

Appendix 3

Environmental Assessment

Prepared by

Ramboll Hong Kong Limited

**PROPOSED 'FLAT' (IN-SITU CONVERSION) IN
"COMMERCIAL (7)" ZONE, NO. 18 SALISBURY ROAD,
TSIM SHA TSUI, KOWLOON (KOWLOON INLAND LOT NO. 9844 (PART))**

ENVIRONMENTAL ASSESSMENT

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CHAPTERS

	Page
1. INTRODUCTION	1-1
1.1 Background	1-1
1.2 The Proposed In-situ Conversion	1-1
1.3 Appraisal of Environmental Impacts	1-2
1.4 Organization of this Report	1-4
2. ROAD TRAFFIC NOISE IMPACT ASSESSMENT	2-1
2.1 Introduction	2-1
2.2 Assessment Criteria	2-1
2.3 Assessment Methodology	2-1
2.4 Noise Sensitive Receivers	2-2
2.5 Road Traffic Noise Impact Assessment Result (Base Case)	2-2
2.6 Conclusion	2-2
3. FIXED SOURCE NOISE IMPACT ASSESSMENT	3-1
3.1 Introduction	3-1
3.2 Assessment Criteria	3-1
3.3 Identification of Fixed Noise Sources	3-2
3.4 Assessment Methodology	3-2
3.5 Noise Sensitive Receivers	3-3
3.6 Fixed Source Noise Impact Assessment Result under Base Case	3-3
3.7 Conclusion	3-4
4. HELICOPTER NOISE IMPACT ASSESSMENT	4-1
4.1 Introduction	4-1
4.2 Assessment Criteria	4-1
4.3 Characteristics of Noise Sources	4-1
4.4 Assessment Methodology	4-2
4.5 Evaluation and Discussion	4-2
4.6 Conclusion	4-3
5. OVERALL CONCLUSION	5-1

TABLES

Table 1.1	Noise Limit for Daytime Construction Activities	1-3
Table 2.1	Summary of Road Traffic Noise Impact Assessment Results under Base Case Scenario	2-2
Table 3.1	Area Sensitivity Rating of NSRs	3-1
Table 3.2	Acceptable Noise Levels for Fixed Source Noise Impact Assessment ..	3-2
Table 3.3	Predicted Maximum Noise Level at Selected NSRs	3-3
Table 4.1	Lmax Noise Level for MD 902 Explorer	4-2

FIGURES

- Figure 1.1 Location of the Application Premises and its Environs
- Figure 2.1 Location of Selected Noise Sensitive Receivers for Road Traffic Noise Impact Assessment
- Figure 3.1 Applicable Area Sensitivity Rating for Individual Facades
- Figure 3.2 Location of Identified Fixed Noise Sources
- Figure 3.3 Location of Representative Noise Sensitive Receivers for Fixed Noise Impact Assessment

APPENDICES

- Appendix 2.1 Traffic Forecast for Year 2044 and Endorsement by TD
- Appendix 2.2 Result of Road Traffic Noise Impact Assessment
- Appendix 3.1 Derived Sound Power Level of Fixed Noise Sources
- Appendix 3.2 Correspondence with Operator/ Owner of the Identified Fixed Noise Sources
- Appendix 3.3 Catalogue of Fixed Noise Sources
- Appendix 3.4 Results of Fixed Source Noise Impact Assessment
- Appendix 4.1 Correspondence with Heliservices

1. INTRODUCTION

1.1 Background

- 1.1.1 The Victoria Dockside development is located at No.18 Salisbury Road, Tsim Sha Tsui, Kowloon. It is currently zoned "Commercial (7)" ("C(7)") under the Approved Tsim Sha Tsui Outline Zoning Plan (OZP) No. S/K1/30, and is within Kowloon Inland Lot No. 9844. The Victoria Dockside development comprises, inter alia, (i) K11 MUSEA, a retail mall integrating premier art, design and leisure experiences, (ii) Grade A office space (K11 ATELIER), (iii) Rosewood Hotel Hong Kong, (iv) hotel-like serviced apartment Rosewood Residences; and (v) another hotel-like serviced apartment K11 ARTUS.
- 1.1.2 The Applicant is now seeking approval from the Town Planning Board under section 16 of the Town Planning Ordinance for the Proposed 'Flat' (In-situ Conversion) at K11 ARTUS ("the Premises"). The Proposal involves the in-situ conversion of existing hotel-like serviced apartments at K11 ARTUS into a maximum of 205 nos. of units for greater spectrum of uses in the complex with the intention to reinforce the sense of place, neighbourhood and vibrancy.
- 1.1.3 Since it only involves conversion of the existing building, there will be no substantial construction work involved. Necessary conversion work may include removal/installation of partitioning for internal layout adjustment and fitting-out works.
- 1.1.4 Ramboll Hong Kong Limited is commissioned by the Applicant to provide environmental consultancy service to prepare the Environmental Assessment (EA) based on the proposal. This EA is prepared as a technical supporting document to examine any potential environmental noise impact and other types of environmental impact arising from the proposed in-situ conversion. Environmental air quality impact and sewerage impact will be addressed in separate submissions.
- 1.1.5 The design of the proposed scheme and other technical information on the proposed in-situ conversion are provided by the Applicant, whereas the traffic forecast is provided by the Project Traffic Consultant (MVA Asia Limited).

1.2 The Proposed In-situ Conversion

- 1.2.1 It is proposed to convert the existing hotel-like suite-type guest rooms at K11 ARTUS to residential units.
- 1.2.2 The Victoria Dockside development comprises a high-rise block (in which Rosewood Hong Kong, Rosewood Residences, office namely K11 ATELIER, etc. are accommodated) and a low-rise block (in which K11 ARTUS is accommodated). K11 ARTUS (the Premises) occupies 8/F to 21/F of the low-rise block. The floors below are occupied by a podium with retail uses. The proposal will convert the existing guest rooms of the Premises by slightly modifying the internal layout and combining areas to units of about 205 numbers. The overall structure, building facades and the existing balconies will be kept intact.
- 1.2.3 The tentative completion year is 2029. **Figure 1.1** shows the location of the Premises. Please refer to the planning statement under this application for the proposed scheme.

1.3 Appraisal of Environmental Impacts

Road Traffic Noise Impact

- 1.3.1 The major road traffic noise source with respect to the Premises arises from the road carriageways from northwest to northeast (i.e. Nathan Road, Salisbury Road and Chatham Road South). As observed in the survey on 24 October 2024, 20 November 2024 and 06 June 2025, the noise environment is dominated by road traffic noise. Road traffic noise impact assessment has been conducted to address the potential road traffic noise impact upon completion with noise mitigation measures proposed where necessary (detailed in **Section 2**).

Railway Noise Impact

- 1.3.2 It is understood that existing MTR Tsuen Wan Line and Tuen Ma Line lay underground along Nathan Road and Salisbury Road respectively. As they are located underground, airborne railway noise impact on the proposed residential use is unlikely a concern.
- 1.3.3 The Victoria Dockside Development is located nearest to MTR Tuen Ma Line under Salisbury Road (the section was previously known as Kowloon Southern Link). Referring to the EIA report (AEIAR-083/2005 – Kowloon Southern Link), ground borne noise impact on various noise sensitive receivers alongside the alignment has been assessed. The noise criteria for domestic premises is: Leq(30min)(0700-2300) 55dB(A) and Leq(30min)(2300-0700) 45dB(A). According to Table 7-7 of the EIA report, predicted Leq(30min) noise level at NSRs nearby such as Sheraton Hotel (4/F) is <35dB(A) and is well below the standard. Since the future domestic dwellings at Victoria Dockside Development are sited further away from Tuen Ma Line and are elevated higher when compared to Sheraton Hotel (4/F), it is anticipated that the ground-borne noise impact would be below 35dB(A) and would not suggest any exceedance. Moreover, according to the discussion under S7.2.6 of the EIA report, cumulative impacts from existing MTR Tsuen Wan Line are considered insignificant. Therefore, no adverse overall ground-borne noise impact on the Premises is anticipated.

Fixed Source Noise Impact

- 1.3.4 Site surveys were conducted on 24 October 2024, 20 November 2024 and 06 June 2025 to identify any environmental nuisance. Various fixed noise sources are identified within 300m from the Premises. They have been taken into account in the fixed source noise impact assessment detailed in **Section 3**.

Helicopter Noise Impact

- 1.3.5 It is understood that helipad facilities are provided at rooftop of Peninsula Hotel. There is a minimum horizontal separation of over 250m from the nearest façade of the future dwelling of the Premises. Nonetheless, as the facilities are within 300m from the Premises, the potential noise impact has been evaluated in the helicopter noise impact assessment in **Section 4**.

Operational Water Quality Impact

- 1.3.6 There are existing drainage and sewerage pipes situated at the immediate north of the Victoria Dockside along Salisbury Road. Surface runoff is collected and conveyed towards west, while sewage is conveyed towards east to public drainage and sewerage system respectively. The proposed conversion would not change the discharge connection.
- 1.3.7 Since this is an in-situ conversion project only involving mainly change of internal layout and does not change the discharge connection, there will be no change on the

amount of surface runoff and the flow regime. No adverse drainage impact is anticipated.

1.3.8 A separate Sewerage Impact Assessment (SIA) has been prepared to address potential sewerage impact upon the in-situ conversion (operational phase). Please refer to the SIA report under this application for details.

1.3.9 No adverse water quality impact during operation of the project is anticipated.

Construction Phase Environmental Impacts

Noise

1.3.10 Construction noise is controlled under the Noise Control Ordinance (NCO). As this is an in-situ conversion project and mainly involves removal/installation of partitioning and fitting-out works, there will be no percussive piling involved. There is also limited use of powered mechanical equipment. Nevertheless, the *"Technical Memorandum on Noise From Construction Work Other than Percussive Piling"* (TM1) and *"Technical Memorandum on Noise From Construction Work in Designated Areas"* (TM2) will be observed and followed, where applicable.

1.3.11 For construction works other than percussive piling, noise limits for daytime construction activities are set out in the ProPECC PN 1/24 *"Minimizing Noise from Construction Activities"* and tabulated below in **Table 1.1**. It will be observed and followed together with guidelines and house rules under *"Pilot Scheme on Quiet Renovation"*.

1.3.12 Best Management practice will also be adopted where appropriate to suppress the impact. In all circumstances, future contractor will be required to exercise adequate mitigation measures (including but not limited to, using well-maintained plants on-site only, using electric-powered equipment where applicable, scheduling noisy operations during non-restricted hours where possible) to minimise potential construction noise impact on the surrounding noise sensitive uses.

Table 1.1 Noise Limit for Daytime Construction Activities

Noise Sensitive Receivers	Leq(30min), dB(A)
All domestic premises Temporary housing accommodation Hostels Convalescences homes Homes for the aged	75
Places of public worship Courts of law Hospitals and medical clinics	70
Educational institutions (including kindergartens and nurseries)	70 (65 during examinations)

Water Quality

1.3.13 This is an in-situ conversion project with already established sewage and drainage systems, which will remain unchanged. Sewage and surface runoff will be collected and discharged to public sewers and drains respectively. ProPECC PN 2/24 on *Construction Site Drainage* will be observed and followed, where applicable. Best management practice will also be adopted. No adverse water quality impact during the construction phase is anticipated.

Waste Management

- 1.3.14 This is an in-situ conversion project and would not involve substantial construction work. Necessary conversion work may include removal/installation of partitioning and fitting-out works.
- 1.3.15 Waste may arise from demolition of the existing partitions and outfit materials, which may contain both inert (e.g. debris arising from demolition of partition) and non-inert (e.g. packaging material) materials. It is estimated that there will be limited C&D waste to be generated due to the project nature. They will be collected and segregated where practicable. Recyclables will be collected by or delivered to recycler. Inert C&D material will be delivered to public fill reception facility, while non-inert C&D material will be disposed at designated landfill site.
- 1.3.16 Given that no substantial construction work will be carried out, only limited number of workers would be required. It is expected there will be dozens kg of general waste generated from workers daily.
- 1.3.17 There is unlikely any chemical waste generated during construction of the project. Nevertheless, chemical waste, if any, will be collected by licensed chemical waste collectors and disposed to chemical waste treatment facility or equivalent.

1.4 Organization of this Report

- 1.4.1 The report is structured as follows:-
- **Section 2** is a road traffic noise impact assessment;
 - **Section 3** is a fixed source noise impact assessment;
 - **Section 4** is a helicopter noise impact assessment;
 - **Section 5** is a concluding summary.

2. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

2.1 Introduction

- 2.1.1 This road traffic noise impact assessment is prepared to address potential road traffic noise impact on the noise sensitive uses of the Premises upon the in-situ conversion and to recommend mitigation measures where practicable to attenuate any impact identified.

2.2 Assessment Criteria

- 2.2.1 Noise standards are recommended in the Hong Kong Planning Standards and Guidelines (HKPSG) for planning against noise impact from sources such as road traffic, railway and aircraft. The Premises comprise residential units and an ancillary clubhouse. The clubhouse will be air conditioned and will not rely on openable windows for ventilation, and is therefore not considered as noise sensitive in nature. Under the HKPSG, the criterion for road traffic noise impact on domestic premises (habitable rooms) in terms of $L_{10(1-hour)}$ at typical facades of the Premises is 70dB(A).

2.3 Assessment Methodology

- 2.3.1 In the assessment, the potential noise impact arising from nearby road carriageways on the Premises has been assessed.
- 2.3.2 Future noise impacts on Noise Sensitive Receivers (NSRs) arising from traffic flows along existing and future road carriageways situated within the vicinity of the Premises are assessed. Calculation of predicted road traffic noise was based on the worst case peak hour traffic flows projected within a 15-year period from the tentative completion date (Year 2029) of the proposed in-situ conversion. For the worst-case scenario evaluation, the assessment year was chosen to be Year 2044, which has the maximum forecasted traffic flow within the 15-year period. The year 2044 traffic forecast data is attached in **Appendix 2.1**. Endorsement of the traffic forecast by Transport Department (TD) is provided in **Appendix 2.1**.
- 2.3.3 The U.K. Department of Transport's procedures "Calculation of Road Traffic Noise" (CRTN) was used to predict the hourly $L_{10(1-hour)}$ noise levels generated from road traffic at selected representative NSRs. Practicable environmental mitigation measures have been recommended, where necessary. The predicted noise levels were compared with the relevant HKPSG noise standards (i.e. $L_{10(1-hour)}$ 70dB(A)).
- 2.3.4 In this assessment, all roads are assumed of impervious surface and a speed limit of 50km/hr.
- 2.3.5 As mentioned in **S1.2**, the in-situ conversion largely involves 8/F to 21/F of the low block of the Victoria Dockside development only, while the retail uses below remain unchanged and the building envelope of K11 MUSEA would not be affected. In this context, the lower portion of the building mass (i.e. the existing retail podium) has been incorporated in the noise model under the base case scenario which would effect to provide shielding against road traffic noise.

2.4 Noise Sensitive Receivers

- 2.4.1 A number of Noise Sensitive Receivers (NSRs) have been set along all sensitive facades of the Premises to demonstrate the environmental acceptability in this assessment. All assessment points were taken at 1.2m above the floor and 1m away from the façade of possible future openable windows locations (as advised by the Applicant, the exact locations to be determined during detailed design stage) of rooms of sensitive use. These possible openable windows will serve to provide natural ventilation to fulfil relevant requirements under Building (Planning) Regulations. **Figure 2.1** illustrates the locations of the selected representative NSRs for road traffic noise impact assessment.

2.5 Road Traffic Noise Impact Assessment Result (Base Case)

- 2.5.1 The predicted road traffic noise levels on the selected NSRs under the base case scenario (i.e. no mitigation measures provided) have been presented in **Table 2.1** and **Appendix 2.2**.

Table 2.1 Summary of Road Traffic Noise Impact Assessment Results under Base Case Scenario

Scenario	Noise Criteria, $L_{10}(1\text{-hour})$, dB(A)	Max. Predicted Road Traffic Noise Level, $L_{10}(1\text{-hour})$, dB(A)	Total Number of Exceedance	Compliance Rate
AM Peak Flow	70	69	0	100%
PM Peak Flow	70	68	0	100%

- 2.5.2 The maximum predicted noise level is 69dB(A) at western façade with least shielding by the building mass underneath it. Full compliance with the relevant HKPSG noise standard is achieved for the Premises. No additional mitigation measures for the road traffic noises are therefore considered necessary.

2.6 Conclusion

- 2.6.1 Road traffic noise impact assessment has been carried out for the proposed in-situ conversion.
- 2.6.2 According to the road traffic noise impact assessment results, no noise exceedance with respect to the HKPSG noise criterion of 70dB(A) is identified under base case scenario. No adverse road traffic noise impact is anticipated on the proposed in-situ conversion to residential use.

3. FIXED SOURCE NOISE IMPACT ASSESSMENT

3.1 Introduction

- 3.1.1 The aim of this study is to assess potential noise impact arising from nearby fixed noise sources within the 300m assessment area of the Premises. Practical noise mitigation measures would be recommended, where necessary.

3.2 Assessment Criteria

- 3.2.1 According to the "Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Spaces or Construction Sites" (IND-TM) issued under the Noise Control Ordinance (NCO), the airborne noise shall comply with the Acceptable Noise Levels (ANL), which are influenced by the Area Sensitivity Rating (ASR).
- 3.2.2 According to the IND-TM, four (4) types of areas are defined, including: Rural Area, Low Density Residential Area, Urban Area and Area Other Than Those Above. The Premises is located in the urbanized Tsim Sha Tsui area and is therefore considered as Urban Area.
- 3.2.3 No designated industrial area on the OZP is observed in the vicinity of the Premises. According to the Annual Traffic Census 2023, the Annual Average Daily Traffic (AADT) was approximately 42,000 for Salisbury Road (Station 3606), which abuts the Victoria Dockside development (and hence the Premises) and is considered as an Influencing Factor (IF) (with AADT over 30,000).
- 3.2.4 For conservative assessment approach, ASR "C" is applicable to the facades that have a direct line of sight and directly or indirectly affected by the IF, whilst ASR "B" would be assigned to the remaining facades. **Figure 3.1** shows the applicable ASR of the noise sensitive facades of the Premises. The ASR and ANLs according to IND-TM are tabulated below.

Table 3.1 Area Sensitivity Rating of NSRs

Type of Area Containing NSR	Degree to which NSR is affected by Influencing Factors (IFs)		
	Not Affected	Indirectly Affected	Directly Affected
i. Rural area, including country parks, or village type development	A	B	B
ii. Low density residential area consisting of low-rise or isolated high-rise developments	A	B	C
iii. Urban area	B	C	C
iv. Area other than those above	B	B	C

- 3.2.5 In any event, the ASR assumed in the report is for indicative assessment only. It should be noted that the fixed noise sources are controlled under Section 13 of the NCO. At the time of investigation, the Noise Control Authority shall determine noise impact from concerned 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. Nothing in the report shall bind the Noise Control Authority in the context of law enforcement against all the fixed noise sources being assessed.

Table 3.2 Acceptable Noise Levels for Fixed Source Noise Impact Assessment

Time Period	ASR "B", Leq (30 min), dB(A)	ASR "C", Leq (30 min), dB(A)
Day & Evening (0700 – 2300 hours)	65	70
Night (2300 – 0700 hours)	55	60

3.3 Identification of Fixed Noise Sources

3.3.1 Various fixed noise sources have been identified through desktop review and site surveys. Site visits were conducted on 24 October 2024, 20 November 2024 and 06 June 2025. Locations of fixed noise sources considered in the assessment are shown in **Figure 3.2** and described below.

Fixed Source Noise from Surrounding Environment

- 3.3.2 There are a number of fixed noise sources (e.g. cooling tower, chiller, VRV, ventilation building, ventilation ducts and louvre etc.) observed in the vicinity of the Premises. Requests were made to the buildings with identified noise sources to collect information of the identified noise sources (e.g. equipment model, noise data) and to request for access to conduct onsite measurement.
- 3.3.3 For some noise sources that are accessible (Source ID: K11_Lv, MOA_Lv1, MOA_Lv2 and MTRCHVB), direct measurement has been conducted to derive their Sound Power Level (SWL) (see **Appendix 3.1**) and adopted in this fixed source noise impact assessment.
- 3.3.4 It is also observed that there were some other louvres and ventilation shafts situated in the vicinity. However, no noticeable noise was heard during site surveys. Therefore, they are excluded from the assessment. Photo records are provided in **Appendix 3.1**.
- 3.3.5 For remaining buildings with identified noise sources, there is no reply to our request to seek for confirmation to grant access for direct measurement nor equipment model information (see **Appendix 3.2**).
- 3.3.6 For those identified fixed noise sources without equipment information nor direct measurement conducted, their noise strengths have been assumed by referencing equipment catalogue model of a similar scale (see **Appendix 3.3**).
- 3.3.7 No night time operation is assumed for the noise sources at Hong Kong Museum of Art (Source ID: MOA_C1 to MOA_C3, MOA_Lv1 and MOA_Lv2), Prestige Tower (Office use) (Source ID: PT_1 to PT_3), CFC Tower (Office use) (Source ID: CFC_1, CFC_2), 8 Minden Avenue (Shopping mall) (Source ID: 8MA_1 to 8MA_2b), Eu Yan Sang Tower (Office use) (Source ID: EYS_1 and EYS_2) and K11 ATELIER (Office use) (Source ID: K11_Lv) due to their business nature at day & evening time only.

3.4 Assessment Methodology

- 3.4.1 Standard acoustic principles were adopted for prediction of cumulative fixed source noise impact. The slant distance between noise sensitive receivers (NSRs) of the Premises and fixed noise sources were assessed.
- 3.4.2 The assessment has taken into account the distance attenuation, screen effect, tonality and façade effect where appropriate. Tonality of 3dB(A) has been assumed for all fixed noise sources except those with direct measurement conducted as a conservative assessment approach.

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

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

where

SPL_{NSR}	= Predicted Noise Level at Selected Representative NSR
SWL_{source}	= Derived Sound Power Level of the Fixed Noise Source
$Corr_{dist}$	= Distance Correction (20 x Log (Slant Distance between NSR and Source))
$Corr_{bar}$	= Barrier Correction (-10dB(A), where applicable)
$Corr_{fac}$	= Façade Correction (+3dB(A))
$Corr_{ton}$	= Tonality Correction (+3dB(A), where applicable)

3.5 Noise Sensitive Receivers

3.5.1 Representative NSRs of residential portion nearest and having a direct line of sight to the identified noise sources have been selected for the assessment. Assessment points are taken at 1.2m above floor and 1m away from façade with openable window of NSRs for natural ventilation.

3.5.2 The clubhouse (which will be retained) is served by central air-conditioning and not rely on openable windows for ventilation. Adverse fixed noise impact is not anticipated at these locations. No assessment point is assigned to the clubhouse area.

3.5.3 **Figure 3.3** shows the locations of the representative NSRs.

3.6 Fixed Source Noise Impact Assessment Result under Base Case

3.6.1 The predicted fixed noise level at representative NSRs under the base case scenario (i.e. no mitigation measures provided) has been calculated and tabulated below in **Table 3.3**. Detailed calculations are shown in **Appendix 3.4**.

3.6.2 According to the results, no exceedance of relevant noise criteria during both day & evening time and night time is found under the base case (i.e. without mitigation measures in place).

Table 3.3 Predicted Maximum Noise Level at Selected NSRs

NSR	ASR	Noise Criteria, dB(A)		Predicted Noise Level, dB(A)	
		Day and Evening Time	Night Time	Day and Evening Time	Night Time
F01	C	70	60	61	58
F02	C	70	60	61	58
F03	C	70	60	61	59
F04	C	70	60	61	59
F04a	C	70	60	61	59
F05	C	70	60	61	59
F06	C	70	60	61	59
F06a	C	70	60	62	60
F07	C	70	60	61	60
F08	C	70	60	62	60
F09	C	70	60	58	50
F10	B	65	55	57	49
F11	B	65	55	53	48
F12	B	65	55	54	48

3.7 Conclusion

- 3.7.1 A fixed source noise impact assessment has been carried out. No unacceptable noise impact is envisaged without any need of noise mitigation measure in place.

4. HELICOPTER NOISE IMPACT ASSESSMENT

4.1 Introduction

- 4.1.1 This section addresses the potential noise impact due to helicopter operation with respect to the helipad facilities at rooftop of Peninsula Hotel over 250m to the northwest of the Premises.

4.2 Assessment Criteria

- 4.2.1 Noise standards are recommended in the HKPSG for planning against the noise impact. The Premises comprise residential units and an ancillary clubhouse. The clubhouse will be air conditioned and will not rely on openable windows for ventilation, and is hence not considered as noise sensitive in nature. Under the HKPSG, the criterion for helicopter noise impact on domestic premises (habitable rooms) in terms of $L_{\max(0700-1900)}$ at typical facades of the Premises is **85dB(A)**.

4.3 Characteristics of Noise Sources

- 4.3.1 Helicopter noise is generated during manoeuvring over the helipad. Different modes of operation (i.e. flyover, approach, departure) would generate noise of varying strength. The highest noise level among approach, take-off and flyover is adopted for assessment.
- 4.3.2 Civil Aviation Department (CAD) has been consulted before on helicopter flight path and operation details of the existing helipad facilities at Peninsula Hotel. As advised, Peninsula Heliport is a private aerodrome, its operational details and statistics are owned and maintained by the heliport operator (Heliservices) and the same should be approached to collect relevant information. Heliservices is the company which offers helicopter services at Peninsula Hotel. Heliservices was interviewed by phone call on 15 November 2024. Following this, Heliservices has been further consulted via email regarding the helicopter fleet type and the flight path. According to their reply, they only employ one helicopter fleet type: MD 902 Explorer. Moreover, Heliservices is used to offer different sightseeing routes. Yet, there are also possible flight paths for services outside the scope of the sightseeing package. No designated flight path information is provided. Nonetheless, in general, they would maintain 1500 feet (i.e. 457.2m) separation from buildings or vehicles in the congested areas like Tsim Sha Tsui. If low flying permission is granted, or during approaching and departure, they would maintain 500 feet (i.e. 152.4m) separation from buildings. There are two helipads at the rooftop of Peninsula Hotel (at around 120mPD). As advised by Heliservices in the interview, there would NOT be any simultaneous operation of more than 1 helicopter at a time. Given that the helipads are sited over 250m (horizontal separation) from the nearest proposed flat unit (at west end), the shortest possible separation of the helicopter from the proposed flat unit could be 152.4m.
- 4.3.3 The helicopter noise source terms based on the MD 902 Explorer Technical Description published by MD Helicopters, Inc. are reviewed. The operational noise levels in Effective Perceived Noise in Decibels (EPNdB) under different modes of operation are extracted. In practice, the noise levels in EPNdB can be converted to $L_{\max}$ by deducting 13 (such as in EIA for North East New Territories New Development Areas Planning and Engineering Study – Investigation). The converted $L_{\max}$ noise level is tabulated below. According to the **Table 4.1** below, the $L_{\max}$ is highest under approach mode based on measurement data by the manufacturer and under take-off mode based on ICAO Reference Limit (which is the standard for helicopters for lateral movement for different flying modes including approach, take-off and flyover and is used to certify aircraft). These noise levels were adopted to project the noise impact on the noise sensitive receivers of the Premises.

- 4.3.4 Moreover, the helipads are separated from nearest proposed flat unit by more than 250m as mentioned. While there is no noise data for modes of movement other than approach, take-off and flyover during operations at the helipads (e.g. vertical lift, side drift), noise impact due to such operations at helipads is unlikely to be higher than approach mode, take-off mode or lateral flyover operation at locations closest to the noise sensitive receivers of the Premises (still with a separation of 152.4m assumed as mentioned in Section 4.3.2). Noise during movement at helipads is not considered to be the worst representative scenario.

Table 4.1 Lmax Noise Level for MD 902 Explorer

Mode of Operation	EPNdB	Reference Distance*	Lmax, dBA*	Lmax, dBA (for reference distance of 120m)^
Take-off	85.4 [94.5]	156	72.4 [81.5]	74.7 [83.8]
Level flyover	83.5 [93.3]	150	70.5 [80.3]	72.4 [82.2]
Approach	89.6 [95.3]	120	76.6 [82.3]	76.6 [82.3]

*The reference distances are based on the measurement procedures stated in ICAO Annex 16, Chapter 8 as stated in Project Profile for the Provision of a Temporary Helipad at Tea Garden, Ngong Ping for the Tung Chung Cable Car Project

^correction for reference distance of 120m = $20 \times \log(\text{Reference Distance}/120)$

Note: 85.4 [94.5] represent measured noise level by manufacturer and [ICAO reference limit] respectively

4.4 Assessment Methodology

- 4.4.1 Helicopter noise is considered as a 'point' source and is evaluated based on the standard acoustic principle of point source propagation. Corrections are applied for the distance attenuation and reflection from façade.
- Distance correction = $-20 \times \log(D/D_{ref})$, where D_{ref} is 120m
 - Façade correction of +3dB(A) is assumed.

4.5 Evaluation and Discussion

- 4.5.1 There is no well-defined flight path information. Nonetheless, according to Schedule 14, Cap.448C, Air Navigation (Hong Kong) Order 1995, a helicopter should not fly over a congested area of a city, town or settlement below a height of 1500 feet (i.e. 457.2m) above the highest fixed object within 2000 feet (i.e. 609.6m) of the helicopter. According to replies from Heliservices, under the general situation, the separation from building tallies with the schedule (i.e. 457.2m separation). For approaching and departure from helipads of Peninsula Hotel, or with low flying permission, the separation will be reduced to minimum 500 feet (i.e. 152.4m).
- 4.5.2 Therefore, under the worst possible scenario, the helicopter may maintain a separation of as short as 152.4m from the Premises under approaching and departure routes.
- 4.5.3 The projected Lmax noise level would hence be:

Case	Predicted noise level
1 (based on measurement data)	$76.6 - 20 \times \log(152.4/120) + 3 = 77.5\text{dB(A)}$
2 (based on ICAO reference limit)	$83.8 - 20 \times \log(152.4/120) + 3 = 84.7\text{dB(A)}$

- 4.5.4 The projected Lmax noise level under the case based on measurement data would be 77.5dB(A) whereas that under worst possible scenario with reference to ICAO reference data would be 84.7dB(A). Both results are within the HKPSG criterion for helicopter noise impact on domestic premises of Lmax 85dB(A).

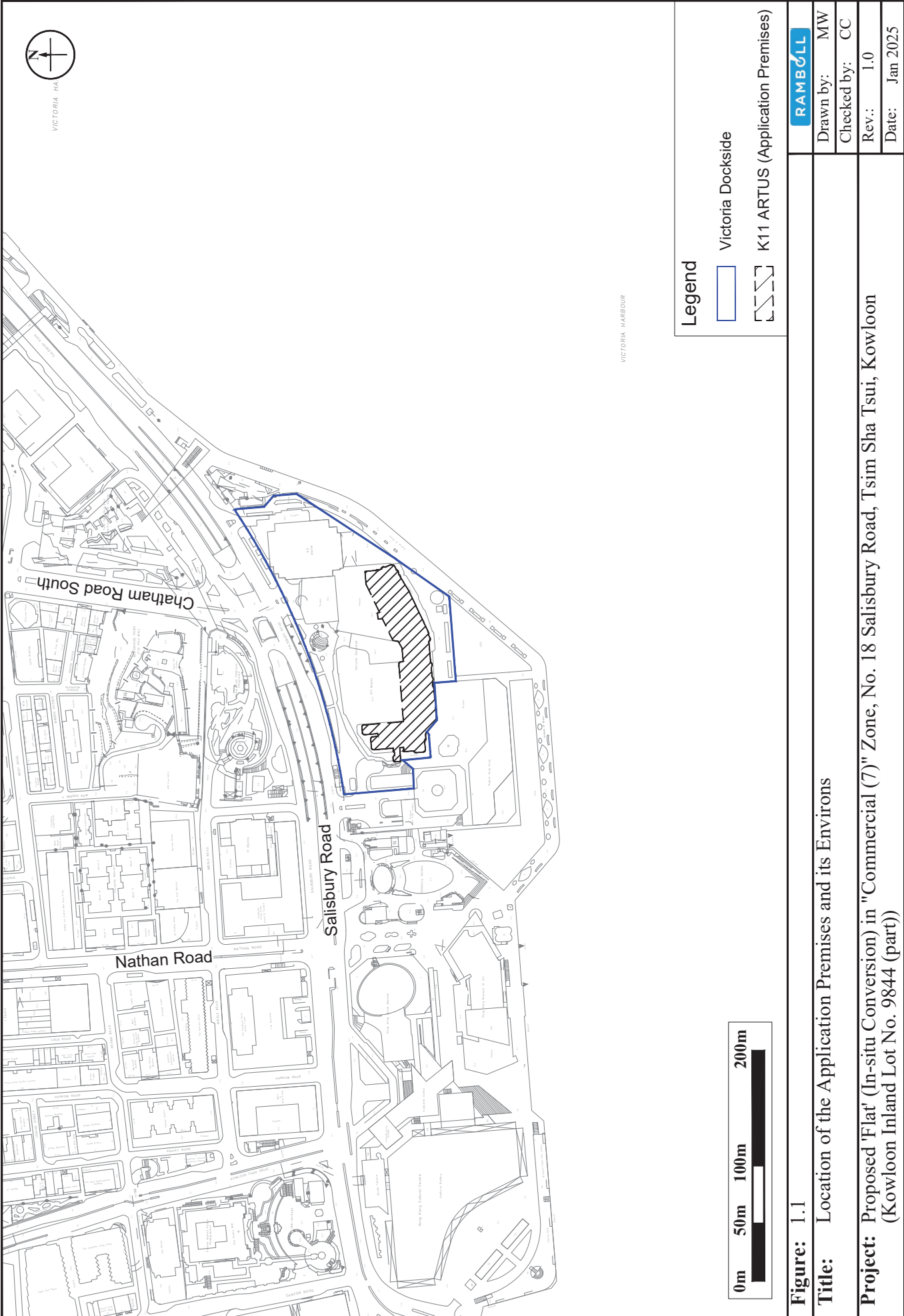
4.6 Conclusion

- 4.6.1 The potential helicopter noise impact on the Premises (dwelling) with respect to the helipads at Peninsula Hotel has been evaluated.
- 4.6.2 Based on the information from Heliservices (the operator of helicopters using the helipads at Peninsula Hotel within 300m from the Premises), the potential helicopter noise impact under the worst possible scenario has been evaluated and is found to be within the applicable HKPSG criterion. No unacceptable helicopter noise impact is therefore anticipated.

5. OVERALL CONCLUSION

- 5.1.1 An environmental assessment has been conducted for the proposed in-situ conversion at the Premises for residential use to address the potential environmental noise, water quality and waste implication.
- 5.1.2 Road traffic noise impact has been carried out for the Premises. According to the predicted results, the predicted noise levels at the Premises due to road traffic noise can fully comply with the relevant noise criteria, and no unacceptable road traffic noise impact due to surrounding roads on the Premises for residential use is anticipated. No road traffic noise mitigation is considered necessary.
- 5.1.3 Fixed source noise impact assessment has also been conducted. The predicted noise levels of representative NSRs would comply with the criteria as stipulated in NCO. It can be concluded that the proposed in-situ conversion to residential use would not be subject to adverse fixed source noise impact. On the other hand, any equipment which may be potentially noise sources at the Premises will be designed and installed with adequate noise mitigation measures to comply with the HKPSG standard and NCO.
- 5.1.4 Helicopter noise impact has been assessed due to the presence of helipads on the rooftop of Peninsula Hotel, which are at more than 250m from the Premises. The maximum predicted noise level is $L_{max} 77.5dB(A)$ according to the assessment which is below the noise criteria of $L_{max} 85dB(A)$. Hence, helicopter noise exceedance at the Premises is not envisaged.
- 5.1.5 Water quality impact and waste implications have been qualitatively discussed. No adverse impact is anticipated as this is only an in-situ conversion project with no major alteration to the overall structures involving any major construction works.
- 5.1.6 To summarise, no insurmountable environmental noise impact, water quality impact and waste implications are anticipated.

Figures



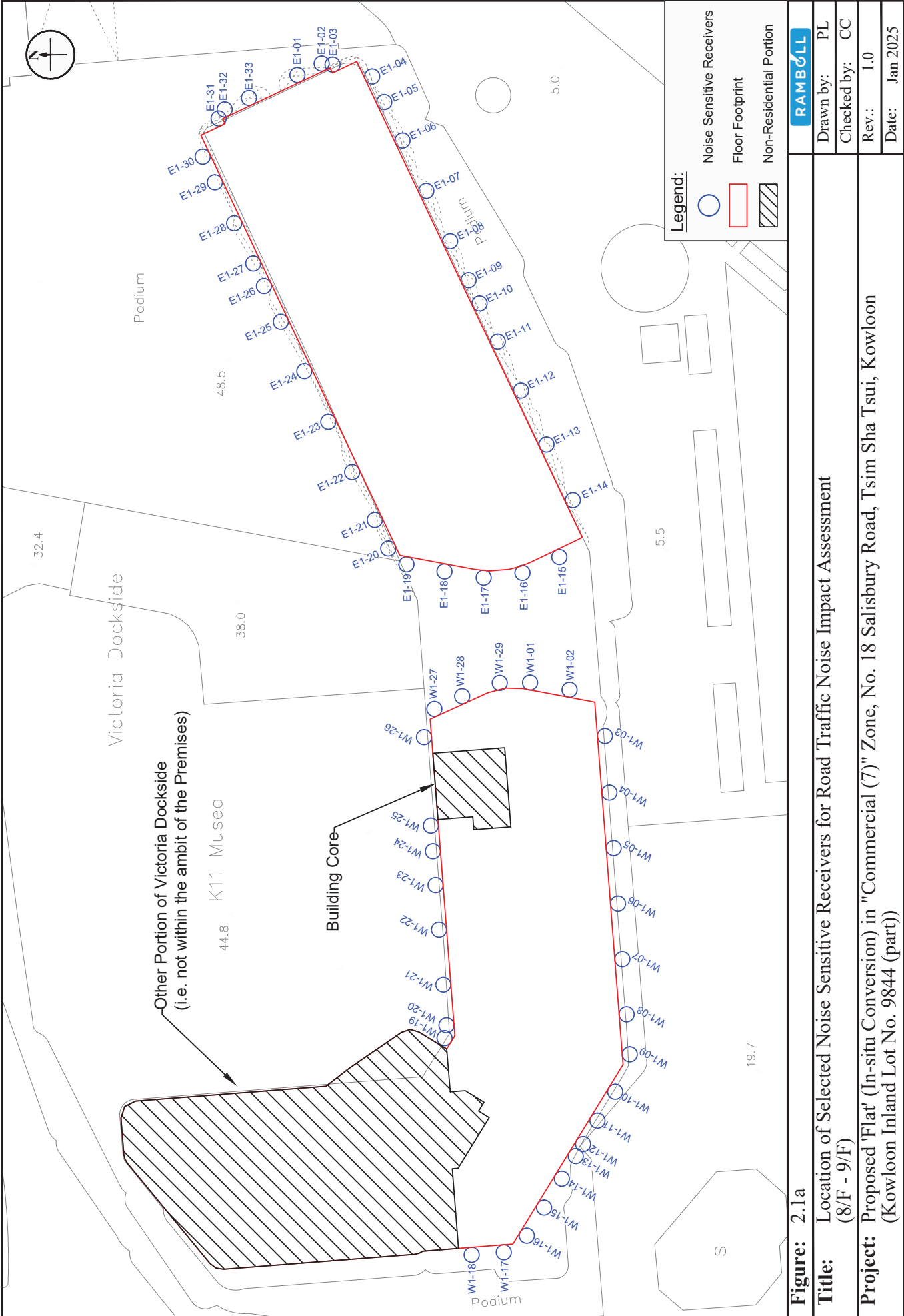
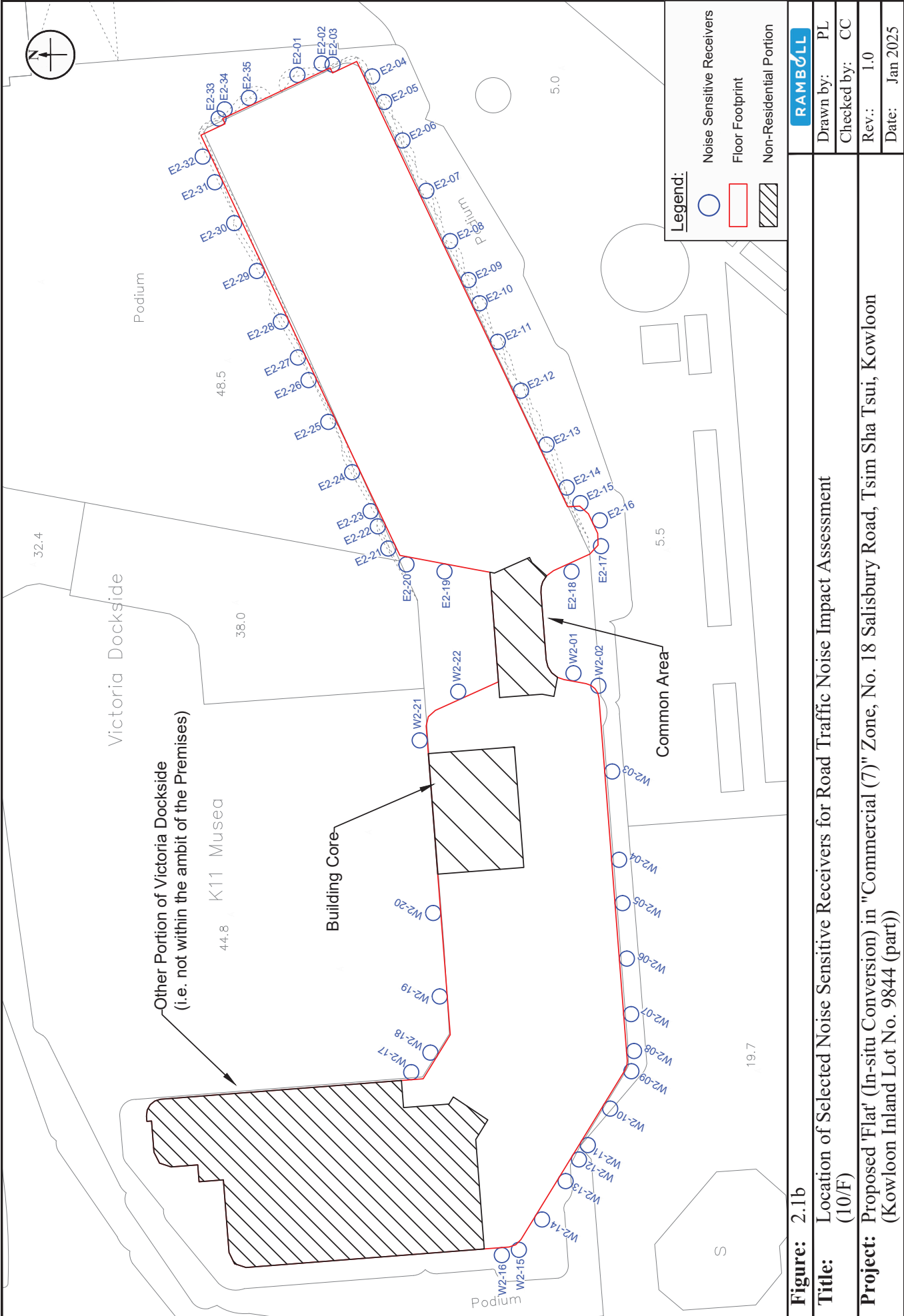
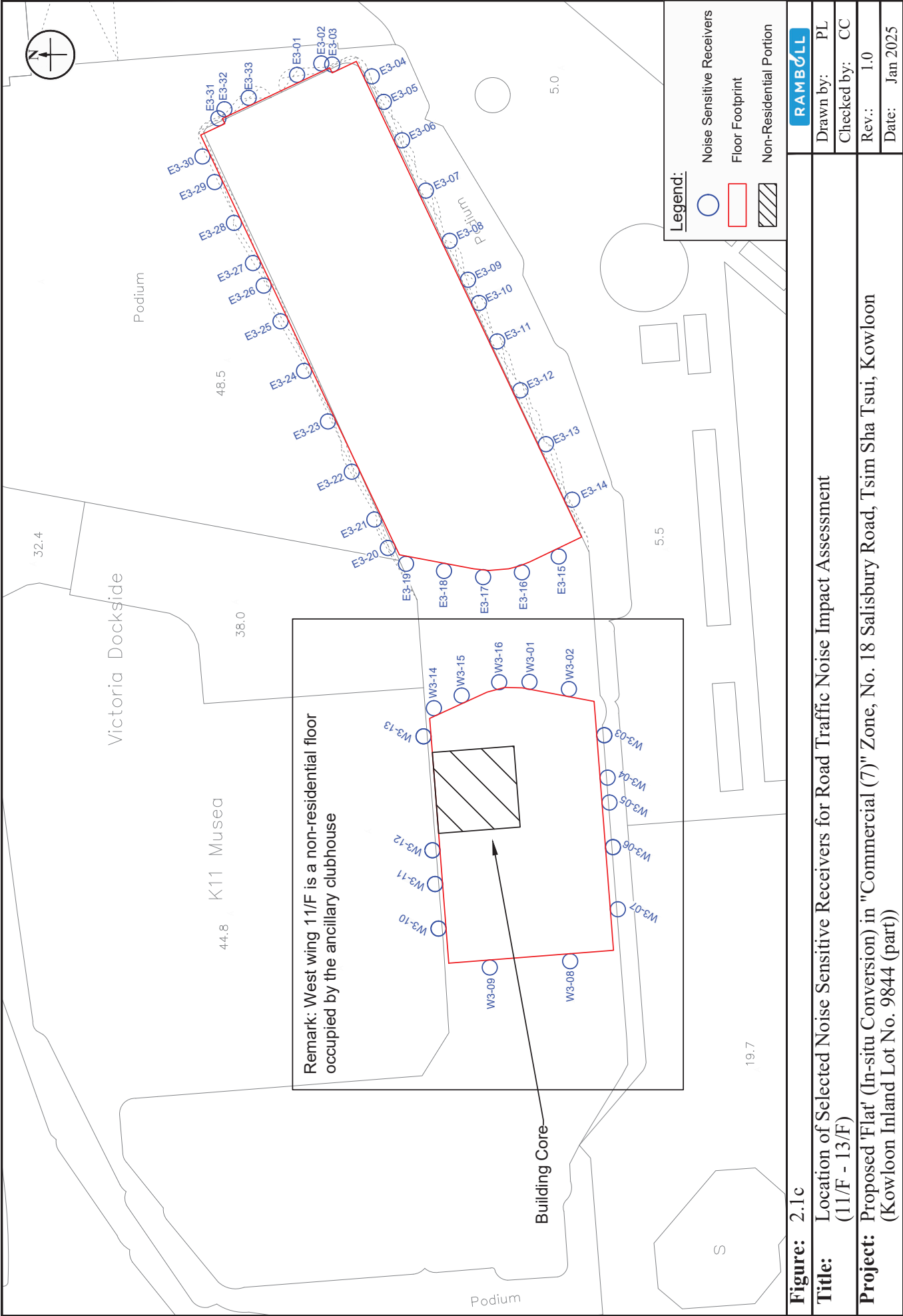


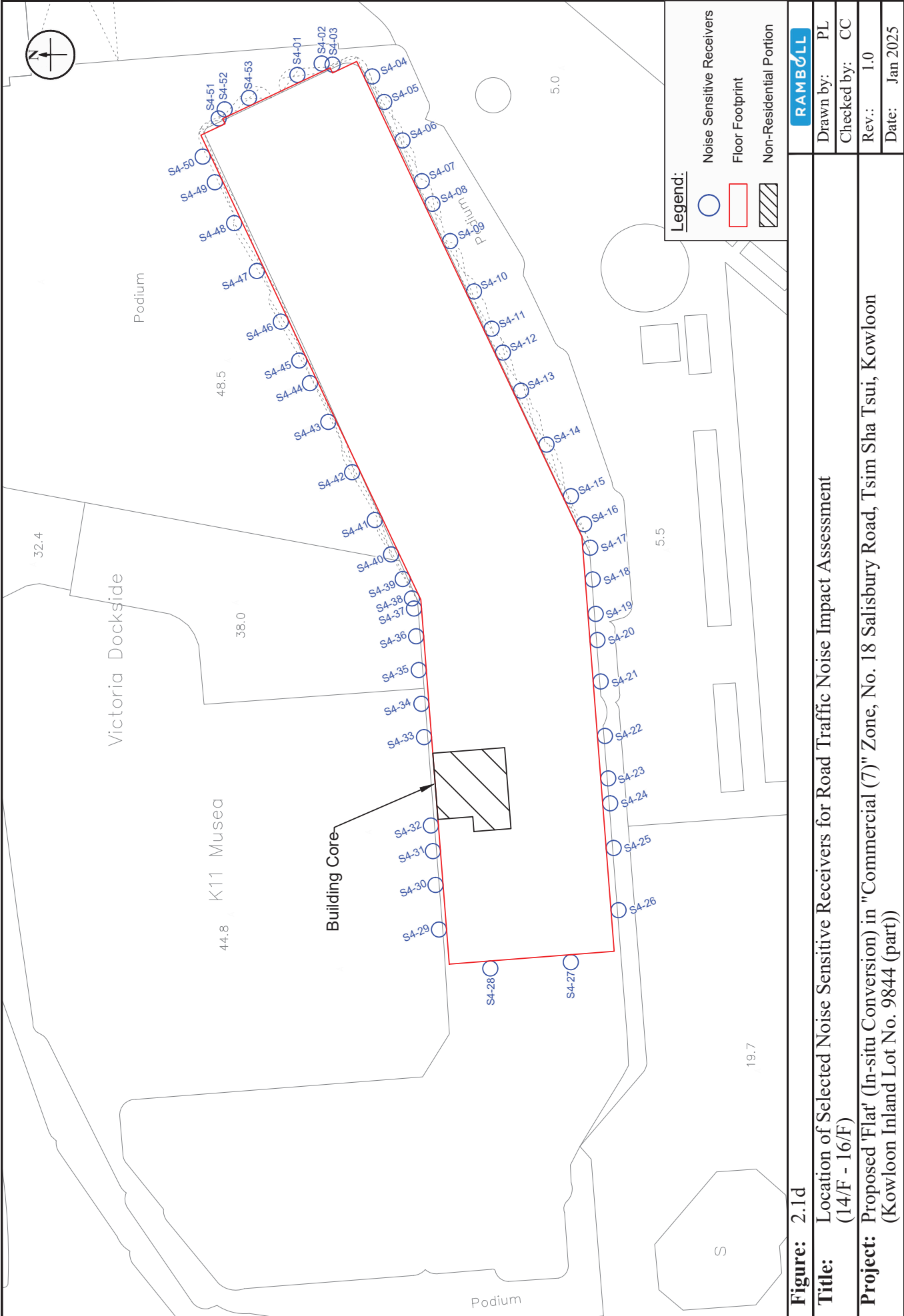
Figure: 2.1a

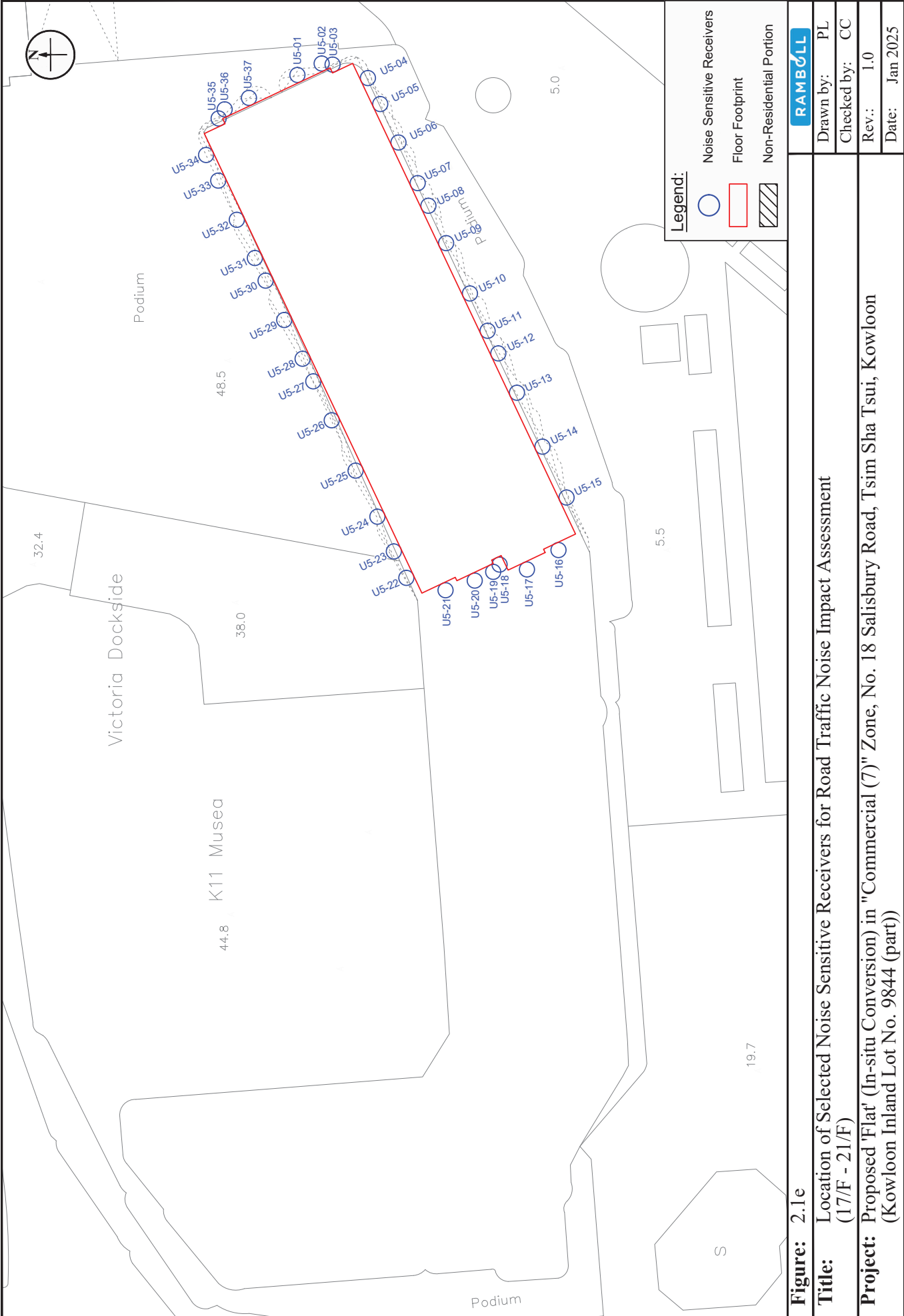
Title: Location of Selected Noise Sensitive Receivers for Road Traffic Noise Impact Assessment (8/F - 9/F)

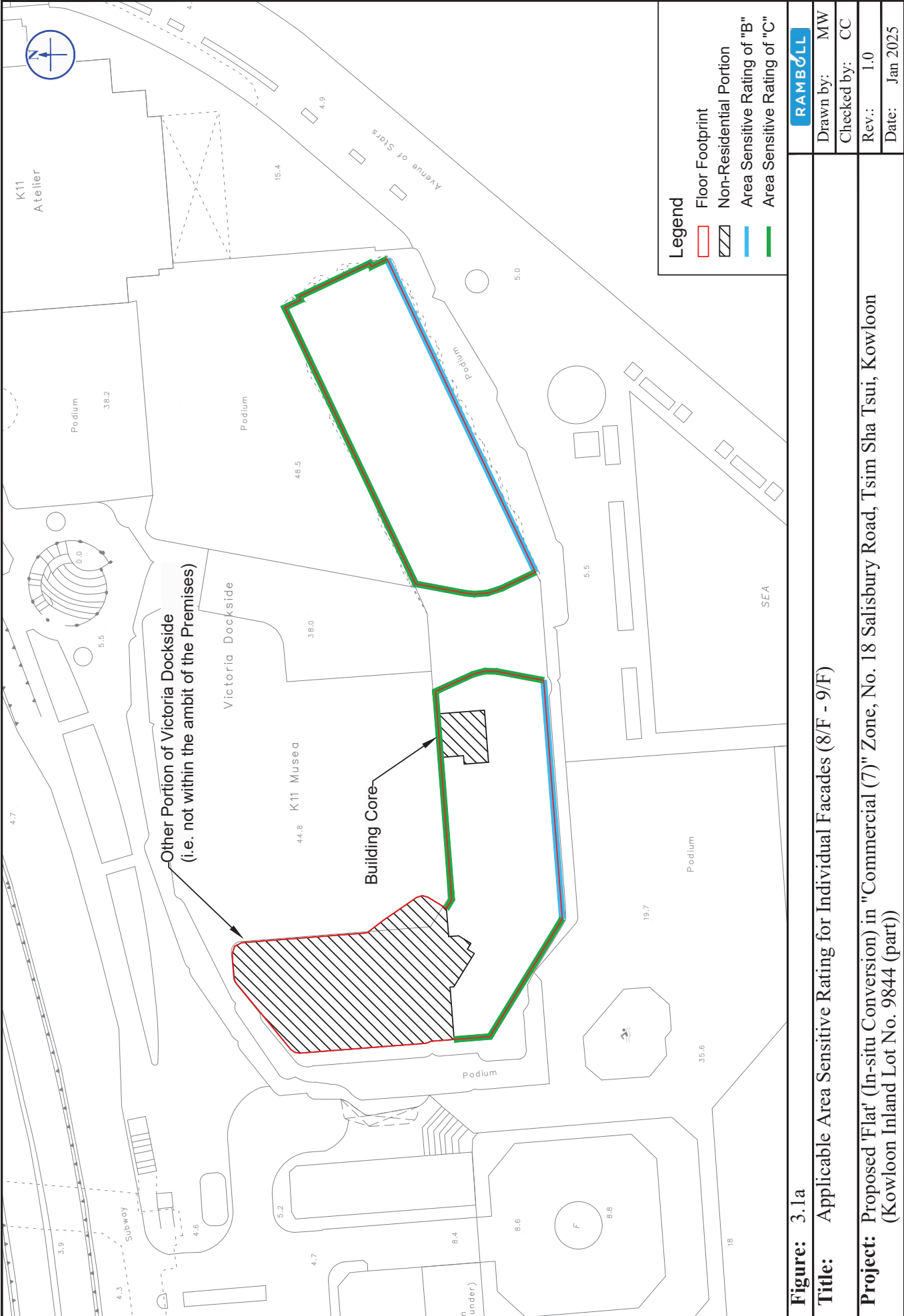
Project: Proposed 'Flat' (In-situ Conversion) in "Commercial (7)" Zone, No. 18 Salisbury Road, Tsim Sha Tsui, Kowloon (Kowloon Inland Lot No. 9844 (part))

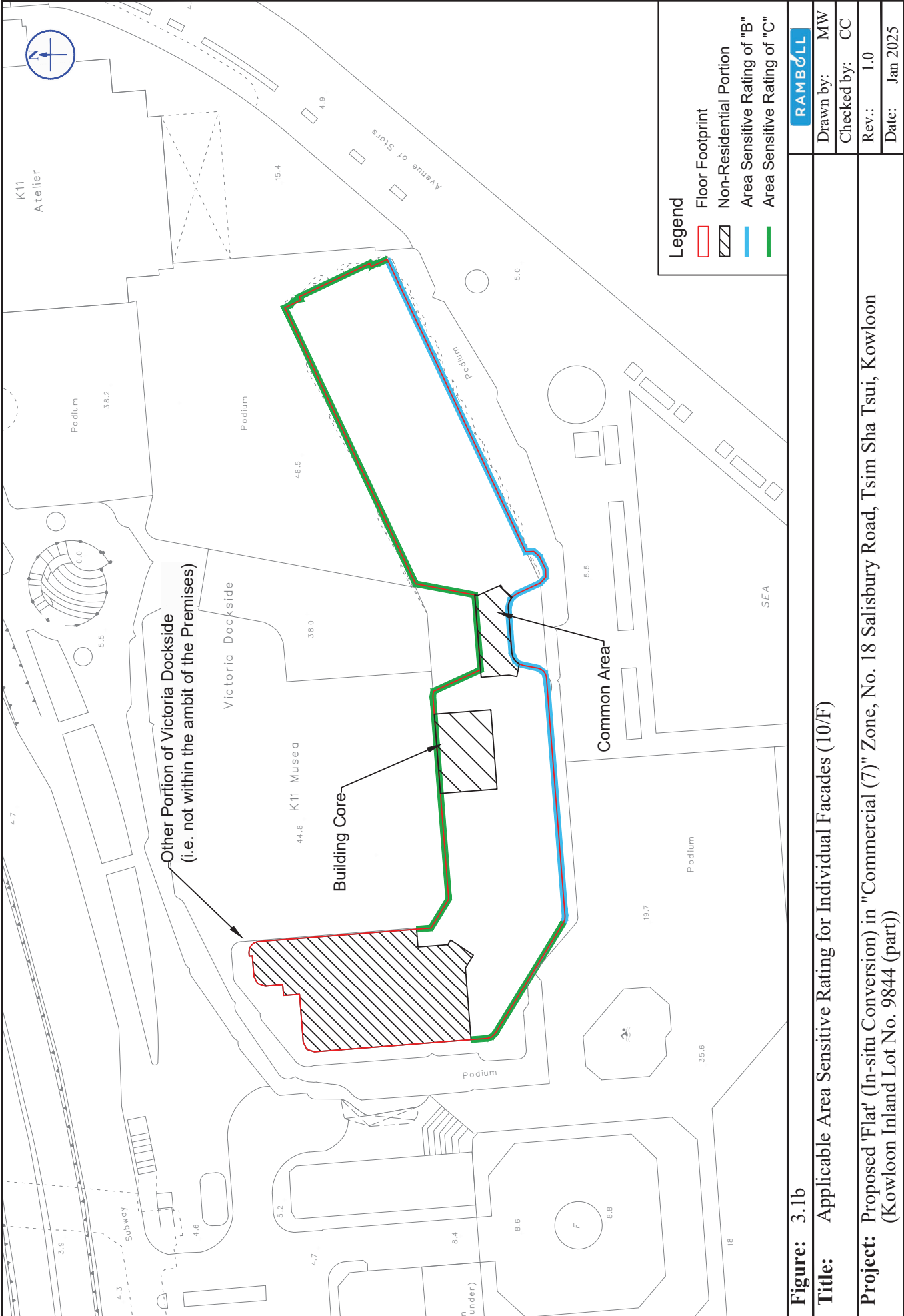




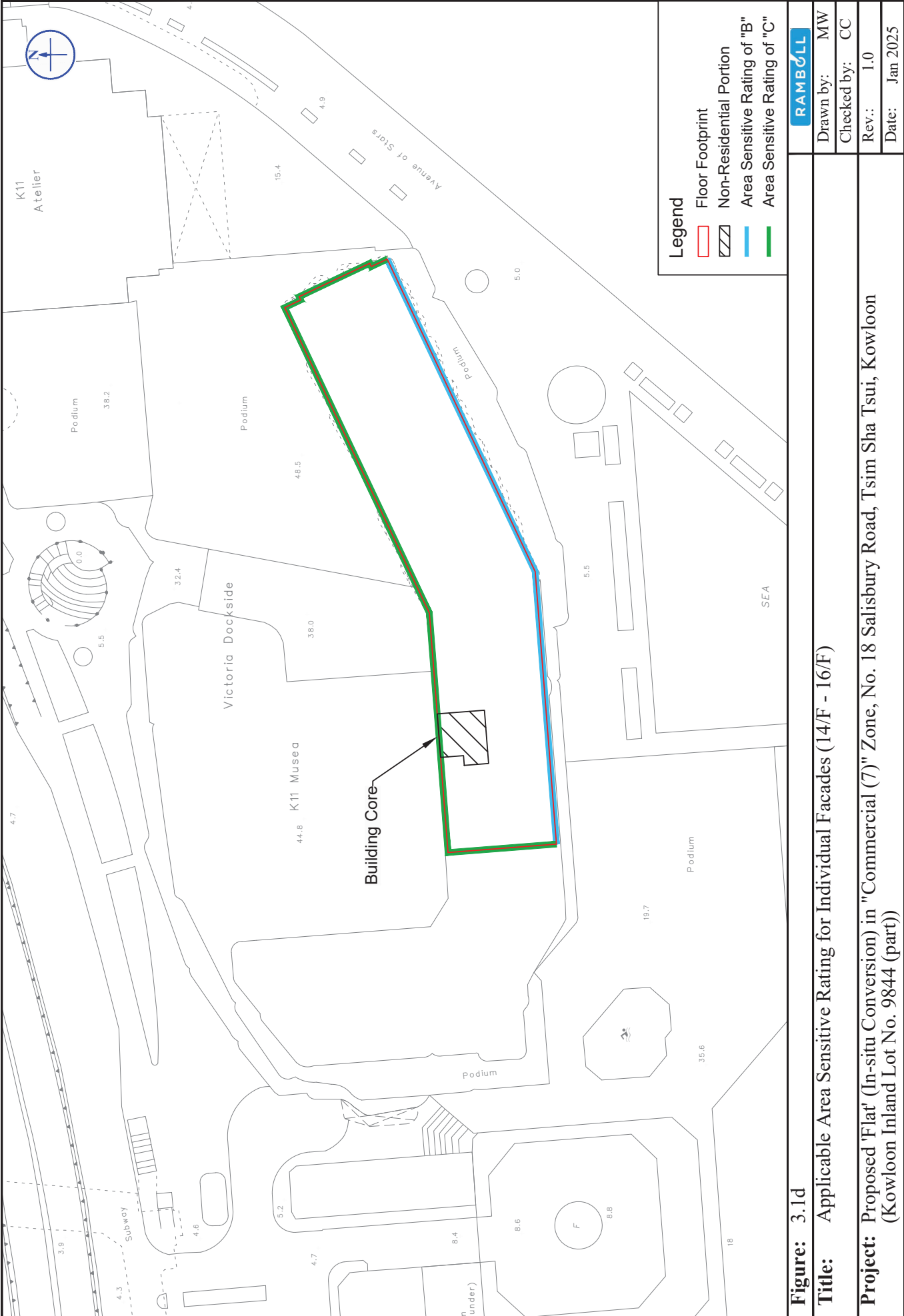


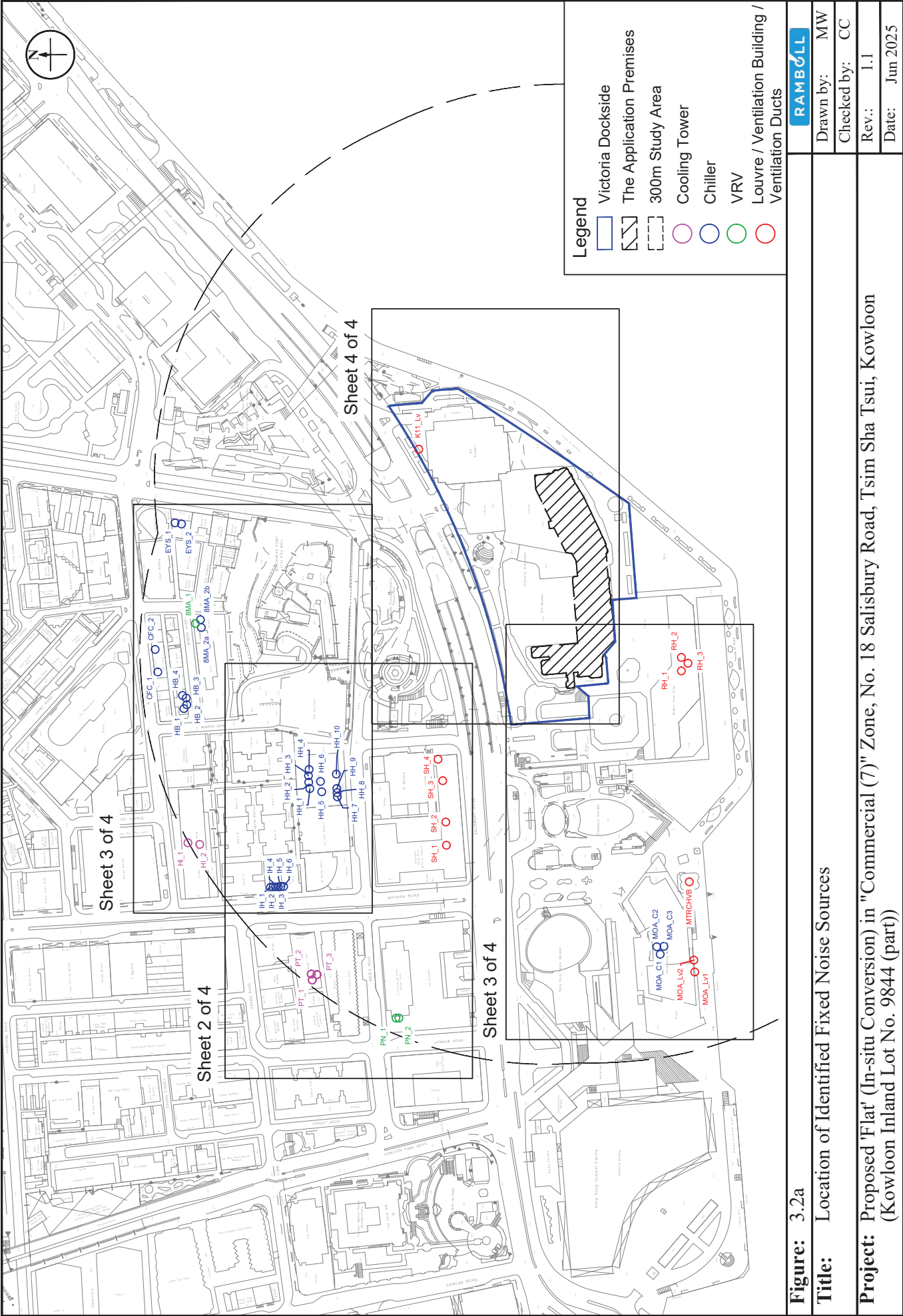












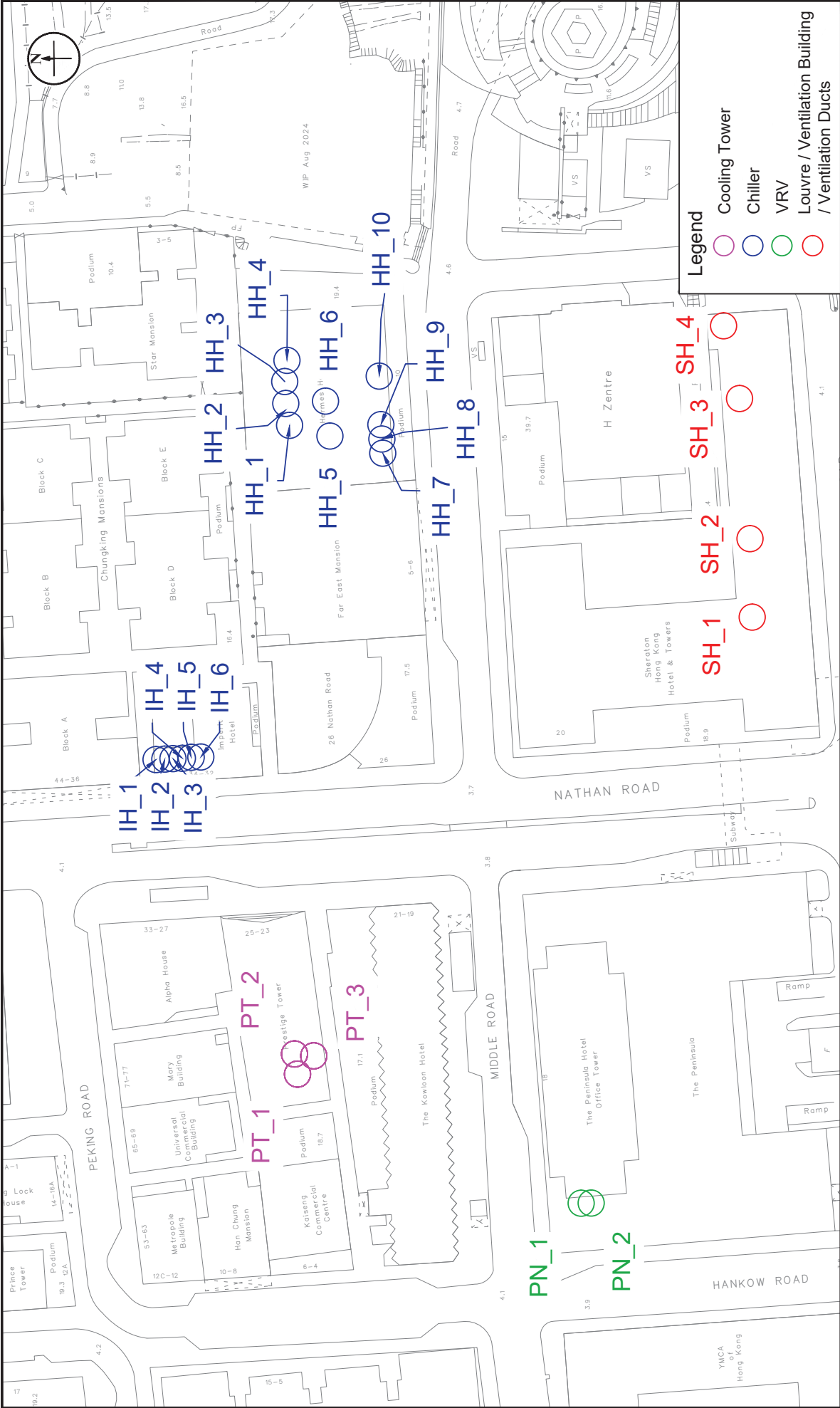


Figure: 3.2c	
Title: Location of Identified Fixed Noise Sources (Sheet 2 of 4)	
Project: Proposed 'Flat' (In-situ Conversion) in "Commercial (7)" Zone, No. 18 Salisbury Road, Tsim Sha Tsui, Kowloon (Kowloon Inland Lot No. 9844 (part))	
Drawn by:	MW
Checked by:	CC
Rev.:	1.1
Date:	Jan 2025

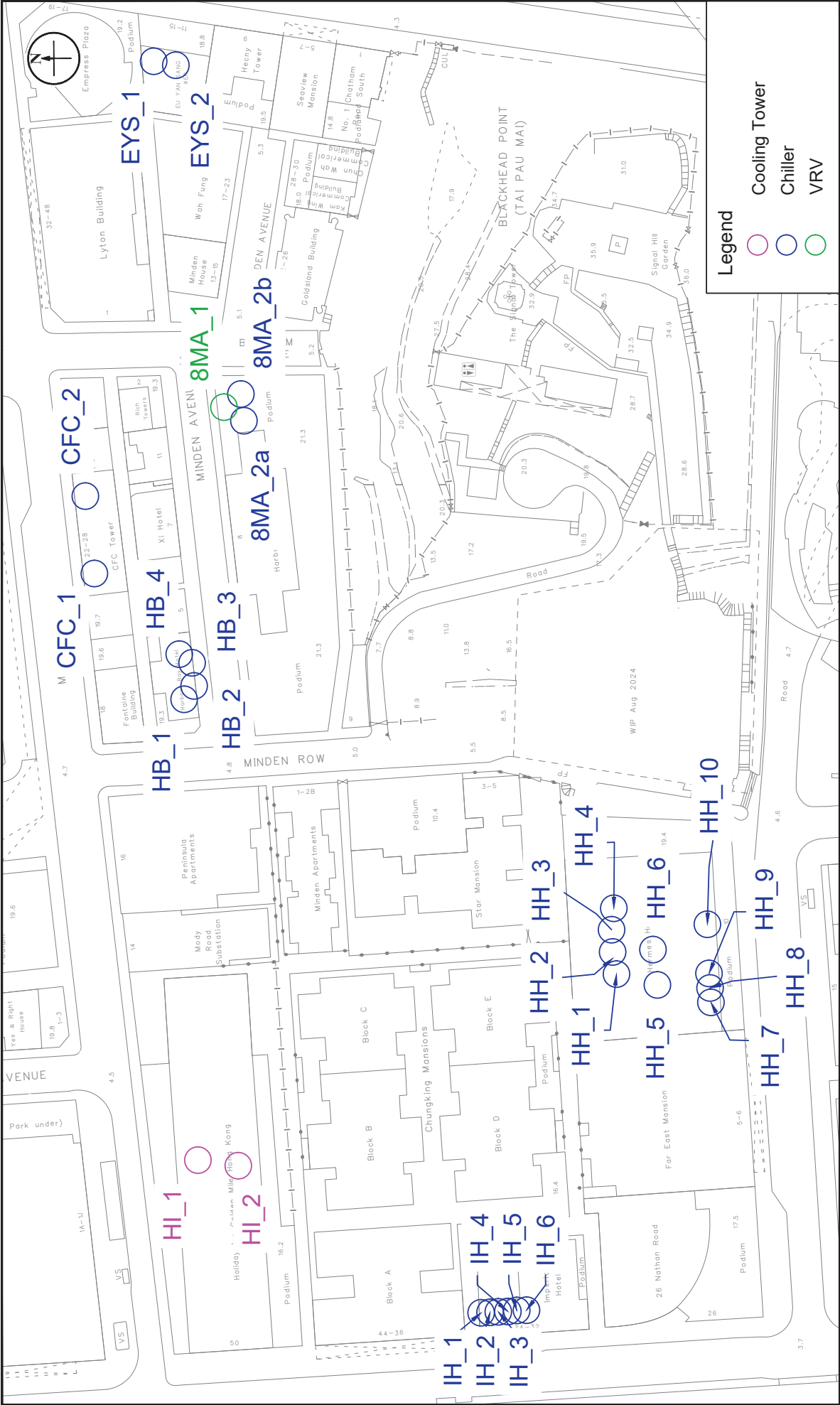
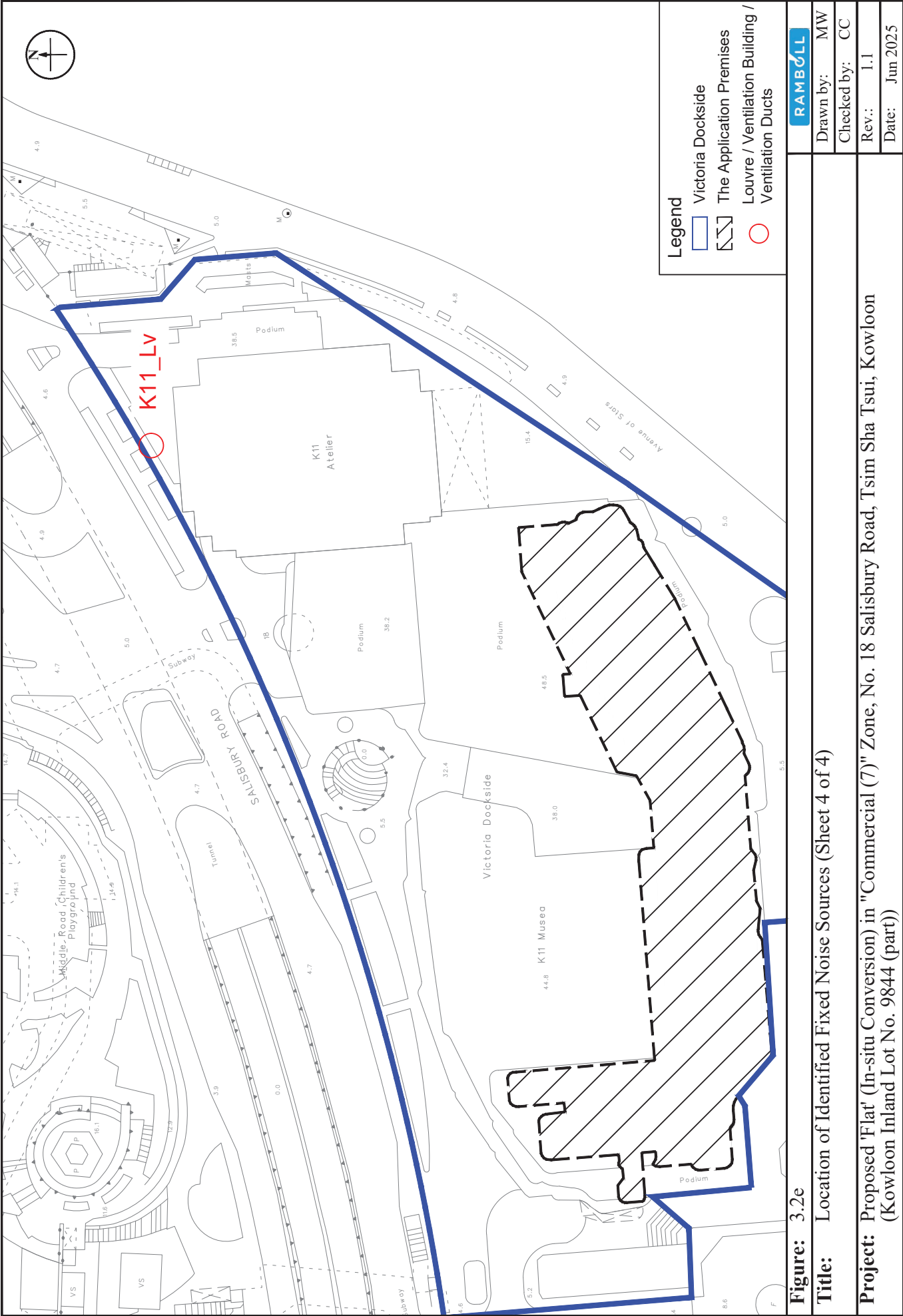
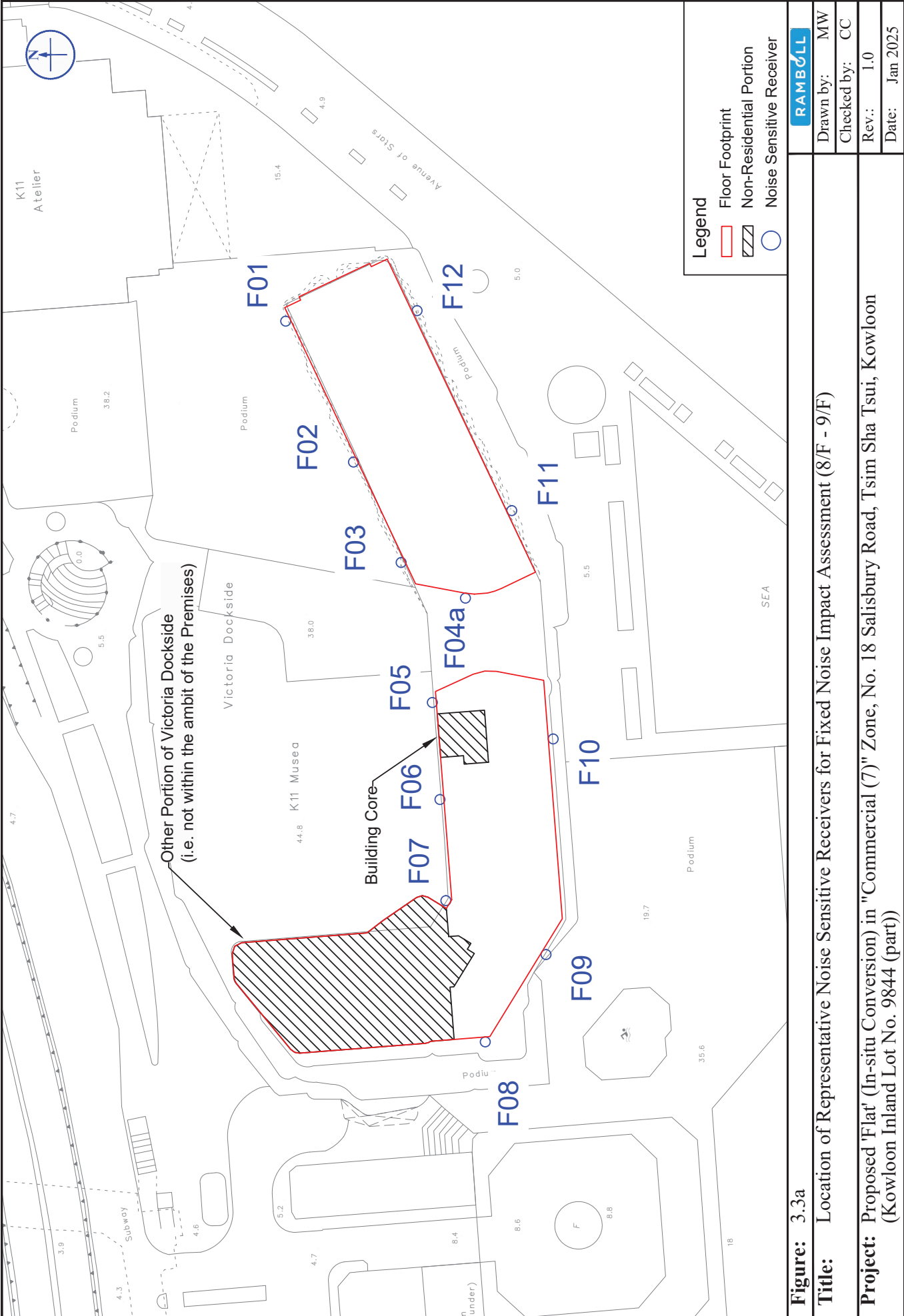
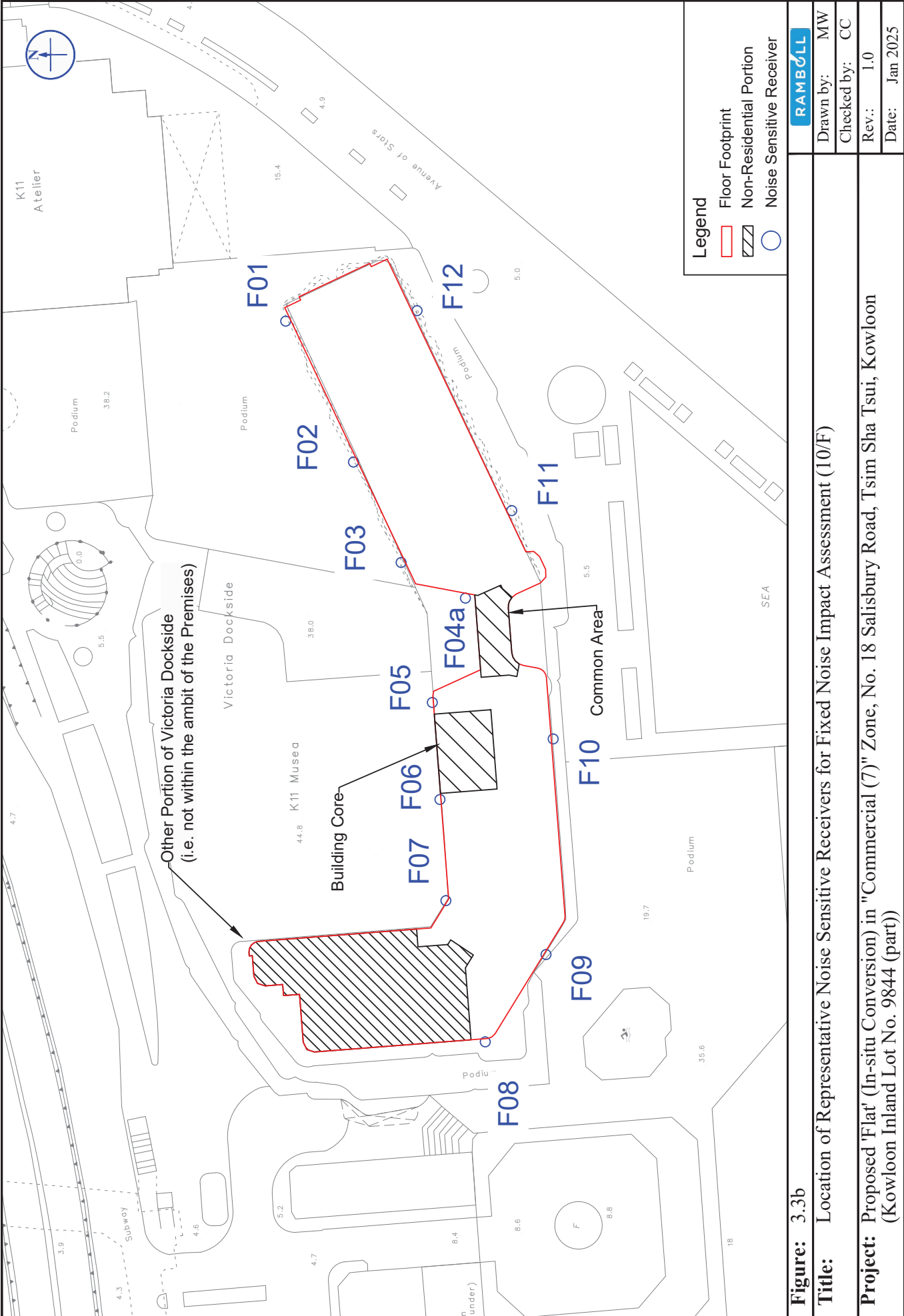
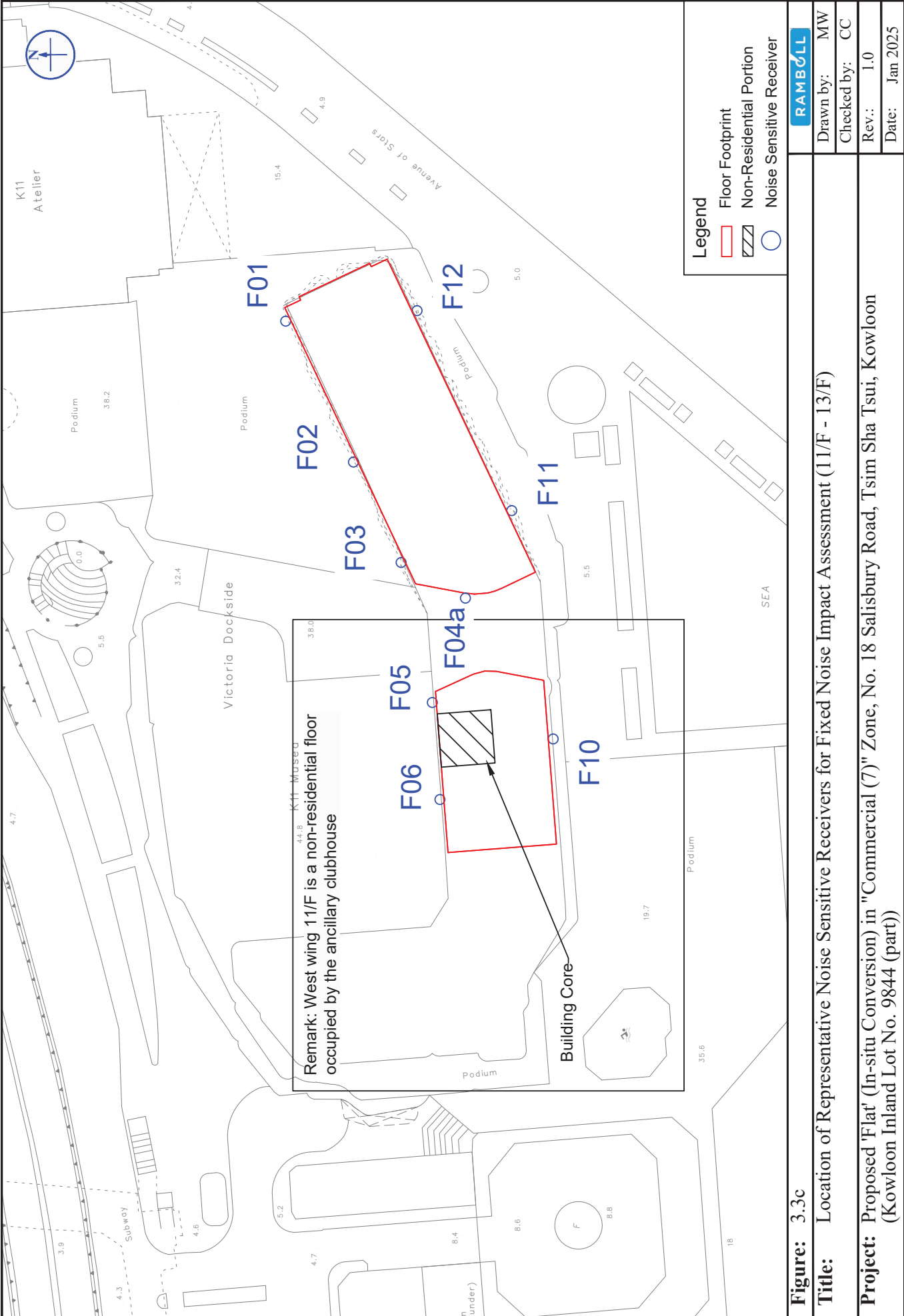


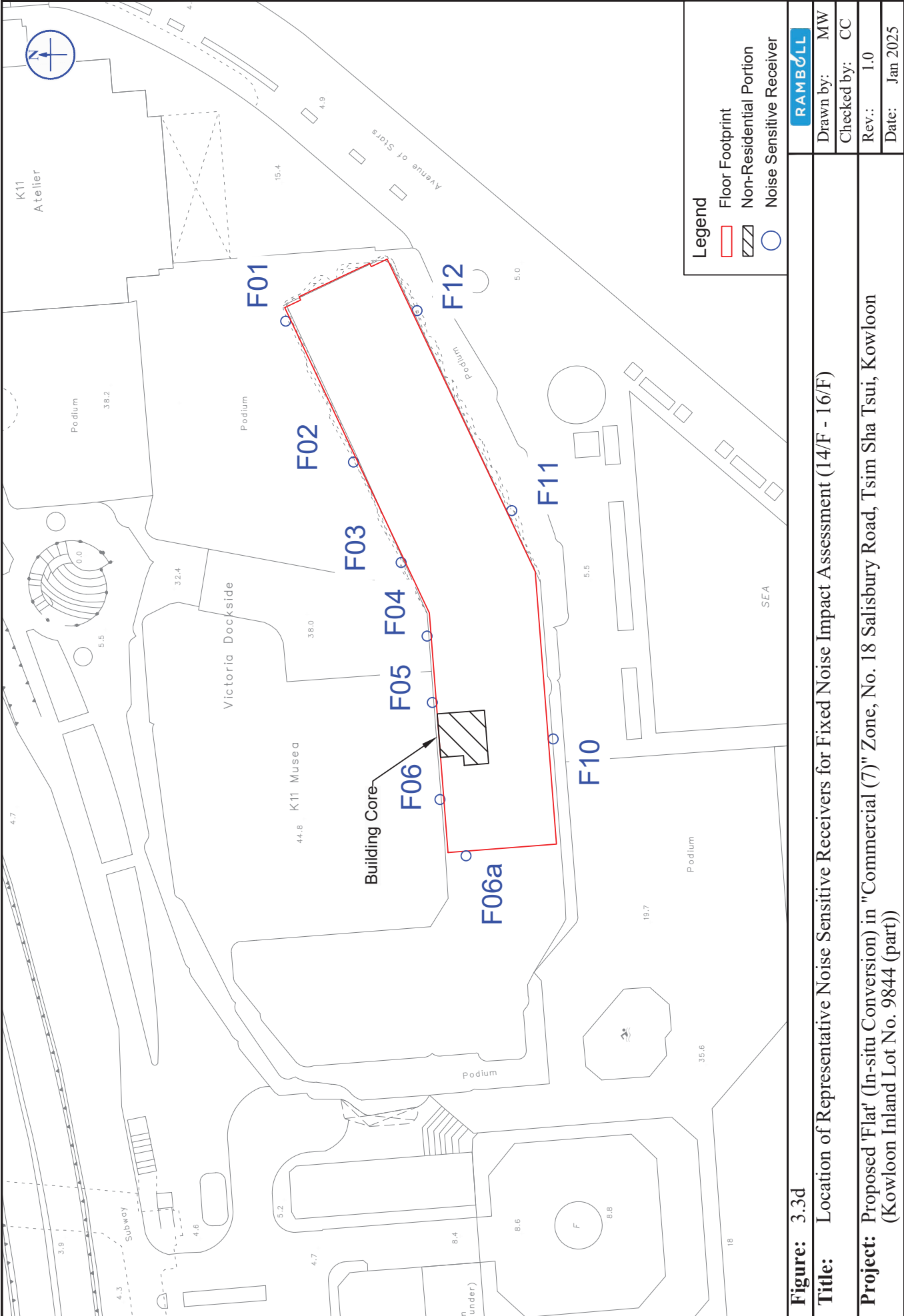
Figure: 3.2d	
Title: Location of Identified Fixed Noise Sources (Sheet 3 of 4)	
Project: Proposed 'Flat' (In-situ Conversion) in "Commercial (7)" Zone, No. 18 Salisbury Road, Tsim Sha Tsui, Kowloon (Kowloon Inland Lot No. 9844 (part))	
Drawn by:	MW
Checked by:	CC
Rev.:	1.1
Date:	Jun 2025

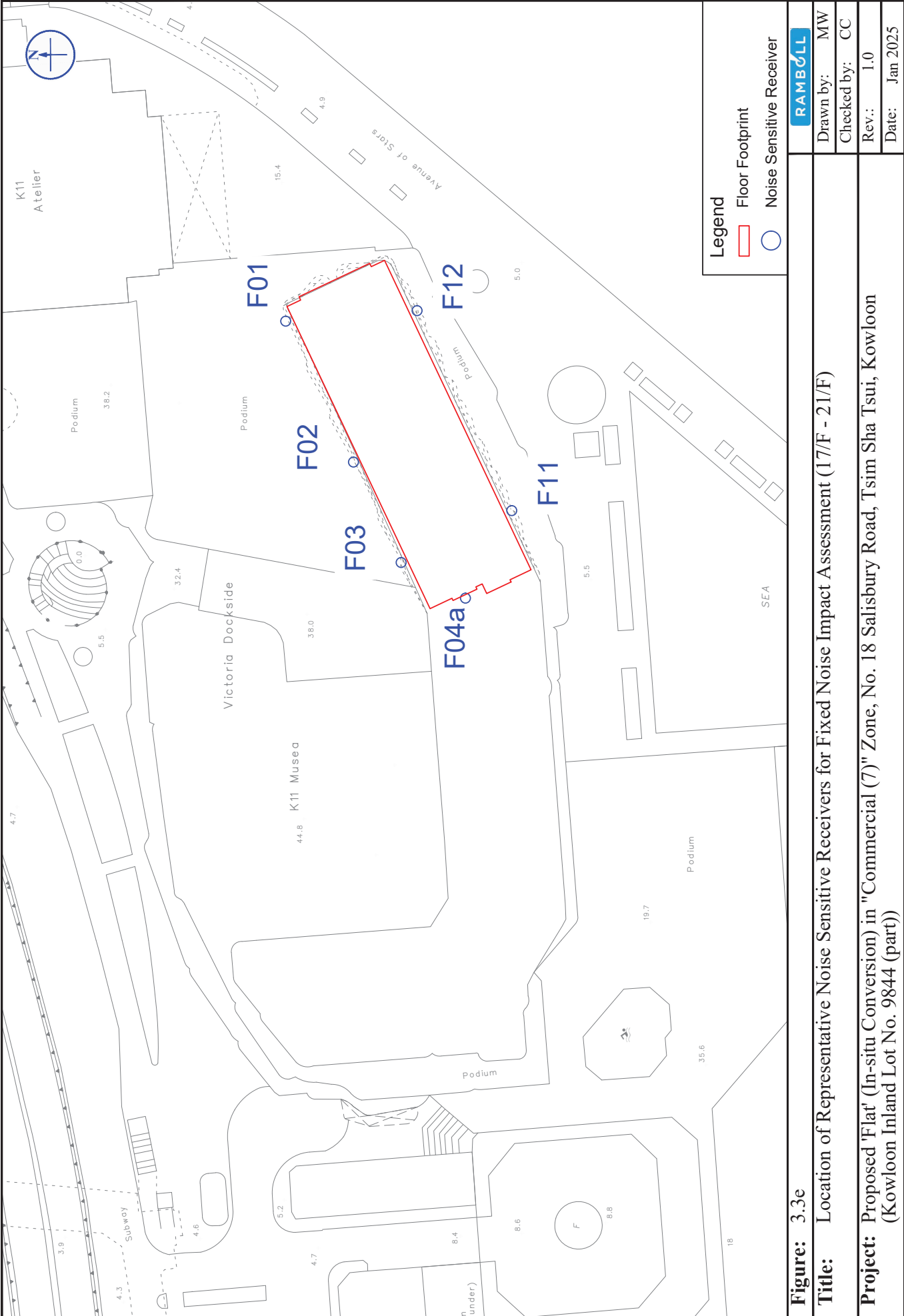












Appendix 2.1 Traffic Forecast for Year 2044 and Endorsement by TD

From: [Ming Yeung KWAN](#)
To: [CHAN Kelvin](#)
Subject: RE: Traffic Forecast for Road Traffic Noise Impact Assessment and Air Quality Impact Assessment For Proposed "Flat" (In-Situ Conversion) in "Commercial (7)" Zone, No. 18 Salisbury Road, Tsim Sha Tsui, Kowloon (Kowloon Inland Lot No. 9844(Part))
Date: Thursday, October 9, 2025 10:11:52 AM
Attachments: [Proposed "Flat" \(In-Situ Conversion\) - Traffic Forecast for EA_20251008.pdf](#)

Dear Kelvin,

I have no further comment from traffic engineering viewpoint on the captioned report given that this report will only be used for TNIA and AQIA purposes.

Our comments on the TIA report should be addressed separately.

Best Regards,
Sunny KWAN
EK/YT, TEK
Transport Department
Tel.: 2399 2511

From: "CHAN Kelvin" <kchan2@systra.com>
To: "Ming Yeung KWAN" <mingyeungkwan@td.gov.hk>
Date: 08/10/2025 06:37 PM
Subject: RE: Traffic Forecast for Road Traffic Noise Impact Assessment and Air Quality Impact Assessment For Proposed "Flat" (In-Situ Conversion) in "Commercial (7)" Zone, No. 18 Salisbury Road, Tsim Sha Tsui, Kowloon (Kowloon Inland Lot No. 9844(Part))

Dear Sunny,

Thanks for your prompt reply.

Please find the attached revised Technical Note for your kind review and endorsement.
Should you have any queries regarding the captioned, please feel free to contact the undersigned at 2864 6462.
Regards,

Kelvin Chan
Associate
Tel: +852 2864 6462 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490



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From: Ming Yeung KWAN <mingyeungkwan@td.gov.hk>
Sent: Monday, October 6, 2025 8:38 AM
To: CHAN Kelvin <kchan2@systra.com>
Subject: RE: Traffic Forecast for Road Traffic Noise Impact Assessment and Air Quality Impact Assessment For Proposed "Flat" (In-Situ Conversion) in "Commercial (7)" Zone, No. 18 Salisbury Road, Tsim Sha Tsui, Kowloon (Kowloon Inland Lot No. 9844(Part))

Dear Kelvin,

Please include the statement below and provide the comparison in the report. Thanks.

Best Regards,
Sunny KWAN
EK/YT, TEK
Transport Department
Tel.: 2399 2511

From: "CHAN Kelvin" <kchan2@systara.com>
To: "Ming Yeung KWAN" <mingyeungkwan@td.gov.hk>
Date: 03/10/2025 06:40 PM
Subject: RE: Traffic Forecast for Road Traffic Noise Impact Assessment and Air Quality Impact Assessment For Proposed "Flat" (In-Situ Conversion) in "Commercial (7)" Zone, No. 18 Salisbury Road, Tsim Sha Tsui, Kowloon (Kowloon Inland Lot No. 9844(Part))

Dear Sunny,

Thanks for your prompt reply.

By comparing the traffic flows at the peak periods in both weekday and weekend for the road sections of TNIA and AQIA, it is found that the traffic flow in weekday is higher. Therefore, the current use of weekday peak hours data is considered representable for conducting TNIA and AQIA.

Regards,

Kelvin Chan

Associate

Tel: +852 2864 6462 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490



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From: Ming Yeung KWAN <mingyeungkwan@td.gov.hk>

Sent: Thursday, October 2, 2025 4:22 PM

To: CHAN Kelvin <kchan2@systara.com>

Subject: Re: Traffic Forecast for Road Traffic Noise Impact Assessment and Air Quality Impact Assessment For Proposed "Flat" (In-Situ Conversion) in "Commercial (7)" Zone, No. 18 Salisbury Road, Tsim Sha Tsui, Kowloon (Kowloon Inland Lot No. 9844(Part))

Dear Kelvin,

Please find my comment below on the captioned report:-

- In the TIA report for the S16 submission, survey data of weekend peak hours has been provided. Please justify the current use of weekday peak hours data is representable for conducting TNIA and AQIA.

Best Regards,
Sunny KWAN
EK/YT, TEK
Transport Department
Tel.: 2399 2511

From: "CHAN Kelvin" <kchan2@systara.com>

To: "mingyeungkwan@td.gov.hk" <mingyeungkwan@td.gov.hk>

Date: 30/09/2025 05:25 PM

Subject: Traffic Forecast for Road Traffic Noise Impact Assessment and Air Quality Impact Assessment For Proposed "Flat" (In-Situ Conversion) in "Commercial (7)" Zone, No. 18 Salisbury Road, Tsim Sha Tsui, Kowloon (Kowloon Inland Lot No. 9844(Part))

Dear Sunny,

There is a Section 16 Planning Application to convert the existing hotel-like serviced apartments at K11 ARTUS to a residential development at Kowloon Inland Lot No. 9844 in Tsim Sha Tsui. The proposed in-situ conversion of the development would be tentatively completed in year 2029.

In this regard, the Noise Impact Assessment and Air Quality Impact Assessment Studies have been carried out. We are pleased to submit herewith the Technical Note on the traffic data for your kind review and endorsement.

Should you have any queries regarding the captioned, please feel free to contact the undersigned at 2864 6462.

Thank you for your kind attention.

Regards,

Kelvin Chan

Associate

Tel: +852 2864 6462 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490



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Drawing No.1 - Index Plan for NIA

Year 2044 Peak Hour Traffic Forecast for NIA

Index No.	Road Name ⁽¹⁾	Direction	Road Type	AM Peak		PM Peak		Speed Limit (km/h)
				Total Flows ⁽²⁾ (Veh/hr)	HV% ⁽³⁾	Total Flows ⁽²⁾ (Veh/hr)	HV% ⁽³⁾	
11	Hankow Road	NB	LD	50	51%	100	65%	50
12B	Access Road (To Culture Centre)	SB	LD	50	31%	50	25%	50
17A	Nathan Road	NB	PD	350	44%	500	40%	50
17B	Nathan Road	SB	PD	650	54%	600	23%	50
18A	Nathan Road	NB	PD	600	39%	750	32%	50
18B	Nathan Road	SB	PD	900	44%	900	18%	50
21	Minden Row	NB	LD	100	56%	100	25%	50
22A	Minden Row	NB	LD	20 ⁽⁴⁾	67%	10 ⁽⁴⁾	29%	50
22B	Minden Row	SB	LD	10 ⁽⁴⁾	67%	10 ⁽⁴⁾	0%	50
23	Middle Road	NB	LD	250	15%	300	7%	50
24A	Access Road (From Regent Hotel)	NB	LD	50	8%	100	3%	50
24B	Access Road (To Regent Hotel)	SB	LD	50	7%	100	7%	50
26	Blenheim Avenue	SB	LD	100	48%	100	22%	50
27A	Blenheim Avenue	NB	LD	10 ⁽⁴⁾	13%	50	27%	50
27B	Blenheim Avenue	SB	LD	50	24%	50	11%	50
30A	Chatham Road South	NB	PD	350	45%	400	29%	50
30B	Chatham Road South	SB	PD	450	37%	600	33%	50
31A	Chatham Road South	NB	LD	300	4%	400	3%	50
31B	Chatham Road South	SB	LD	250	5%	450	1%	50
50	Mody Road	EB	LD	600	30%	800	12%	50
57	Minden Avenue	WB	LD	100	55%	100	24%	50
58A	Minden Avenue	EB	LD	50	35%	20 ⁽⁴⁾	15%	50
58B	Minden Avenue	WB	LD	50	40%	20 ⁽⁴⁾	7%	50
60	Middle Road	WB	LD	250	30%	300	18%	50
61	Middle Road	WB	LD	250	16%	300	7%	50
62A	Middle Road	EB	LD	100	4%	100	3%	50
62B	Middle Road	WB	LD	100	8%	100	3%	50
65A	Salisbury Road	EB	PD	1950	29%	1900	22%	50
65B	Salisbury Road	WB	PD	1300	29%	1650	15%	50
66	Salisbury Road	EB	PD	1950	28%	1850	19%	50
67	Salisbury Road	EB	PD	2200	30%	2000	17%	50
68	Salisbury Road	EB	PD	550	45%	500	29%	50
69	Salisbury Road	EB	PD	250	43%	250	24%	50
70	Salisbury Road (Underpass)	EB	PD	1500	24%	1250	12%	50
71	Salisbury Road	WB	PD	100	35%	50	12%	50
72	Salisbury Road (Underpass)	WB	PD	250	14%	500	12%	50
73	Salisbury Road	WB	PD	1300	29%	1750	19%	50
74	Salisbury Road	WB	PD	1100	28%	1250	22%	50
75	Access Road (Hong Kong Culture Centre)	WB	LD	50	25%	50	25%	50
76	Access Road (Legoland Taxi Lay-by)	WB	LD	10 ⁽⁴⁾	0%	10 ⁽⁴⁾	0%	50
77	Salisbury Road	EB	PD	400	38%	400	26%	50
78	Access Road (Ingress to Mody Road B/T)	NB	LD	50	100%	50	100%	50
79	Salisbury Road	EB	PD	50	64%	50	60%	50
80	Salisbury Road	EB	PD	250	49%	250	37%	50
81	Chatham Road South	SB	PD	50	57%	100	26%	50
82	Salisbury Road	WB	PD	850	25%	1050	16%	50

Notes:

- 1 Refer to Drawing No 1;
- 2 Traffic flows are rounded up to the nearest 50 veh/hr;
- 3 Heavy vehicles include all categories of motor vehicles except private car, taxi and motorcycle.

Appendix 2.2 Result of Road Traffic Noise Impact Assessment

Predicted Road Traffic Noise (L10, dBA) at Selected Sensitive Receivers for PM Peak Flow

Base Case

West Wing		W1-01	W1-02	W1-03	W1-04	W1-05	W1-06	W1-07	W1-08	W1-09	W1-10	W1-11	W1-12	W1-13	W1-14	W1-15	W1-16	W1-17	W1-18	W1-19	W1-20	W1-21	W1-22	W1-23	W1-24	W1-25	W1-26	W1-27	W1-28	W1-29	
Floor	mpd	49.0	52	43	43	43	43	43	44	52	52	51	52	53	54	56	59	64	64	69	50	50	50	50	50	50	50	50	51	53	53
	8/F	49.0	52	43	43	43	43	43	44	52	52	51	52	53	54	56	59	64	64	69	50	50	50	50	50	50	50	51	53	53	
	9/F	51	42	42	42	42	42	42	43	51	51	50	51	52	53	55	58	63	63	68	49	49	49	49	49	49	49	51	51	51	
Expenditure	Max Noise Level	54	53	46	46	46	46	47	47	56	57	59	60	61	63	64	67	68	68	73	53	53	53	53	53	53	54	55	56	56	55
	Expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Rear		W2-01	W2-02	W2-03	W2-04	W2-05	W2-06	W2-07	W2-08	W2-09	W2-10	W2-11	W2-12	W2-13	W2-14	W2-15	W2-16	W2-17	W2-18	W2-19	W2-20	W2-21	W2-22
Road	mpd	60.2	54	40	40	40	45	46	59	61	62	63	64	64	66	68	68	55	55	56	56	56	57
10/F	56.4	54	40	40	40	40	45	46	59	61	62	63	64	64	66	68	68	55	55	56	56	56	57
Min Noise Level	54	40	40	40	40	40	45	46	59	61	62	63	64	64	66	68	68	55	55	56	56	56	57
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rear		W3-01	W3-02	W3-03	W3-04	W3-05	W3-06	W3-07	W3-08	W3-09	W3-10	W3-11	W3-12	W3-13	W3-14	W3-15	W3-16
Roof	mpd	57	56	43	43	44	44	44	51	52	59	59	59	59	59	58	57
12/F	63.5	57	57	47	47	47	47	48	55	56	60	60	60	60	60	59	58
13/F	66.8	57	57	47	47	47	48	48	55	56	60	60	60	60	60	59	58
Min Noise Level		57	57	47	47	47	47	48	55	56	60	60	60	60	60	59	58
Exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

East Wing

Rear		E1-01	E1-02	E1-03	E1-04	E1-05	E1-06	E1-07	E1-08	E1-09	E1-10	E1-11	E1-12	E1-13	E1-14	E1-15	E1-16	E1-17	E1-18	E1-19	E1-20	E1-21	E1-22	E1-23	E1-24	E1-25	E1-26	E1-27	E1-28	E1-29	E1-30	E1-31	E1-32	E1-33
Road	mpd	60.2	42	42	42	41	41	42	42	42	42	42	42	42	42	44	45	48	49	51	49	48	47	47	47	47	47	47	47	47	47	44	44	43
10/F	56.4	42	42	42	42	41	41	42	42	42	42	42	42	42	44	45	48	49	51	49	48	47	47	47	47	47	47	47	47	47	47	44	44	43
9/F	52.8	45	44	44	44	44	44	44	44	44	44	44	44	45	45	45	46	47	51	52	54	52	50	49	49	49	49	49	49	49	47	46	46	
Min Noise Level	45	44	44	44	44	44	44	44	44	44	44	44	44	45	45	45	46	47	51	52	54	52	50	49	49	49	49	49	49	49	47	46	46	
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

		E2-01	E2-02	E2-03	E2-04	E2-05	E2-06	E2-07	E2-08	E2-09	E2-10	E2-11	E2-12	E2-13	E2-14	E2-15	E2-16	E2-17	E2-18	E2-19	E2-20	E2-21	E2-22	E2-23	E2-24	E2-25	E2-26	E2-27	E2-28	E2-29	E2-30	E2-31	E2-32	E2-33
Rear	mpd	43	42	42	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
10/F	56.4	43	42	42	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
Max Noise Level	43	42	42	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rear		E3-01	E3-02	E3-03	E3-04	E3-05	E3-06	E3-07	E3-08	E3-09	E3-10	E3-11	E3-12	E3-13	E3-14	E3-15	E3-16	E3-17	E3-18	E3-19	E3-20	E3-21	E3-22	E3-23	E3-24	E3-25	E3-26	E3-27	E3-28	E3-29	E3-30	E3-31	E3-32	E3-33
Road	mpd	44	43	43	40	40	40	40	40	40	40	40	40	40	40	40	45	48	55	56	57	56	54	53	53	53	53	54	54	54	48	47	46	
11/F	60.2	44	43	43	40	40	40	40	40	40	40	40	40	40	40	40	45	48	55	56	57	56	54	53	53	53	53	54	54	54	48	47	46	
12/F	63.5	46	45	45	42	42	42	42	43	43	43	43	43	43	43	47	51	56	57	58	58	57	56	55	55	55	55	56	56	57	57	50	50	48
13/F	66.8	46	45	45	42	42	42	42	43	43	43	43	43	43	43	47	51	56	57	58	58	57	56	55	55	55	55	56	56	57	57	50	50	48
Min Noise Level	46	45	45	42	42	42	42	42	43	43	43	43	43	43	43	47	51	56	57	58	58	57	56	55	55	55	55	56	56	57	57	50	50	48
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Combined Tower

Rear		S4-01	S4-02	S4-03	S4-04	S4-05	S4-06	S4-07	S4-08	S4-09	S4-10	S4-11	S4-12	S4-13	S4-14	S4-15	S4-16	S4-17	S4-18	S4-19	S4-20	S4-21	S4-22	S4-23	S4-24	S4-25	S4-26	S4-27	S4-28	S4-29	S4-30	S4-31	S4-32	S4-33	
Road	mpd	47	45	47	45	39	39	39	39	39	39	39	39	39	39	39	39	39	40	42	43	43	43	43	43	43	44	44	44	44	44	44	44	44	44
10/F	70.1	47	45	47	45	39	39	39	39	39	39	39	39	39	39	39	39	39	40	42	43	43	43	43	43	44	44	44	44	44	44	44	44	44	
15/F	73.4	48	47	47	47	39	39	39	39	39	39	39	39	39	39	39	39	40	42	43	43	43	43	43	43	44	44	44	44	44	44	44	44	44	
16/F	76.7	50	48	48	48	39	39	39	39	39	39	39	39	39	39	39	42	44	44	45	45	45	45	46	46	46	46	47	47	47	47	47	47		
Max Noise Level	50	48	48	48	48	39	39	39	39	39	39	39	39	39	39	39	42	44	44	45	45	45	45	46	46	46	46	47	47	47	47	47	47		
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Rear		S4-28	S4-29	S4-30	S4-31	S4-32	S4-33	S4-34	S4-35	S4-36	S4-37	S4-38	S4-39	S4-40	S4-41	S4-42	S4-43	S4-44	S4-45	S4-46	S4-47	S4-48	S4-49	S4-50	S4-51	S4-52	S4-53	S4-54	S4-55	S4-56	S4-57	S4-58	S4-59	S4-60
Road	mpd	59	62	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
14/F	70.1	59	62	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
15/F	71.4	61	63	63	62	62	62	62	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
16/F	76.7	62	65	64	64	63	63	63	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
Min Noise Level	62	65	64	64	64	63	63	63	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
Exceedance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Rear		U5-01	U5-02	U5-03	U5-04	U5-05	U5-06	U5-07	
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Appendix 3.1 Derived Sound Power Level of Fixed Noise Sources

Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Measurement Date: 24 Oct 2024 (Thu) 1430 – 1455 Weather Condition: Sunny Noise Source ID: MTRCHVB	Noise measurement was carried out at the edge of the walkway facing the exhaust. The sound pressure level is taken when the ventilation shaft is active for a conservative approach. 
---	---

Sound Level meter: Norsonic 139	Sound Calibrator: Norsonic 1256
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Deduced Sound Power Level for the Ventilation Building (when active)

Activity	SPL, dB(A)	Background Noise, dB(A)	Calculated SPL, dB(A)	Measurement distance (D), m	Derived SWL, dB(A)*
Ventilation	66.4	58.6	65.7	10.9	94.4

Remark:
* Derived SWL = SPL + 20 x log (D) + 8

Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Measurement Date: 24 Oct 2024 (Thu) 1600 – 1630 Weather Condition: Clear Noise Source ID:K11_Lv	Noise measurements were conducted for the louver at K11 Atelier on Tsim Sha Tsui East Waterfront Podium Garden directly facing the louver. 
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Deduced Sound Power Level for the Louver

Activity	SPL, dB(A)	Background Noise, dB(A)	Calculated SPL, dB(A)	Measurement distance (D), m	Derived SWL, dB(A)*
Louver	65.8	61.1	64.0	66.5	108.5

Remark:

* Derived SWL = SPL + 20 x log (D) + 8

Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Measurement Date: 29 Nov 2024 (Fri) 1300 – 1400 Weather Condition: Clear Noise Source ID:MOA_Lv1, MOA_Lv2	Noise measurements were conducted for the louvers at Hong Kong Museum of Arts in accordance with the standard acoustical principles and “International Standard ISO 3746: Acoustics – Determination of sound power level of noise sources using sound pressure – survey method using an enveloping measurement surface over a reflecting plane”. 
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Deduced Sound Power Level for the Louver

(Please refer to the ISO:3746 Calculation Sheet in this Appendix.)

Sound Power Measurement Calculation Sheet
To: ISO 3746 (Survey Method)

Project No.	TSTVD
Measurement Date & Time:	28 November 2024
Type of Sound Source:	Louver
Operation Conditions:	Stable

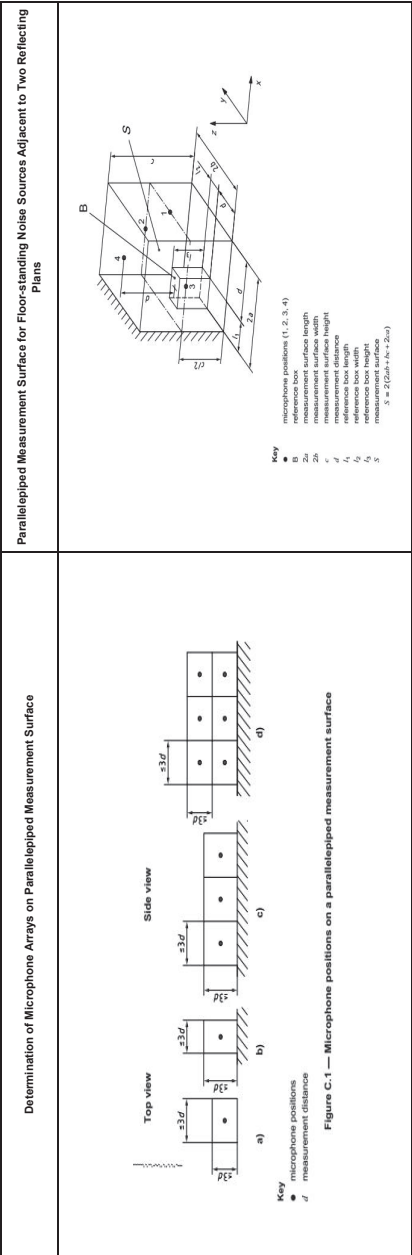
Overall, dB(A)				MOA_Lv1	MOA_Lv2
Raw Data	$\overline{L'_{pA}(ST)} = 10 \lg \left[\frac{1}{N_M} \sum_{i=1}^{N_M} 10^{0.1 L'_{pA,i}(ST)} \right] \text{ dB}$	Averaged $L'_{pA}(ST)$	Averaged $L_{pA}(dB)$	80.7	81.3
				60.4	60.4

Surface Area	No. of reflecting plane:	3	2
	Parallel Measurement Surface, d (m):	1	1
	Surface Area of Measurement (m ²):	16.5	19.3

K _{1A} Correction	$\Delta L_{pA} = \overline{L'_{pA}(ST)} - \overline{L'_{pA}(B)}$	$\Delta L_{pA} = L'_{pA}(ST) - L_{pA}(dB)$	20.3	20.9
	$\Delta L_{pA} > 10 \text{ dB}$, K_{1A} is assumed equal to zero.	$\Delta L_{pA} > 10$	0	0
	$3 \text{ dB} \leq \Delta L_{pA} \leq 10 \text{ dB}$ $K_{1A} = -10 \lg \left(1 - 10^{-0.1 \Delta L_{pA}} \right) \text{ dB}$	$3 \leq \Delta L_{pA} \leq 10$		
	$\Delta L_{pA} < 3 \text{ dB}$, K_{1A} to be applied in this case is 3 dB	$\Delta L_{pA} < 3$		
		K_{1A}	0.0	0.0

K _{2A} Correction	$K_{2A} = 10 \lg \left[1 + 4 \frac{S}{A} \right] \text{ dB}$	$A = a S_v$	Outdoor Area	
		K_{2A}	0	

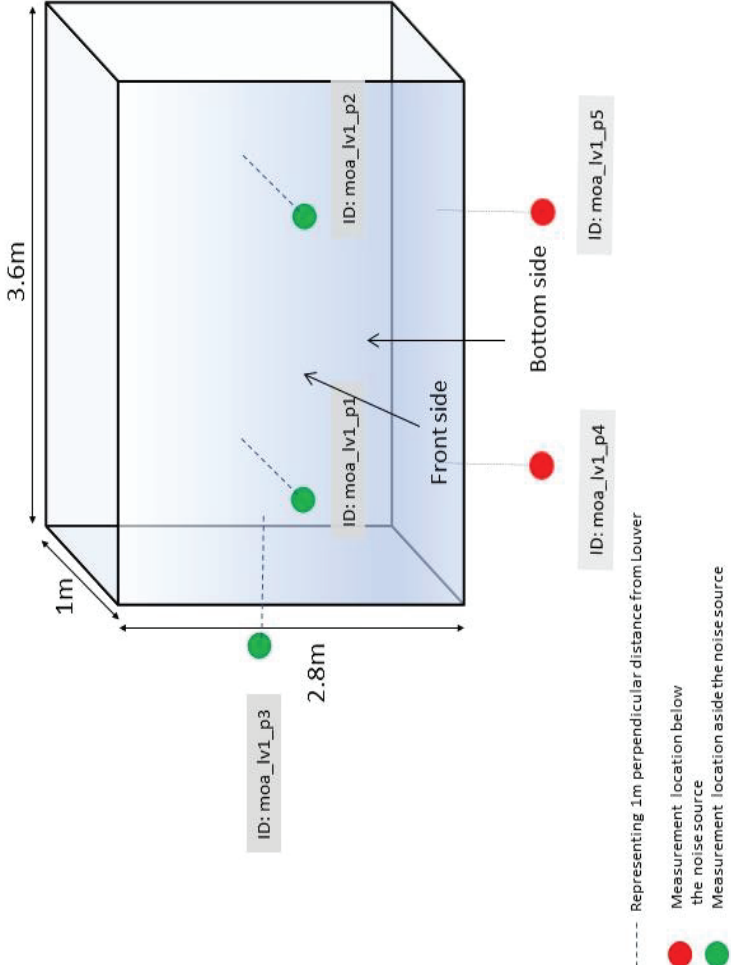
Results	$\overline{L_{pA}} = \overline{L'_{pA}(ST)} - K_{1A} - K_{2A}$	Corrected L_{pA}	80.7	81.3
	$L_{WA} = \overline{L_{pA}} + 10 \lg \frac{S}{S_0}$	Sound Power Level: L_{WA}	92.9	94.2



Noise Source ID: MOA_Lv1

Log no.	Sound Source	Overall, dB(A)	10 ^{1/10}
moa_lv1_p1	Front	81.94	156285480
moa_lv1_p2		82.30	169848733
moa_lv1_p3	Side	79.76	94630580
moa_lv1_p4	Bottom	79.55	90105180
moa_lv1_p5		79.20	83221531
L'pA(ST) = Average SPL			80.70828938

Noise source ID: MOA_Lv1
Measurement Points – Louver



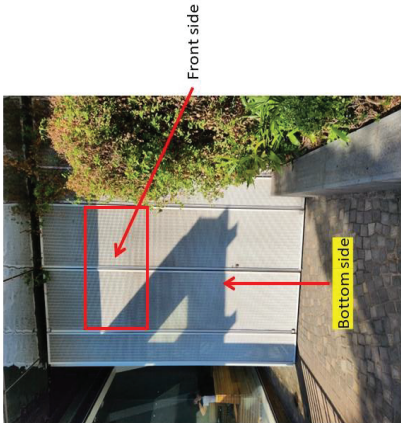
Dimension of measurement Surface

H (m)	L (m)	W (m)
= 2.8	1	3.6

Total Measurement Surface

$$= 2.8 \times 1 + 2.8 \times 3.6 + 1 \times 3.6$$
$$= 16.48 \text{ m}^2$$

Noise source ID: MOA_Lv1
Measurement Points – Louver



Noise Source ID: MOA_Lv2

Log no.	Sound Source	Overall, dB(A)	10 ^{l/10}
moa_lv2_p1	Front	81.35	136495389
moa_lv2_p2		84.05	254319602
moa_lv2_p3		80.80	120140680
moa_lv2_p4	Side	78.89	77458886
moa_lv2_p5		80.72	118130486
moa_lv2_p6	Bottom	80.38	109204290
L'pA(ST) = Average SPL			81.29864296

Dimension of measurement Surface

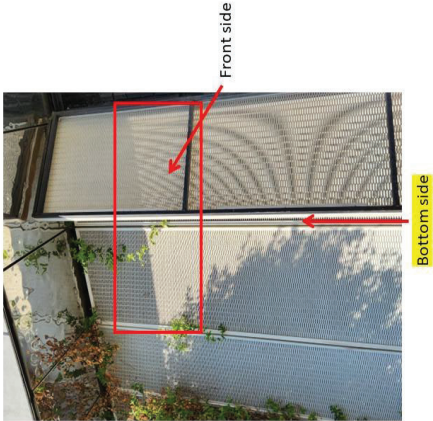
H (m)	L (m)	W (m)
= 2.8	1	3.6

Total Measurement Surface

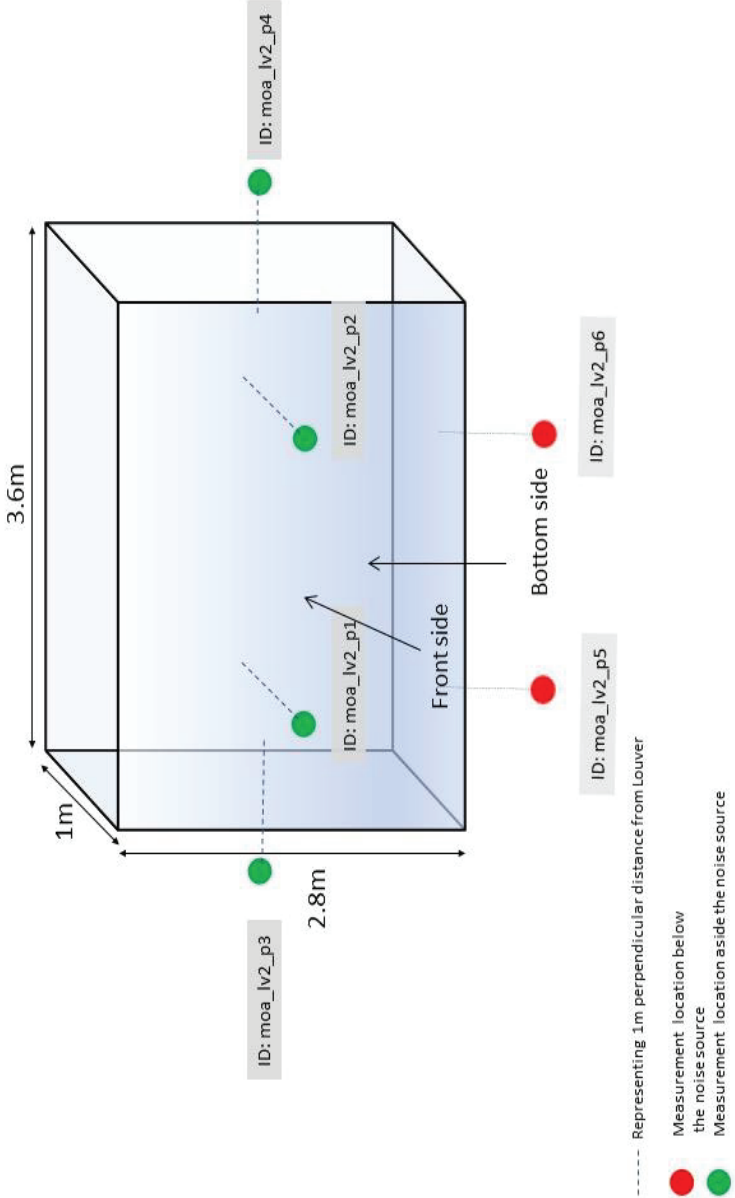
= 2.8*1*2 + 2.8*3.6 + 1*3.6

= 19.28 m²

Noise source ID: MOA_Lv2
Measurement Points – Louver



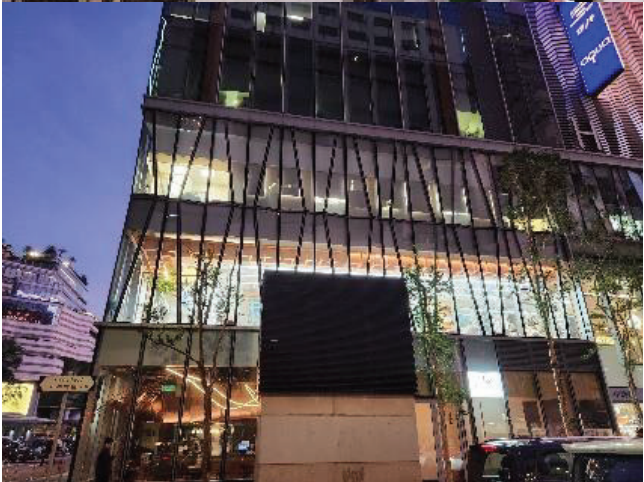
Noise source ID: MOA_Lv2
Measurement Points – Louver



Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Date of observation: 24 Oct 2024 (Thu) Weather Condition: Clear Noise Source ID: N/A	Louvre was identified at The Garden of Stars. No noticeable noise was observed on the day of visit. 
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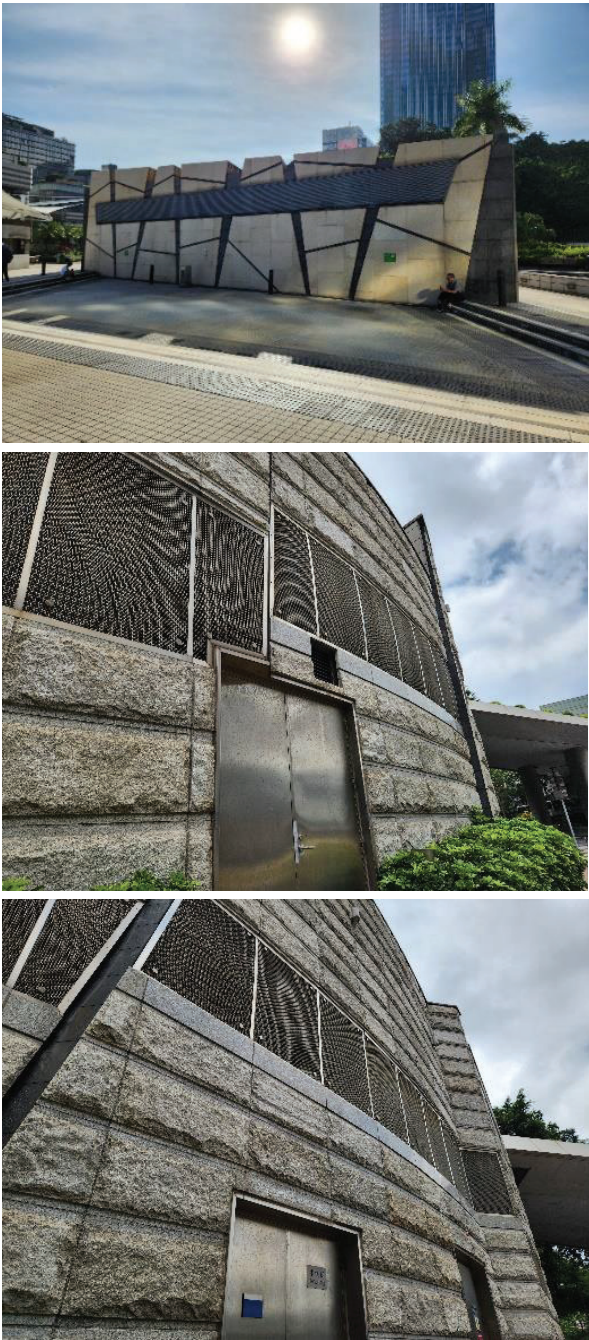
Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Date of observation: 24 Oct 2024 (Thu) Weather Condition: Clear Noise Source ID: N/A	Multiple louvres were identified around Exit K of Tsim Sha Tsui / Tsim Sha Tsui East Station. No noticeable noise was observed on both days of visit.  
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Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Date of observation: 24 Oct 2024 (Thu) Weather Condition: Clear Noise Source ID: N/A	More louvres were identified within the assessment area. No noticeable noise was observed on the day of visit.  The four photographs show a building facade with large black louvres. The top-left photo shows a street-level view with a yellow sign above the louvres. The top-right photo shows a closer view of the louvres. The bottom-left photo shows a view from a different angle, with a red sign visible on the left. The bottom-right photo shows a view from a distance, with a metal fence in the foreground.
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Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Date of observation: 24 Oct 2024 (Thu), 6 Jun 2025 (Fri) Weather Condition: Clear Noise Source ID: N/A	Louvre and ventilation ducts were identified within and around the structure near Exit K of Tsim Sha Tsui / Tsim Sha Tsui East Station. No noticeable noise was observed on the day of visit. 
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Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Date of observation: 6 Jun 2025 (Fri) Weather Condition: Clear Noise Source ID: N/A	Louvre was identified at K11 Musea. No noticeable noise was observed on the day of visit. 
--	---

Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Date of observation: 6 Jun 2025 (Fri) Weather Condition: Clear Noise Source ID: N/A	Louvre was identified at H-Zentre. No noticeable noise was observed on the day of visit. 
--	---

Appendix 3.1: Derived Sound Power Level of Fixed Noise Sources

Date of observation: 20 Nov 2024 (Wed) Weather Condition: Cloudy Noise Source ID: N/A	No noise sources are identified at the podium of K11 Artus. 
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**Appendix 3.2 Correspondence with Operator/ Owner of the Identified Fixed
Noise Sources**

Peter Leung

To: hkmoa_enquiries@lcsd.gov.hk
Cc: Calvin Chiu; Peter Leung
Subject: Request for Information of the Chillers and VRVs at Hong Kong Museum of Art

Dear Sir/Madam,

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact the undersigned at 3465 2815 (email: mcfwong@ramboll.com) or the our Mr. Peter Leung at 3465 2831 (email: peterleung@ramboll.com).

Kind regards

Michael Wong

Assistant Environmental Consultant

D +852 3465 2815
mcfwong@ramboll.com

Ramboll
21st Floor

BEA Harbour View Centre

56 Gloucester Road

Wan Chai

Hong Kong

<https://ramboll.com>

Ramboll Hong Kong Limited

Ref.: NWDSTVDEI00_0_0003L.24.docx

25 October 2024

By Fax (2739 8707) and Post

Management Office
Sheraton Hong Kong Hotel & Towers
20 Nathan Road, Tsim Sha Tsui
Kowloon, Hong Kong

Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers, Cooling Towers and VRVs at Sheraton Hotel & Towers**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers, cooling towers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Michael Wong at 3465 2815 (email: mcfwong@ramboll.com) or the undersigned at 3465 2831 (email: peterleung@ramboll.com).

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Ref.: NWDSTVDEI00_0_0004L.24.docx

25 October 2024

By Post

Management Office
H-Zentre
15 Middle Road, Tsim Sha Tsui
Kowloon, Hong Kong
Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers, Cooling Towers and VRVs at H-Zentre**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers, cooling towers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Michael Wong at 3465 2815 (email: mcfwong@ramboll.com) or the undersigned at 3465 2831 (email: peterleung@ramboll.com).

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Peter Leung

To: info@peninsula.com
Cc: Calvin Chiu; Peter Leung
Subject: Request for Information of the VRVs at The Peninsula Hong Kong

Dear Sir/Madam,

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. outdoor VRV units) are identified at the podium of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact the undersigned at 3465 2815 (email: mcfwong@ramboll.com) or the our Mr. Peter Leung at 3465 2831 (email: peterleung@ramboll.com).

Kind regards

Michael Wong

Assistant Environmental Consultant

D +852 3465 2815
mcfwong@ramboll.com

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Hong Kong

<https://ramboll.com>

Ramboll Hong Kong Limited

Ref.: NWDSTVDEI00_0_0006L.24.docx

25 October 2024

By Post

Management Office
Prestige Tower
23-25 Nathan Road,
Tsim Sha Tsui, Hong Kong

Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers, Cooling Towers and VRVs at Prestige Tower**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers, cooling towers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Michael Wong at 3465 2815 (email: mcfwong@ramboll.com) or the undersigned at 3465 2831 (email: peterleung@ramboll.com).

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Ref.: NWDSTVDEI00_0_0007L.24.docx

25 October 2024

By Post

Management Office
Alpha House,
27 Nathan Road,
Tsim Sha Tsui, Hong Kong

Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers, Cooling Towers and VRVs at Alpha House**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers, cooling towers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Michael Wong at 3465 2815 (email: mcfwong@ramboll.com) or the undersigned at 3465 2831 (email: peterleung@ramboll.com).

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Peter Leung

To: 26nathanroad@shkmgmt.com
Cc: Calvin Chiu; Peter Leung
Subject: Request for Information of the Chillers, Cooling Towers and VRVs at 26 Nathan Road

Dear Sir/Madam,

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers, cooling towers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact the undersigned at 3465 2815 (email: mcfwong@ramboll.com) or the our Mr. Peter Leung at 3465 2831 (email: peterleung@ramboll.com).

Kind regards

Michael Wong

Assistant Environmental Consultant

D +852 3465 2815
mcfwong@ramboll.com

Ref.: NWDSTVDEI00_0_0009L.24.docx

25 October 2024

By Post

Management Office
Hermes House
10 Middle Road, Tsim Sha Tsui,
Kowloon, Hong Kong

Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers, Cooling Towers and VRVs at Hermes House**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers, cooling towers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Michael Wong at 3465 2815 (email: mcfwong@ramboll.com) or the undersigned at 3465 2831 (email: peterleung@ramboll.com).

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Peter Leung

From: Wong, John KL <John.KL.Wong@PCPD.com>
Sent: 30 October 2024 11:43
To: Peter Leung; Michael Wong
Subject: Request Chiller Information at Hermes House for noise assessment study
Attachments: SKM_C45824103011130.pdf

Some people who received this message don't often get email from john.kl.wong@pcpd.com. [Learn why this is important](#)

Dear Mr Peter Leung,

Thank you for your request regarding the chiller information for the feasibility study and noise assessment. However, we regret to inform you that we are unable to provide this information at this time due to company policy. We appreciate your understanding."

Best Regards,
John Wong
Facilities Manager
Tel: (852) 2888 6696
Fax: (852) 2829 1789
E-mail : John.KL.Wong@pcpd.com

This message (and any attachments) may contain information that is confidential, proprietary, privileged or otherwise protected by law. The message is intended solely for the named addressee (or a person responsible for delivering it to the addressee). If you are not the intended recipient of this message, you are not authorized to read, print, retain, copy or disseminate this message or any part of it. If you have received this message in error, please destroy the message or delete it from your system immediately and notify the sender.

 Please consider the environment before printing this email

Ref.: NWDSTVDEI00_0_0010L.24.docx

25 October 2024

By Post

Management Office
Holiday Inn Golden Mile
50 Nathan Road, Tsim Sha Tsui
Kowloon, Hong Kong

Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers, Cooling Towers and VRVs at Holiday Inn Golden Mile**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers, cooling towers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

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Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Ref.: NWDSTVDEI00_0_0011L.24.docx

25 October 2024

By Post

Management Office
Fontaine Building,
18 Mody Road, Tsim Sha Tsui
Kowloon, Hong Kong

Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers, Cooling Towers and VRVs at Fontaine Building**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers, cooling towers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice on whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Michael Wong at 3465 2815 (email: mcfwong@ramboll.com) or the undersigned at 3465 2831 (email: peterleung@ramboll.com).

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Peter Leung

To: info@harbourbayhotel.com
Cc: Calvin Chiu; Peter Leung
Subject: Request for Information of the Chillers and VRVs at Harbour Bay Hotel

Dear Sir/Madam,

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers, cooling towers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact the undersigned at 3465 2815 (email: mcfwong@ramboll.com) or the our Mr. Peter Leung at 3465 2831 (email: peterleung@ramboll.com).

Kind regards

Michael Wong

Assistant Environmental Consultant

D +852 3465 2815
mcfwong@ramboll.com

Ramboll
21st Floor

BEA Harbour View Centre

56 Gloucester Road

Wan Chai

Hong Kong

<https://ramboll.com>

Ramboll Hong Kong Limited

Ref.: NWDSTVDEI00_0_0013L.24.docx

25 October 2024

By Post

Management Office
CFC Tower,
28 Mody Road, Tsim Sha Tsui
Kowloon, Hong Kong

Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers and VRVs at CFC Tower**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Michael Wong at 3465 2815 (email: mcfwong@ramboll.com) or the undersigned at 3465 2831 (email: peterleung@ramboll.com).

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Ref.: NWDSTVDEI00_0_0014L.24.docx

25 October 2024

By Post

Management Office
8 Minden Avenue,
8 Minden Avenue, Tsim Sha Tsui
Kowloon, Hong Kong

Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers and VRVs 8 Minden Avenue**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers and outdoor VRV units) are identified above the mall which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Michael Wong at 3465 2815 (email: mcfwong@ramboll.com) or the undersigned at 3465 2831 (email: peterleung@ramboll.com).

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Ref.: NWDSTVDEI00_0_0015L.24.docx

25 October 2024

By Post

Management Office
Eu Yan Sang Tower,
11-15 Chatham Road South, Tsim Sha Tsui
Kowloon, Hong Kong

Dear Sir/Madam,

**Proposed Development in Tsim Sha Tsui –
Request for Information of the Chillers and VRVs at Eu Yan Sang Tower**

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. chillers and outdoor VRV units) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, power rating, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 08 November 2024 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Michael Wong at 3465 2815 (email: mcfwong@ramboll.com) or the undersigned at 3465 2831 (email: peterleung@ramboll.com).

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Peter Leung
Senior Environmental Consultant

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Michael Wong

From: Michael Wong
Sent: 06 June 2025 17:09
To: regent.hongkong@ihg.com
Cc: Calvin Chiu; Peter Leung
Subject: Request for Information of the Fixed Noise Sources at Regent Hong Kong

Dear Sir/Madam,

We are the environmental consultant and responsible to assess noise impact from all fixed noisy equipment for a Project in Tsim Sha Tsui.

According to desktop review and recent site survey, several fixed noise sources (e.g. AHU/PAUs) are identified at the rooftop of the captioned building which is within our study area. In order to assess the potential noise impact to the Proposed Development, it would be grateful if you could provide the following information as available for the study:

- Inventory of equipment (e.g. MVAC outdoor units);
- The operation parameters of each type of equipment:
 - Quantity (e.g. 4 nos + 2 nos standby)
 - Operation Hours (e.g. 08:00 to 22:00 hours)
 - Location (layout / room layout plan)
 - Particulars (e.g. catalogue, brand and model, air flow rate, sound emission data as available)
 - Acoustic / sound insulation measures adopted (e.g. acoustic silencers / noise enclosures)

In addition, we would like to seek your advice for whether we are allowed to enter the captioned building to carry out on-site noise measurement at location close to the identified noisy equipment. Due to the tight programme of this project, your prompt response on or before 20 June 2025 would be very much appreciated.

Should you have any questions on this request, please do not hesitate to contact our Mr. Peter Leung at 3465 2831 (email: peterleung@ramboll.com) or the undersigned at 3465 2815 (email: mcfwong@ramboll.com).

Kind regards

Michael Wong

Assistant Environmental Consultant

D +852 3465 2815
mcfwong@ramboll.com

Ramboll
21st Floor

BEA Harbour View Centre

56 Gloucester Road

Wan Chai

Hong Kong

<https://ramboll.com>

Ramboll Hong Kong Limited

Appendix 3.3 Catalogue of Fixed Noise Sources

Air cooled multi-scroll chiller

Standard efficiency

Standard sound

- › Single refrigerant circuit (2 scroll compressors) with single evaporator
- › Compact design to allow easy indoor installation or retrofit operations
- › Micro channel heat exchanger technology reduces the amount of refrigerant used in the system, lowering environmental impact
- › Partial and total heat recovery option available
- › Stainless steel plate heat exchanger

EWAQ-G-SS 075: HB_2, HB_3 ,HH_2, HH_3, HH_4

Cooling only				EWAQ-G-SS	075	085	100	110	120	140	155
Cooling capacity	Nom.			kW	74.7	84.2	96.7	107	117	139	154
Power input	Cooling	Nom.		kW	27.7	31.2	35.0	39.5	43.4	51.1	57.2
Capacity control	Method										
	Minimum capacity			%	50	44	50	44	50	43	50
EER					2.70		2.76		2.70		2.73
ESEER					4.11	4.23	4.04	4.12	3.91	4.20	4.06
Dimensions	Unit	Height		mm							
		Width		mm							
		Depth		mm	2,140		2,680			3,200	
Weight	Unit			kg	681	792	923	953	982	1,037	1,066
	Operation weight			kg	692	802	934	963	993	1,054	1,085
Water heat exchanger	Type										
	Water flow rate	Cooling	Nom.	l/s	3.6	4.0	4.6	5.1	5.6	6.7	7.4
	Water pressure drop	Cooling	Nom.	kPa	15.5	27.3	36.9	31.6	36.0	27.5	25.8
	Water volume			l	5.60	4.90		5.60		8.10	9.40
Air heat exchanger	Type										
Compressor	Type										
	Quantity										
Fan	Type										
	Quantity				4			6		8	
	Air flow rate	Nom.		l/s	6,017	6,444		9,029		12,008	
	Speed			rpm				1,360			
Sound power level	Cooling	Nom.		dB(A)	83	85	87		89		
Sound pressure level	Cooling	Nom.		dB(A)	66	68	69		71		
Operation range	Air side	Cooling	Min.~Max.	°CDB				-10~42			
	Water side	Cooling	Min.~Max.	°CDB				-10~15			
Refrigerant	Type / GWP										
	Circuits	Quantity									
Refrigerant charge	Per circuit			kg/TCO ₂ Eq	8.0 / 15.7			10.0 / 20.9		12.0 / 25.1	
Piping connections	Evaporator water inlet/outlet (OD)							2" 1/2			
Unit	Starting current	Max		A	208	259	266	313	321	361	374
	Running current	Cooling	Nom.	A	54	58	62	70	79	89	102
		Max		A	64	69	77	84	92	108	122
Power supply	Phase/Frequency/Voltage			Hz/V				3~/50/400			

Air cooled multi-scroll chiller

High efficiency

Standard sound

- › Single refrigerant circuit (2 scroll compressors) with single evaporator
- › Compact design to allow easy indoor installation or retrofit operations
- › Micro channel heat exchanger technology reduces the amount of refrigerant used in the system, lowering environmental impact
- › Partial and total heat recovery option available
- › Stainless steel plate heat exchanger

EWAQ-G-XS 080: EYS_1, EYS_2

Cooling only				EWAQ-G-XS	080	090	105	115	130	150
Cooling capacity	Nom.			kW	79.8	90.3	105	117	131	149
Power input	Cooling	Nom.		kW	25.8	29.0	33.8	37.7	42.3	48.1
Capacity control	Method									
	Minimum capacity			%	50	44	50	44	50	43
EER					3.10	3.11	3.12		3.10	
ESEER					4.20	4.30	4.28	4.34	4.22	4.36
Dimensions	Unit	Height		mm		1,800			1,820	
		Width		mm			1,195			
		Depth		mm	2,680		3,200		3,800	
Weight	Unit			kg	734	850	991	1,020	1,086	1,123
	Operation weight			kg	744	860	1,007	1,035	1,102	1,144
Water heat exchanger	Type									
	Water flow rate	Cooling	Nom.	l/s	3.8	4.3	5.0	5.6	6.3	7.1
	Water pressure drop	Cooling	Nom.	kPa	25.7	32.7	20.3	19.9	25.4	20.6
	Water volume			l	5.58	4.86		5.60		8.10
Air heat exchanger	Type									
Compressor	Type									
	Quantity									
Fan	Type									
	Quantity									
	Air flow rate	Nom.		l/s	9,029	9,498	12,008		15,046	
	Speed			rpm			1,360			
Sound power level	Cooling	Nom.		dBA	84	85	87		89	
Sound pressure level	Cooling	Nom.		dBA	66	68	69		71	
Operation range	Air side	Cooling	Min.~Max.	°CDB				-10~45		
	Water side	Cooling	Min.~Max.	°CDB				-10~15		
Refrigerant	Type / GWP									
	Circuits									
Refrigerant charge	Per circuit			kg/TCO ₂ Eq	8.0 / 16.7			10.0 / 20.9		12.0 / 25.1
Piping connections	Evaporator water inlet/outlet (OD)							2" 1/2		
Unit	Starting current	Max		A	210	261	268	315	324	362
	Running current	Cooling	Nom.	A	52	56	61	69	76	87
		Max		A	65	71	78	86	96	109
Power supply	Phase/Frequency/Voltage			Hz/V				3~/50/400		

Air cooled multi-scroll inverter chiller

High efficiency

Standard sound

- › High efficiency **DC inverter scroll** compressors
- › Advanced compressor and fan design resulting in low operating sound levels
- › Dual independent refrigerant circuit for built-in redundancy and reliable operation
- › Wide operating range in cooling mode
- › Reduced footprint thanks to the **V-shaped frame** (EWAQ210GZXS & EWAQ190GZXR)
- › MicroTech III controller with superior control logic and easy interface

EWAQ-GZXS 320: HH_1

Cooling only				EWAQ-GZXS		210	270	320	340	400
Cooling capacity	Nom.			kW		201	270	323	340	395
Power input	Cooling	Nom.		kW		72.5	94.0	122	117	144
Capacity control	Method							Stepless		
	Minimum capacity			%		14.4	14.3	14.9	14.3	14.8
EER						2.77	2.87	2.64	2.92	2.75
ESEER						4.79	4.89	4.90	4.77	4.78
Dimensions	Unit	Height		mm		2,270		2,223		
		Width		mm		1,290		2,234		
		Depth		mm		4,450		3,560		4,460
Weight	Unit			kg		1,600	2,100	2,150	2,400	2,500
	Operation weight			kg		1,677	2,233	2,297	2,575	2,688
Water heat exchanger	Type							Plate heat exchanger		
	Water volume			l		29	61	75	79	92
	Water flow rate	Cooling	Nom.	l/s		9.6	12.9	15.4	16.3	18.9
	Water pressure drop	Cooling	Total	kPa		27	14	15	16	18
Air heat exchanger	Type							High efficiency fin and tube type with integral subcooler		
Compressor	Type							DC Inverter Scroll		
	Quantity					6	8	10		12
Fan	Type							Direct propeller		
	Quantity					4		6		8
	Air flow rate	Nom.		l/s		17,473		26,209		34,946
	Speed			rpm				920		
Sound power level	Cooling	Nom.		dBA		92		94		96
Sound pressure level	Cooling	Nom.		dBA		75		78		79
Operation range	Water side	Cooling	Min.~Max.	°CDB				-8~-20		
	Air side	Cooling	Min.~Max.	°CDB				-18~-43		
Refrigerant	Type / GWP							R-410A / 2,087.5		
	Circuits	Quantity				1		2		
Refrigerant charge	Per circuit			kg/TCO ₂ Eq		48.0 / 100.2		36.0 / 75.2		48.0 / 100.2
Piping connections	Evaporator water inlet/outlet (OD)					2.5"		4.5"		
Unit	Maximum starting current			A				2		
	Nominal running current (RLA)	Cooling		A		114	155	195	189	227
	Maximum running current			A		155	236	281	286	309
Power supply	Phase/Frequency/Voltage			Hz/V				3~/50/400		

Air cooled screw chiller

Standard efficiency

Standard sound

- › One refrigerant circuit with single screw compressor
- › **Compact design** with brazed plate heat exchanger
- › Large operation range (ambient temperature down to -18°C)
- › Water supply down to -15°C

EWAD-E-SS 410: HB_1, HB_4,
HH_7, HH_8, HH_9, 8MA_2a,
8MA_2b

Cooling only				EWAD-E-SS		100	120	140	160	180	210	260	310	360	410	
Cooling capacity	Nom.			kW	101	121	138	163	183	213	255	306	359	411		
Power input	Cooling	Nom.		kW	39.1	47.5	53.9	60.9	69.0	72.4	87.8	112	134	147		
Capacity control	Method				Stepless 25.0											
	Minimum capacity														%	
EER					2.58	2.54	2.55	2.67	2.64	2.95	2.90	2.73	2.67	2.80		
ESEER					2.84	2.83	2.66	2.84	2.73	2.93	3.08	2.96	3.13	3.24		
Dimensions	Unit	Height		mm	2,273						2,223					
		Width		mm	1,292						2,236					
		Depth		mm	2,165		3,065		3,965		3,070					
Weight	Unit			kg	1,684		1,861		2,086		2,919					
	Operation weight			kg	1,699		1,881		2,116		2,963					
Water heat exchanger	Type				Plate heat exchanger											
	Water volume			l	12	15	17	20	24	30	25	30	36	44		
	Water flow rate	Cooling	Nom.	l/s	4.8	5.8	6.6	7.8	8.7	10.2	12.2	14.6	17.2	19.7		
	Water pressure drop	Cooling	Nom.	kPa	24	25	23	24	22	21	47	48		45		
Air heat exchanger	Type				High efficiency fin and tube type with integral subcooler											
Compressor	Type				Single screw compressor										Asymmetric single screw compressor	
	Quantity				1											
Fan	Type				Direct propeller											
	Quantity				2		3		4		6					
	Air flow rate	Nom.		l/s	10,924	10,576	16,386	15,865	21,848	21,153	32,772		31,729			
	Speed			rpm	900											
Sound power level	Cooling	Nom.		dBA	92				93		94				95	
Sound pressure level	Cooling	Nom.		dBA	74						75				76	
Operation range	Water side	Cooling	Min.~Max.	°CDB	-15~15											
	Air side	Cooling	Min.~Max.	°CDB	-18~48											
Refrigerant	Type / GWP				R-134a / 1,430											
	Circuits			Quantity	1											
Refrigerant charge	Per circuit			kg/TCO ₂ Eq	18.0 / 25.7	21.0 / 30.0	23.0 / 32.9	28.0 / 40.0	34.0 / 48.6	39.0 / 55.8	46.0 / 65.8		56.0 / 80.1	74.0 / 105.8		
Piping connections	Evaporator water inlet/outlet (OD)				3"											
Unit	Maximum starting current			A	151		195		288		330		410			
	Nominal running current (RLA)			Cooling A	67	81	92	102	116	121	148	185	220	241		
	Maximum running current			A	86	103	119	132	157	164	198	242	284	298		
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/400											

Air cooled screw chiller

High ambient

Standard sound

› High ambient

- › Stepless single-screw compressor
- › Large operation range (ambient temperature down to -18°C)
- › MicroTech III controller with superior control logic and easy interface



EWAD-D-HS 210: IH_1, IH_2, IH_3, IH_4, IH_5, IH_6

Cooling only				EWAD-D-HS				200	210	230	260	270	290	310	340	380	420	450	480	510	550	590	
Cooling capacity	Nom.		kW	194	208	233	255	272	288	305	334	379	413	446	476	512	545	585					
Power input	Cooling	Nom.	kW	77.9	76.0	83.9	92.1	98.9	105	114	122	129	143	152	164	177	185	194					
Capacity control	Method			Stepless																			
	Minimum capacity		%	12.5																			
EER				2.49	2.73	2.77		2.75	2.73	2.68	2.75	2.93	2.90	2.93	2.90	2.89	2.95	3.02					
ESEER				3.02	3.16	3.24	3.11	3.20	3.18	3.17	3.15	3.46	3.50	3.57		3.55	3.60	3.68					
Dimensions	Unit	Height	mm	2,223																			
		Width	mm	2,234																			
		Depth	mm	2,239	3,339				4,040				4,940										
Weight	Unit		kg	2,475	2,470	2,865		2,870		3,185		3,277	3,942	4,356	4,361	4,366							
	Operation weight		kg	2,500		2,960				3,300		3,447	4,112	4,526									
Water heat exchanger	Type			Plate heat exchanger				Single pass shell & tube															
	Water volume		l	25	30	95		90		115		170		165		160							
	Water flow rate	Cooling	Nom.	l/s	9.3	9.9	11.1	12.2	13.1	13.8	14.6	16.0	18.2	19.8	21.4	22.8	24.5	26.1	28.0				
	Water pressure drop	Cooling	Nom.	kPa	32	24	46	52	54	59	64	58	70	46	53	58	51	56	53				
Air heat exchanger	Type			High efficiency fin and tube type with integral subcooler																			
Compressor	Type			Single screw compressor																			
	Quantity			2													Asymmetric single screw compressor						
Fan	Type			Direct propeller																			
	Quantity			4	6				8				10										
	Air flow rate	Nom.	l/s	21,843	21,153	32,772		32,251	31,729		43,696		42,306	54,620									
	Speed	Cooling	Nom.	rpm	890																		
Sound power level	Cooling	Nom.	dBA	96										97	99	97	98		99	100			
Sound pressure level	Cooling	Nom.	dBA	77										79		77	78		79	80			
Operation range	Water side	Cooling	Min.~Max.	°CDB				-15~-15															
	Air side	Cooling	Min.~Max.	°CDB				-18~-48															
Refrigerant	Type / GWP			R-134a / 1,430																			
	Circuits	Quantity		2																			
Refrigerant charge	Per circuit		kg/TCO ₂ Eq	18.0 / 25.7	21.0 / 30.0	22.0 / 31.5	26.0 / 37.2	28.0 / 40.0	31.0 / 44.3	28.0 / 40.0		34.0 / 48.6	30.0 / 42.9	45.0 / 64.4	47.5 / 67.9	46.0 / 65.8		47.0 / 67.2					
Piping connections	Evaporator water inlet/outlet (OD)			3"		4"																	
Unit	Maximum starting current		A	222	239		283	291	303	307	312	423	468	489		498							
	Nominal running current (RLA)	Cooling	A	134	131	145	157	169	180	191	204	214	239	258	275	295	306	320					
	Maximum running current		A	172	197	213	224	234	249	272	283	320	338	367	388	399	410						
Power supply	Phase/Frequency/Voltage		Hz/V	3~/50/400																			

Air cooled screw chiller

High efficiency

Standard/low sound

- › Stepless single-screw compressor
- › Large operation range (ambient temperature down to -18°C and up to 50°C)
- › 2-3 truly independent refrigerant circuits
- › DX shell and tube evaporator – one pass refrigerant side to minimize pressure drops
- › Partial and total heat recovery option available
- › Standard electronic expansion valve
- › MicroTech III controller with superior control logic and easy interface

EWAD-C-XS 890: MOA_C1, MOA_C2, MOA_C3

EWAD-C-XS C10: HH_5, HH_6, HH_10

Cooling only				EWAD-C-XS/XL		760	830	890	990	C10	C11	C12	C13	H14	H15	C16	C17	C18	C19	C20	C21	C22							
Cooling capacity	Nom.			kW		752	827	885	997	1,069	1,192	1,276	1,343	1,408	1,517	1,590	1,678	1,760	1,849	1,896	1,947	2,002							
Power input	Cooling	Nom.		kW		237	255	282	311	343	367	404	416	450	483	510	541	569	598	619	648	678							
Capacity control	Method			Stepless																									
	Minimum capacity			%		12.5										7.0													
EER						3.17	3.22	3.14	3.20	3.12	3.25	3.15	3.23	3.13	3.14	3.12	3.10	3.09	3.06	3.00	2.95								
ESEER						3.77	3.92	3.81	3.91	3.84	3.99	3.86	4.05	4.04	4.06	4.00	3.96	3.94	3.93	4.02	3.91	3.89							
Dimensions	Unit	Height		mm		2,540																							
		Width		mm		2,285																							
		Depth		mm		6,285	7,185	8,085	9,885				12,085	12,985	13,885	14,785													
Weight (XS)	Unit			kg		5,990	6,340	6,360	7,190	7,470	8,220	8,240	8,900		11,570	11,900	12,260	12,600											
	Operation weight		kg		6,240	6,540	6,600	7,600	7,870	8,510	8,630	9,890		12,430	12,760	13,140	13,470												
Weight (XL)	Unit			kg		6,280	6,640	6,650	7,480	7,760	8,510	8,530	9,190		12,010	12,350	12,700	13,040											
	Operation weight		kg		6,520	6,840	6,890	7,880	8,160	8,900	8,920	10,180		12,870	13,200	13,580	13,910												
Water heat exchanger	Type			Single pass shell & tube																									
	Water flow rate	Cooling	Nom.	l/s		36.1	39.6	42.4	47.8	51.2	57.1	61.1	64.4	67.5	72.8	76.1	80.4	84.4	88.6	90.7	93.2	95.8							
	Water pressure drop	Cooling	Nom.	kPa		81	51	64	61	69	75	51	68	77	84	62	68	74	39	41	43								
	Water volume				l		251	243		303		386		979		850	871	850											
Air heat exchanger	Type			High efficiency fin and tube type																									
	Type			Asymmetric single screw compressor																									
	Quantity			2																									
Fan	Type			Direct propeller																									
	Quantity			20																									
	Air flow rate			Nom.		l/s		64,131	4,819	8,508	106,885				128,262	138,950	149,639	160,327											
	Speed			rpm		900																							
Sound power level (XS)	Cooling	Nom.		dBA		100	101		102		103				104														
Sound power level (XL)	Cooling	Nom.		dBA		99	98		99				100																
Sound pressure level (XS)	Cooling	Nom.		dBA		80	81		80				81																
Sound pressure level (XL)	Cooling	Nom.		dBA		76	77		77				78																
Operation range	Air side	Cooling	Min.~Max.	°CDB		-18~50																							
	Water side	Cooling	Min.~Max.	°CDB		-8~15																							
	Type / GWP			R-134a / 1,430																									
Refrigerant	Circuits			2																									
	Quantity			3																									
Refrigerant charge	Per circuit			kg/TCO ₂ Eq		750/1073	810/1158	810/1158	910/1300	1000/1430	1150/1645	1175/1680	1250/1788	1455/2081	1250/1788	990/1416	827/1182	1033/1478	1090/1559	1133/1621	1200/1716								
Piping connections	Evaporator water inlet/outlet (OD)			mm		168.3mm																							
Unit	Starting current			Max		A	618	657	923	970	1,029				1,072								1,085	1,268	1,328	1,387	1,430	1,472	1,486
	Running current			Cooling	Nom.	A	387	428	463	511	559	607	667	686	731	778	835	885	934.0	984	1,018	1,059	1,100						
	Max			A	510	560	605	672	731	811	875	929				982	1,096	1,168	1,241	1,313	1,366	1,419	1,473						
Power supply	Phase/Frequency/Voltage			Hz/V		3~/50/400																							

Air cooled screw chiller with free cooling

High efficiency

Standard/low sound

- › Free cooling chiller for space cooling and industrial processes
- › Stepless single-screw compressor
- › Greater energy savings and reduced CO₂ emissions during cold season
- › Wide operating range
- › MicroTech III controller with superior control logic and easy interface

EWAD-CFXS 770: CFC_1, CFC_2

Cooling only				EWAD-CFXS/XL	640	770	850	900	C10	C11	C12	C13	C14	C15	C16
Cooling capacity	Nom.			kW	640 (1)	772 (1)	852 (1)	902 (1)	1,027 (1)	1,089 (1)	1,269 (1)	1,349 (1)	1,435 (1)	1,493 (1)	1,555 (1)
Free cooling capacity	Nom.			kW	415 (2)	510 (2)	583 (2)	612 (2)	701 (2)	734 (2)	902 (2)	957 (2)	963 (2)	1,013 (2)	1,039 (2)
Mechanical capacity				kW	225 (2)	262 (2)	269 (2)	290 (2)	325 (2)	355 (2)	366 (2)	392 (2)	472 (2)	480 (2)	517 (2)
Air temperature for free cooling 100%				°C	-0.8	-0.1	1.2	0.4	0.9	0.1	2.9	2.1	1.3	0.7	0.1
Power input	Cooling	Nom.		kW	257 (1) 53.7 (2)	272 (1) 62.0 (2)	293 (1) 64.7 (2)	324 (1) 69.8 (2)	360 (1) 75.7 (2)	399 (1) 83.4 (2)	397 (1) 86.4 (2)	439 (1) 92.8 (2)	454 (1) 101 (2)	492 (1) 109 (2)	530 (1) 115 (2)
Capacity control	Method									Stepless					
	Minimum capacity			%						12.5					
EER					2.49 (1) 11.91 (2)	2.84 (1) 12.44 (2)	2.90 (1) 13.17 (2)	2.78 (1) 12.93 (2)	2.85 (1) 13.56 (2)	2.73 (1) 13.05 (2)	3.19 (1) 14.68 (2)	3.08 (1) 14.55 (2)	3.16 (1) 14.21 (2)	3.04 (1) 13.72 (2)	2.93 (1) 13.50 (2)
ESEER					3.44	3.52	3.78	3.50	3.74	3.54	3.88	3.78	4.01	3.96	3.85
Dimensions	Unit	Height		mm						2,565					
		Width		mm						2,480					
		Depth		mm	6,300	7,200	8,100		9,000				10,800		
Weight (XS)	Unit			kg	7,760	8,340	8,900		10,160	10,420		11,900	12,540	12,620	12,670
	Operation weight			kg	8,515	9,100	9,705		11,169	11,429		13,276	14,516	14,596	14,646
Weight (XL)	Unit			kg	8,050	8,620	9,190		10,450	10,710		12,190	12,830	12,910	12,960
	Operation weight			kg	8,795	9,390	9,995		11,459	11,719		13,566	14,806	14,886	14,936
Water heat exchanger	Type									Single pass shell & tube					
	Water volume			l	741	771	808			1,012		1,372		1,965	
	Water flow rate	Cooling	Nom.	l/s	27.8 (1) 27.8 (2)	33.5 (1) 33.5 (2)	37.0 (1) 37.0 (2)	39.2 (1) 39.2 (2)	44.6 (1) 44.6 (2)	47.3 (1) 47.3 (2)	55.1 (1) 55.1 (2)	58.6 (1) 58.6 (2)	62.4 (1) 62.4 (2)	64.9 (1) 64.9 (2)	67.6 (1) 67.6 (2)
	Water pressure drop	Cooling	Nom.	kPa	85 (1) 128 (2)	105 (1) 172 (2)	90 (1) 178 (2)	101 (1) 198 (2)	111 (1) 245 (2)	124 (1) 272 (2)	98 (1) 232 (2)	110 (1) 259 (2)	139 (1) 305 (2)	150 (1) 328 (2)	162 (1) 354 (2)
Air heat exchanger	Type									High efficiency fin and tube type with integral subcooler					
Compressor	Type									Asymmetric single screw compressor					
	Quantity									2					
Fan	Type									Direct propeller					
	Quantity				10	12	14		16				20		
	Air flow rate	Nom.		l/s	50,368	60,441	70,515		80,588				95,253		
	Speed			rpm					920						
Sound power level (XS)	Cooling	Nom.		dBA		100		101		102			103		
Sound power level (XL)	Cooling	Nom.		dBA	96		97		98				99		
Sound pressure level (XS)	Cooling	Nom.		dBA	79		80		81				80		
Sound pressure level (XL)	Cooling	Nom.		dBA		76				77					
Operation range	Water side	Cooling	Min.~Max.	°CDB						-8~-15					
	Air side	Cooling	Min.~Max.	°CDB						-20~-45					
Refrigerant	Type / GWP									R-134a / 1,430					
	Circuits	Quantity								2					
Refrigerant charge	Per circuit			kg/TCOEq	64.0/91.5	73.0/104.4	81.0/115.8		91.0/130.1		107.0/153.0		112.5/160.9		124.0/177.3
Piping connections	Evaporator water inlet/outlet (OD)				DN150PN15(168.3mm)				DN200PN16(219.1mm)				DN250PN16(273mm)		
Unit	Maximum starting current			A	605	619	658		924	971		1,030		1,073	1,086
	Nominal running current (RLA)	Cooling		A	404	430	467	515	568	628	636	701	720	773	825
	Maximum running current			A	476	510	561	605	672	731	811		875	929	982
Power supply	Phase/Frequency/Voltage			Hz/V						3~/50/400					

(1) Cooling: entering evaporator water temp. 16°C; leaving evaporator water temp. 10°C; ambient air temp. 35°C; full load operation. (2) Data is calculated at ambient air temperature 5°C, inlet water temperature 16°C.

SPECIFICATION FOR FT SERIES

FP-80: PT_1, PT_2, PT_3, HI_1, HI_2

SPECIFICATION FOR FT SERIES

Derived SWL = 59 + 20*log(16) + 8 = 91.1

ITEM	MODEL												FT-8	FT-10	FT-15	FT-20	FT-25	FT-30	FT-40	FT-50	FT-60	FT-80	FT-100	FT-125	FT-150	FT-175	FT-200	FT-225	FT-250	FT-300	FT-350	FT-400	FT-500	FT-600	FT-700	FT-800	FT-1000
Capacity	27 °C WB	Circulating water flow rate	m ³ /hr	6.2	7.8	11.7	15.6	19.5	23.4	31.2	39.1	46.9	62.5	78.1	97.7	117.2	136.7	156.2	175.8	195.3	234.4	273.4	312.5	390.6	468.7	546.8	625.0	781.2	89.9	112.1							
		Make-up water (Approx.)	m ³ /hr	0.1	0.1	0.2	0.3	0.3	0.4	0.6	0.7	0.9	1.1	1.4	1.7	2.0	2.2	2.5	2.8	3.1	3.5	3.9	4.5	5.6	6.7	7.8	8.9	10.3	12.1								
	28 °C WB	Circulating water flow rate	m ³ /hr	5.6	7.4	10.6	14.4	17.8	21.5	28.7	36.3	42.5	58.8	70.6	88.2	107.5	125.0	142.5	160.0	176.2	212.5	250.0	287.5	337.5	431.2	512.4	575.0	718.7									
		Make-up water (Approx.)	m ³ /hr	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.8	1.0	1.3	1.5	1.8	2.0	2.3	2.5	3.0	3.6	4.1	4.8	6.2	7.3	8.2	10.3									
			Air flow rate (Approx.)	m ³ /min	70	85	140	160	230	280	330	420	450	700	830	950	1150	1200	1250	1600	1750	2000	2200	2450	2700	3500	3750	5000	5400								
		Hot water temperature	°C	37																																	
Overall Dimension		Cold water temperature	°C	32																																	
	Diameter (ϕ)	mm	920	920	1160	1160	1490	1490	1660	1660	1890	2100	2100	2900	2900	3310	3310	3960	3960	4360	4760	4760	5600	6600	6600	7600	7600										
	Height (H)	mm	1560	1700	1585	1835	1945	1885	2035	2110	2300	2475	2910	3110	3110	3300	3450	3920	3920	3990	4195	4255	4590	5310	5510	5660	5860										
	Height (w/o motor) (m)	mm	1390	1530	1395	1645	1760	1720	1785	1860	1980	2155	2590	2790	2790	2880	3030	3300	3300	3300	3495	3495	3830	4470	4670	4720	4940										
Material	Air inlet mesh		PVC																																		
	Basin		FRP																																		
	Casing		FRP																																		
	Eliminator		FRP																																		
	Fan		FRP																																		
	Filler		PVC																																		
	Motor support		Steel (Hot-dip galvanized)																																		
	Sprinkler head		Aluminium alloy																																		
	Sprinkler pipe		PVC pipe																																		
	Stand pipe		PVC pipe																																		
Fan	Structure		Steel (Hot-dip galvanized)																																		
	TYPE		Axial-flow																																		
	Diameter	mm	550	640	770	970	970	930	1100	1100	1200	1700	1700	1500	1500	1800	1800	2400	2400	450	3000	3000	3400	3400	314	3700											
	Speed	rpm	970																																		
Motor	Driven type		Direct driven																																		
	TYPE		Totally enclosed fan cooled outdoor 3 phase induction motor																																		
	Power source		380V / 3 / 50Hz																																		
	Rated output	kw	0.18	0.37	0.75	1.5	1.5	6	6	6	8	8	2.2	3.7	10	5.5	7.5	11	15	15	15	15	15	15	15	22											
Distribution System	No of pole	Pole	6																																		
	TYPE		Automatic sprinkler system																																		
	Inlet dia	mm	40	50	50	80	80	80	100	100	100	125	125	125	150	150	200	200	200	250	250	250	250	250	250	300	300										
	Outlet dia	mm	15	20	20	40	40	40	60	60	60	80	80	80	100	100	125	125	125	150	150	150	150	150	150	150	150	150									
Piping	No of outlet	mm	40	50	50	80	80	80	100	100	100	125	125	125	150	150	200	200	200	250	250	250	250	250	250	300	300										
	Outlet	mm	40	50	50	80	80	80	100	100	100	125	125	125	150	150	200	200	200	250	250	250	250	250	250	300	300										
	Drain	mm	25																																		
	Overflow	mm	25																																		
Weight	Float valve	mm	15																																		
	Manual make-up	mm	15																																		
	Dry weight	Kg	56	65	75	85	105	130	150	180	250	270	500	540	580	870	900	1300	1350	1550	1720	2050	2450	3950	4050	4700	4900										
	Operating weight	Kg	140	150	200	210	290	370	390	550	840	860	1600	1640	1680	2170	2200	2700	2750	3350	3720	3950	6150	9350	9450	11900	12100										
Noise Level	Sound pressure level	dBA	45.5	47	48	50	52	54	58	59	58	59	61	61.5	62	62	62	63	63	64	64.5	61.5	62	65	66	73	74										

NOTE:

Nominal cooling capacity is based on 13 ℓ / min / RT (1 RT=3,900 Kcal / hr) at 37°C inlet water temperature, 32°C outlet 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.

室外机阵容

RUXYQ22BA: PN_1, PN_2



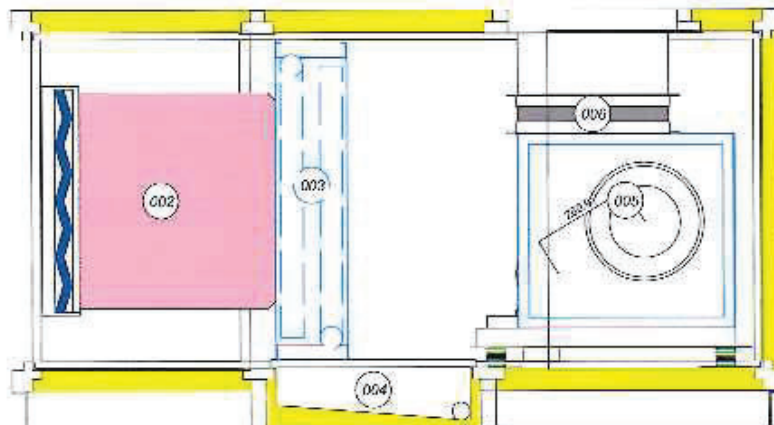
室外机																																	
型号		RUXYQ8BA	RUXYQ10BA	RUXYQ12BA	RUXYQ14BA	RUXYQ16BA	RUXYQ18BA	RUXYQ20BA	RUXYQ22BA	RUXYQ24BA	RUXYQ26BA	RUXYQ28BA	RUXYQ30BA	RUXYQ32BA	RUXYQ34BA	RUXYQ36BA	RUXYQ38BA																
匹数	HP	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	三组 50Hz 3~V															
组合方式		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																
能效等级	制冷	224	28.0	33.5	40.0	45.0	50.4	56.5	61.5	68.0	73.5	78.9	83.9	89.5	95.0	101.5	106.9																
	制热	250	31.5	37.5	45.0	50.0	56.5	63.0	69.0	76.0	82.5	88.0	94.0	100.5	106.5	114.0	119.5																
	综合	4.70	6.71	8.10	9.88	11.80	12.80	14.70	17.30	19.4	22.0	24.0	26.0	28.0	30.0	32.0	34.0																
风量范围	m³/min	5.24	6.72	8.48	10.50	12.10	13.30	15.30	17.00	19.2	21.0	23.0	25.0	27.0	29.0	31.0	33.0																
机脚尺寸(H*W*D)	mm	142	175	185	223	280	271	271	271	271	271	271	271	271	271	271	271																
重量	kg	53	54	56	57	58	59	60	61	62	63	64	65	66	67	68	69																
	dB(A)	55	57	59	60	61	62	63	64	65	66	67	68	69	70	71	72																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	11.1	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6																
制冷剂	kg	84	8.6	8.7	11.1	11.1	1																										



COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
• ISO 9001 •



P 3 / 5	23/05/2019	SOUND DATA		
Model 24 - 1st	13/04/2020	17/03/17/15-SCF-D58C	Model 1 Ver 002.003(C) 03/05/2018 NXSCBT3VFI L080	
Project Hotel	Hotel			
Ref PAU-301				Model A1(C)1010H-1350W Flow 1.60 m3/s



IN-DUCT SOUND POWER LEVEL dB									
		125	250	500	1000	2000	4000	8000	A
	INLET	87	89	81	79	72	71	67	85.4
002	G3+F7	0	0	0	0	-1	-1	-1	
003	P38-16AR 4R- 1ST-950A-2.0PM Cu/Al	-2	-2	-2	-2	-4	-3	-3	
005	ADH 315 R - 1604 RPM - 4.00 kW	89	91	83	81	77	75	71	87.9
	OUTLET	89	91	83	81	77	75	71	87.9

AIRBORNE SOUND POWER LEVEL dB									
		125	250	500	1000	2000	4000	8000	A
		82	75	67	62	47	38	33	71.6

PAU-301: SH_1, SH_2, SH_3, SH_4, RH_1, RH_2, RH_3

Appendix 3.4 Results of Fixed Source Noise Impact Assessment

Summary Table of Fixed Noise Sources

Noise Source ID	Noise Sources	Coordinates			SWL, dB(A)	Quantity	Equivalent SWL, dB(A) (Day & Evening Time)	Equivalent SWL, dB(A) (Night Time)
		x	y	z				
MOA C1	HKMOA Chiller	835760.2	817180.5	37.8	101.0	1	101.0	0.0
MOA C2	HKMOA Chiller	835766.0	817183.1	37.8	101.0	1	101.0	0.0
MOA C3	HKMOA Chiller	835766.4	817177.6	37.8	101.0	1	101.0	0.0
MOA LV1	HKMOA Louver	835746.4	817153.6	5.3	92.9	1	92.9	0.0
MOA LV2	HKMOA Louver	835755.7	817154.4	5.3	94.2	1	94.2	0.0
MTRCHVB	MTR Cross Harbour Ventilation Building	835816.5	817157.9	11.5	94.4	1	94.4	94.4
PN 1	Peninsula VRV	835710.5	817386.1	44.3	71.0	1	71.0	71.0
PN 2	Peninsula VRV	835710.6	817383.8	44.3	71.0	1	71.0	71.0
PT 1	Prestige Tower Cooling Tower	835740.2	817451.2	44.6	91.1	1	91.1	0.0
PT 2	Prestige Tower Cooling Tower	835744.8	817451.9	44.6	91.1	1	91.1	0.0
PT 3	Prestige Tower Cooling Tower	835744.3	817447.5	44.6	91.1	1	91.1	0.0
IH 1	Imperial Hotel Chiller	835812.4	817483.7	60.2	96.0	1	96.0	96.0
IH 2	Imperial Hotel Chiller	835812.5	817481.7	60.2	96.0	1	96.0	96.0
IH 3	Imperial Hotel Chiller	835812.6	817479.8	60.2	96.0	1	96.0	96.0
IH 4	Imperial Hotel Chiller	835812.7	817477.7	60.2	96.0	1	96.0	96.0
IH 5	Imperial Hotel Chiller	835812.9	817475.6	60.2	96.0	1	96.0	96.0
IH 6	Imperial Hotel Chiller	835813.0	817473.4	60.2	96.0	1	96.0	96.0
IH 1	Holiday Inn Cooling Tower	835845.7	817538.7	57.2	91.1	1	91.1	91.1
IH 2	Holiday Inn Cooling Tower	835847.0	817547.9	57.2	91.1	1	91.1	91.1
HB 1	Harbour Bay Hotel Chiller	835950.8	817551.4	72.5	95.0	1	95.0	95.0
HB 2	Harbour Bay Hotel Chiller	835954.0	817548.8	72.5	83.0	1	83.0	83.0
HB 3	Harbour Bay Hotel Chiller	835959.3	817548.8	72.5	83.0	1	83.0	83.0
HB 4	Harbour Bay Hotel Chiller	835962.3	817552.6	72.5	95.0	1	95.0	95.0
CFC 1	CFC Tower Chiller	835979.9	817571.3	70.2	100.0	1	100.0	0.0
CFC 2	CFC Tower Chiller	835997.4	817573.4	70.2	100.0	1	100.0	0.0
HH 1	Hermes House Chiller	835889.1	817453.0	56.3	94.0	1	94.0	94.0
HH 2	Hermes House Chiller	835894.1	817453.9	56.3	83.0	2	86.0	86.0
HH 3	Hermes House Chiller	835899.2	817454.2	56.3	83.0	1	83.0	83.0
HH 4	Hermes House Chiller	835904.0	817453.6	56.3	83.0	1	83.0	83.0
HH 5	Hermes House Chiller	835886.6	817443.8	56.3	102.0	1	102.0	102.0
HH 6	Hermes House Chiller	835894.7	817444.8	56.3	102.0	1	102.0	102.0
HH 7	Hermes House Chiller	835882.7	817431.6	56.3	95.0	1	95.0	95.0
HH 8	Hermes House Chiller	835886.0	817431.8	56.3	95.0	1	95.0	95.0
HH 9	Hermes House Chiller	835889.3	817432.1	56.3	95.0	1	95.0	95.0
HH 10	Hermes House Chiller	835900.4	817432.5	56.3	102.0	1	102.0	102.0
8MA 1	8 Minden Avenue VRV	836017.6	817542.0	21.3	74.0	3	78.8	0.0
8MA 2a	8 Minden Avenue Chiller	836014.5	817537.5	21.3	95.0	1	95.0	0.0
8MA 2b	8 Minden Avenue Chiller	836020.5	817538.2	21.3	95.0	1	95.0	0.0
EYS 1	Eu Yan Sang Tower Chiller	836095.2	817557.6	72.0	84.0	1	84.0	0.0
EYS 2	Eu Yan Sang Tower Chiller	836094.5	817553.1	72.0	84.0	1	84.0	0.0
K11 Lv	K11 Atelier Louver	836153.2	817368.3	11.5	108.5	1	108.5	0.0
SH 1	Sheraton Hotel Ventilation Duct	835845.1	817346.8	61.9	71.6	1	71.6	71.6
SH 2	Sheraton Hotel Ventilation Duct	835863.1	817347.3	61.9	71.6	1	71.6	71.6
SH 3	Sheraton Hotel Ventilation Duct	835895.3	817349.7	61.9	71.6	1	71.6	71.6
SH 4	Sheraton Hotel Ventilation Duct	835911.9	817353.4	61.9	71.6	1	71.6	71.6
RH 1	Regent Hotel Ventilation Duct	835980.7	817164.1	61.0	71.6	1	71.6	71.6
RH 2	Regent Hotel Ventilation Duct	835991.2	817164.1	61.0	71.6	1	71.6	71.6
RH 3	Regent Hotel Ventilation Duct	835986.7	817158.9	61.0	71.6	1	71.6	71.6

Remark:

It is assumed that there is no nighttime operation for the sources at MOA, PT, CFC, 8MA, EYS and K11 due to their business nature as museum / shopping malls / office buildings operating at day & evening time only.
For the deduction of SWL, the measurement distance for VRVs is taken as 1m according to GB18837

Detailed Calculations for Industrial Noise Assessment (Day & Evening Time)

Noise Sensitive Receiver (NSR)		NSR (x)	NSR (y)	NSR (z)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	Noise Source (z)	No of Units	Overall SWL, dB(A)	Slant Distance from Noise Receiver (m)	Distance Correction, dB(A)	Barrier Correction, dB(A)	Tonality Correction, dB(A)	Facade Correction, dB(A)	Corrected Noise Level, dB(A), L _{eq} (30 min)
F10	ASR																
F10	836040.7	817220.0	50.2	MOA_C1	HKMOA Chiller	835760.2	817180.5	37.8	1	101.0	101.0	283.6	-57.1	0	3	3	49.9
	MOA_C2			HKMOA Chiller	835766.0	817183.1	37.8	1	101.0	101.0	277.4	-56.9	0	3	3	50.1	
ASR	B	65	MOA_C3	HKMOA Chiller	835766.4	817177.6	37.8	1	101.0	101.0	277.9	-56.9	0	3	3	50.1	
			MOA_Lv1	HKMOA Louver	835746.4	817153.6	5.3	1	92.9	92.9	305.0	-57.7	0	0	3	38.2	
Day Time ANL			MOA_Lv2	HKMOA Louver	835755.7	817154.4	5.3	1	94.2	94.2	296.0	-57.4	0	3	3	39.8	
			MTRCHWB	MTR Cross Harbour Ventilation Building	835816.5	817157.9	11.5	1	94.4	94.4	235.8	-55.5	0	0	3	41.9	
			PN_1	Peninsula VRV	835710.5	817386.1	44.3	1	71.0	71.0	369.7	-59.4	-10	3	3	7.6	
			PN_2	Peninsula VRV	835710.6	817383.8	44.3	1	71.0	71.0	368.6	-59.3	-10	3	3	7.7	
			PT_1	Prestige Tower Cooling Tower	835740.2	817451.2	44.6	1	91.1	91.1	379.3	-59.6	-10	3	3	27.5	
			PT_2	Prestige Tower Cooling Tower	835744.8	817451.9	44.6	1	91.1	91.1	376.0	-59.5	-10	3	3	27.6	
			PT_3	Prestige Tower Cooling Tower	835744.3	817447.5	44.6	1	91.1	91.1	373.7	-59.4	-10	3	3	27.6	
			IH_1	Imperial Hotel Chiller	835812.4	817483.7	60.2	1	96.0	96.0	349.0	-58.9	-10	3	3	33.1	
			IH_2	Imperial Hotel Chiller	835812.5	817481.7	60.2	1	96.0	96.0	347.4	-58.8	-10	3	3	33.2	
			IH_3	Imperial Hotel Chiller	835812.6	817479.8	60.2	1	96.0	96.0	345.9	-58.8	-10	3	3	33.2	
			IH_4	Imperial Hotel Chiller	835812.7	817477.7	60.2	1	96.0	96.0	344.3	-58.7	-10	3	3	33.3	
			IH_5	Imperial Hotel Chiller	835812.9	817475.6	60.2	1	96.0	96.0	342.6	-58.7	-10	3	3	33.3	
			IH_6	Imperial Hotel Chiller	835813.0	817473.4	60.2	1	96.0	96.0	340.9	-58.7	-10	3	3	33.3	
			H1_1	Holiday Inn Cooling Tower	835845.7	817538.7	57.2	1	91.1	91.1	373.8	-59.5	-10	3	3	27.6	
			H1_2	Holiday Inn Cooling Tower	835847.0	817547.9	57.2	1	91.1	91.1	380.9	-59.6	-10	3	3	27.5	
			H1_3	Harbour Bay Hotel Chiller	835950.8	817551.4	72.5	1	95.0	95.0	344.1	-58.7	-10	3	3	32.3	
			H1_4	Harbour Bay Hotel Chiller	835954.0	817548.8	72.5	1	83.0	83.0	340.8	-58.6	-10	3	3	20.4	
			H1_5	Harbour Bay Hotel Chiller	835959.3	817549.3	72.5	1	83.0	83.0	339.9	-58.6	-10	3	3	20.4	
			H1_6	Harbour Bay Hotel Chiller	835962.3	817552.6	72.5	1	95.0	95.0	342.4	-58.7	-10	3	3	32.3	
			CFC_1	CFC Tower Chiller	835979.9	817571.3	70.2	1	100.0	100.0	357.1	-59.1	-10	3	3	36.9	
			CFC_2	CFC Tower Chiller	835997.4	817573.4	70.2	1	100.0	100.0	356.6	-59.0	-10	3	3	37.0	
			HH_1	Hermes House Chiller	835889.1	817453.0	56.3	1	94.0	94.0	278.1	-56.9	-10	3	3	33.1	
			HH_2	Hermes House Chiller	835894.1	817453.9	56.3	2	83.0	86.0	276.1	-56.8	-10	3	3	25.2	
			HH_3	Hermes House Chiller	835899.2	817454.2	56.3	1	83.0	83.0	273.7	-56.7	-10	3	3	22.3	
			HH_4	Hermes House Chiller	835904.0	817453.6	56.3	1	83.0	83.0	270.8	-56.7	-10	3	3	22.3	
			HH_5	Hermes House Chiller	835886.6	817443.8	56.3	1	102.0	102.0	271.8	-56.7	-10	3	3	41.3	
			HH_6	Hermes House Chiller	835894.7	817444.8	56.3	1	102.0	102.0	268.1	-56.6	-10	3	3	41.4	
			HH_7	Hermes House Chiller	835882.7	817431.6	56.3	1	95.0	95.0	264.2	-56.4	-10	3	3	34.6	
			HH_8	Hermes House Chiller	835886.0	817431.8	56.3	1	95.0	95.0	262.4	-56.4	-10	3	3	34.6	
			HH_9	Hermes House Chiller	835889.3	817432.1	56.3	1	95.0	95.0	260.7	-56.3	-10	3	3	34.7	
			HH_10	Hermes House Chiller	835900.4	817432.5	56.3	1	102.0	102.0	254.7	-56.1	-10	3	3	41.9	
			BMA_1	8 Minden Avenue VRV	836017.6	817542.0	21.3	3	74.0	78.8	324.1	-58.2	-10	3	3	16.6	
			BMA_2a	8 Minden Avenue Chiller	836014.5	817537.5	21.3	1	95.0	95.0	319.9	-58.1	-10	3	3	32.9	
			BMA_2b	8 Minden Avenue Chiller	836020.5	817538.2	21.3	1	95.0	95.0	320.1	-58.1	-10	3	3	32.9	
			EVS_1	Eu Yan Sang Tower Chiller	836095.2	817557.6	72.0	1	84.0	84.0	342.6	-58.7	-10	3	3	21.3	
			EVS_2	Eu Yan Sang Tower Chiller	836094.5	817553.1	72.0	1	84.0	84.0	338.1	-58.6	-10	3	3	21.4	
			K11_Lv	K11 Atelier Louver	836153.2	817368.3	11.5	1	108.5	108.5	190.1	-53.6	-10	0	3	47.9	
			SH_1	Sheraton Hotel Ventilation Duct	835845.1	817346.8	61.9	1	71.6	71.6	233.5	-55.4	-10	3	3	12.2	
			SH_2	Sheraton Hotel Ventilation Duct	835863.1	817347.3	61.9	1	71.6	71.6	218.9	-54.8	-10	3	3	12.8	
			SH_3	Sheraton Hotel Ventilation Duct	835895.3	817349.7	61.9	1	71.6	71.6	195.2	-53.8	-10	3	3	13.8	
			SH_4	Sheraton Hotel Ventilation Duct	835911.9	817353.4	61.9	1	71.6	71.6	185.8	-53.4	-10	3	3	14.2	
			RH_1	Regent Hotel Ventilation Duct	835980.7	817164.1	61.0	1	71.6	71.6	82.8	-46.4	0	3	3	31.2	
			RH_2	Regent Hotel Ventilation Duct	835991.2	817164.1	61.0	1	71.6	71.6	75.5	-45.6	0	3	3	32.0	
			RH_3	Regent Hotel Ventilation Duct	835986.7	817158.9	61.0	1	71.6	71.6	82.3	-46.3	0	3	3	31.3	
Total																	
56.9																	

Detailed Calculations for Industrial Noise Assessment (Day & Evening Time)

Noise Sensitive Receiver (NSR)		NSR (x)	NSR (y)	NSR (z)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	Noise Source (z)	No of Units	Overall SWL, dB(A)	Slant Distance from Noise Receiver (m) (SR)	Distance Correction, dB(A)	Barrier Correction, dB(A)	Tonality Correction, dB(A)	Facade Correction, dB(A)	Corrected Noise Level, dB(A), L _{eq} (30 min)
F11	836087.0	817228.4	50.2	MOA_C1	HKMOA Chiller	835760.2	817180.5	37.8	1	101.0	101.0	330.5	-58.4	-10	3	3	38.6
ASR	B			MOA_C2	HKMOA Chiller	835766.0	817183.1	37.8	1	101.0	101.0	334.4	-58.2	-10	3	3	38.8
Day Time ANL	65	MOA_C3	HKMOA Chiller	835766.4	817177.6	37.8	1	101.0	101.0	324.8	3	38.8					
		MOA_Lv1	HKMOA Louver	835746.4	817153.6	5.3	1	92.9	92.9	351.6	-58.9	-10	0	3	27.0		
		MOA_Lv2	HKMOA Louver	835755.7	817154.4	5.3	1	94.2	94.2	342.5	-58.7	-10	0	3	28.5		
		MTRCHVB	MTR Cross Harbour Ventilation Building	835816.5	817157.9	11.5	1	94.4	94.4	282.1	-57.0	-10	0	3	30.4		
		PN_1	Peninsula VRV	835710.5	817386.1	44.3	1	71.0	71.0	408.2	-60.2	-10	3	3	6.8		
		PN_2	Peninsula VRV	835710.6	817383.8	44.3	1	71.0	71.0	407.3	-60.2	-10	3	3	6.8		
		PT_1	Prestige Tower Cooling Tower	835740.2	817451.2	44.6	1	91.1	91.1	412.3	-60.3	-10	3	3	26.8		
		PT_2	Prestige Tower Cooling Tower	835744.8	817451.9	44.6	1	91.1	91.1	408.8	-60.2	-10	3	3	26.9		
		PT_3	Prestige Tower Cooling Tower	835744.3	817447.5	44.6	1	91.1	91.1	406.8	-60.2	-10	3	3	26.9		
		IH_1	Imperial Hotel Chiller	835812.4	817483.7	60.2	1	96.0	96.0	375.1	-59.5	-10	3	3	32.5		
		IH_2	Imperial Hotel Chiller	835812.5	817481.7	60.2	1	96.0	96.0	373.7	-59.4	-10	3	3	32.6		
		IH_3	Imperial Hotel Chiller	835812.6	817479.8	60.2	1	96.0	96.0	372.3	-59.4	-10	3	3	32.6		
		IH_4	Imperial Hotel Chiller	835812.7	817477.7	60.2	1	96.0	96.0	370.8	-59.4	-10	3	3	32.6		
		IH_5	Imperial Hotel Chiller	835812.9	817475.6	60.2	1	96.0	96.0	369.3	-59.3	-10	3	3	32.7		
		IH_6	Imperial Hotel Chiller	835813.0	817473.4	60.2	1	96.0	96.0	367.8	-59.3	-10	3	3	32.7		
		H1_1	Holiday Inn Cooling Tower	835845.7	817538.7	57.2	1	91.1	91.1	393.2	-59.9	-10	3	3	27.2		
		H1_2	Holiday Inn Cooling Tower	835847.0	817547.9	57.2	1	91.1	91.1	399.7	-60.0	-10	3	3	27.0		
		HB_1	Harbour Bay Hotel Chiller	835950.8	817551.4	72.5	1	95.0	95.0	351.2	-58.9	-10	3	3	32.1		
		HB_2	Harbour Bay Hotel Chiller	835954.0	817548.8	72.5	1	83.0	83.0	347.6	-58.8	-10	3	3	20.2		
		HB_3	Harbour Bay Hotel Chiller	835959.3	817549.3	72.5	1	83.0	83.0	346.1	-58.8	-10	3	3	20.2		
		HB_4	Harbour Bay Hotel Chiller	835962.3	817552.6	72.5	1	95.0	95.0	348.1	-58.8	-10	3	3	32.2		
		CFC_1	CFC Tower Chiller	835979.9	817571.3	70.2	1	100.0	100.0	359.9	-59.1	-10	3	3	36.9		
		CFC_2	CFC Tower Chiller	835997.4	817573.4	70.2	1	100.0	100.0	357.0	-59.1	-10	3	3	36.9		
		HH_1	Hermes House Chiller	835889.1	817453.0	56.3	1	94.0	94.0	299.5	-57.5	-10	3	3	32.5		
		HH_2	Hermes House Chiller	835894.1	817453.9	56.3	2	83.0	86.0	296.8	-57.5	-10	3	3	24.6		
		HH_3	Hermes House Chiller	835899.2	817454.2	56.3	1	83.0	83.0	293.8	-57.4	-10	3	3	21.6		
		HH_4	Hermes House Chiller	835904.0	817453.6	56.3	1	83.0	83.0	290.3	-57.3	-10	3	3	21.7		
		HH_5	Hermes House Chiller	835886.6	817443.8	56.3	1	102.0	102.0	294.2	-57.4	-10	3	3	40.6		
		HH_6	Hermes House Chiller	835894.7	817444.8	56.3	1	102.0	102.0	289.6	-57.2	-10	3	3	40.8		
		HH_7	Hermes House Chiller	835882.7	817431.6	56.3	1	95.0	95.0	288.2	-57.2	-10	3	3	33.8		
		HH_8	Hermes House Chiller	835886.0	817431.8	56.3	1	95.0	95.0	286.1	-57.1	-10	3	3	33.9		
		HH_9	Hermes House Chiller	835889.3	817432.1	56.3	1	95.0	95.0	284.0	-57.1	-10	3	3	33.9		
		HH_10	Hermes House Chiller	835900.4	817432.5	56.3	1	102.0	102.0	276.6	-56.8	-10	3	3	41.2		
		BMA_1	8 Minden Avenue VRV	836017.6	817542.0	21.3	3	74.0	78.8	322.5	-58.2	-10	3	3	16.6		
		BMA_2a	8 Minden Avenue Chiller	836014.5	817537.5	21.3	1	95.0	95.0	318.8	-58.1	-10	3	3	32.9		
		BMA_2b	8 Minden Avenue Chiller	836020.5	817538.2	21.3	1	95.0	95.0	318.1	-58.1	-10	3	3	32.9		
		EVS_1	Eu Yan Sang Tower Chiller	836095.2	817557.6	72.0	1	84.0	84.0	330.0	-58.4	-10	3	3	21.6		
		EVS_2	Eu Yan Sang Tower Chiller	836094.5	817553.1	72.0	1	84.0	84.0	325.5	-58.3	-10	3	3	21.7		
		K11_Lv	K11 Atelier Louver	836153.2	817368.3	11.5	1	108.5	108.5	159.6	-52.1	-10	0	3	49.4		
		SH_1	Sheraton Hotel Ventilation Duct	835845.1	817346.8	61.9	1	71.6	71.6	269.6	-56.6	-10	3	3	11.0		
		SH_2	Sheraton Hotel Ventilation Duct	835863.1	817347.3	61.9	1	71.6	71.6	253.8	-56.1	-10	3	3	11.5		
		SH_3	Sheraton Hotel Ventilation Duct	835895.3	817349.7	61.9	1	71.6	71.6	227.2	-55.1	-10	3	3	12.5		
		SH_4	Sheraton Hotel Ventilation Duct	835911.9	817353.4	61.9	1	71.6	71.6	215.4	-54.7	-10	3	3	12.9		
		RH_1	Regent Hotel Ventilation Duct	835980.7	817164.1	61.0	1	71.6	71.6	124.7	-49.9	0	3	3	27.7		
		RH_2	Regent Hotel Ventilation Duct	835991.2	817164.1	61.0	1	71.6	71.6	115.9	-49.3	0	3	3	28.3		
		RH_3	Regent Hotel Ventilation Duct	835986.7	817158.9	61.0	1	71.6	71.6	122.5	-49.8	0	3	3	27.8		
																Total	52.8

Detailed Calculations for Industrial Noise Assessment (Night Time)

Noise Sensitive Receiver (NSR)		NSR (x)		NSR (y)	NSR (z)	Noise Source (NS)	Description	Noise Source (x)	Noise Source (y)	Noise Source (z)	No of Units	SWL, dB(A)	Overall SWL, dB(A)	Slant Distance from Noise Source to Receiver (m) (SR)	Distance Correction, dB(A)	Barrier Correction, dB(A)	Tonality Correction, dB(A)	Facade Correction, dB(A)	Corrected Noise Level, dB(A), L _{eq} (20 min)
F06	836028.5	817243.1		50.2	MTRCHVB	MTR Cross Harbour Ventilation Building	835816.5	817157.9	11.5	1	94.4	94.4	231.7	-55.3	-10	0	3	3	32.1
	ASR	C	60																
Night Time ANL																			

Appendix 4.1 Correspondence with Heliservices

Calvin Chiu

From: Cherry Wong <cherry.wong@heliservices.com.hk>
Sent: Tuesday, June 17, 2025 2:06 PM
To: Grace KF Wong
Cc: Calvin Chiu; Peter Leung
Subject: RE: Request for information for Helicopter fleet type(s) and flight route of sightseeing services

Some people who received this message don't often get email from cherry.wong@heliservices.com.hk. [Learn why this is important](#)

Dear Grace,

We maintain 1500' separation from obstacle unless we are conducting aerial photography with low flying permission (500' separation) or at our approaching and departure to/ from Peninsula Hotel Helipad.

Regards,

Cherry Wong
Flight Operations Support Manager

Heliservices (HK) Ltd.
Lam Kam Road Airfield, Shek Kong, N.T.
Postal Address: P.O. Box 52, Kam Tin Post Office, Kam Tin, N.T.
Office : (+852) 2488 1727 | Fax : (+852) 2488 0086 | Mobile : (+852) 6718 6131
Visit us at www.heliservices.com.hk
Follow us at www.facebook.com/Heliservices

From: Grace KF Wong <GKFWONG@ramboll.com>
Sent: Tuesday, June 17, 2025 10:34 AM
To: Cherry Wong <cherry.wong@heliservices.com.hk>
Cc: Calvin Chiu <cchiu@ramboll.com>; Peter Leung <PETERLEUNG@ramboll.com>
Subject: RE: Request for information for Helicopter fleet type(s) and flight route of sightseeing services

Dear Cherry,

Thank you for your reply.

May I interpret that while the flight path can be tailored upon customer's request, it will maintain a separation of 1500' from buildings in congested area like Tsim Sha Tsui in general?

Kind regards,

Grace Wong

Assistant Environmental Consultant

D +852 3465 2868
gkfwong@ramboll.com

Ramboll Hong Kong Limited

Classification: Confidential

From: Cherry Wong <cherry.wong@heliservices.com.hk>
Sent: Tuesday, June 17, 2025 10:06 AM
To: Grace KF Wong <GKFWONG@ramboll.com>
Subject: RE: Request for information for Helicopter fleet type(s) and flight route of sightseeing services

You don't often get email from cherry.wong@heliservices.com.hk. [Learn why this is important](#)

Good morning,

Sorry for the delayed reply. Please see below for your reference,

1. The Helicopter fleet type(s) currently in use
MD902 Explorer Helicopters
2. The flight path (including attitude information) for sightseeing experiences offered under different packages, as well as possible flight path for service outside the scope of the current sightseeing packages

You may refer to below company website link for our offered sightseeing routes.

<https://heliservices.com.hk/en/sightseeing/>

We offer special charter as well upon customers' request of their preferred route or location. So basically, we could fly anywhere in HK apart from the restricted area e.g. military zone or airport zone. We normally maintain 1500' above obstacle e.g. building or vehicle in the congested area.

Hope this helps. Thank you.

Regards,

Cherry Wong
Flight Operations Support Manager

Heliservices (HK) Ltd.
Lam Kam Road Airfield, Shek Kong, N.T.
Postal Address: P.O. Box 52, Kam Tin Post Office, Kam Tin, N.T.
Office : (+852) 2488 1727 | Fax : (+852) 2488 0086 | Mobile : (+852) 6718 6131
Visit us at www.heliservices.com.hk
Follow us at www.facebook.com/Heliservices

From: info@heliservices.com.hk <info@heliservices.com.hk>
Sent: Tuesday, June 3, 2025 1:22 PM
To: Cherry Wong <cherry.wong@heliservices.com.hk>
Subject: Fw: Request for information for Helicopter fleet type(s) and flight route of sightseeing services

Dear Cherry,

Please assist in replying to the email below.

Thanks and Best regards,
Ida Chan
Heliservices (HK) Ltd.
Tel: (852) 2802 0200

Office Hour: 0900-1800

Visit us at www.heliservices.com.hk

Follow us at www.facebook.com/Heliservices

From: Grace KF Wong <GKFWONG@ramboll.com>

Sent: Tuesday, June 3, 2025 12:50 PM

To: info@heliservices.com.hk <Info@heliservices.com.hk>

Cc: Calvin Chiu <cchiu@ramboll.com>; Peter Leung <PETERLEUNG@ramboll.com>

Subject: Request for information for Helicopter fleet type(s) and flight route of sightseeing services

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Dear Sir/Madam,

We are the environmental consultant appointed to carry out a Noise Impact Assessment at Victoria Dockside for an application to the Government. The location plan of the captioned project is attached for your reference. For the purpose of assessment, it would be grateful if you could provide the following information as commented by the Government:

1. The Helicopter fleet type(s) currently in use
2. The flight path (including attitude information) for sightseeing experiences offered under different packages, as well as possible flight path for service outside the scope of the current sightseeing packages

We would be much appreciated if you could provide the requested information. Should you have any queries, please do not hesitate to contact the undersigned or our Mr. Calvin Chiu at 3465 2811 (cchiu@ramboll.com).

We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Kind regards

Grace Wong

Assistant Environmental Consultant

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