

Appendix C

Environmental Assessment

Prepared by

Ramboll Hong Kong Limited

APPLICATION FOR PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131) FOR SUBMISSION OF LAYOUT PLAN AND PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION FOR PERMITTED FLAT AT "RESIDENTIAL (GROUP C)7" ZONE AT THE EBENEZER SCHOOL AND HOME FOR THE VISUALLY IMPAIRED, 131 POK FU LAM ROAD, POK FU LAM, HONG KONG

ENVIRONMENTAL ASSESSMENT

Date **February 2026**

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Signed

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1. INTRODUCTION

1.1 Background

- 1.1.1 The Subject Site currently occupied by Ebenezer School (and associated developments) at Pok Fu Lam Road is proposed to be redeveloped for residential use. A rezoning application for the Subject Site was submitted and approved in May 2022. The Subject Site is currently zoned "Residential (Group C) 7" ("R(C)7") under the Pok Fu Lam Outline Zoning Plan (OZP) (No. S/H10/23). According to the notes of the OZP, R(C)7 site is subject to maximum plot ratio of 1.9 and maximum building height of 151mPD. A layout plan is also required to be submitted for any new development or redevelopment of an existing building at the R(C)7 site.
- 1.1.2 The development scheme is subsequently revised. A Section 16 planning application (no. A/H10/97) was submitted in 2024 and considered not supported by Town Planning Board in 2025.
- 1.1.3 Afterwards, the layout scheme is further revised based on the scheme in the last Section 16 planning application. The number of blocks, disposition, orientation, building height, etc. are generally the same as before. Major changes include design of bus layby to address comments in last Section 16 planning application.
- 1.1.4 This Environmental Assessment (EA) is prepared for the proposed residential redevelopment at the Subject Site based on the latest proposal as one of the technical supporting documents for the S16 planning application.
- 1.1.5 Ramboll Hong Kong Limited has been commissioned by the applicant to prepare this environmental assessment. This environmental assessment covers assessment of environmental noise and air quality impact in relation to the project.
- 1.1.6 The development scheme is provided by Handi Design (Project Architect). The traffic forecast is provided by OZZO (Project Traffic Consultant).

1.2 The Site Environs

- 1.2.1 The Subject Site is of elongated shape with long frontage adjacent to Pok Fu Lam Road (around 138mPD). It amounts to about 6,460 sq.m and is currently occupied by Ebenezer School and Home for the Visually Impaired. It is bounded by Pok Fu Lam Road on northeast side. The vehicular access point to Pok Fu Lam Road is on the southeast end.
- 1.2.2 The surrounding uses are mainly residential developments on the opposite side of Pok Fu Lam Road to the northeast to east, premises of University of Hong Kong on west side, and Queen Mary Hospital to the further north separated by existing residential developments. The lot to the immediate southeast is zoned for residential use as well. The Subject Site is surrounded by vegetated slope on southeast, south, west and northwest. Victoria Road elevated more than 50m lower than the Subject Site is to the further southwest. Areas to the further south to west are occupied by residential developments at much lower elevations. There is no industrial use in the surrounding.
- 1.2.3 **Figure 1** shows the locations of the Subject Site and its environs.

1.3 Proposed Development

- 1.3.1 The existing building at the Subject Site with the main roof elevated at about 151mPD.

- 1.3.2 The proposed redevelopment consists of 4 residential blocks (T1 to T4) elevated at maximum 164mPD (measured at main roof level). There are maximum 10 residential storeys (excluding one level of lobby) and a total of 135 flat units. The floor-to-floor height is 3500mm. Beside the residential blocks, clubhouse facilities will be provided and one outdoor swimming pool will be located near to the southwest boundary of the Subject Site and farthest away from Pok Fu Lam Road. The clubhouse will be provided with central air conditioning system so that it would not rely on openable window for ventilation purpose. The tentative completion year is 2034 based on the latest proposal.

- 1.3.3 **Appendix 1** shows the latest development scheme.

1.4 Appraisal of Environmental Impact

- 1.4.1 As discussed, there is no industrial use in the surrounding so that industrial/residential interfacing problem will not be a concern.
- 1.4.2 Pok Fu Lam Road is a primary distributor according to Annual Traffic Census so that considerable traffic flow is anticipated. Corresponding traffic noise and vehicular emission impacts are major concerns.
- 1.4.3 Beside road traffic, Queen Mary Hospital (QMH) is found to the further north of the Subject Site. The horizontal separation distance between the main block of the hospital and the nearest Subject Site boundary is over 200m.
- 1.4.4 The noise environment of the Subject Site and immediate surrounding is dominated by road traffic. Nearest fixed noise sources were identified at about 140m away from the Subject Site. All fixed noise sources identified were at the rooftop of the building and the elevation is higher than the proposed development. The proposed development will likely be equipped with facilities such as VRV to provide central air conditioning to the future clubhouse facilities. There will be exhaust fan installation for car park and E&M room. Potential fixed noise impact due to the proposed installation to future noise sensitive uses of the proposed development and existing/planned noise sensitive uses in the surrounding will be fully addressed. These potentially noisy facilities will be designed so that they will meet relevant standard stipulated in the HKPSG. No unacceptable fixed noise impact due to the operation of the Proposed Development is anticipated.
- 1.4.5 During the operation of the project, there will be waste generation from the residential, and clubhouse uses such as glass, metals, plastics, food wastes, textile, wood, household hazardous wastes and others. Adequate waste collection/storage facilities will be provided for collection and storage of sorted recyclable wastes (glass, paper, metal, plastic) to enable recycling. Based on Waste Statistics for 2024 (the latest publication), the per capita disposal rates of municipal solid waste, domestic waste, commercial & industrial waste are respectively 1.40kg/person/day, 0.86kg/person/day and 0.53kg/person/day (Plate 2.7 of Waste Statistics for 2024). Among domestic and commercial waste, the recovery rate are 22% and 48% respectively (Plate 3.2 of Waste Statistics for 2024). Based on the Proposed Development with around 2950 residential population and 199 working population, there will be around 3455kg/day of waste generation (i.e. $0.86/(1-22\%) \times 2950 + 0.53/(1-48\%) \times 199$). With adequate waste collection/storage facilities provided to segregate recyclable and non-recyclable wastes, the burden of waste treatment facilities in Hong Kong will be reduced. In addition, the applicant will explore in detailed design stage to collect food waste alongside these recyclable wastes mentioned above to further reduce waste generation.

1.5 Organisation of this Report

1.5.1 Based on discussion above, this report is prepared and organised to contain the following chapters to address individual environmental impacts:

- Chapter 2 Environmental Air quality impact
- Chapter 3 Environmental Noise impact
- Chapter 4 Construction Waste Disposal

2. AIR QUALITY IMPACT ASSESSMENT

2.1 Buffer Separation Requirement under HKPSG

- 2.1.1 According to Table 3.1 in Chapter 9 of Hong Kong Planning Standards and Guidelines (HKPSG), minimum buffer separation is recommended for air sensitive uses from different types of pollution sources including road and industrial areas.
- 2.1.2 For industrial areas, buffer separation depends on relative difference in height of chimney exit and the site, and up to 200m is recommended.
- 2.1.3 For road and highways, buffer separations (measured from road kerb side to air sensitive use) of 20m, 10m and 5m are recommended respectively for trunk road and primary distributor, district distributor and local distributor.

2.2 Surrounding Environment

- 2.2.1 The Subject Site is located in urban area. It is mainly surrounded by residential, institutional and hospital uses.
- 2.2.2 There is no fluff, odour and other air pollutant emission identified in the surrounding.
- 2.2.3 The nearest road is Pok Fu Lam Road which is a primary distributor according to Annual Traffic Census 2024 (i.e. latest version). The next nearest road is Victoria Road is already sited over 60m apart.

2.3 Appraisal of Chimney Stack Emission Impact on the Proposed Development

- 2.3.1 According to the updated field survey on 13/2/2026 which covers 200m from the Subject Site, it consists of residential developments (including nurses' quarters), office and other institutional uses (e.g. Administration Block, New Clinical Building, Professional Block, Cancer Centre of QMH; Jockey Club Building for Interdisciplinary Research; Caritas Wu Cheng-chung Secondary School). There is no chimney stack identified within 200m from the Subject Site (**Figure 2**) which resembles the observation in the approved rezoning application and last S16 planning application. The horizontal buffer distance requirement is deemed complied with.
- 2.3.2 Therefore, no adverse air quality impact due to chimney stack emission is anticipated.
- 2.3.3 It is fully understood that it should be the responsibility of the applicant and consultants to ensure the validity of the chimney data in site surveys.

2.4 Appraisal of Vehicular Emission Impact on the Proposed Development

- 2.4.1 **Figure 3** shows the buffer separation from kerb side of Pok Fu Lam Road to the Subject Site. As discussed, the next nearest road is over 60m apart so that the buffer separation requirement is already complied with disregard the classification.
- 2.4.2 The buffer area will cover over half of the area of the Subject Site. In order to meet the requirement, the development has been designed so that there is no window opening of the habitable room within 20m from kerb side of Pok Fu Lam Road. In other words, the window/door opening of the habitable rooms will be positioned to more than 20m from kerb side of Pok Fu Lam road, which resembles the design and commitment in the approved rezoning application and the last S16 planning application. For the clubhouse facilities, the fresh air intake location will be positioned to more than 20m apart as well. The outdoor swimming pool is located near the

southwestern boundary of Subject Site and already have over 20m setback from kerb side of Pok Fu Lam Road.

- 2.4.3 Again, no adverse air quality impact due to traffic emission is anticipated with adequate buffer separation provided.

2.5 Appraisal of Air Quality Impact Arising from the Proposed Development

- 2.5.1 The nature of the Proposed Development is not environmental polluting. No significant air quality impact arising from the proposed development is anticipated.

2.6 Air Quality Impact during Construction of the Project

Legislation

- 2.6.1 Assessment criteria for aerial emission is based in the Hong Kong Air Quality Objectives (AQOs).

Representative Air Sensitive Receivers

- 2.6.2 The nearest air/noise sensitive receiver is a cluster of residential buildings along Pok Fu Lam Road (Radcliffe and Dor Fook Mansion) minimum 20m away to the northeast.

Identification of Potential Air Quality Impacts

- 2.6.3 Demolition, site formation, excavation, foundation and superstructure construction works would be required for the construction of the project.
- 2.6.4 According to desktop research, no concurrent projects are identified with 500m assessment area of the site. Therefore, there are no air quality impact due to the concurrent projects.
- 2.6.5 Fugitive dust will be the potential major source of air quality impact during the construction phase. Significant emissions are not anticipated from the criteria pollutants – NO₂, SO₂, and CO, etc. as only a limited number of diesel/ petroleum fuelled machinery would be operating. Moreover, under the Air Pollutant Control (Non-road Mobile Machinery) (Emission) Regulation, only approved or exempted non-road mobile machineries (including mobile generator, air compressor, crawler crane, bulldozer, and etc.) with a proper label are allowed to be used in the construction site. For SO₂ emission, under Air Pollution Control (Fuel Restriction) Regulation, only liquid fuel with a sulphur content of less than 0.005% by weight are allowed to be used in the construction site.

Mitigation Measures for Fugitive Dust and Gaseous Emission

- 2.6.6 Adequate and practical mitigation measures will be adopted during construction of the project to suppress dust and gaseous emission. With the implementation of sufficient suppression measures as stipulated under the APCO, Air Pollution Control (Construction Dust) Regulation (Cap 311R) and good site practices, fugitive dust and gaseous emission arising from construction can be effectively suppressed through contractual clauses and close enforcement of the resident engineers. The Contractor(s) shall be required to follow the requirements of the Air Pollution Control (Construction Dust) Regulation which requires notification before carrying out construction works and to adopt air quality control reduction measures while carrying out demolition activities or construction activities.
- 2.6.7 The recommended mitigation measures for protection of nearby ASRs are described below:

- Use of regular watering, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;
- Use of frequent watering for particularly dusty construction areas close to ASRs;
- Open temporary stockpiles should be avoided or covered. Prevent placing dusty material storage plies near ASRs;
- Dusty material stockpiled onsite, if any, should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3-sides;
- Where this is not practicable owing to frequent usage, watering should be applied to aggregate fines;
- Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations;
- Establishment and use of vehicle wheel and body washing facilities at the exit points of the site;
- Imposition of speed controls for vehicles on unpaved site roads. 8 km/hr is the recommended limit;
- Routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs;
- Provide hoarding of not less than 3.6m high from ground level along site boundary which is next to the ASRs to further protect the ASRs.
- Location all the dusty activities away from any nearby ASRs as far as practicable
- Avoid using exempted NRMMS

2.6.8 "Recommended Pollution Control Clauses for Construction Contracts" is available on the EPD website which set out the recommended air pollution control measures to be implemented by the contractor(s) during the construction stage of the Project.

2.6.9 In addition, availability of electricity supply during construction of the project will be explored and such requirement will be specified in future contract. If available, contractor should maximise use of electricity and with least reliance of diesel fuelled equipment (e.g. for electricity powered stationary equipment such as pump instead of using generator). With the adoption of good practices, it is expected that emission of construction fugitive dust and gaseous emissions can be kept to an acceptable level.

2.7 Conclusion

2.7.1 As confirmed in updated field survey, there is no chimney identified within 200m from the Subject Site. In addition, the air sensitive uses in the development scheme can meet the buffer separation requirement with respect to nearest carriageways. There is no fluff, odour and other air pollutant emission identified in the surrounding. Therefore, it is envisaged that the proposed development at the Subject Site would not be subject to significant air quality impact.

2.7.2 Best management practice will be adopted during construction of the project. Necessary mitigation measures as stated above and in "Recommended Pollution Control Clauses for Construction Contracts" where applicable will be applied so that emission during construction stage should be kept to an acceptable level.

3. NOISE IMPACT ASSESSMENT

3.1 Road Traffic Noise Impact Assessment

Introduction

- 3.1.1 The Subject Site is bounded by Pok Fu Lam Road to the northeast which is identified the major road traffic noise source. The noise environment onsite is dominated by road traffic noise. There is no industrial use in the surrounding and no noticeable noise from fixed noise source or industrial activities. Potentially noisy facilities of the proposed development will be designed so that they will meet relevant standard stipulated in the HKPSG. No unacceptable fixed noise impact due to the operation of the Proposed Development is anticipated.
- 3.1.2 Traffic noise impact assessment is prepared to address potential road traffic noise impact on the proposed residential redevelopment in future.

Assessment Criteria

- 3.1.3 Noise standards are recommended in the HKPSG for planning against noise impact from sources such as road traffic, railway and aircraft etc. The proposed development is residential in nature. Associated facilities such as plantroom are not considered noise sensitive uses. According to the guidelines, the maximum noise level from road traffic, measured in terms of L_{10} (1-hr) is recommended to be 70 dB(A) at typical facades of new dwellings.

Road Traffic Noise Impact Assessment Methodology

- 3.1.4 The assessment approach and methodology involved the prediction of future noise impacts on Noise Sensitive Receivers (NSRs) arising from traffic flows on existing and future road carriageways situated in the vicinity of the Subject Site.
- 3.1.5 The U.K. Department of Transport's procedure "Calculation of Road Traffic Noise" (CRTN) was used to predict the hourly L_{10} noise levels generated from road traffic at selected representative NSRs.
- 3.1.6 The Proposed development is applied for commencing operation in 2034. Traffic forecast for year 2049 representing the worst situation within 15 years from the operation is provided by project traffic consultant and included in **Appendix 2**. Endorsement of the traffic forecast data will be provided when available.

Noise Sensitive Receivers

- 3.1.7 NSRs within the Subject Site have been selected for openable window of habitable rooms to represent the noise sensitive uses of the proposed development. Locations of the NSRs are shown in **Figure 4**.
- 3.1.8 The assessment points have been taken to be situated at 1.2 m above floor slabs and at 1 m away from the external facade of openable windows of habitable room of the flats.

Predicted Road Traffic Noise Level under Base Case Scenario

- 3.1.9 The proposed development is designed with due consideration of road traffic noise impact. Single-aspect building design is adopted which means that all openable window (for ventilation purpose) of habitable rooms of residential blocks will be facing away from Pok Fu Lam Road. Nevertheless, assessment points are assigned to the glazing location under Base Case Scenario for completeness.

3.1.10 The predicted road traffic noise level ($L_{10}(1\text{-hr})$) under base case scenario for the proposed development (without any noise mitigation measures) is presented in **Appendix 3**.

3.1.11 According to the assessment result, the highest predicted noise level is $L_{10}(1\text{hr})$ 79 dB(A) at rear side of the room facing Pok Fu Lam Road. There are 39 out of 135 flat units with exceedance, equivalent to compliance level of about 71%.

Recommended Noise Mitigation Measures and Predicted Road Traffic Noise Level under Mitigated Scenario

Fixed Glazing and Fixed Glazing with Maintenance Window

3.1.12 As discussed, single-aspect building design is adopted. It means that the glazing (if any) facing Pok Fu Lam Road directly will not be adopted as prescribed window opening. These locations are either equipped with fixed glazing (i.e. no opening) for all floors, or fixed glazing with maintenance window. Furthermore, window pane of the fixed glazing or fixed glazing with maintenance window will be of at least 8mm with noise insulation performance of Sound Transmission Class (STC) 34 or above.

3.1.13 If the fixed glazing is equipped with maintenance window, the maintenance window will be provided with a removable handle or key lock system to ensure the maintenance window remains locked except for cleaning and maintenance purpose. The maintenance window will be opened for maintenance only but not for ventilation purpose and this will be clearly stated in the Deed of Mutual Covenant (DMC) and sales brochure so that future buyer/occupants can be well informed on this matter.

Vertical Acoustic Fin

3.1.14 In order to further reduce the view angle between the noise sensitive receivers and the major carriageways and in turn road traffic noise impact, full-height vertical fin with depth 1 m is recommended at strategic locations as shown in **Figure 5**. The vertical acoustic fin will be provided from the lowest floor to the top floor. The noise reduction effect provided by vertical fin is determined using CRTN methodology taking into account the view angle correction but would not be higher than 3 dB(A) as a conservative approach.

3.1.15 The proposed mitigation measures (fixed glazing with maintenance window, and vertical acoustic fin) are shown in **Figure 5**. With the mitigation measures in place, the predicted noise level at all NSRs would be within the acceptable standard. Full compliance of the road traffic noise standard can be achieved. The predicted road traffic noise level ($L_{10}(1\text{-hr})$) under scenario with mitigation measures for the proposed development is presented in **Appendix 3**.

3.2 Construction Noise Impact

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

Construction Noise Criteria

3.2.2 Construction noise is controlled under the Noise Control Ordinance (NCO) which prohibits the use of powered mechanical equipment (PME) during the restricted hours (7 p.m. to 7 a.m. on normal weekdays and any time on a public holiday, including Sunday) without a valid Construction Noise Permit (CNP) from the Authority. The criteria and procedures for issuing such a permit are specified in the "Technical Memorandum on Noise From Construction Works Other than Percussive Piling" (TM1).

While there is no planned construction works to be carried out during the restricted hours, TM1 should be followed in case there is any need to carry out works in such time period in future.

- 3.2.3 With effect from 1 November 96, the use of specified powered mechanical equipment (SPME) for carrying out construction work other than percussive piling and/ or the carrying out of prescribed construction work (PCW) within a designated area are also brought under control. The relevant technical details are provided in the "Technical Memorandum on Noise from Construction Work in Designated Areas" (TM2).
- 3.2.4 For construction works other than percussive piling, although TM1 does not provide control over daytime construction activities, noise limits as shown in below Table are set out in the "Practice Note for Professional Persons Environmental Consultative Committee" (ProPECC) PN/1 issued in 2024.

Table 1 Noise Limit for Daytime Construction Activities

NSR	0700 to 1900 Hours on Any Day Not Being a Sunday or General Holiday, Leq (30 min)*, dB(A)
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 examination)

**Notes: Leq(30min) is a standard measure of noise level which means the continuous equivalent noise level over a 30 minute interval.*

Representative Noise Sensitive Receivers

- 3.2.5 The nearest air/noise sensitive receiver is a cluster of residential building along Pok Fu Lam Road (Radcliffe and Dor Fook Mansion) minimum 20m away to the northeast. On the other hand, the nearest school development is Caritas Wu Cheng-chung Secondary School over 125m to the northwest.
- 3.2.6 Sufficient noise mitigation measures should be introduced in the development to alleviate potential noise impacts on any NSR. The Contractor(s) will be required under the contract to ensure regular maintenance of all plant and equipment, and that noise generation at source would be minimized and practicable noise mitigation measures would be in use. The Contractor(s) will be required to adopt quiet type construction plants (e.g. EPD's quality powered mechanical equipment (QPME) inventory), wherever practicable. Movable noise barriers will also be erected around noisy plants in order to minimize noise generation at source. With these measures in place noise generation due to construction activities would be minimized.
- 3.2.7 The following general noise mitigation measures are recommended for implementation:

- Application of properly designed silencers, mufflers, acoustically dampened panels and acoustic sheds or shields, etc.;
 - Making use of onsite electricity and use of electric-powered equipment where applicable instead of diesel-powered or pneumatic-powered equipment;
 - Erecting noise enclosures/ movable noise barriers around noisy plants;
 - Only well-maintained plants should be operated on-site;
 - Plants should be serviced regularly during the construction programme;
 - Noisy activities can be scheduled to minimize exposure of nearby NSRs to high levels of construction noise. For example, noisy activities can be scheduled for midday or at times coinciding with periods of high background noise;
 - Noisy equipment such as emergency generators shall always be sited as far away as possible from noise sensitive receivers;
 - Location of noise emitting plants at maximum possible distances from sensitive receivers;
 - Contractual clauses for construction works; and
 - Schedule of noisy operations during non-restricted hours where possible.
 - Quieter construction method & equipment such as using high pressure water jetting, quieter type wire saws or diamond wire saws, hydraulic crusher for concrete breaking for demolition works, handheld concrete crushers, silent piling by press-in method for foundation works.
- 3.2.8 The above-mentioned noise mitigation measures, and all other relevant measures in "Recommended Pollution Control Clauses for Construction Contracts" from EPD website and ProPECC PN 1/24 will be included in the contractual clauses for implementation by the contractor(s) during the construction stage for construction of the proposed development. Furthermore, the Project Proponent will be recommended to specify the quieter construction equipment/methods in the construction contract to adopt through the preparation of a Construction Noise Management Plan (CNMP) by the successful tenderer with reference to ProPECC PN 1/24. With these measures in place, construction noise due to the Proposed Development can be minimized, and no significant noise impact is anticipated.

3.3 Fixed Noise Impact Assessment

Impact due to Surrounding Fixed Noise Sources

Identification of Fixed Noise Sources

- 3.3.1 Based on onsite observation along the periphery of the Application Site, no noticeable noise from any fixed noise sources can be identified. According to further review including referencing to aerial photos in the surrounding, some noise sources have been identified at surrounding building as tabulated below and shown in **Table 2**.

Table 2 Identified Fixed Noise Sources in the Surrounding

Building	Type of Noise Sources	Elevation	Separation from Nearest Site Boundary
Queen Mary Hospital – Wing E	Chillers (1 nos.)	~195mPD	~220m

Queen Mary Hospital – Professorial Block	Chillers (4 nos.)	~178mPD	~190m
Queen Mary Hospital – New Clinical Building	Chillers (3 nos.) VRVs (2 nos.) Equipment substantially shielded by building structure	~177mPD	~140m
HKU Hong Kong Jockey Club Building for Interdisciplinary Research	VRVs (1 nos.) Chillers (1 nos.) Cooling towers (3 nos.)	~170mPD	~205m
HKU Academic Building	Cooling towers (4 nos.)	~172mPD	~170m
HKU Li Ka Shing Faculty of Medicine Laboratory Block	Cooling towers (7 nos.)	~160mPD	~245m

3.3.2 All identified fixed noise sources are located at rooftop of buildings and direct noise measurement is not possible. Since direct measurement is not practicable possible, the noise strength of the identified noise sources has been assumed based on reference equipment catalogue model of similar scale.

3.3.3 The elevations of all identified fixed noise sources are in fact higher than the proposed development and already substantially shielded by its building structure.

3.3.4 Most noise sources are air conditioning systems, educational buildings/ offices or similar uses are expected to operate during day and evening time only and not occupied during night time so that no operation of their noise sources is assumed. Night time operation is anticipated for the noise sources at hospital building rooftops.

Assessment Criteria

3.3.5 According to the Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites ("IND-TM") issued under the Noise Control Ordinance, the proposed development is situated in type "(iv) Area other than those above". Area Sensitivity Rating "B" is adopted assuming that it is not affected by any influencing factor. Respectively standards during day & evening time and night time are Leq(30min) 65dB(A) and 55 dB(A).

Noise Sensitive Receivers

3.3.6 As the identified noise sources are located generally on south west side of the Application Site, representative NSRs are selected at the south and west façades of towers of the proposed development nearest to the noise sources (see **Figure 6**).

Assessment Methodology

3.3.7 Standard acoustic principles were adopted for prediction of cumulative fixed noise impact. In accordance with the IND-TM, a barrier correction of -10dB(A) is applied where the line of sight from the representative NSR would be completely blocked by building structure or barriers. A façade correction of +3dB(A) is also adopted. Tonality of 3dB(A) is also assumed for all fixed noise sources as a conservative assessment approach.

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

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

where

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

Assessment Results under Unmitigated Scenario

- 3.3.9 According to the assessment results in **Appendix 4**, the predicted noise levels at all selected NSRs would well comply with relevant standards. No adverse fixed noise impact on the proposed development is anticipated.

Impact due to Future Fixed Noise Sources of the Proposed Development

- 3.3.10 The Proposed Development will inevitably contain noisy facilities such as ventilation system for carpark, fan system and HVAC for clubhouse. However, in this early planning stage, building services consultant/contractor has not been engaged and there is absence of any detail regarding potential noisy facilities. Moreover, by nature of the project, it is fully compatible with the surrounding and no excessive fixed noise sources will be equipped. In all circumstances, the requirement under HKPSG is fully observed (i.e. acceptable noise level minus 5 decibels). In future detailed design of the project, same requirement will be imposed so that the relevant noise standard will be met by various means such as selection of quiet equipment, use of shielding device, acoustic louvers, silencers, semi/full-enclosure. Planning approval condition to require noise impact assessment is expected. Upon availability of details of fixed noise sources, the assessment of fixed noise impact can be conducted with respect to the said planning approval condition. With abundance of direct noise mitigation measures to control and suppressed the generated noise level, no adverse noise impact due to operation of potentially noisy facilities of the Proposed Development on the proposed residential uses and any other surrounding noise sensitive uses is anticipated.

3.4 Conclusion

- 3.4.1 The proposed development at the Subject Site is likely affected by road traffic noise. In addition to single-aspect building design, fixed glazing, fixed glazing with maintenance window, and vertical acoustic fin are recommended. All NSRs of the proposed development would be within the standard stipulated under HKPSG after mitigations.
- 3.4.2 Best management practice will be adopted for the construction of the Proposed Development so that no significant noise impact is anticipated.
- 3.4.3 The potential noise impact from fixed sources has been assessed. According to the assessment results, the Proposed Development would not be subject to adverse fixed noise impact.
- 3.4.4 Potentially noisy facilities of the proposed development will be designed so that they will meet relevant standard stipulated in the HKPSG. No unacceptable fixed noise impact due to the operation of the Proposed Development is anticipated.

4. CONSTRUCTION WASTE DISPOSAL

Legislation

4.1.1 The principal legislation controlling waste materials in Hong Kong is the Waste Disposal Ordinance (WDO) (Cap. 354) and its subsidiary regulations including Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) and Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Other relevant ordinance includes Land (Miscellaneous Provisions) Ordinance (Cap 28) and Public Health and Municipal Services Ordinance (Cap 132) - Public Cleansing and Prevention of Nuisances Regulation. Other relevant guidelines which cover how applicant and contractor should comply with the regulations are as follows:

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

Construction Waste Impact

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

- Waste from demolition of existing building and site clearance;
- Excavated C&D materials ;
- Inert and non-inert C&D materials (including waste timber formwork);
- General refuse generated by the workforce;
- Chemical and oily wastes due to maintenance of equipment; and
- Asbestos containing materials

Waste Management Strategy

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

Construction Waste Disposal Measures

- 4.1.4 The various waste management options are categorised in terms of preference from an environmental viewpoint. The options considered to be most preferable have the least environmental impacts and are more sustainable in the long term. The hierarchy is as follows. The waste management strategy is to avoid waste generation in the first place (i.e. in descending order of preference as listed below).
- Avoidance and reduction;
 - Reuse of materials;
 - Recovery and recycling; and
 - Treatment and disposal.
- 4.1.5 The following section describes the best management practices in construction site to avoid or further reduce the potential environmental impacts associated with the handling, collection and disposal of construction and chemical wastes arising from the construction of the Proposed Development.
- 4.1.6 Contractor will be required to develop and implement a proper waste management plan (WMP) according to the PNAP ADV-19. The WMP should include designation of areas for the segregation and temporary storage of materials for future use or recycling, the hierarchy for waste management on and off-site as well as a complete list of mitigation measures for handling excavated materials.
- 4.1.7 It will be the contractor's responsibility to ensure that only reputable licensed waste collectors are used and that appropriate measures to reduce adverse impacts, including windblown litter and dust from the transportation of these wastes, are employed. In addition, the contractor must ensure that all the necessary permits or licences required under the Waste Disposal Ordinance are obtained for the construction phase.
- 4.1.8 It can be achieved through careful planning of works method and material consumption before ordering of materials. Material should be properly stored and protected to reduce damage and contamination to reduce waste generation as well. Non-timber formwork, or used timber, instead of virgin timber, should be adopted where possible.
- 4.1.9 If that is unavoidable, source reduction and segregation should be exercised as far as practicable and at the same time, recycling and reuse should be adopted to salvage as much as possible all the recyclable and reusable materials.
- 4.1.10 In order to monitor the disposal of C&D material at landfills and public fill reception facilities, as appropriate, and to control fly tipping, a trip-ticket system should be included as one of the contractual requirements to be implemented by Contractor. Reference shall be made to DEVB TCW No.6/2010 for details.

C&D Materials

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

- 4.1.12 Waste generated by construction activities should be sorted into inert C&D materials and non-inert C&D materials. Adequate areas for sorting and storage of segregated materials should be provided onsite. The inert C&D materials which comprise soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt shall be reused in earth filling, reclamation or site formation works. The non-inert C&D materials which comprises metal, timber, paper, glass, junk and general garbage shall be reused or recycled and, as the last resort, disposal of at landfills.
- 4.1.13 It is estimated that about 61240m³ of inert C&D material and 7030m³ of non-inert C&D material will be generated during the course of construction (including demolition). Adequate areas for sorting and storage of segregated materials should be provided onsite. Construction wastes shall be sorted, with the inert C&D materials broken up into small pieces. Where possible, the C&D materials will be reused onsite (e.g. backfilling). Residual C&D material will be delivered to public fill reception facility, and the non-inert C&D materials should be disposed of at landfill.
- 4.1.14 The Applicant and its contractor will consider to use dump trucks equipped with GPS or an equivalent system for tracking the delivery of inert and non-inert C&D material from the site to the designated disposal location. The trip-ticket system and other measures for transportation, storage and collection of waste, such as using trucks with cover or enclosed containers for waste transportation will be implemented. Disposal and transportation of C&D materials are recommended before foreseeable inclement weather such as typhoon or heavy rain. The stockpiled soil shall be properly covered with tarpaulin when heavy storms are forecast.

Chemical Waste

- 4.1.15 Any unused chemicals and those with remaining functional capacity should be recycled as far as possible. Chemical waste will be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes. All chemical waste that cannot be recycled or re-refined in the case of waste lubricants should be collected by a licensed chemical waste collector and disposed of Chemical Waste Treatment Centre (CWTC) at Tsing Yi. Provided that the handling, storage and disposal of chemical waste are in accordance with these requirements, adverse waste management implications, including the potential hazards, air and odour emissions, noise, wastewater discharge, ecology and public transport, associated with handling, storage and disposal of chemical waste are not expected.
- 4.1.16 Chemical and oily wastes generated from the construction activities, vehicle and plant maintenance and oil interceptors should be disposed of as chemical waste in strict compliance with the Waste Disposal (Chemical Waste) (General) Regulation. Any person who produces or causes to produce chemical waste is required to register with EPD. The Applicant and its contractor will duly follow the requirement and register with EPD as a chemical waste producer.

Asbestos Containing Material

- 4.1.17 Asbestos was widely used in the construction industry prior to the early 1980s for fireproofing, thermal and electrical insulation as well as in sound absorption materials. However, asbestos is currently recognized as hazardous materials, due to its etiological effects on human respiratory system.
- 4.1.18 Asbestos containing material (ACM) may be present in the buildings within the Application Site. Thus, ACM which may be disturbed during demolition activities, should be removed and disposed of in a proper manner prior to the demolition work, so as to

avoid the release of harmful asbestos fibres to environment and minimise potential hazard.

- 4.1.19 All ACM if confirmed to be present within the existing premises must be removed and disposed of in accordance with the Air Pollution Control Ordinance (APCO) and WDO prior to the demolition works. A Registered Asbestos Consultant and Registered Asbestos Laboratory shall be engaged to conduct investigation for the presence of ACM. An Asbestos Investigation report, an Asbestos Abatement Plan (AAP) (if required) and a notification of commencement of asbestos abatement works should be provided afterwards. As required under Cap. 311 APCO, the owner of premises shall give not less than 28 days' written notice to the Authority before the commencement of asbestos abatement work. Also, the removal of ACM should be carried out by a Registered Asbestos Contractor according to the approved AAP under the supervision of a Registered Asbestos Consultant. Asbestos control in accordance with the requirement under APCO will be followed. The asbestos waste generated shall be disposed by a licenced collector in compliance with the WDO.

General Refuse

- 4.1.20 Waste such as bamboo, contaminated plastic and glass, packaging waste and other organic materials will be considered as non-recyclable waste and disposed to landfills.
- 4.1.21 For general refuse (including food waste, paper, plastic bottles and aluminium cans, etc.), mitigation measures should include provision of a collection area where waste can be sorted, stored and loaded prior to removal from the site. Recyclable materials (i.e. paper, plastic bottles and aluminium cans) will be separated for recycling, in order to reduce the amount of general refuse to be disposed of at landfill.
- 4.1.22 The removal of general refuse from the site will be arranged on a daily basis or at least on every second day to minimize any potential odour impacts. Disposal of general refuse is recommended before foreseeable inclement weather such as typhoon or heavy rain.
- 4.1.23 Waste disposal from construction site is subject to control under the Waste Disposal Ordinance.
- 4.1.24 To estimate the general refuse generated during construction phase, an assumption of 50 workers per day with 0.65kg per worker per day has been made.
- 4.1.25 **Table 3** presents the estimation of waste generated during construction phase.

Table 3 Estimated Quantities of Waste during Construction Phase

Waste Material	Estimated Waste Generation	Proposed Disposal Method and Destination
Inert C&D Material	~61240 m ³	~0.5% (i.e. 306m ³) would be reused and the remaining (i.e. 99.5% or ~60934m ³) would be delivered offsite to public fill reception facility (i.e. Chai Wan Public Fill Barging Point)
Non-Inert C&D Material	~7030 m ³	To be disposed of at designed landfill site
General Refuse	~30 kg per day	Recyclables collected by refuse collection vehicle;

		Non-recyclables disposed of at designated landfill site
Chemical Waste	Anticipated to be limited (around some hundred litres at most)	To be collected by licensed chemical waste collectors and deliver to Chemical Waste Treatment Centre or equivalent
Asbestos Containing Materials	TBC (Subject to further investigation by the asbestos specialist)	To be disposed of at designated landfill site

5. OVERALL CONCLUSION

- 5.1.1 An environmental assessment has been conducted to address potential environmental noise, air quality impact, and construction waste disposal based on the proposed development scheme.

Air Quality

- 5.1.2 As confirmed in field survey, there is no chimney identified within 200m from the Subject Site so that the buffer separation requirement can be well met. Similarly, the air sensitive uses in the MLP can meet the buffer separation requirement with respect to nearest carriageways. There is no fluff, odour and other air pollutant emission identified in the surrounding. Therefore, it is envisaged that the proposed development at the Subject Site would not be subject to significant air quality impact.

- 5.1.3 Best management practice will be adopted during construction of the project. Necessary mitigation measures as stated above and in "Recommended Pollution Control Clauses for Construction Contracts" where applicable will be applied so that emission during construction stage should be kept to an acceptable level.

Noise

- 5.1.4 The proposed development at the Subject Site is likely affected by road traffic noise. In addition to single-aspect building design, fixed glazing, fixed glazing with maintenance window, and vertical acoustic fin are recommended. All NSRs of the proposed development would be within the standard stipulated under HKPSG after mitigations.

- 5.1.5 Best management practice will be adopted for the construction of the Proposed Development so that no significant noise impact is anticipated.

- 5.1.6 The potential noise impact from fixed sources has been assessed. According to the assessment results, the Proposed Development would not be subject to adverse fixed noise impact.

- 5.1.7 Potentially noisy facilities of the proposed development will be designed so that they will meet relevant standard stipulated in the HKPSG. No unacceptable fixed noise impact due to the operation of the Proposed Development is anticipated.

Construction Waste Disposal

- 5.1.8 Best management practice will be adopted for the construction of the Proposed Development. C&D materials generation will be minimised and reused where possible, and recycled. No significant waste management implications is anticipated during the construction phase.

Figure

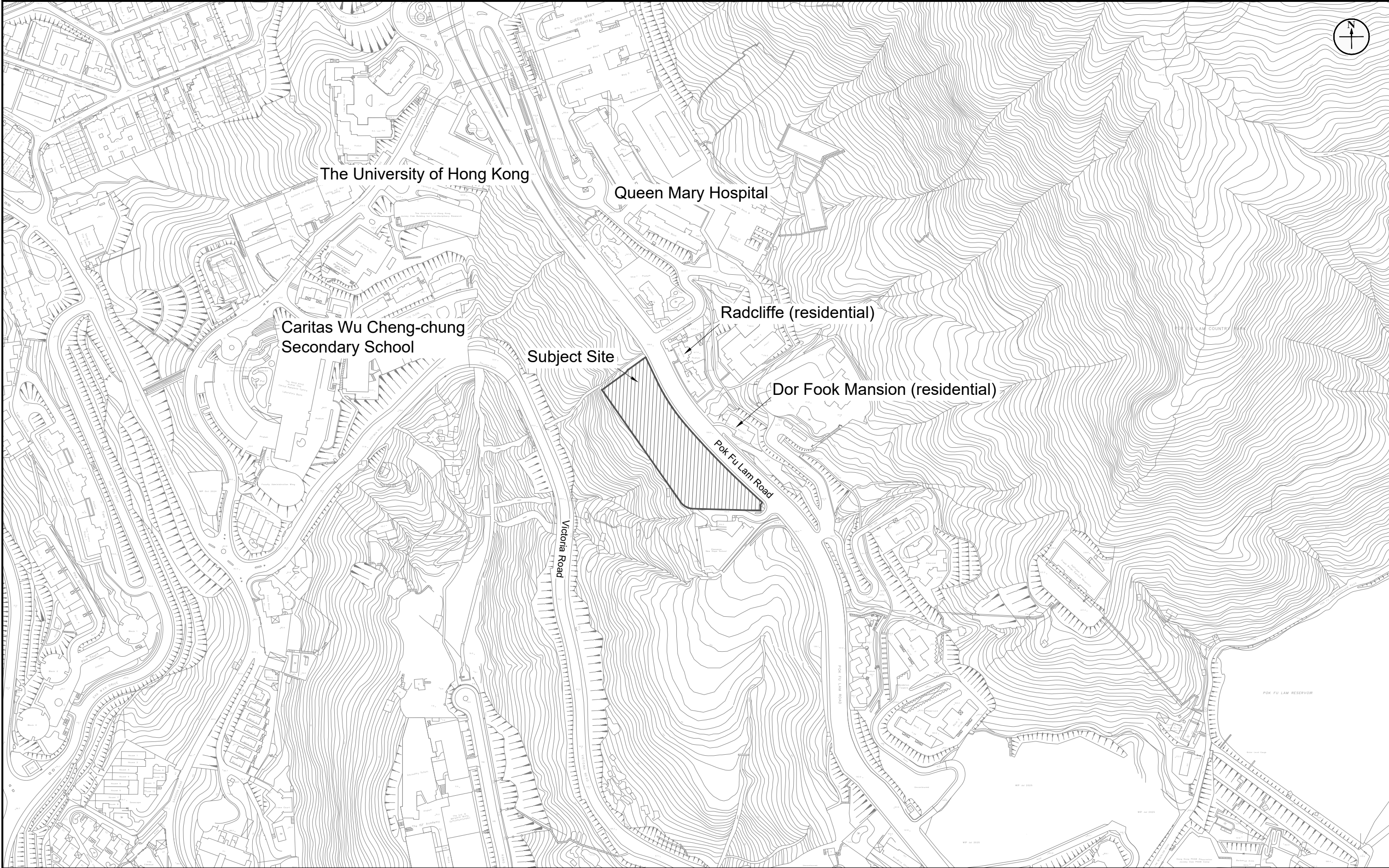


Figure: 1

Title: Location of the Subject Site and its Environs

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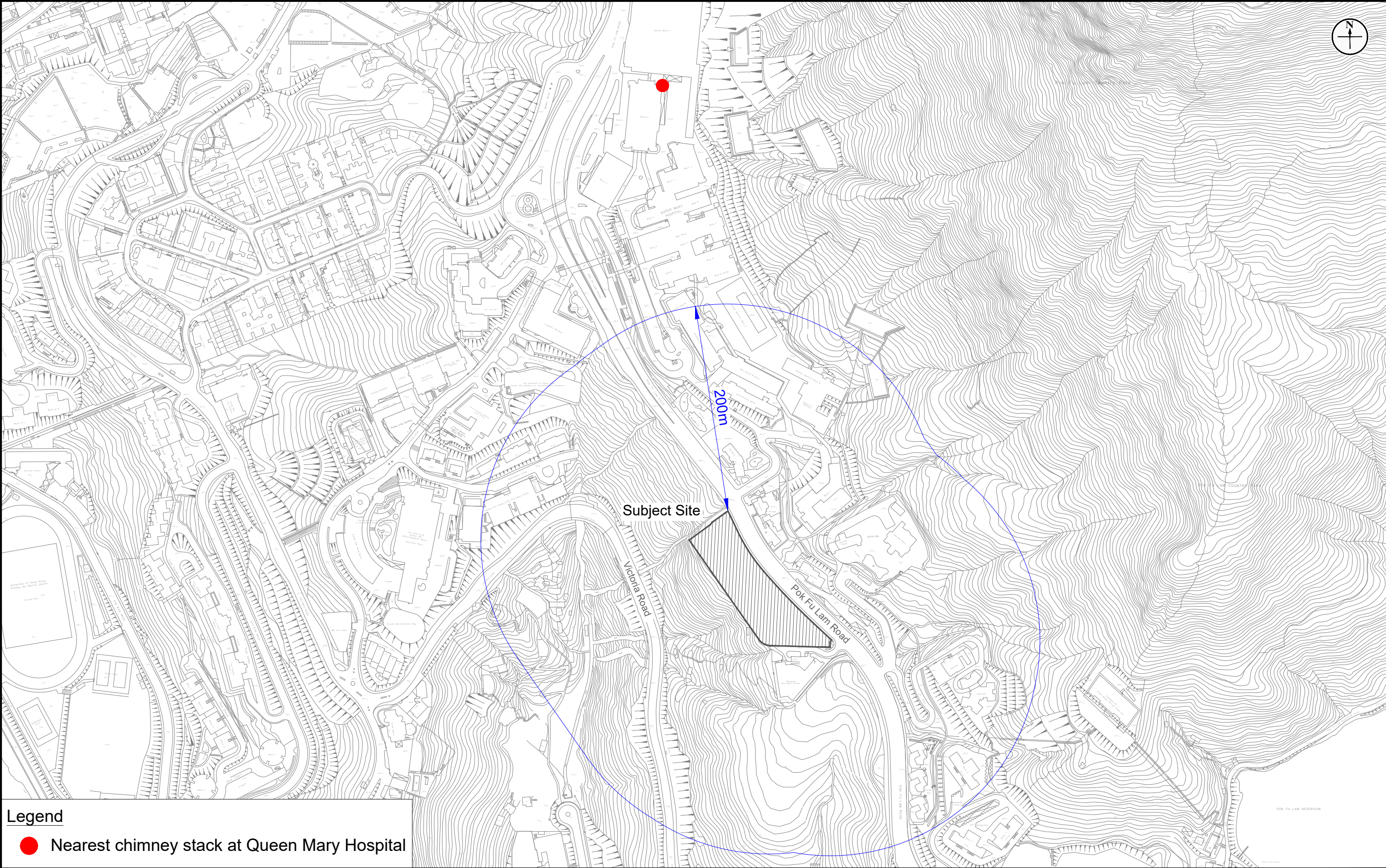
RAMBOLL

Drawn by: CM

Checked by: CC

Rev.: 3.0

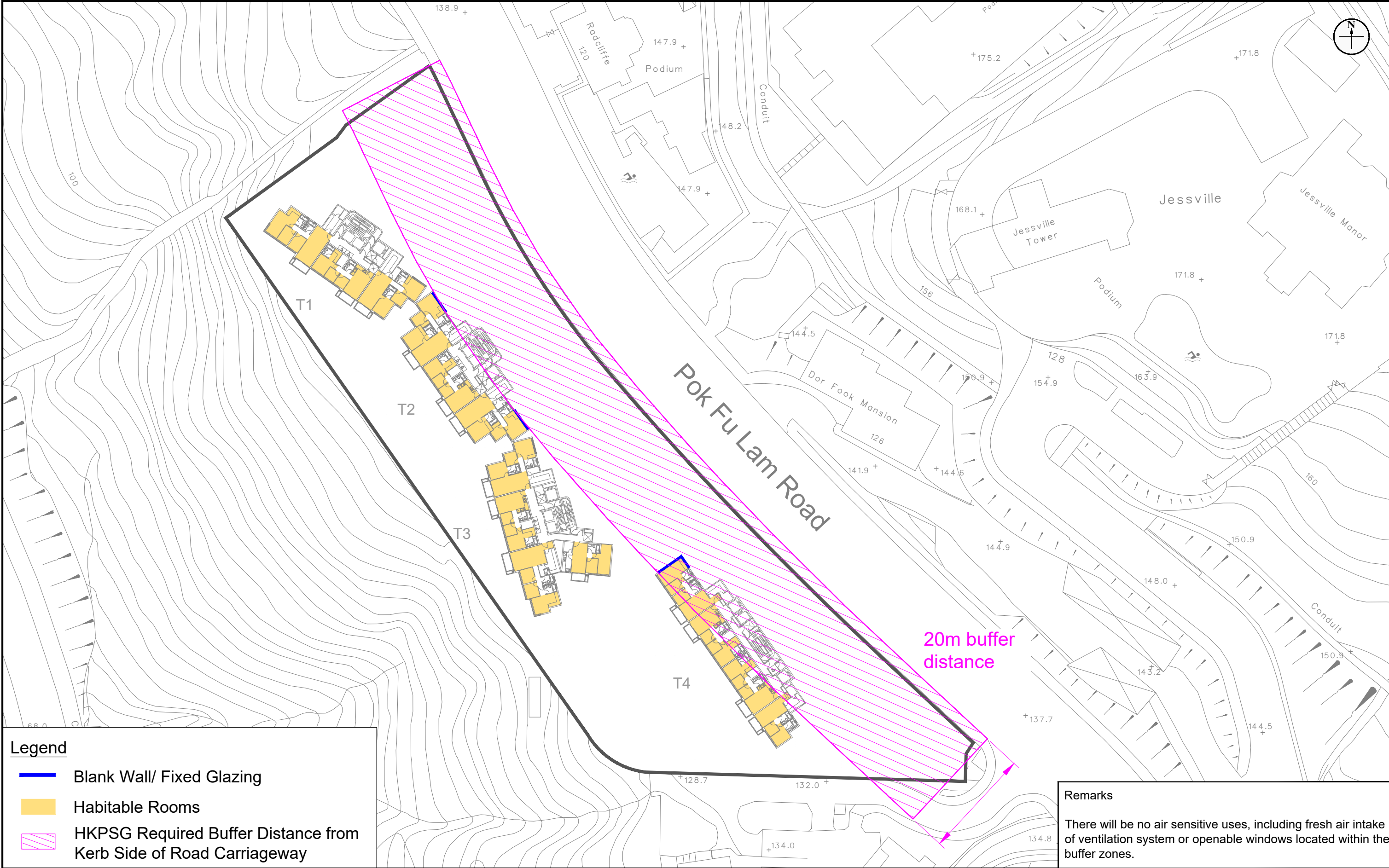
Date: Feb 2026



Legend

Nearest chimney stack at Queen Mary Hospital

Figure: 2		RAMBOLL	
Title: 200m Study Area from Subject Site Boundary for Chimney Stack Emission Study		Drawn by:	CM
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Legend

- Blank Wall/ Fixed Glazing
- Habitable Rooms
- HKPSG Required Buffer Distance from Kerb Side of Road Carriageway

Remarks

There will be no air sensitive uses, including fresh air intake of ventilation system or openable windows located within the buffer zones.

Figure: 3a		RAMBOLL	
Title: Buffer Separation between Kerb Side of Road Carriageway and Nearest Air Sensitive Uses in the Subject Site		Drawn by: CM	
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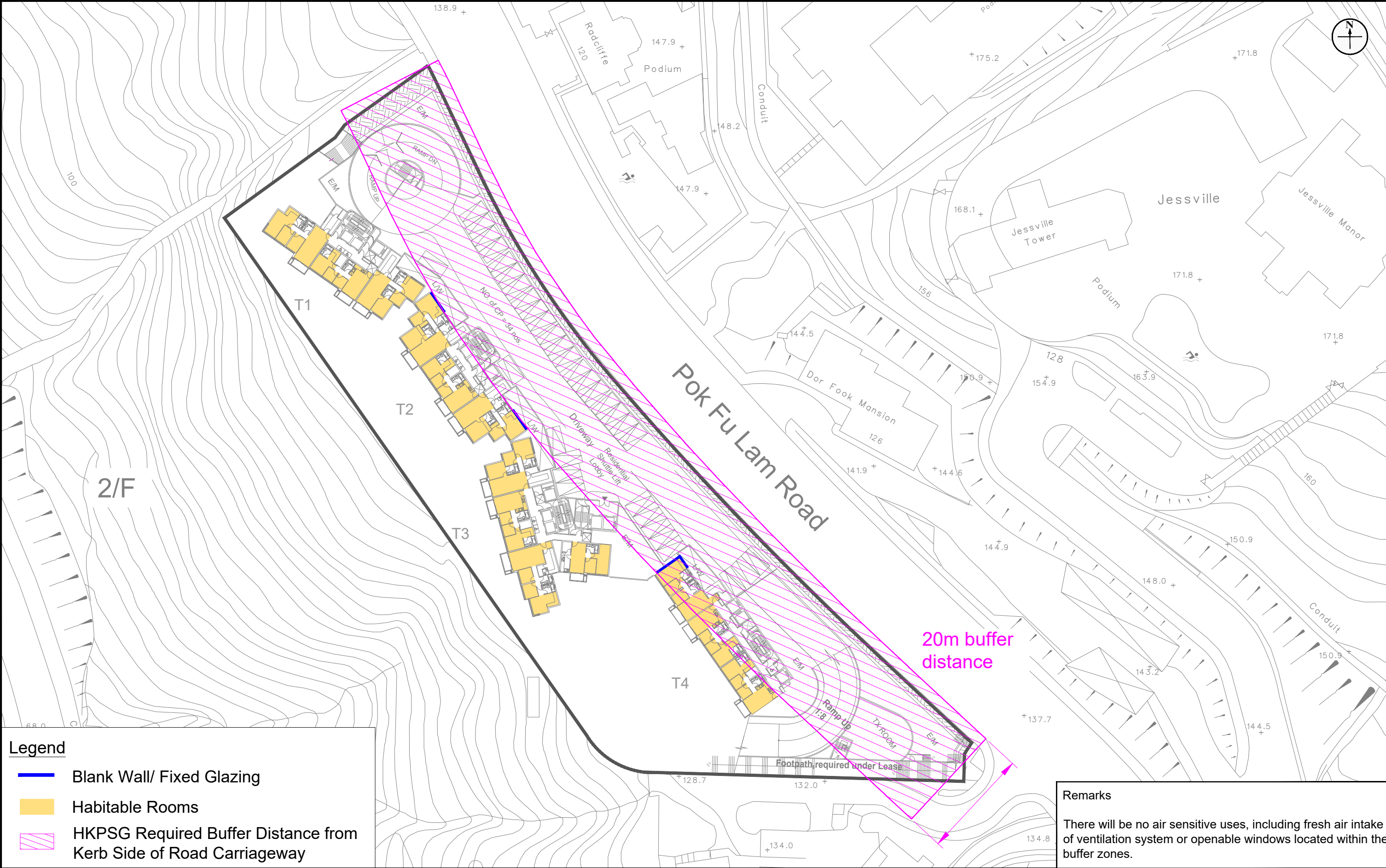


Figure: 3b		RAMBOLL	
Title: Buffer Separation between Kerb Side of Road Carriageway and Nearest Air Sensitive Uses in the Subject Site		Drawn by: CM	
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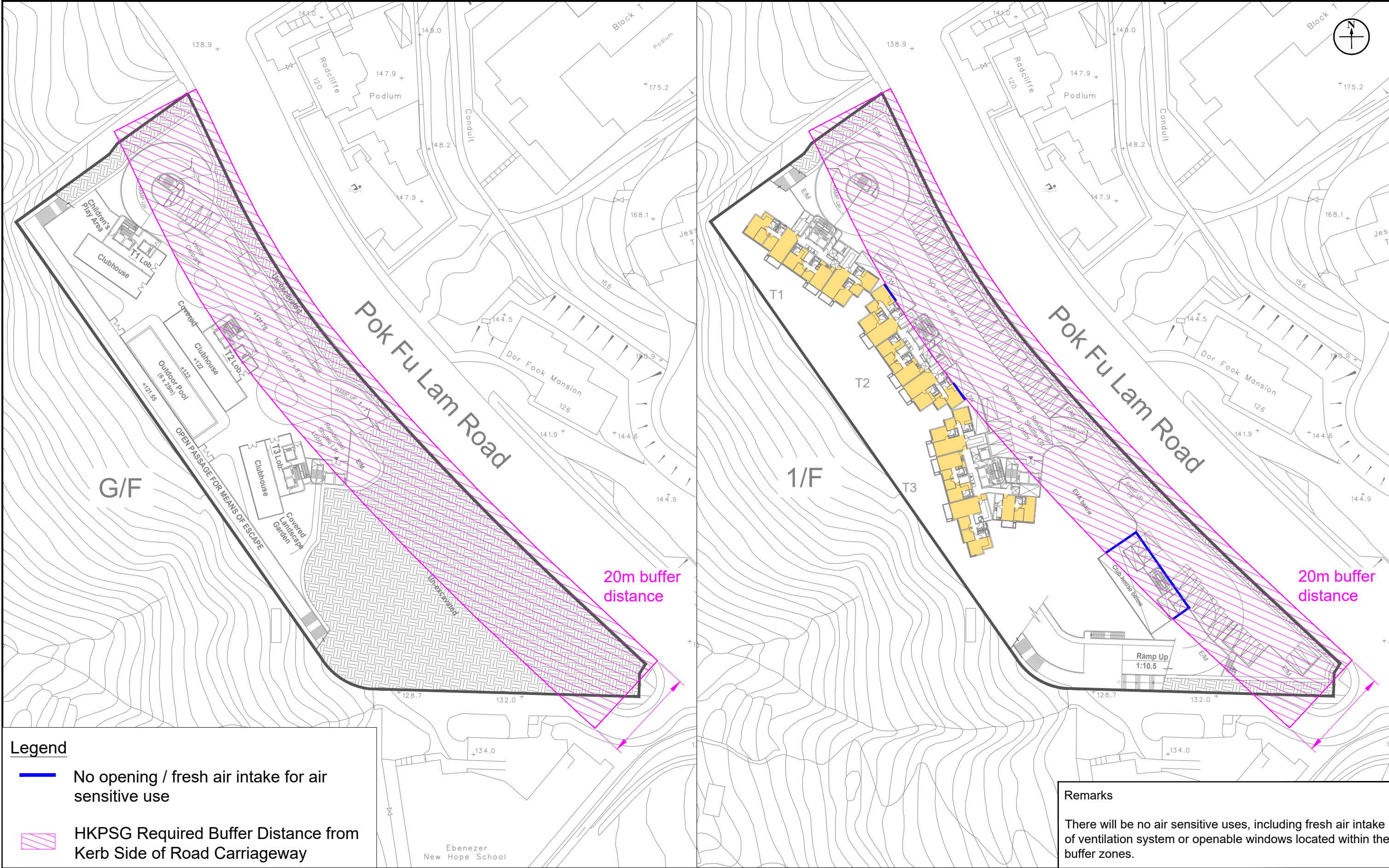
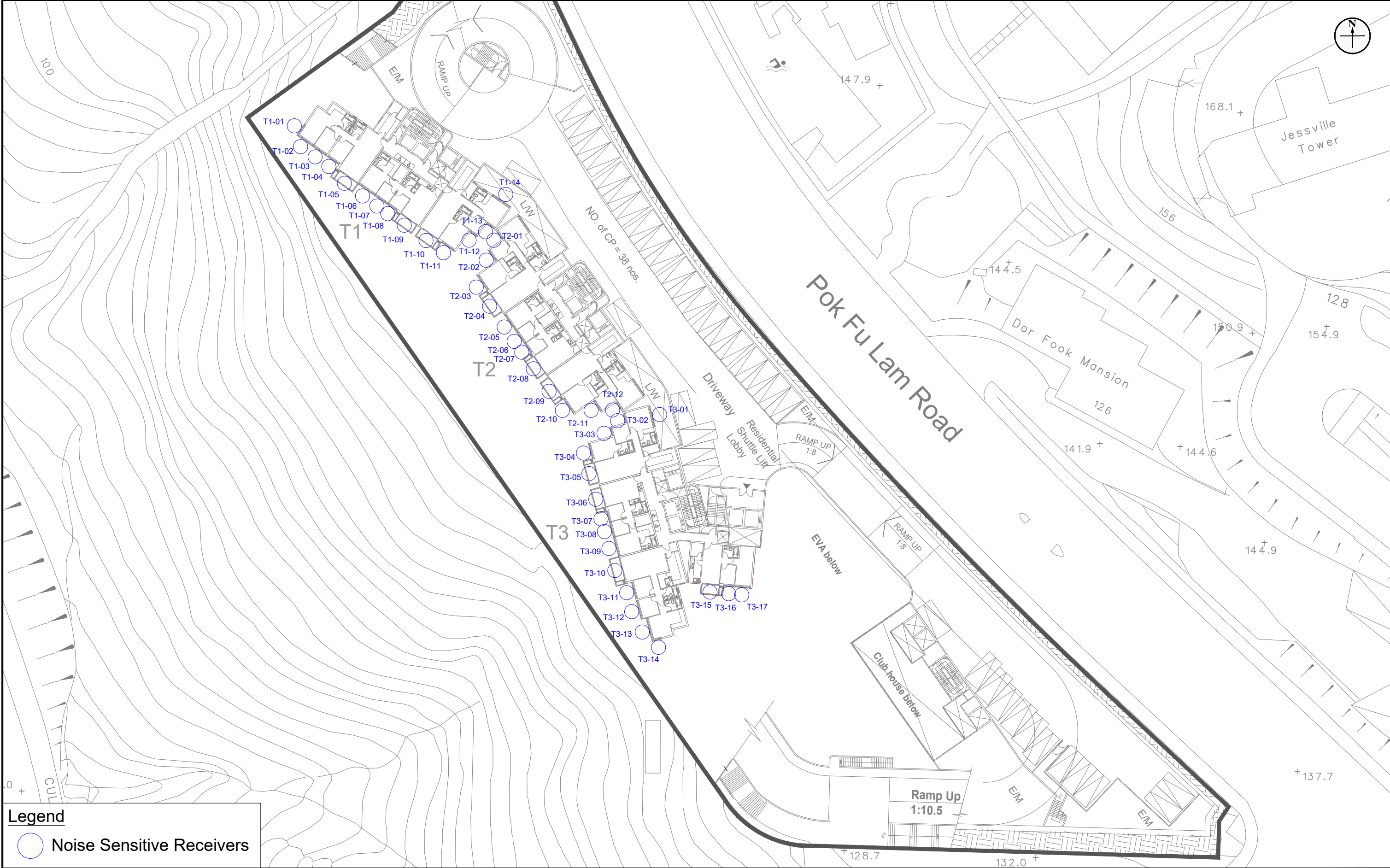


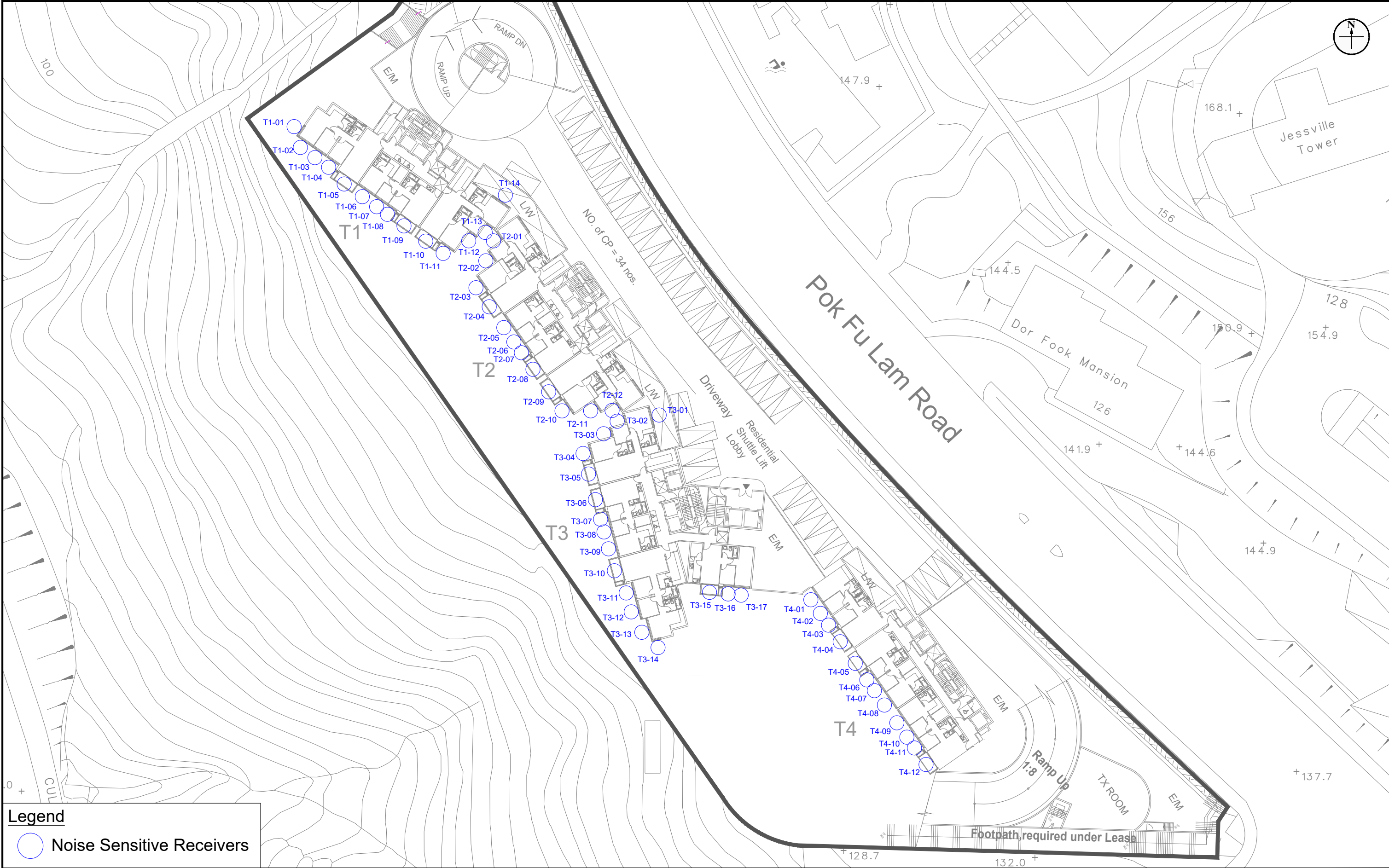
Figure: 3c		RAMBOLL	
Title: Buffer Separation between Kerb Side of Road Carriageway and Nearest Air Sensitive Uses in the Subject Site		Drawn by: CM	
Project: Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131) for Submission of Layout Plan and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat at “Residential (Group C)7” zone at the Ebenezer School and Home for the Visually Impaired, 131 Pok Fu Lam Road, Pok Fu Lam, Hong Kong		Checked by: CC	
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Legend

○ Noise Sensitive Receivers

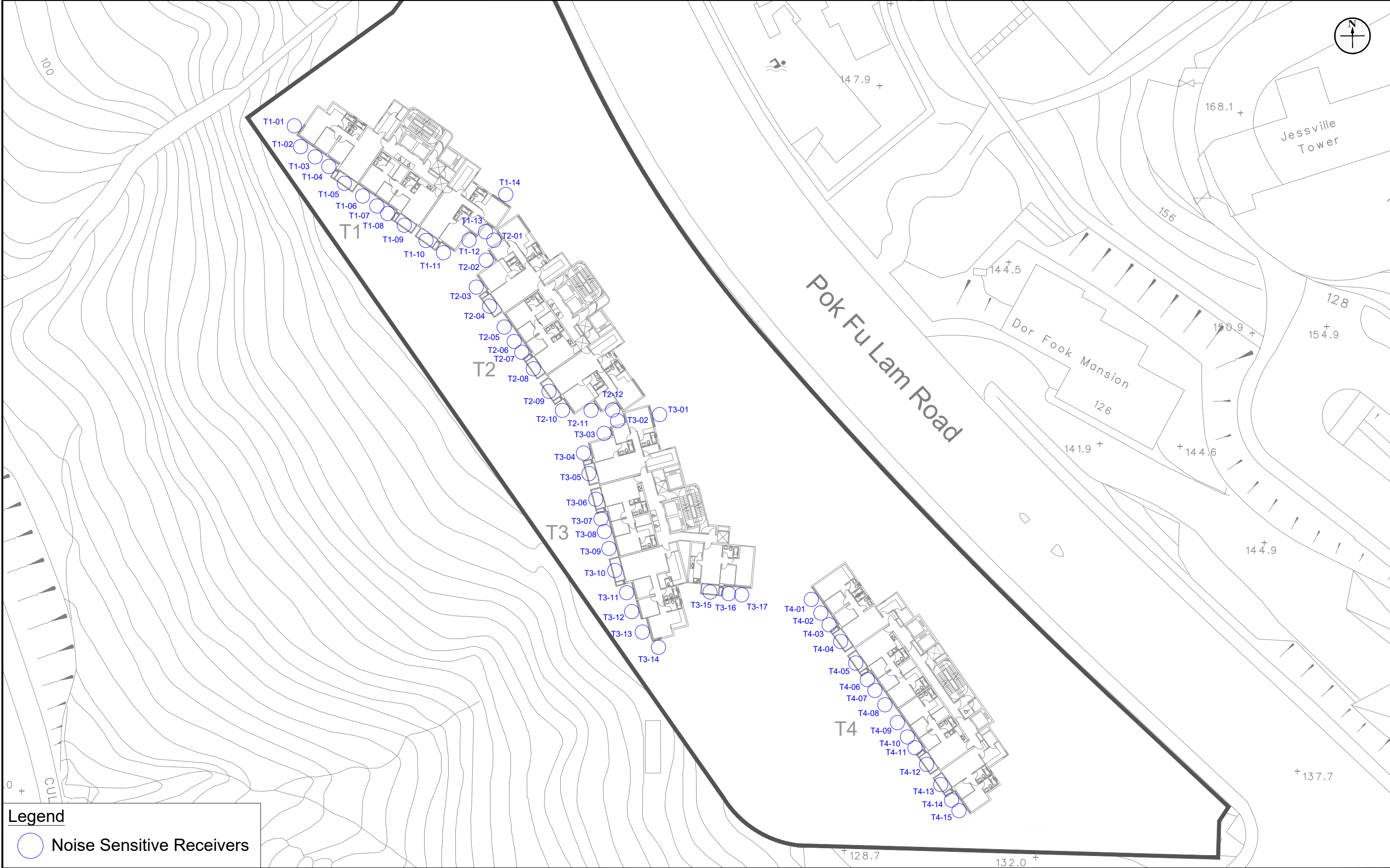
Figure: 4a		RAMBOLL	
Title: Location of Representative Noise Sensitive Receiver for Road Traffic Noise Impact Assessment - 1/F		Drawn by:	CM
Project: Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131) for Submission of Layout Plan and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat at “Residential (Group C)7” zone at the Ebenezer School and Home for the Visually Impaired, 131 Pok Fu Lam Road, Pok Fu Lam, Hong Kong		Checked by:	CC
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Legend

○ Noise Sensitive Receivers

Figure: 4b		RAMBOLL	
Title: Location of Representative Noise Sensitive Receiver for Road Traffic Noise Impact Assessment - 2/F		Drawn by: CM	
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Legend

○ Noise Sensitive Receivers

Figure: 4c		RAMBOLL	
Title: Location of Representative Noise Sensitive Receiver for Road Traffic Noise Impact Assessment - 3/F to 10/F		Drawn by:	CM
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		Date:	Feb 2026

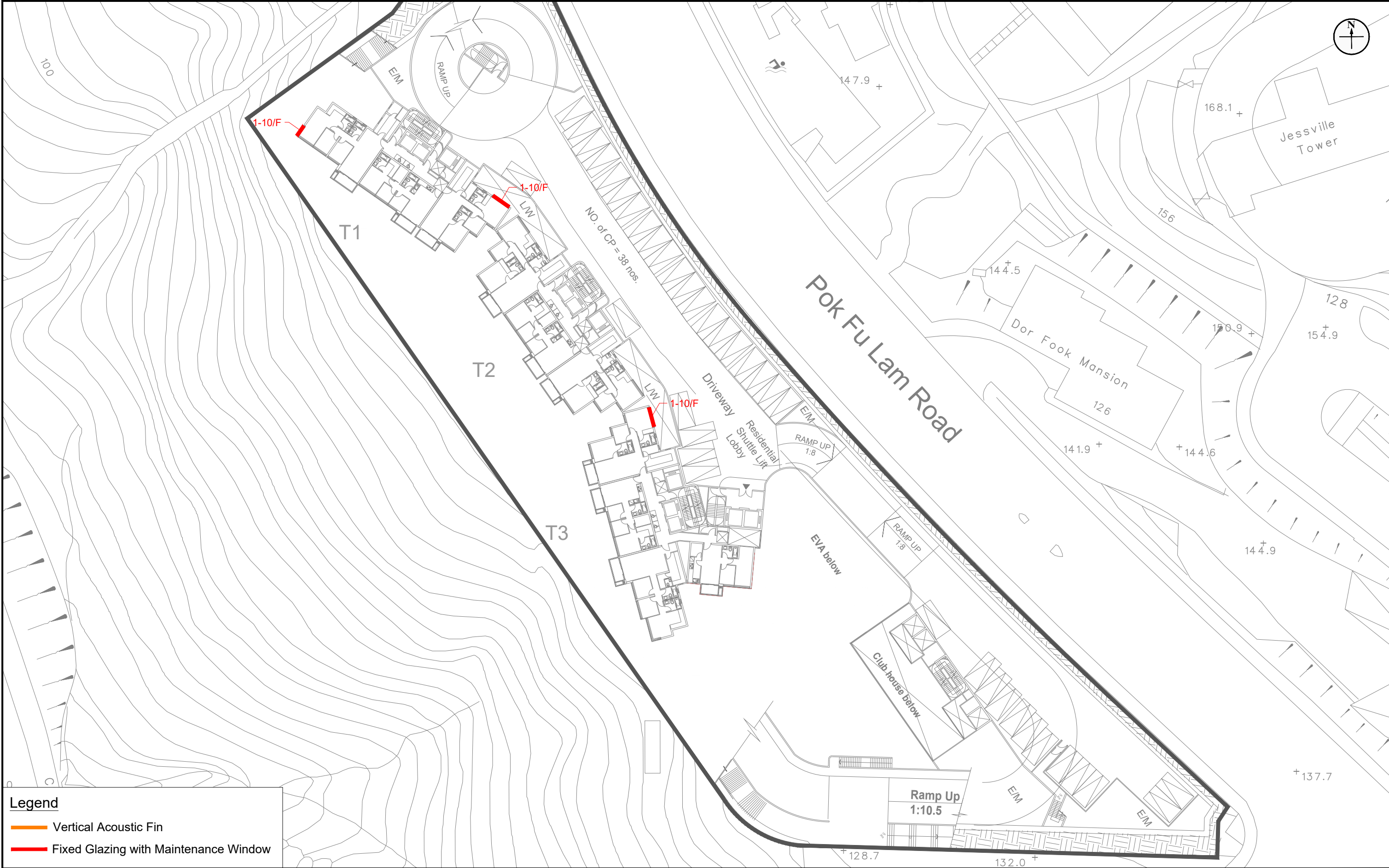


Figure: 5a		RAMBOLL	
Title: Proposed Noise Mitigation Measures for Road Traffic Noise Impact Assessment - 1/F		Drawn by: CM	
Project: Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131) for Submission of Layout Plan and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat at “Residential (Group C)7” zone at the Ebenezer School and Home for the Visually Impaired, 131 Pok Fu Lam Road, Pok Fu Lam, Hong Kong		Checked by: CC	
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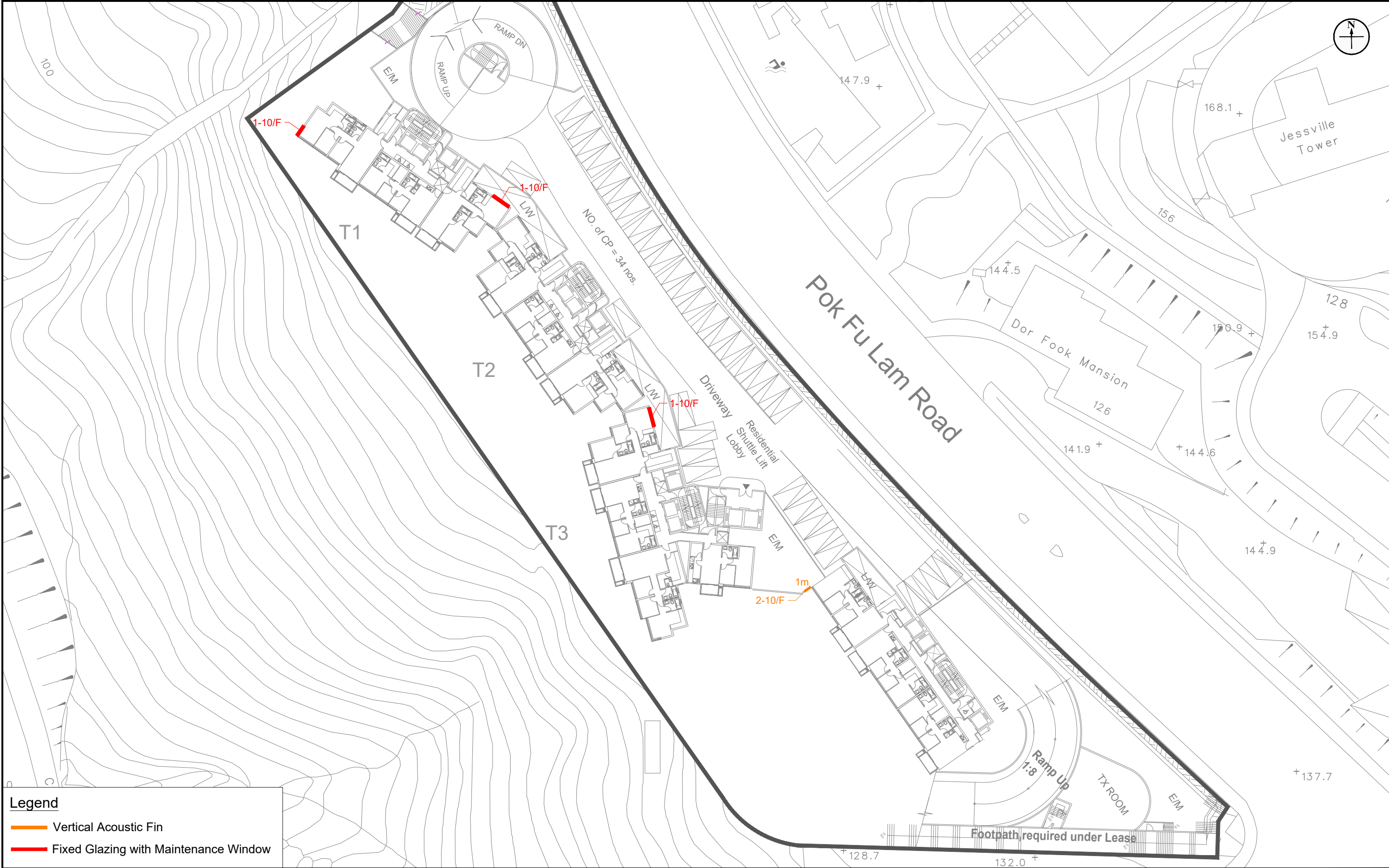
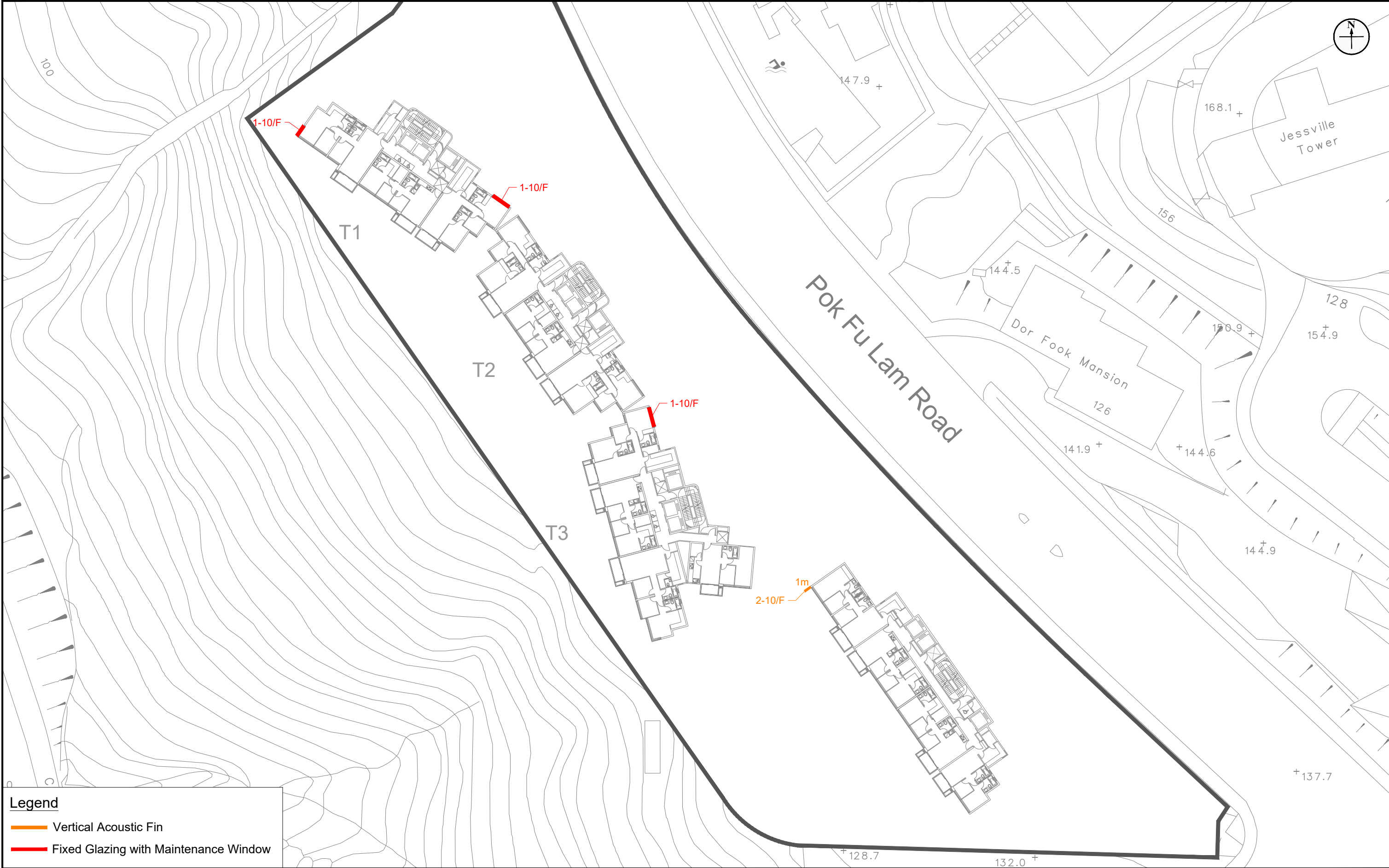


Figure: 5b		RAMBOLL	
Title: Proposed Noise Mitigation Measures for Road Traffic Noise Impact Assessment - 2/F		Drawn by: CM	
Project: Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131) for Submission of Layout Plan and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat at “Residential (Group C)7” zone at the Ebenezer School and Home for the Visually Impaired, 131 Pok Fu Lam Road, Pok Fu Lam, Hong Kong		Checked by: CC	
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Legend	
	Vertical Acoustic Fin
	Fixed Glazing with Maintenance Window

Figure: 5c			
Title: Proposed Noise Mitigation Measures for Road Traffic Noise Impact Assessment - 3/F to 10/F		Drawn by: CM	
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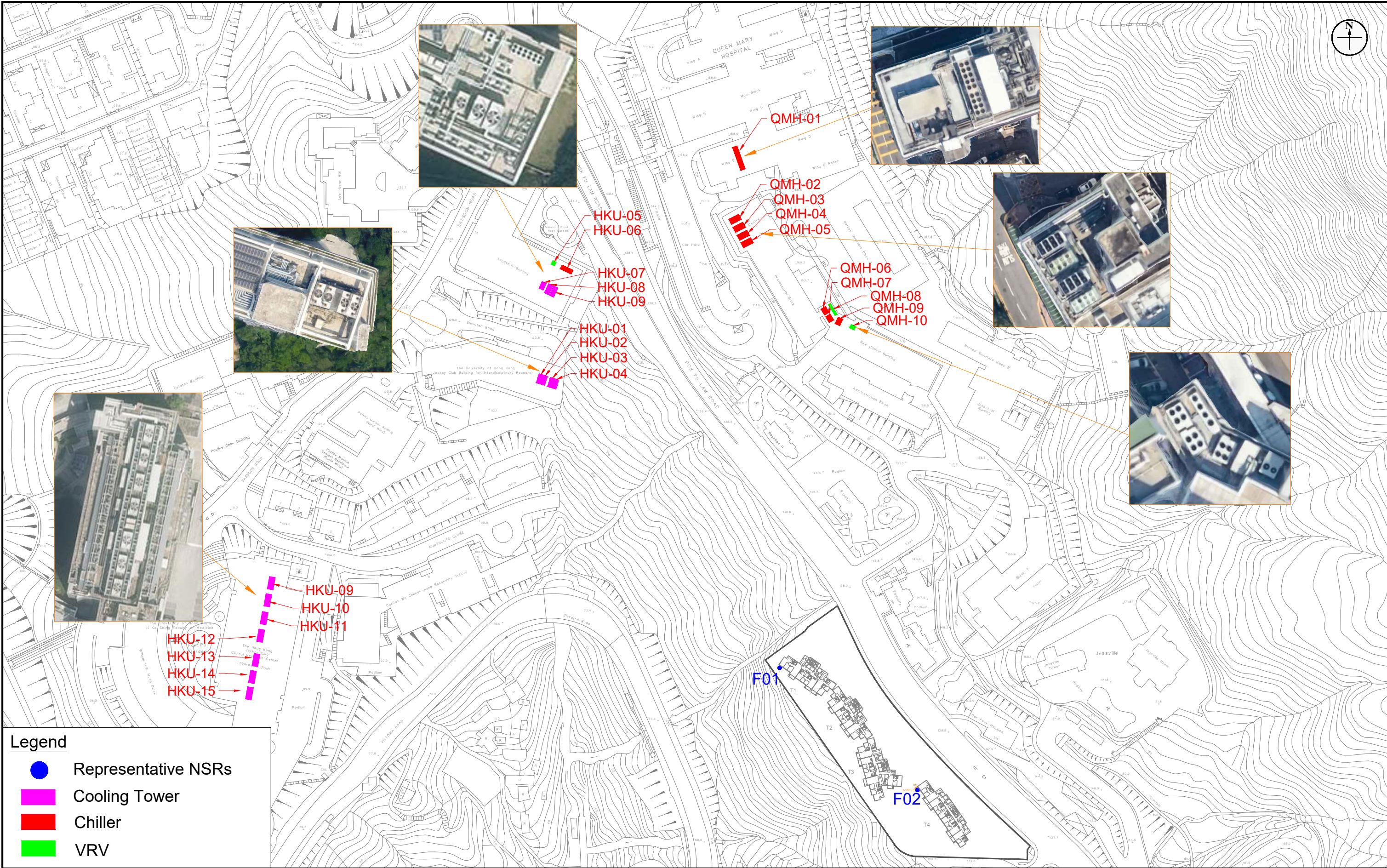
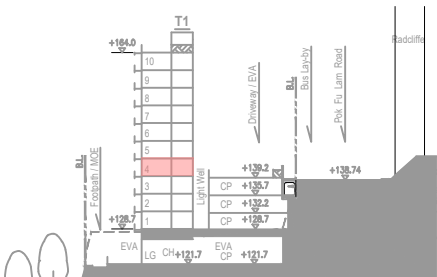
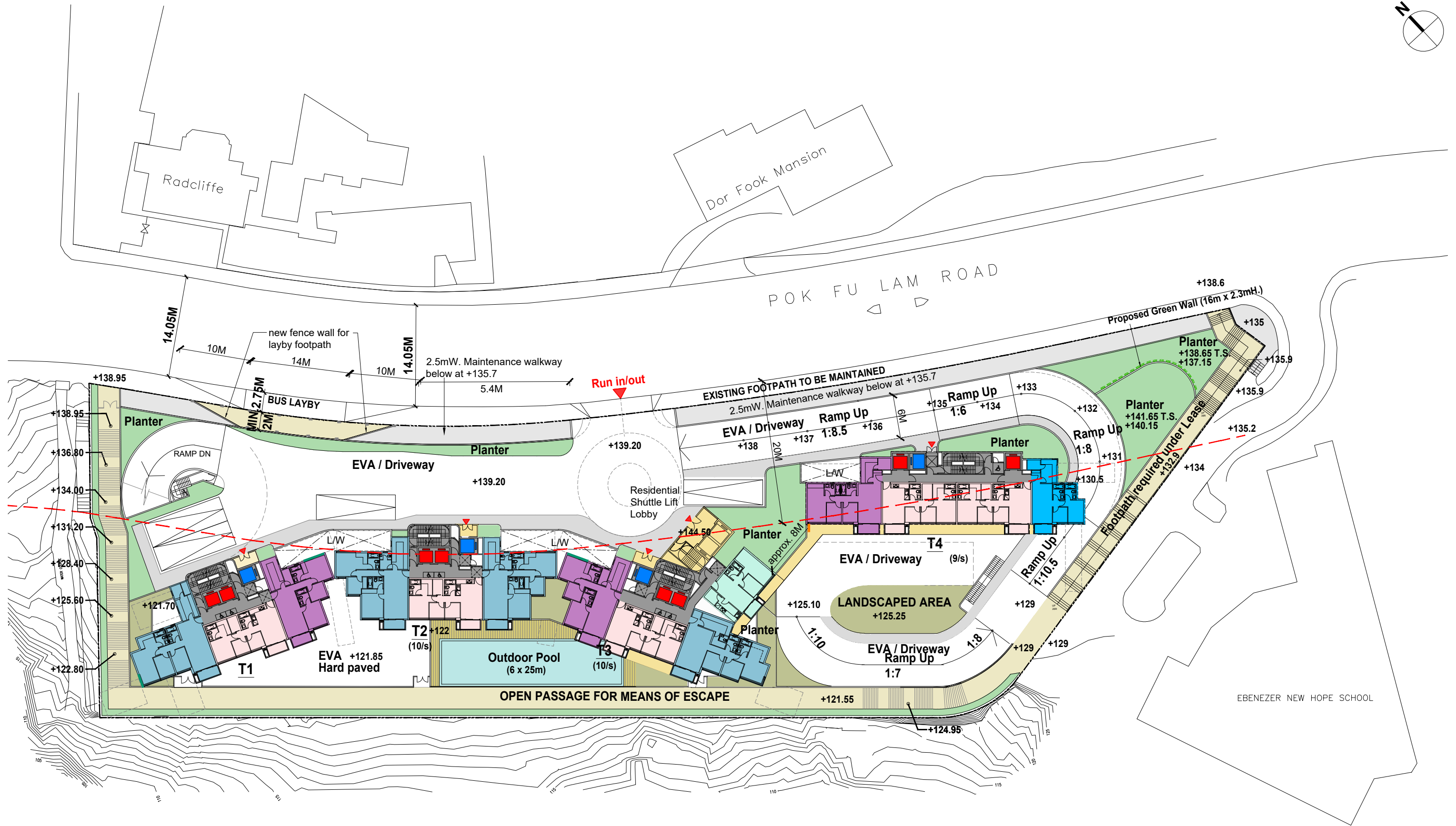


Figure: 6	RAMBOLL
Title: Identified Fixed Noise Sources and Locations of Representative Noise Sensitive Receivers for Fixed Noise Impact Assessment	Drawn by: CM
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	Rev.: 3.0
	Date: Feb 2026

Appendix 1 Proposed Master Layout Plan



LEGEND	
—	FIXED GLAZING (1-10/F)
—	ACOUSTIC FIN (2-10/F)

Floor	Nos. of Carpark
3/F	25
2/F	34
1/F	38
G/F	15
Total	112

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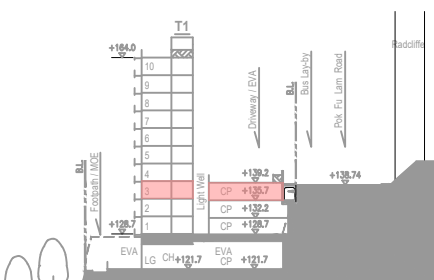
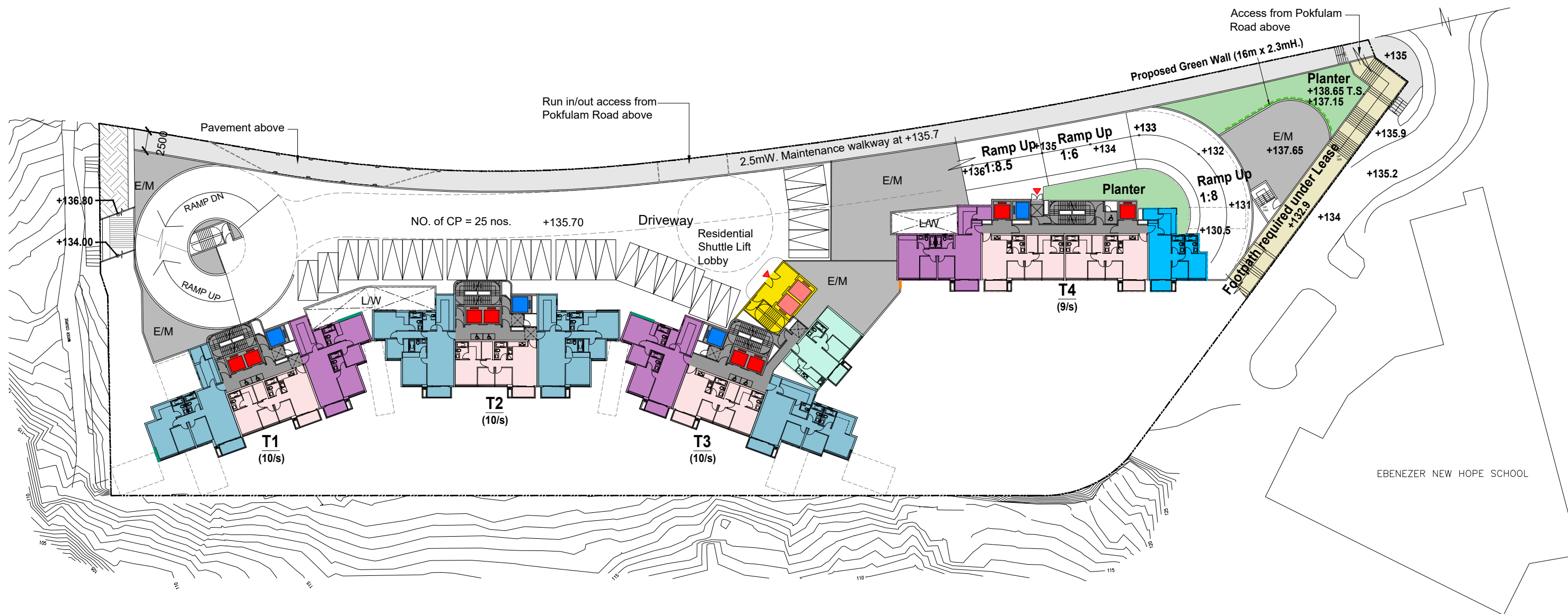
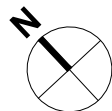
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
193 PRINCE EDWARD ROAD WEST, KOWLOON

T: 2547 1267
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PROJECT TITLE
Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131) for Submission of Layout Plan and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat at "Residential (Group C)" zone at the Ebenezer School and Home for the Visually Impaired, 131 Pok Fu Lam Road, Pok Fu Lam, Hong Kong

DRAWING TITLE
LAYOUT PLAN - 4/F
SECTION 16 SUBMISSION (2ND) - SCHEME 24

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
A-01	1:500	-	FEB 2026	DATE OF APPROVAL



LEGEND	
FIXED GLAZING (1-10/F)	
ACOUSTIC FIN (2-10/F)	

Floor	Nos. of Carpark
3/F	25
2/F	34
1/F	38
G/F	15
Total	112

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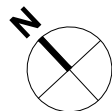
UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
193 PRINCE EDWARD ROAD WEST, KOWLOON

T: 2547 1267
F: 2875 1467

PROJECT TITLE
Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131) for Submission of Layout Plan and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat at "Residential (Group C)7" zone at the Ebenezer School and Home for the Visually Impaired, 131 Pok Fu Lam Road, Pok Fu Lam, Hong Kong

DRAWING TITLE
LAYOUT PLAN - 3/F
SECTION 16 SUBMISSION (2ND) - SCHEME 24

DRAWING NO.	SCALE	REV. NO.	DATE / REVISION NO.	APPROVAL BY
A-02	1:500	-	FEB 2026	DATE OF APPROVAL



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UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
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T: 2547 1267
F: 2875 1467

PROJECT TITLE

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DRAWING TITLE

LAYOUT PLAN - 2/F
SECTION 16 SUBMISSION (2ND) - SCHEME 24

DRAWING NO.

A-03

SCALE

1:500

REV. NO.

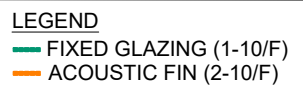
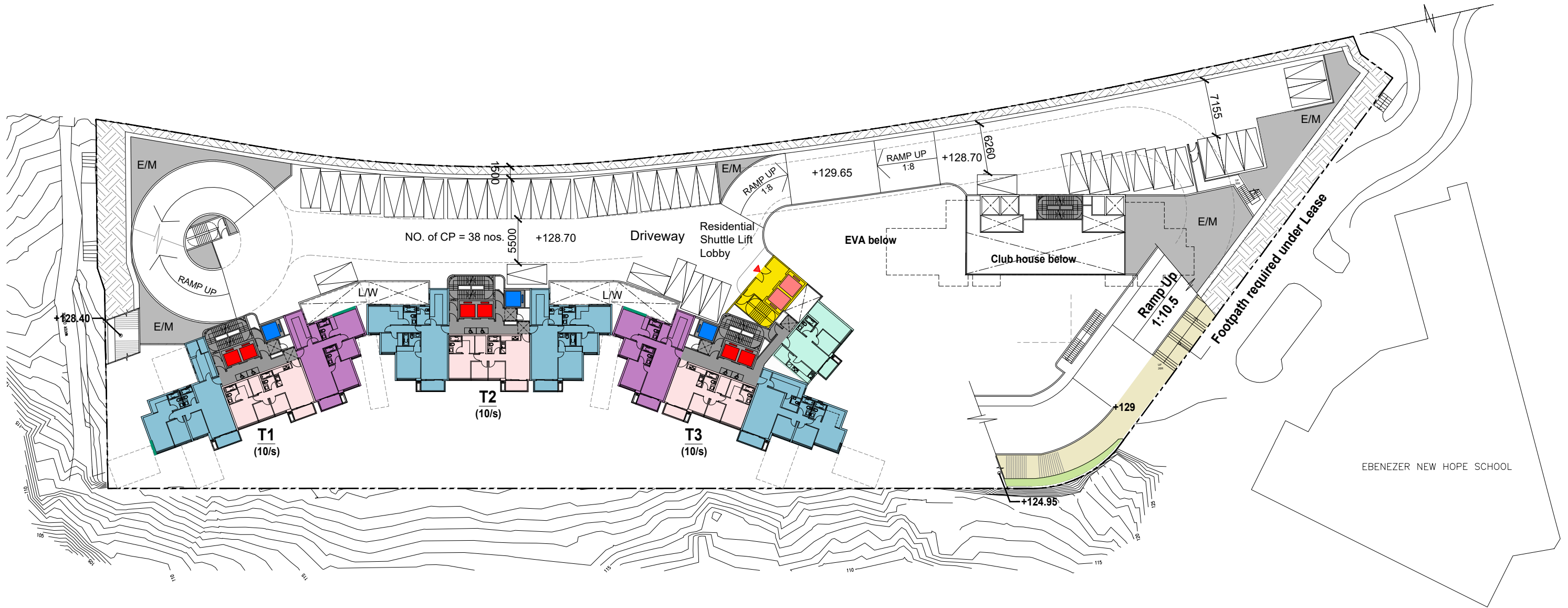
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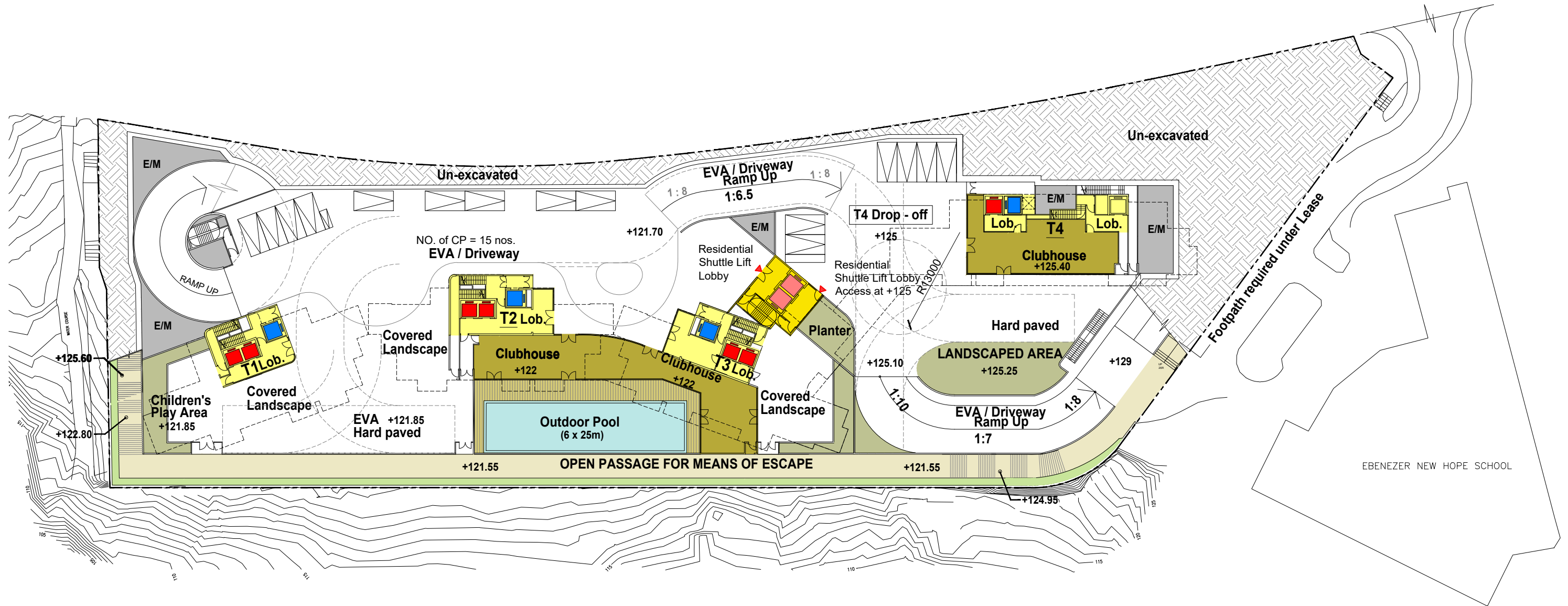
FEB 2026

APPROVAL BY

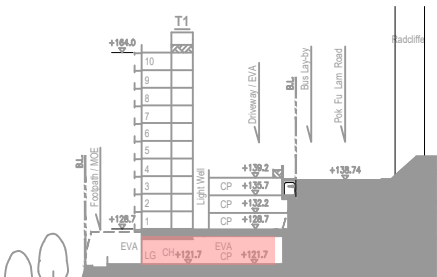
DATE OF APPROVAL



Floor	Nos. of Carpark
3/F	25
2/F	34
1/F	38
G/F	15
Total	112



EBENEZER NEW HOPE SCHOOL



Floor	Nos. of Carpark
3/F	25
2/F	34
1/F	38
G/F	15
Total	112

Handi Architects Limited

UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
193 PRINCE EDWARD ROAD WEST, KOWLOON

T: 2547 1267
F: 2875 1467

PROJECT TITLE
Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131) for Submission of Layout Plan and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat at "Residential (Group C)" zone at the Ebenezer School and Home for the Visually Impaired, 131 Pok Fu Lam Road, Pok Fu Lam, Hong Kong

DRAWING TITLE
LAYOUT PLAN - UG/F & LG/F
SECTION 16 SUBMISSION (2ND) - SCHEME 24

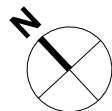
DRAWING NO.
A-05

SCALE
1:500

REV. NO.
-

DATE / REVISION NO.
FEB 2026

APPROVAL BY
DATE OF APPROVAL



- LEGEND**
- FIXED GLAZING (1-10/F)
 - ACOUSTIC FIN (2-10/F)

Handi Architects Limited

UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
193 PRINCE EDWARD ROAD WEST, KOWLOON

T: 2547 1267
F: 2875 1467

PROJECT TITLE
Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131) for Submission of Layout Plan and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat at "Residential (Group C)7" zone at the Ebenezer School and Home for the Visually Impaired, 131 Pok Fu Lam Road, Pok Fu Lam, Hong Kong

DRAWING TITLE
LAYOUT PLAN - TYPICAL FLOOR
SECTION 16 SUBMISSION (2ND) - SCHEME 24

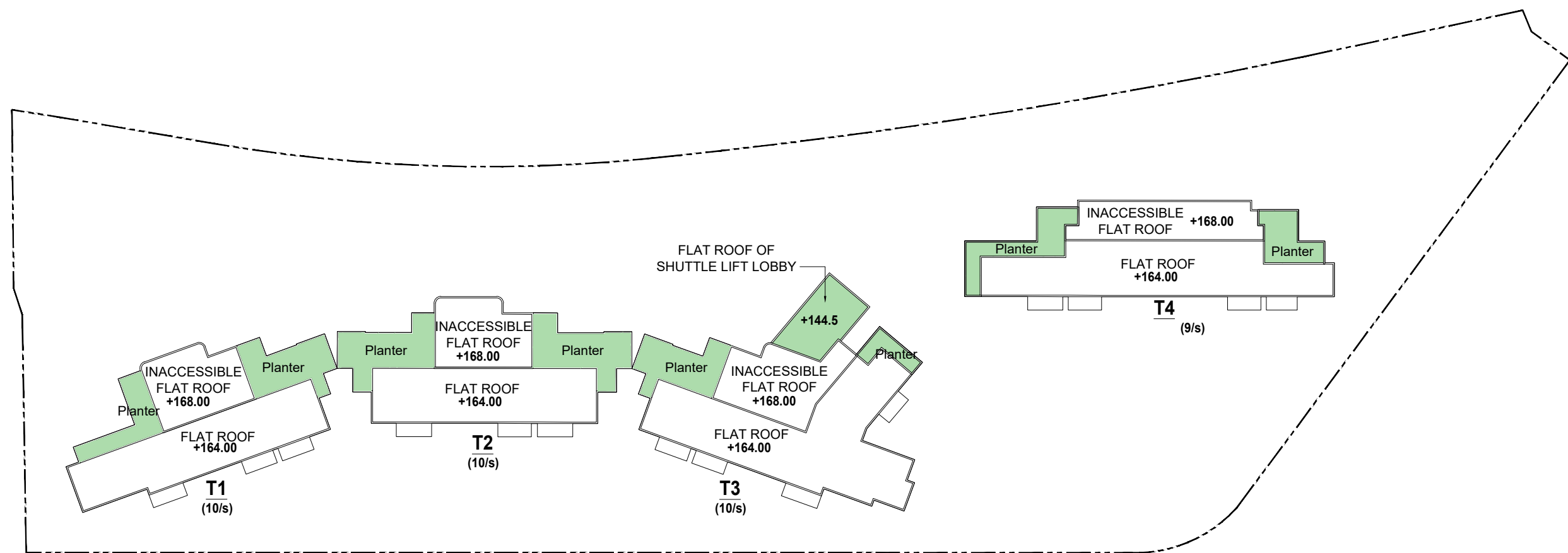
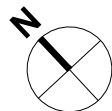
DRAWING
NO.
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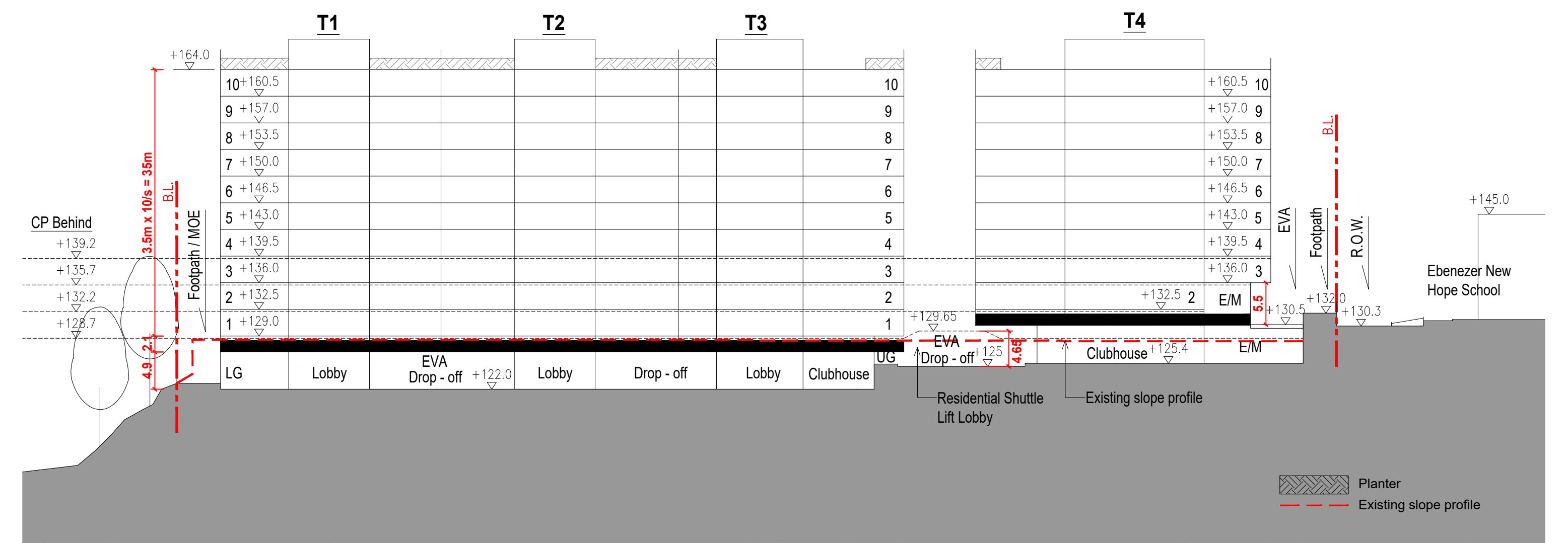
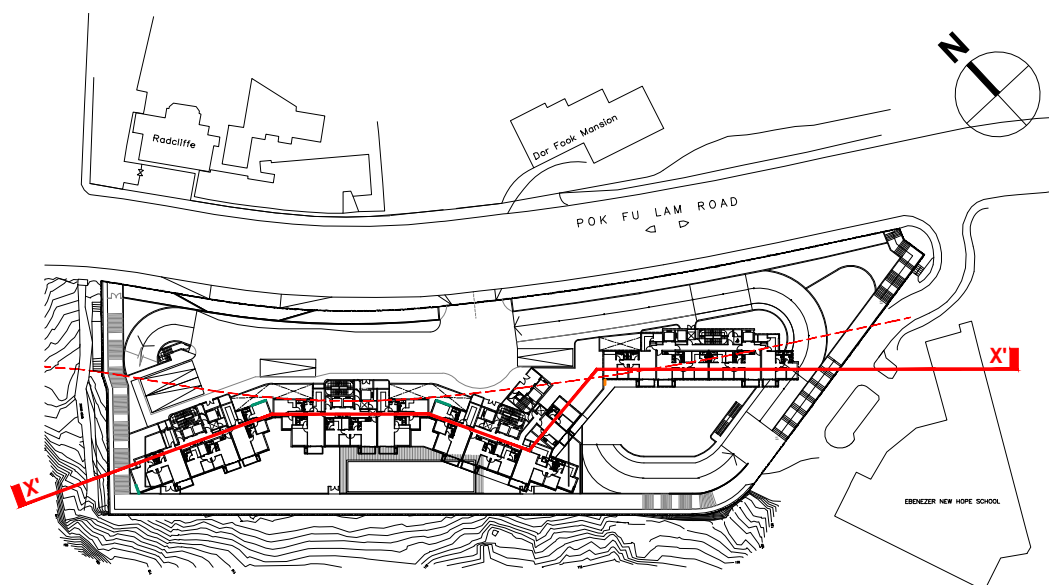
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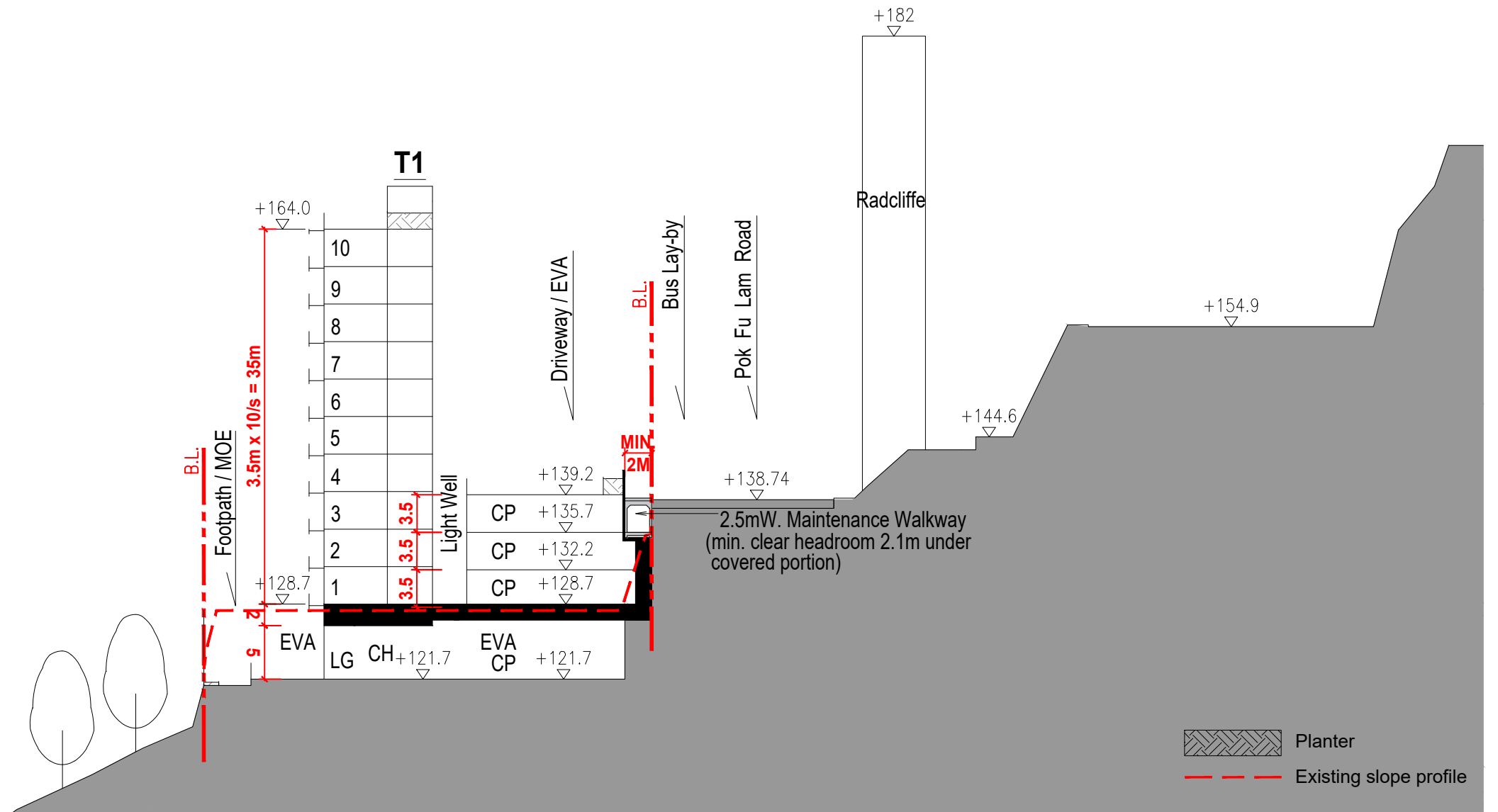
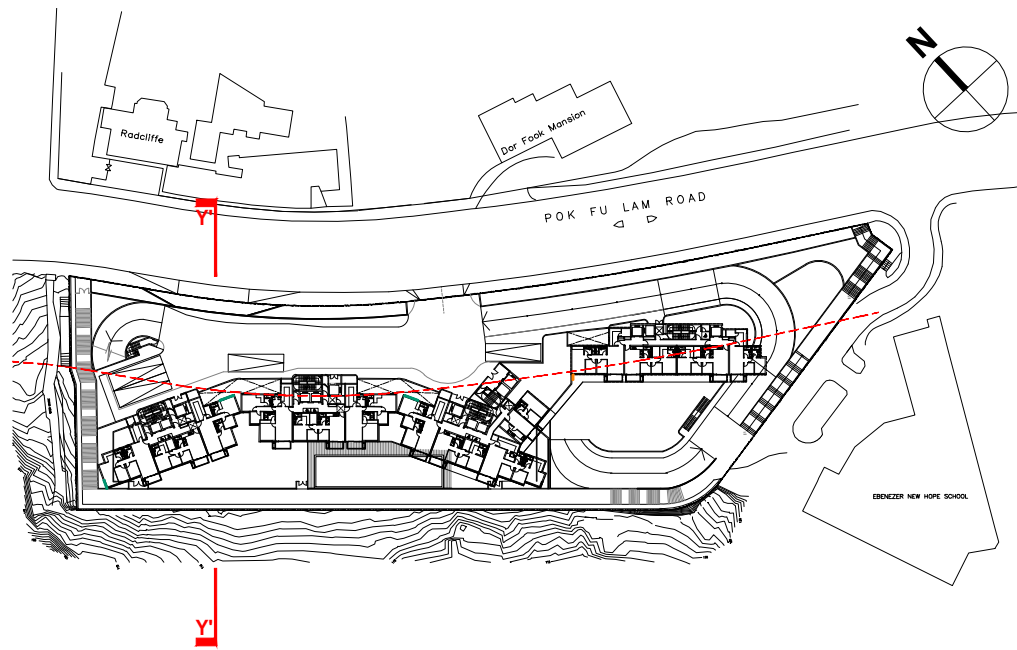
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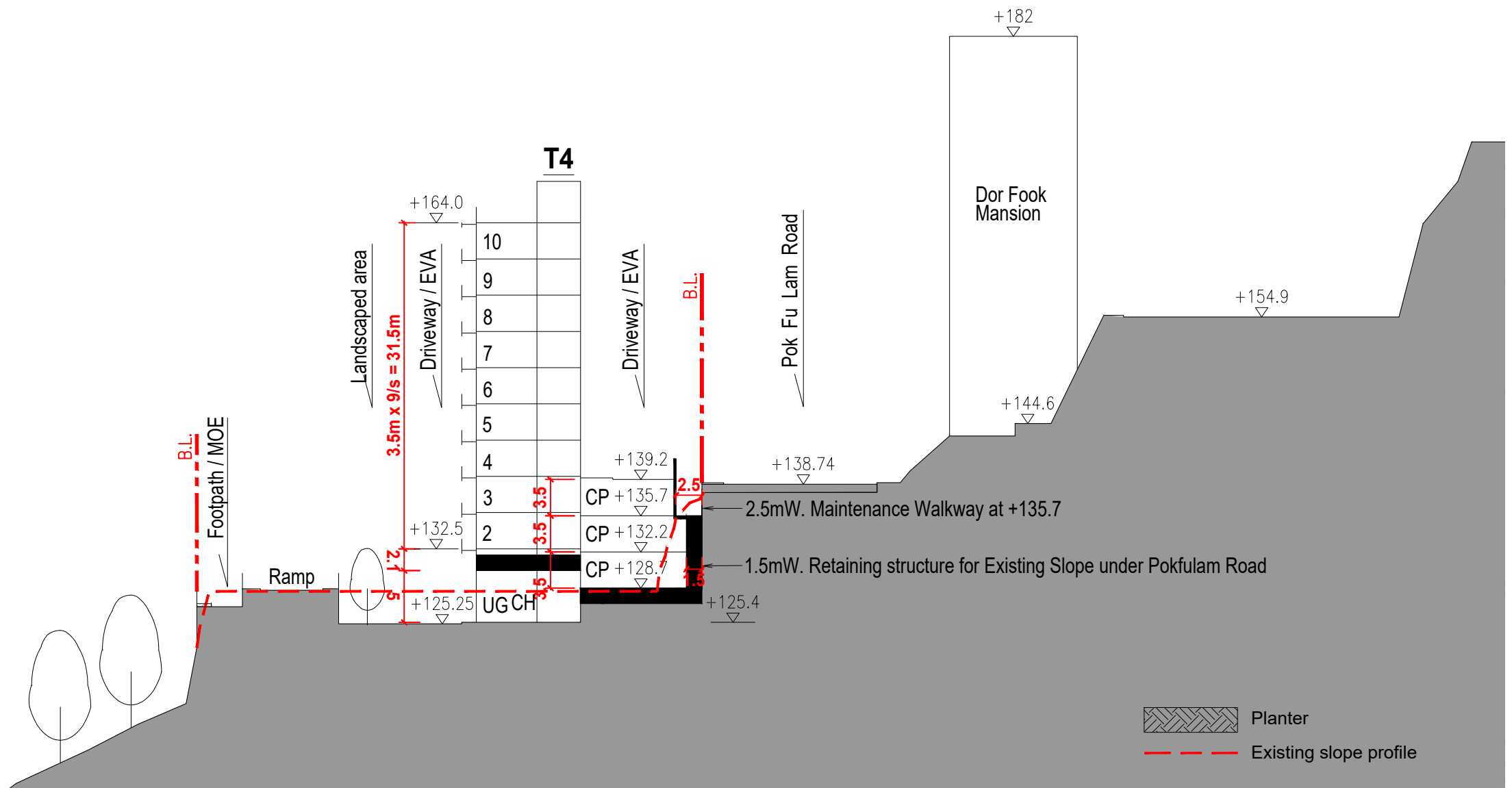
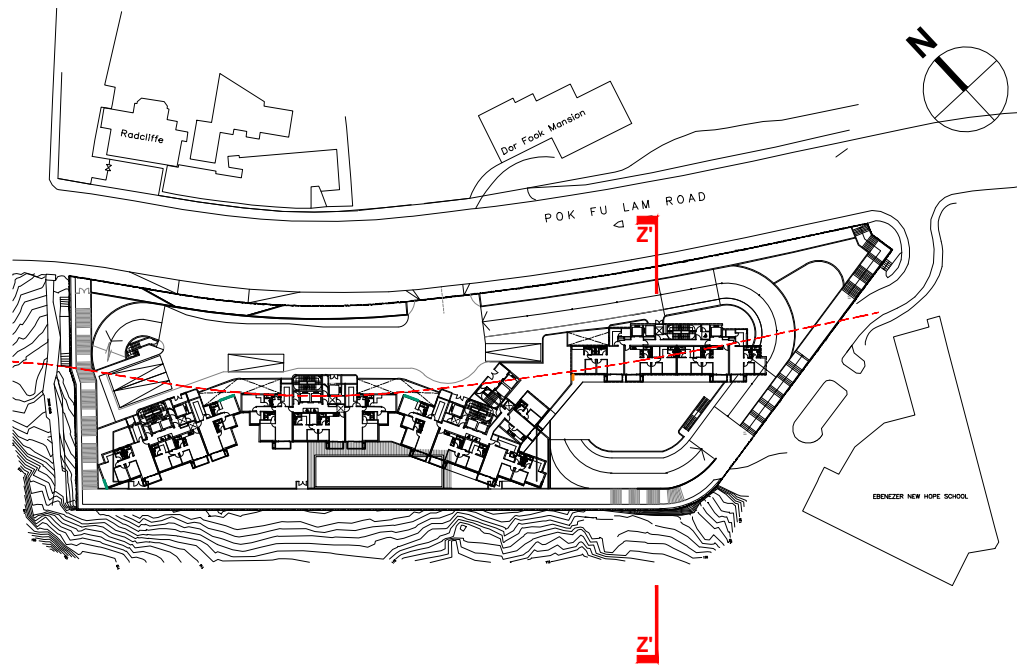
DATE / REVISION NO.
FEB 2026

APPROVAL BY
DATE OF APPROVAL







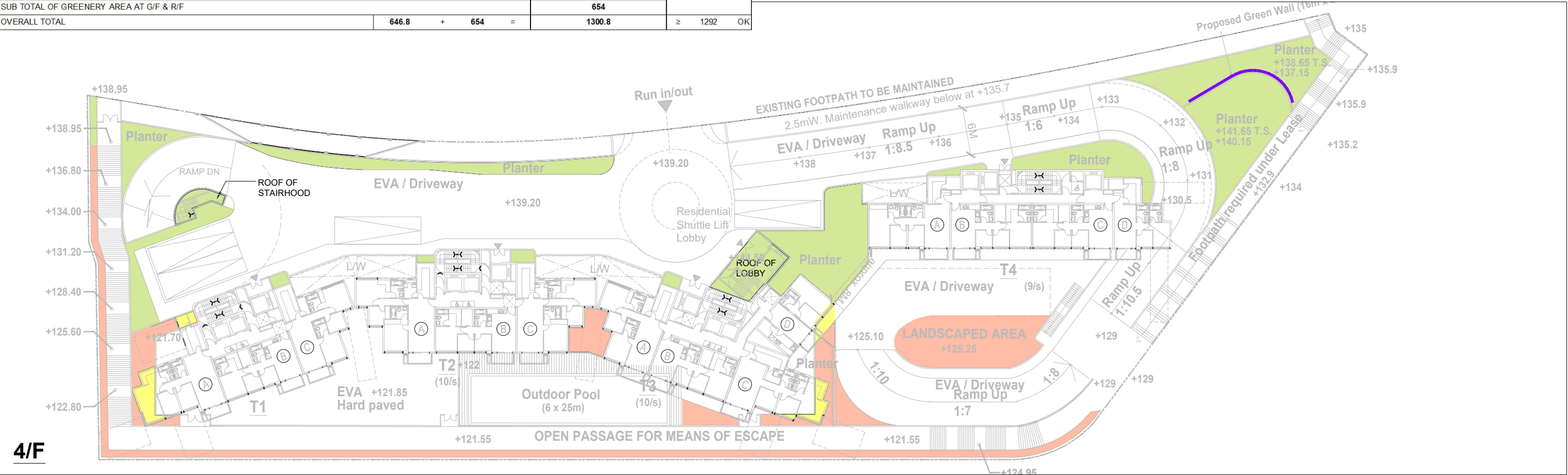


SITE COVERAGE OF GREENERY

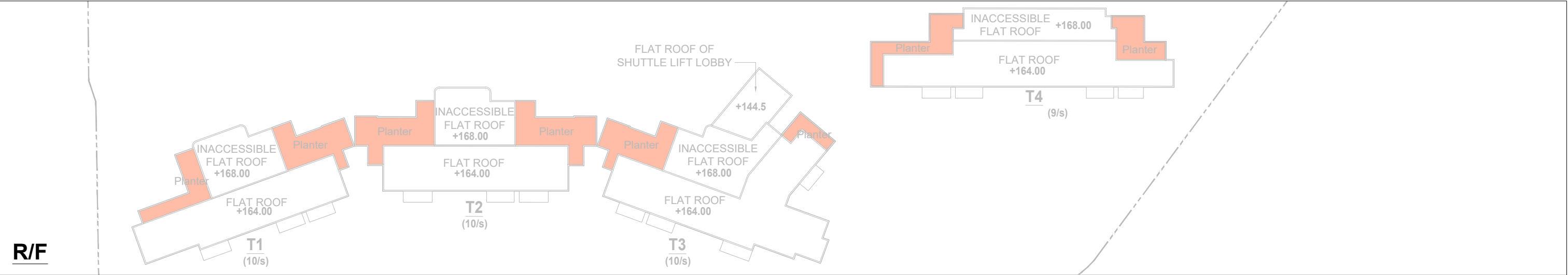
SITE AREA			=	6460	SM	>	1,000	SM	<	20000	SM
MIN. GREENERY AREAS (OVERALL) (20% OF SITE AREA)	6460	x	20%	=	1292	SM					
MIN. GREENERY AREAS (PRIMARY ZONE) (10% OF SITE AREA)	6460	x	10%	=	646	SM					
ACCEPTABLE GREENING FEATURES AREAS (30% OF TOTAL REQUIRED GREENERY AREAS)	1292	x	30%	=	387.6	SM					

GREENERY AREA SCHEDULE

LOCATION		GREENERY AREA PROVIDED ON PLAN (SM)	REDUCTION FACTOR IN COMPUTING THE GREENERY AREAS (SM)	ACCOUNTABLE GREENERY AREA PROVIDED (SM)	GREENERY AREA REQUIRED (SM)
4/F(PRIMARY ZONE)	SUB TOTAL OF GREENERY AREA AT 4/F (PRIMARY ZONE)			610	
4/F (PRIMARY ZONE GREENING FEATURES AREAS)	VERTICAL GREENERY				
		16x2.3	NIL	36.8	
	SUB TOTAL OF GREENING FEATURES AT 4/F (PRIMARY ZONE)			36.8 ≤ 387.6	
PRIMARY ZONE TOTAL			610 + 36.8 =	646.8	> 646 OK
G/F			NIL	373	
R/F				262	
G/F	COVERED GREENERY AREA		50%	19	
SUB TOTAL OF GREENERY AREA AT G/F & R/F				654	
OVERALL TOTAL			646.8 + 654 =	1300.8	≥ 1292 OK



4/F



R/F

Handi Architects Limited

UNIT 2010, 20/F, TOWER 1, GRAND CENTURY PLACE,
193 PRINCE EDWARD ROAD WEST, KOWLOON

T: 2547 1267
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PROJECT TITLE
Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131) for Submission of Layout Plan and Proposed Minor Relaxation of Building Height Restriction for Permitted Flat at "Residential (Group C)" zone at the Ebenezer School and Home for the Visually Impaired, 131 Pok Fu Lam Road, Pok Fu Lam, Hong Kong

DRAWING TITLE
LAYOUT PLAN - 4/F
SECTION 16 SUBMISSION (2ND) - SCHEME 24 (SITE COVERAGE OF GREENERY)

DRAWING NO.
SBD-01

SCALE
1:500

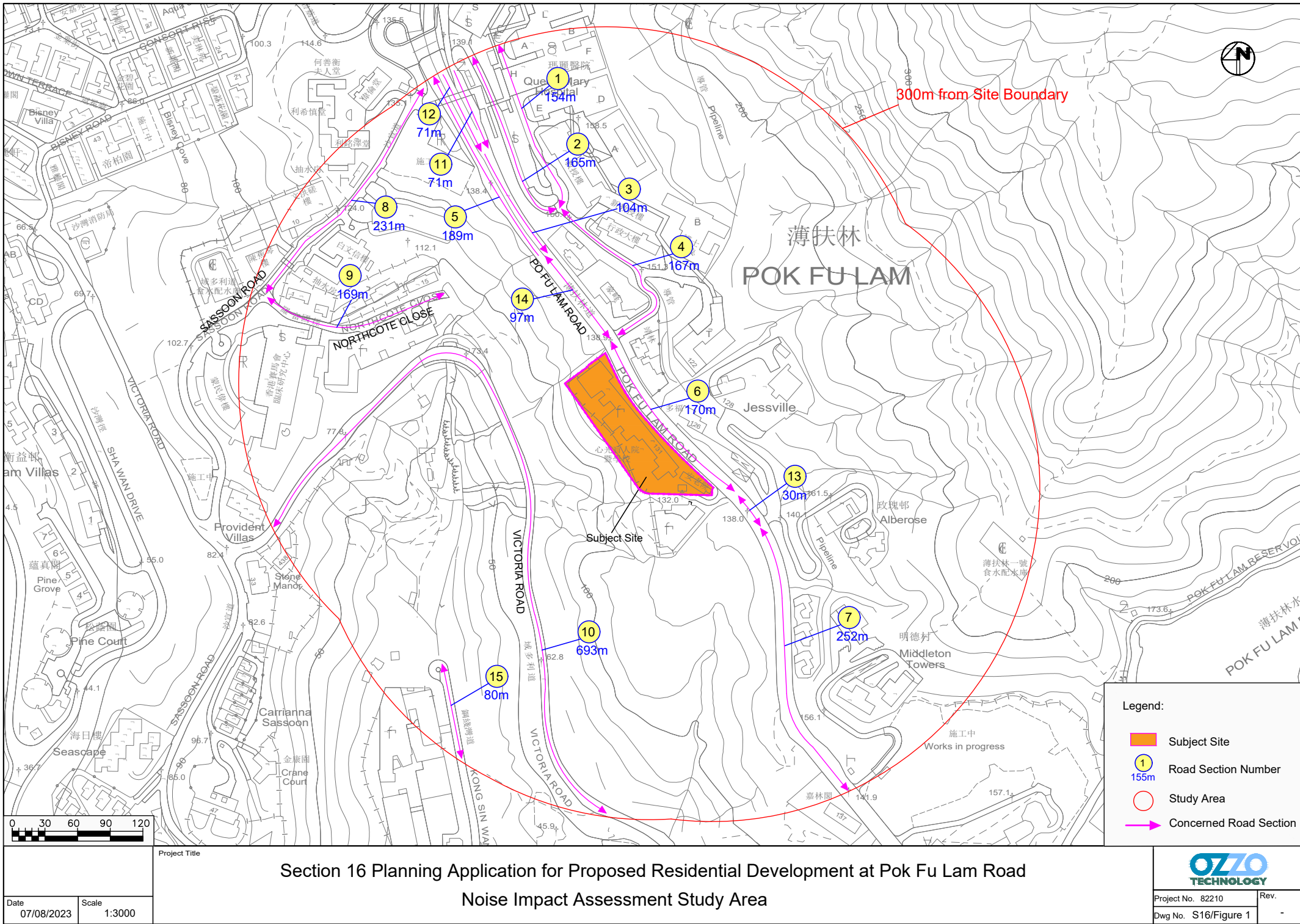
REV. NO.
-

DATE / REVISION NO.
FEB 2026

APPROVAL BY
DATE OF APPROVAL

**Appendix 2 Traffic Forecast for Year 2049 Provided by Project Traffic
Consultant**

X:\Oz\82210_Planning Applications for a Proposed Residential Development at Pok Fu Lam\MapData\82210-Figure 1.dwg 2023/08/07 16:46:52



2049 Peak Hour Traffic Forecast for Traffic Noise Impact Assessment

Road ID	Road Name	Section Between		1- or 2-Way	Direction	Road Type	Length (m)	AM Peak Hour		PM Peak Hour	
								Flow (veh/hr)	% HV	Flow (veh/hr)	% HV
1	Access Road from Pok Fu Lam Road	Queen Mary Hospital Professorial Block	Queen Mary Hospital Main Block	2-way	NB/SB	LD	154	779	19.7%	655	19.0%
2	Access Road from Pok Fu Lam Road	Queen Mary Hospital Professorial Block	Elevated Road	2-way	NB/SB	LD	165	866	19.7%	728	19.0%
3	Pok Fu Lam Road	Elevated Road	Royalton	1-way	SB	PD	104	1241	23.7%	944	16.1%
4	Access Road from Pok Fu Lam Road	Royalton	Queen Mary Hospital Professorial Block	2-way	NB/WB	LD	167	362	0.3%	198	0.0%
5	Pok Fu Lam Road	Royalton	Elevated Road	1-way	NB	PD	189	1432	22.3%	1219	17.0%
6	Pok Fu Lam Road	Royalton	Ebenezer New Hope School Podium	2-way	NB/SB	PD	170	2931	20.9%	2295	15.6%
7	Pok Fu Lam Road	Ebenezer New Hope School Podium	Pok Fu Lam Reservoir Road	2-way	NB/SB	PD	252	2861	20.9%	2288	15.6%
8	Sassoon Road	Northcote Close	Pok Fu Lam Road	2-way	NB/SB	DD	231	1462	9.7%	1151	6.5%
9	Northcote Close	Sassoon Road	Cul-De-Sac	2-way	EB/WB	LD	169	68	9.3%	97	7.8%
10	Victoria Road	Sassoon Road	The ISF Academy (Secondary)	2-way	WB/SB	DD	693	1028	13.9%	789	10.4%
11	Pok Fu Lam Road Ramp	Sassoon Road Flyover	Elevated Road	1-way	SB	LD	71	266	55.4%	235	46.6%
12	Pok Fu Lam Road	Sassoon Road Flyover	Elevated Road	1-way	SB	PD	71	975	15.7%	709	7.0%
13	Pok Fu Lam Road	Elevated Road	Access Road to Alberose	2-way	NB/SB	PD	30	2861	20.9%	2288	15.6%
14	Pok Fu Lam Road	Elevated Road	Royalton	2-way	NB/SB	PD	97	2673	23.0%	2163	16.6%
15	Kong Sin Wan Road	Information Crescent	Cul-De-Sac	2-way	NB/SB	LD	80	466	3.5%	194	1.3%

**Appendix 3 Predicted Traffic Road Noise Level (L10(1-hr)) at Selected
NSRs under Base Case and Mitigated Case**

Predicted Road Traffic Noise at Selected Sensitive Receivers (AM)
Base Scenario

		Tower 1													
		Flat A					Flat B				Flat C				
Floor	mPD	T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07	T1-08	T1-09	T1-10	T1-11	T1-12	T1-13	T1-14
1/F	130.2	73	68	67	66	66	66	65	65	64	63	63	56	55	78
2/F	133.7	73	68	67	67	66	66	66	66	66	65	65	59	57	79
3/F	137.2	73	68	67	67	67	66	66	66	66	66	66	60	59	79
4/F	140.7	73	68	67	67	67	66	66	66	66	66	66	61	60	79
5/F	144.2	73	68	67	67	67	66	66	66	66	66	66	61	60	79
6/F	147.7	73	68	67	67	67	66	66	66	66	66	66	61	61	78
7/F	151.2	73	68	67	67	67	66	66	66	66	66	66	61	61	78
8/F	154.7	73	68	67	67	66	66	66	66	66	66	66	61	61	78
9/F	158.2	73	68	67	67	66	66	66	66	66	66	66	61	61	78
10/F	161.7	73	68	67	67	67	66	66	66	66	66	66	62	62	77
Max.		73	68	67	67	67	66	66	66	66	66	66	62	62	79
Exceedance		10					0				10				

		Tower 2											
		Flat A				Flat B				Flat C			
Floor	mPD	T2-01	T2-02	T2-03	T2-04	T2-05	T2-06	T2-07	T2-08	T2-09	T2-10	T2-11	T2-12
1/F	130.2	53	59	62	62	62	62	61	61	61	61	57	54
2/F	133.7	55	60	64	64	63	63	63	63	63	63	59	57
3/F	137.2	57	62	65	65	65	65	64	64	64	64	60	58
4/F	140.7	59	63	66	66	65	65	65	65	65	65	61	59
5/F	144.2	60	64	66	66	66	66	65	65	65	65	62	60
6/F	147.7	60	64	66	66	66	66	66	66	65	65	62	60
7/F	151.2	60	64	66	66	66	66	66	66	65	65	62	60
8/F	154.7	60	64	66	66	66	66	66	66	65	65	62	60
9/F	158.2	61	64	66	66	66	66	66	66	66	65	62	60
10/F	161.7	62	64	66	66	66	66	66	66	66	66	63	61
Max.		62	64	66	66	66	66	66	66	66	66	63	61
Exceedance		0				0				0			

		Tower 3																	
		Flat A					Flat B				Flat C					Flat D			
Floor	mPD	T3-01	T3-02	T3-03	T3-04	T3-05	T3-06	T3-07	T3-08	T3-09	T3-10	T3-11	T3-12	T3-13	T3-14	T3-15	T3-16	T3-17	
1/F	130.2	78	57	58	62	62	63	63	63	63	63	63	63	63	66	51	53	66	
2/F	133.7	78	57	60	63	63	64	64	64	64	64	64	64	64	67	52	54	66	
3/F	137.2	79	58	61	64	64	64	64	65	65	65	65	65	65	67	54	56	66	
4/F	140.7	79	59	62	65	65	65	65	65	65	65	65	65	65	68	58	59	67	
5/F	144.2	78	61	63	65	65	65	65	65	65	65	65	66	66	68	62	63	68	
6/F	147.7	78	61	63	65	65	65	65	65	65	65	65	66	67	69	63	64	68	
7/F	151.2	78	61	63	65	65	65	65	65	65	65	65	66	67	69	64	64	68	
8/F	154.7	78	61	63	65	65	65	65	65	65	65	65	66	67	69	64	64	68	
9/F	158.2	77	62	63	65	65	65	65	65	65	65	65	66	67	69	64	64	68	
10/F	161.7	77	62	64	66	66	66	66	66	66	66	65	66	67	69	64	65	68	
Max.		79	62	64	66	66	66	66	66	66	66	65	66	67	69	64	65	68	
Exceedance		10					0					0					0		

		Tower 4														
		Flat A				Flat B				Flat C				Flat D		
Floor	mPD	T4-01	T4-02	T4-03	T4-04	T4-05	T4-06	T4-07	T4-08	T4-09	T4-10	T4-11	T4-12	T4-13	T4-14	T4-15
2/F	133.7	71	63	56	57	57	57	57	57	57	57	57	57	--	--	--
3/F	137.2	71	63	58	59	59	59	59	59	59	59	59	58	59	59	66
4/F	140.7	71	64	61	61	61	61	61	61	61	61	61	61	61	62	67
5/F	144.2	71	66	63	63	64	64	64	64	64	64	64	65	65	66	69
6/F	147.7	72	67	65	64	64	64	64	64	65	65	65	65	66	67	69
7/F	151.2	72	67	65	64	64	64	64	65	65	65	65	65	66	67	69
8/F	154.7	71	67	65	65	64	65	65	65	65	65	65	65	66	67	69
9/F	158.2	71	67	65	65	64	65	65	65	65	65	65	65	66	67	69
10/F	161.7	71	67	66	65	65	65	65	65	65	65	66	66	66	67	69
Max.		72	67	66	65	65	65	65	65	65	65	66	66	66	67	69
Exceedance		9				0				0				0		

	AM
Total no. of Flats:	135
Total no. of Exceedance:	39
Compliance Level:	71%
Max. Noise Level:	79

Noted:

	Noise level exceed stardand of 70 dB(A)
--	Not Available at this residential storey

Predicted Road Traffic Noise at Selected Sensitive Receivers (AM)
Base Scenario (Fixed Glazing with Maintenance Window)

		Tower 1													
		Flat A					Flat B				Flat C				
		T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07	T1-08	T1-09	T1-10	T1-11	T1-12	T1-13	T1-14
Floor	mPD														
1/F	130.2	FG	68	67	66	66	66	65	65	64	63	63	56	55	FG
2/F	133.7	FG	68	67	67	66	66	66	66	66	65	65	59	57	FG
3/F	137.2	FG	68	67	67	67	66	66	66	66	66	66	60	59	FG
4/F	140.7	FG	68	67	67	67	66	66	66	66	66	66	61	60	FG
5/F	144.2	FG	68	67	67	67	66	66	66	66	66	66	61	60	FG
6/F	147.7	FG	68	67	67	67	66	66	66	66	66	66	61	61	FG
7/F	151.2	FG	68	67	67	67	66	66	66	66	66	66	61	61	FG
8/F	154.7	FG	68	67	67	66	66	66	66	66	66	66	61	61	FG
9/F	158.2	FG	68	67	67	66	66	66	66	66	66	66	61	61	FG
10/F	161.7	FG	68	67	67	67	66	66	66	66	66	66	62	62	FG
Max.		0	68	67	67	67	66	66	66	66	66	66	62	62	0
Exceedance		0					0				0				

		Tower 2											
		Flat A				Flat B				Flat C			
		T2-01	T2-02	T2-03	T2-04	T2-05	T2-06	T2-07	T2-08	T2-09	T2-10	T2-11	T2-12
Floor	mPD												
1/F	130.2	53	59	62	62	62	62	61	61	61	61	57	54
2/F	133.7	55	60	64	64	63	63	63	63	63	63	59	57
3/F	137.2	57	62	65	65	65	65	64	64	64	64	60	58
4/F	140.7	59	63	66	66	65	65	65	65	65	65	61	59
5/F	144.2	60	64	66	66	66	66	65	65	65	65	62	60
6/F	147.7	60	64	66	66	66	66	66	66	65	65	62	60
7/F	151.2	60	64	66	66	66	66	66	66	65	65	62	60
8/F	154.7	60	64	66	66	66	66	66	66	65	65	62	60
9/F	158.2	61	64	66	66	66	66	66	66	66	65	62	60
10/F	161.7	62	64	66	66	66	66	66	66	66	66	63	61
Max.		62	64	66	66	66	66	66	66	66	66	63	61
Exceedance		0				0				0			

		Tower 3																
		Flat A					Flat B				Flat C					Flat D		
		T3-01	T3-02	T3-03	T3-04	T3-05	T3-06	T3-07	T3-08	T3-09	T3-10	T3-11	T3-12	T3-13	T3-14	T3-15	T3-16	T3-17
Floor	mPD																	
1/F	130.2	FG	57	58	62	62	63	63	63	63	63	63	63	63	66	51	53	66
2/F	133.7	FG	57	60	63	63	64	64	64	64	64	64	64	64	64	52	54	66
3/F	137.2	FG	58	61	64	64	64	64	65	65	65	65	65	65	67	54	56	66
4/F	140.7	FG	59	62	65	65	65	65	65	65	65	65	65	65	68	58	59	67
5/F	144.2	FG	61	63	65	65	65	65	65	65	65	65	66	66	68	62	63	68
6/F	147.7	FG	61	63	65	65	65	65	65	65	65	65	66	67	69	63	64	68
7/F	151.2	FG	61	63	65	65	65	65	65	65	65	65	66	67	69	64	64	68
8/F	154.7	FG	61	63	65	65	65	65	65	65	65	65	66	67	69	64	64	68
9/F	158.2	FG	62	63	65	65	65	65	65	65	65	65	66	67	69	64	64	68
10/F	161.7	FG	62	64	66	66	66	66	66	66	66	65	66	67	69	64	65	68
Max.		0	62	64	66	66	66	66	66	66	66	65	66	67	69	64	65	68
Exceedance		0					0				0					0		

		Tower 4														
		Flat A				Flat B				Flat C				Flat D		
		T4-01	T4-02	T4-03	T4-04	T4-05	T4-06	T4-07	T4-08	T4-09	T4-10	T4-11	T4-12	T4-13	T4-14	T4-15
Floor	mPD															
2/F	133.7	71	63	56	57	57	57	57	57	57	57	57	57	--	--	--
3/F	137.2	71	63	58	59	59	59	59	59	59	59	59	58	59	59	66
4/F	140.7	71	64	61	61	61	61	61	61	61	61	61	61	61	62	67
5/F	144.2	71	66	63	63	64	64	64	64	64	64	64	65	65	66	69
6/F	147.7	72	67	65	64	64	64	64	64	65	65	65	65	66	67	69
7/F	151.2	72	67	65	64	64	64	64	65	65	65	65	65	66	67	69
8/F	154.7	71	67	65	65	64	65	65	65	65	65	65	65	66	67	69
9/F	158.2	71	67	65	65	64	65	65	65	65	65	65	65	66	67	69
10/F	161.7	71	67	66	65	65	65	65	65	65	65	66	66	66	67	69
Max.		72	67	66	65	65	65	65	65	65	65	66	66	66	67	69
Exceedance		9				0				0				0		

	AM
Total no. of Flats:	135
Total no. of Exceedance:	9
Compliance Level:	93%
Max. Noise Level:	72

Noted:

	Noise level exceed stardand of 70 dB(A)
FG	Fixed Glazing with Maintenance Window
--	Not Available at this residential storey

Predicted Road Traffic Noise at Selected Sensitive Receivers (AM)
Mitigated Scenario (Vertical Fin, and Fixed Glazing with Maintenance Window)

		Tower 1													
		Flat A					Flat B				Flat C				
		T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07	T1-08	T1-09	T1-10	T1-11	T1-12	T1-13	T1-14
Floor	mPD														
1/F	130.2	FG	66	65	65	64	64	64	63	63	62	61	54	53	FG
2/F	133.7	FG	66	65	65	65	64	64	64	64	63	63	57	55	FG
3/F	137.2	FG	66	65	65	65	65	64	64	64	64	64	58	57	FG
4/F	140.7	FG	66	65	65	65	65	65	64	64	64	64	59	58	FG
5/F	144.2	FG	67	65	65	65	65	65	64	64	64	64	59	59	FG
6/F	147.7	FG	67	65	65	65	65	64	64	64	64	64	59	59	FG
7/F	151.2	FG	66	65	65	65	64	64	64	64	64	64	59	59	FG
8/F	154.7	FG	66	65	65	65	64	64	64	64	64	64	59	59	FG
9/F	158.2	FG	66	65	65	65	64	64	64	64	64	64	59	59	FG
10/F	161.7	FG	66	65	65	65	64	64	64	64	64	64	60	60	FG
Max.		0	67	65	65	65	65	65	64	64	64	64	60	60	0
Exceedance		0					0				0				

		Tower 2											
		Flat A				Flat B				Flat C			
		T2-01	T2-02	T2-03	T2-04	T2-05	T2-06	T2-07	T2-08	T2-09	T2-10	T2-11	T2-12
Floor	mPD												
1/F	130.2	51	57	60	60	60	60	60	60	60	60	56	53
2/F	133.7	53	59	62	62	62	61	61	61	61	61	57	55
3/F	137.2	55	60	63	63	63	63	63	62	62	62	58	56
4/F	140.7	57	62	64	64	64	63	63	63	63	63	59	57
5/F	144.2	58	62	64	64	64	64	64	64	64	63	60	58
6/F	147.7	58	62	64	64	64	64	64	64	64	64	60	58
7/F	151.2	59	62	64	64	64	64	64	64	64	64	60	58
8/F	154.7	59	62	64	64	64	64	64	64	64	64	60	58
9/F	158.2	59	62	64	64	64	64	64	64	64	64	60	58
10/F	161.7	60	63	64	64	64	64	64	64	64	64	61	59
Max.		60	63	64	64	64	64	64	64	64	64	61	59
Exceedance		0				0				0			

		Tower 3																	
		Flat A					Flat B					Flat C					Flat D		
Floor	mPD	T3-01	T3-02	T3-03	T3-04	T3-05	T3-06	T3-07	T3-08	T3-09	T3-10	T3-11	T3-12	T3-13	T3-14	T3-15	T3-16	T3-17	
1/F	130.2	FG	55	57	60	61	61	61	61	61	62	62	62	62	64	49	52	64	
2/F	133.7	FG	56	58	61	62	62	62	62	62	62	62	62	62	65	50	53	64	
3/F	137.2	FG	57	59	62	62	63	63	63	63	63	63	63	63	65	52	54	64	
4/F	140.7	FG	58	60	63	63	63	63	63	63	63	63	63	63	66	56	57	65	
5/F	144.2	FG	59	61	63	63	63	63	63	63	63	63	64	65	67	61	61	66	
6/F	147.7	FG	59	61	63	64	64	64	64	64	63	63	64	65	67	62	62	66	
7/F	151.2	FG	59	61	64	64	64	64	64	64	64	63	64	65	67	62	62	66	
8/F	154.7	FG	60	61	64	64	64	64	64	64	64	64	64	65	67	62	62	66	
9/F	158.2	FG	60	62	64	64	64	64	64	64	64	64	64	65	67	62	62	66	
10/F	161.7	FG	61	62	64	64	64	64	64	64	64	64	64	65	67	62	63	66	
Max.		0	61	62	64	64	64	64	64	64	64	64	64	65	67	62	63	66	
Exceedance		0					0					0					0		

		Tower 4														
		Flat A				Flat B				Flat C				Flat D		
		T4-01	T4-02	T4-03	T4-04	T4-05	T4-06	T4-07	T4-08	T4-09	T4-10	T4-11	T4-12	T4-13	T4-14	T4-15
Floor	mPD															
2/F	133.7	69	61	55	55	55	55	55	55	55	55	56	56	--	--	--
3/F	137.2	69	61	57	57	57	57	57	57	57	57	57	57	57	57	64
4/F	140.7	69	62	59	59	59	59	59	59	59	59	59	59	59	60	65
5/F	144.2	70	64	62	62	62	62	62	62	62	62	63	63	63	64	67
6/F	147.7	70	65	64	63	62	63	63	63	63	63	63	63	64	65	67
7/F	151.2	70	65	64	63	62	63	63	63	63	63	63	63	64	65	67
8/F	154.7	69	65	64	63	62	63	63	63	63	63	63	63	64	65	67
9/F	158.2	69	66	64	63	63	63	63	63	63	63	63	64	64	65	67
10/F	161.7	69	66	64	63	63	63	63	63	63	64	64	64	64	65	68
Max.		70	66	64	63	63	63	63	63	63	64	64	64	64	65	68
Exceedance		0				0				0				0		

	AM
Total no. of Flats:	135
Total no. of Exceedance:	0
Compliance Level:	100%
Max. Noise Level:	70

Noted:
FG Fixed Glazing with Maintenance Window
-- Not Available at this residential storey

Predicted Road Traffic Noise at Selected Sensitive Receivers (PM)
Base Scenario

		Tower 1													
		Flat A					Flat B				Flat C				
Floor	mPD	T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07	T1-08	T1-09	T1-10	T1-11	T1-12	T1-13	T1-14
1/F	130.2	71	66	65	65	64	64	64	63	63	62	61	54	53	77
2/F	133.7	71	66	65	65	65	64	64	64	64	63	63	57	55	77
3/F	137.2	72	66	65	65	65	65	64	64	64	64	64	58	57	77
4/F	140.7	72	66	65	65	65	65	65	64	64	64	64	59	58	77
5/F	144.2	72	67	65	65	65	65	65	64	64	64	64	59	59	77
6/F	147.7	72	67	65	65	65	65	64	64	64	64	64	59	59	77
7/F	151.2	71	66	65	65	65	64	64	64	64	64	64	59	59	76
8/F	154.7	71	66	65	65	65	64	64	64	64	64	64	59	59	76
9/F	158.2	71	66	65	65	65	64	64	64	64	64	64	59	59	76
10/F	161.7	71	66	65	65	65	64	64	64	64	64	64	60	60	75
Max.		72	67	65	65	65	65	65	64	64	64	64	60	60	77
Exceedance		10					0				10				

		Tower 2											
		Flat A				Flat B				Flat C			
Floor	mPD	T2-01	T2-02	T2-03	T2-04	T2-05	T2-06	T2-07	T2-08	T2-09	T2-10	T2-11	T2-12
1/F	130.2	51	57	60	60	60	60	60	60	60	60	56	53
2/F	133.7	53	59	62	62	62	61	61	61	61	61	57	55
3/F	137.2	55	60	63	63	63	63	63	62	62	62	58	56
4/F	140.7	57	62	64	64	64	63	63	63	63	63	59	57
5/F	144.2	58	62	64	64	64	64	64	64	64	63	60	58
6/F	147.7	58	62	64	64	64	64	64	64	64	64	60	58
7/F	151.2	59	62	64	64	64	64	64	64	64	64	60	58
8/F	154.7	59	62	64	64	64	64	64	64	64	64	60	58
9/F	158.2	59	62	64	64	64	64	64	64	64	64	60	58
10/F	161.7	60	63	64	64	64	64	64	64	64	64	61	59
Max.		60	63	64	64	64	64	64	64	64	64	61	59
Exceedance		0				0				0			

		Tower 3																
		Flat A					Flat B				Flat C					Flat D		
Floor	mPD	T3-01	T3-02	T3-03	T3-04	T3-05	T3-06	T3-07	T3-08	T3-09	T3-10	T3-11	T3-12	T3-13	T3-14	T3-15	T3-16	T3-17
1/F	130.2	76	55	57	60	61	61	61	61	61	62	62	62	62	64	49	52	64
2/F	133.7	77	56	58	61	62	62	62	62	62	62	62	62	62	65	50	53	64
3/F	137.2	77	57	59	62	62	63	63	63	63	63	63	63	63	65	52	54	64
4/F	140.7	77	58	60	63	63	63	63	63	63	63	63	63	63	66	56	57	65
5/F	144.2	77	59	61	63	63	63	63	63	63	63	63	64	65	67	61	61	66
6/F	147.7	76	59	61	63	64	64	64	64	64	63	63	64	65	67	62	62	66
7/F	151.2	76	59	61	64	64	64	64	64	64	64	63	64	65	67	62	62	66
8/F	154.7	76	60	61	64	64	64	64	64	64	64	64	64	65	67	62	62	66
9/F	158.2	76	60	62	64	64	64	64	64	64	64	64	64	65	67	62	62	66
10/F	161.7	75	61	62	64	64	64	64	64	64	64	64	64	65	67	62	63	66
Max.		77	61	62	64	64	64	64	64	64	64	64	64	65	67	62	63	66
Exceedance		10					0				0					0		

		Tower 4														
		Flat A				Flat B				Flat C				Flat D		
Floor	mPD	T4-01	T4-02	T4-03	T4-04	T4-05	T4-06	T4-07	T4-08	T4-09	T4-10	T4-11	T4-12	T4-13	T4-14	T4-15
2/F	133.7	69	61	55	55	55	55	55	55	55	55	56	56	--	--	--
3/F	137.2	69	61	57	57	57	57	57	57	57	57	57	57	57	57	64
4/F	140.7	69	62	59	59	59	59	59	59	59	59	59	59	59	60	65
5/F	144.2	70	64	62	62	62	62	62	62	62	62	63	63	63	64	67
6/F	147.7	70	65	64	63	62	63	63	63	63	63	63	63	64	65	67
7/F	151.2	70	65	64	63	62	63	63	63	63	63	63	63	64	65	67
8/F	154.7	69	65	64	63	62	63	63	63	63	63	63	63	64	65	67
9/F	158.2	69	66	64	63	63	63	63	63	63	63	63	64	64	65	67
10/F	161.7	69	66	64	63	63	63	63	63	63	64	64	64	64	65	68
Max.		70	66	64	63	63	63	63	63	63	64	64	64	64	65	68
Exceedance		0				0				0				0		

	PM
Total no. of Flats:	135
Total no. of Exceedance:	30
Compliance Level:	78%
Max. Noise Level:	77

Noted:

	Noise level exceed stardand of 70 dB(A)
--	Not Available at this residential storey

Predicted Road Traffic Noise at Selected Sensitive Receivers (PM)
Base Scenario (Fixed Glazing with Maintenance Window)

		Tower 1													
		Flat A					Flat B				Flat C				
Floor	mPD	T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07	T1-08	T1-09	T1-10	T1-11	T1-12	T1-13	T1-14
1/F	130.2	FG	66	65	65	64	64	64	63	63	62	61	54	53	FG
2/F	133.7	FG	66	65	65	65	64	64	64	64	63	63	57	55	FG
3/F	137.2	FG	66	65	65	65	65	64	64	64	64	64	58	57	FG
4/F	140.7	FG	66	65	65	65	65	65	64	64	64	64	59	58	FG
5/F	144.2	FG	67	65	65	65	65	65	64	64	64	64	59	59	FG
6/F	147.7	FG	67	65	65	65	65	64	64	64	64	64	59	59	FG
7/F	151.2	FG	66	65	65	65	64	64	64	64	64	64	59	59	FG
8/F	154.7	FG	66	65	65	65	64	64	64	64	64	64	59	59	FG
9/F	158.2	FG	66	65	65	65	64	64	64	64	64	64	59	59	FG
10/F	161.7	FG	66	65	65	65	64	64	64	64	64	64	60	60	FG
Max.		0	67	65	65	65	65	65	64	64	64	64	60	60	0
Exceedance		0					0				0				

		Tower 2											
		Flat A				Flat B				Flat C			
Floor	mPD	T2-01	T2-02	T2-03	T2-04	T2-05	T2-06	T2-07	T2-08	T2-09	T2-10	T2-11	T2-12
1/F	130.2	51	57	60	60	60	60	60	60	60	60	56	53
2/F	133.7	53	59	62	62	62	61	61	61	61	61	57	55
3/F	137.2	55	60	63	63	63	63	63	62	62	62	58	56
4/F	140.7	57	62	64	64	64	63	63	63	63	63	59	57
5/F	144.2	58	62	64	64	64	64	64	64	64	63	60	58
6/F	147.7	58	62	64	64	64	64	64	64	64	64	60	58
7/F	151.2	59	62	64	64	64	64	64	64	64	64	60	58
8/F	154.7	59	62	64	64	64	64	64	64	64	64	60	58
9/F	158.2	59	62	64	64	64	64	64	64	64	64	60	58
10/F	161.7	60	63	64	64	64	64	64	64	64	64	61	59
Max.		60	63	64	64	64	64	64	64	64	64	61	59
Exceedance		0				0				0			

		Tower 3																
		Flat A					Flat B				Flat C					Flat D		
Floor	mPD	T3-01	T3-02	T3-03	T3-04	T3-05	T3-06	T3-07	T3-08	T3-09	T3-10	T3-11	T3-12	T3-13	T3-14	T3-15	T3-16	T3-17
1/F	130.2	FG	55	57	60	61	61	61	61	61	62	62	62	62	64	49	52	64
2/F	133.7	FG	56	58	61	62	62	62	62	62	62	62	62	62	65	50	53	64
3/F	137.2	FG	57	59	62	62	63	63	63	63	63	63	63	63	65	52	54	64
4/F	140.7	FG	58	60	63	63	63	63	63	63	63	63	63	63	66	56	57	65
5/F	144.2	FG	59	61	63	63	63	63	63	63	63	63	64	65	67	61	61	66
6/F	147.7	FG	59	61	63	64	64	64	64	64	63	63	64	65	67	62	62	66
7/F	151.2	FG	59	61	64	64	64	64	64	64	64	63	64	65	67	62	62	66
8/F	154.7	FG	60	61	64	64	64	64	64	64	64	64	64	65	67	62	62	66
9/F	158.2	FG	60	62	64	64	64	64	64	64	64	64	64	65	67	62	62	66
10/F	161.7	FG	61	62	64	64	64	64	64	64	64	64	64	65	67	62	63	66
Max.		0	61	62	64	64	64	64	64	64	64	64	64	65	67	62	63	66
Exceedance		0					0				0					0		

		Tower 4														
		Flat A				Flat B				Flat C				Flat D		
Floor	mPD	T4-01	T4-02	T4-03	T4-04	T4-05	T4-06	T4-07	T4-08	T4-09	T4-10	T4-11	T4-12	T4-13	T4-14	T4-15
2/F	133.7	69	61	55	55	55	55	55	55	55	55	56	56	--	--	--
3/F	137.2	69	61	57	57	57	57	57	57	57	57	57	57	57	57	64
4/F	140.7	69	62	59	59	59	59	59	59	59	59	59	59	59	60	65
5/F	144.2	70	64	62	62	62	62	62	62	62	62	63	63	63	64	67
6/F	147.7	70	65	64	63	62	63	63	63	63	63	63	63	64	65	67
7/F	151.2	70	65	64	63	62	63	63	63	63	63	63	63	64	65	67
8/F	154.7	69	65	64	63	62	63	63	63	63	63	63	63	64	65	67
9/F	158.2	69	66	64	63	63	63	63	63	63	63	63	64	64	65	67
10/F	161.7	69	66	64	63	63	63	63	63	63	64	64	64	64	65	68
Max.		70	66	64	63	63	63	63	63	63	64	64	64	64	65	68
Exceedance		0				0				0				0		

	PM
Total no. of Flats:	135
Total no. of Exceedance:	0
Compliance Level:	100%
Max. Noise Level:	70

Noted:

	Noise level exceed stardand of 70 dB(A)
FG	Fixed Glazing with Maintenance Window
--	Not Available at this residential storey

Predicted Road Traffic Noise at Selected Sensitive Receivers (PM)
Mitigated Scenario (Vertical Fin, and Fixed Glazing with Maintenance Window)

		Tower 1													
		Flat A					Flat B				Flat C				
		T1-01	T1-02	T1-03	T1-04	T1-05	T1-06	T1-07	T1-08	T1-09	T1-10	T1-11	T1-12	T1-13	T1-14
Floor	mPD														
1/F	130.2	FG	66	65	65	64	64	64	63	63	62	61	54	53	FG
2/F	133.7	FG	66	65	65	65	64	64	64	64	63	63	57	55	FG
3/F	137.2	FG	66	65	65	65	65	64	64	64	64	64	58	57	FG
4/F	140.7	FG	66	65	65	65	65	65	64	64	64	64	59	58	FG
5/F	144.2	FG	67	65	65	65	65	65	64	64	64	64	59	59	FG
6/F	147.7	FG	67	65	65	65	65	64	64	64	64	64	59	59	FG
7/F	151.2	FG	66	65	65	65	64	64	64	64	64	64	59	59	FG
8/F	154.7	FG	66	65	65	65	64	64	64	64	64	64	59	59	FG
9/F	158.2	FG	66	65	65	65	64	64	64	64	64	64	59	59	FG
10/F	161.7	FG	66	65	65	65	64	64	64	64	64	64	60	60	FG
Max.		0	67	65	65	65	65	65	64	64	64	64	60	60	0
Exceedance		0					0				0				

		Tower 2											
		Flat A				Flat B				Flat C			
		T2-01	T2-02	T2-03	T2-04	T2-05	T2-06	T2-07	T2-08	T2-09	T2-10	T2-11	T2-12
Floor	mPD												
1/F	130.2	51	57	60	60	60	60	60	60	60	56	53	
2/F	133.7	53	59	62	62	62	61	61	61	61	57	55	
3/F	137.2	55	60	63	63	63	63	63	62	62	58	56	
4/F	140.7	57	62	64	64	64	63	63	63	63	59	57	
5/F	144.2	58	62	64	64	64	64	64	64	64	60	58	
6/F	147.7	58	62	64	64	64	64	64	64	64	60	58	
7/F	151.2	59	62	64	64	64	64	64	64	64	60	58	
8/F	154.7	59	62	64	64	64	64	64	64	64	60	58	
9/F	158.2	59	62	64	64	64	64	64	64	64	60	58	
10/F	161.7	60	63	64	64	64	64	64	64	64	61	59	
Max.		60	63	64	64	64	64	64	64	64	61	59	
Exceedance		0				0				0			

		Tower 3																
		Flat A					Flat B					Flat C					Flat D	
		T3-01	T3-02	T3-03	T3-04	T3-05	T3-06	T3-07	T3-08	T3-09	T3-10	T3-11	T3-12	T3-13	T3-14	T3-15	T3-16	T3-17
Floor	mPD																	
1/F	130.2	FG	55	57	60	61	61	61	61	61	62	62	62	62	64	49	52	64
2/F	133.7	FG	56	58	61	62	62	62	62	62	62	62	62	62	65	50	53	64
3/F	137.2	FG	57	59	62	62	63	63	63	63	63	63	63	63	65	52	54	64
4/F	140.7	FG	58	60	63	63	63	63	63	63	63	63	63	63	66	56	57	65
5/F	144.2	FG	59	61	63	63	63	63	63	63	63	63	64	65	67	61	61	66
6/F	147.7	FG	59	61	63	64	64	64	64	64	63	63	64	65	67	62	62	66
7/F	151.2	FG	59	61	64	64	64	64	64	64	64	63	64	65	67	62	62	66
8/F	154.7	FG	60	61	64	64	64	64	64	64	64	64	64	65	67	62	62	66
9/F	158.2	FG	60	62	64	64	64	64	64	64	64	64	64	65	67	62	62	66
10/F	161.7	FG	61	62	64	64	64	64	64	64	64	64	64	65	67	62	63	66
Max.		0	61	62	64	64	64	64	64	64	64	64	64	65	67	62	63	66
Exceedance		0					0					0					0	

		Tower 4														
		Flat A				Flat B				Flat C				Flat D		
Floor	mPD	T4-01	T4-02	T4-03	T4-04	T4-05	T4-06	T4-07	T4-08	T4-09	T4-10	T4-11	T4-12	T4-13	T4-14	T4-15
2/F	133.7	69	61	55	55	55	55	55	55	55	55	56	56	--	--	--
3/F	137.2	69	61	57	57	57	57	57	57	57	57	57	57	57	57	64
4/F	140.7	69	62	59	59	59	59	59	59	59	59	59	59	59	60	65
5/F	144.2	70	64	62	62	62	62	62	62	62	62	63	63	63	64	67
6/F	147.7	70	65	64	63	62	63	63	63	63	63	63	63	64	65	67
7/F	151.2	70	65	64	63	62	63	63	63	63	63	63	63	64	65	67
8/F	154.7	69	65	64	63	62	63	63	63	63	63	63	63	64	65	67
9/F	158.2	69	66	64	63	63	63	63	63	63	63	63	64	64	65	67
10/F	161.7	69	66	64	63	63	63	63	63	63	64	64	64	64	65	68
Max.		70	66	64	63	63	63	63	63	63	64	64	64	64	65	68
Exceedance		0				0				0				0		

	PM
Total no. of Flats:	135
Total no. of Exceedance:	0
Compliance Level:	100%
Max. Noise Level:	70

Noted:

FG	Fixed Glazing with Maintenance Window
--	Not Available at this residential storey

Appendix 4 Detailed Fixed Noise Impact Assessment

Predicted Noise Level for Fixed Noise Impact Assessment - Base Case Scenario

Day/Evening Time

F01 NSR Coordinate: x = 831654.4 y = 814286.4

52

Source ID	Description	Industrial Noise Source Coordinate:		SPL	Ref dist.	SWL	Horizontal distance from source to NSR (m)	Distance Corr.	Façade Corr.	Barrier Corr.	Tonality Corr.	Impulsive Corr.	ANL
		x	y										
QMH-01	Chiller (Ref - Daikin: EWAD-C-SS H14)	831562.4	814549.2	--	--	102.0	278.5	56.9	3.0	-10.0	3.0	0.0	41.1
QMH-02	Chiller (Ref - Daikin: EWAD-D-XS 470)	831560.4	814517.8	--	--	99.0	249.7	55.9	3.0	-10.0	3.0	0.0	39.1
QMH-03	Chiller (Ref - Daikin: EWAD-D-XS 470)	831562.6	814513.6	--	--	99.0	245.0	55.8	3.0	-10.0	3.0	0.0	39.2
QMH-04	Chiller (Ref - Daikin: EWAD-D-XS 470)	831564.7	814509.4	--	--	99.0	240.4	55.6	3.0	-10.0	3.0	0.0	39.4
QMH-05	Chiller (Ref - Daikin: EWAD-D-XS 470)	831566.6	814505.7	--	--	99.0	236.2	55.5	3.0	-10.0	3.0	0.0	39.5
QMH-06	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831606.8	814470.5	--	--	93.0	190.2	53.6	3.0	-10.0	3.0	0.0	35.4
QMH-07	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831609.3	814466.7	--	--	93.0	185.8	53.4	3.0	-10.0	3.0	0.0	35.6
QMH-08	VRV (Ref - Daikin: RUXYQ88BB)	831610.9	814471.2	66.0	1.0	74.0	189.8	53.6	3.0	-10.0	3.0	0.0	16.4
QMH-09	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831614.0	814465.1	--	--	93.0	183.2	53.3	3.0	-10.0	3.0	0.0	35.7
QMH-10	VRV (Ref - Daikin: RUXYQ44BB)	831621.2	814462.1	63.0	1.0	71.0	178.8	53.0	3.0	-10.0	3.0	0.0	14.0
HKU-01	Cooling Tower (Ref - ryowo: FW-200)	831459.7	814435.4	64.0	3.6	83.1	245.2	55.8	3.0	-10.0	3.0	0.0	23.3
HKU-02	Cooling Tower (Ref - ryowo: FW-200)	831461.8	814434.8	64.0	3.6	83.1	243.1	55.7	3.0	-10.0	3.0	0.0	23.4
HKU-03	Cooling Tower (Ref - ryowo: FW-200)	831465.5	814433.5	64.0	3.6	83.1	239.4	55.6	3.0	-10.0	3.0	0.0	23.5
HKU-04	Cooling Tower (Ref - ryowo: FW-200)	831467.7	814432.7	64.0	3.6	83.1	237.2	55.5	3.0	0.0	3.0	0.0	33.6
HKU-05	VRV (Ref - Daikin: RUXYQ44BB)	831466.8	814495.1	63.0	1.0	71.0	280.6	57.0	3.0	0.0	3.0	0.0	20.0
HKU-06	Chiller (Ref - Daikin: EWAD-C-SS 970)	831473.6	814491.8	--	--	101.0	273.7	56.7	3.0	0.0	3.0	0.0	50.3
HKU-07	Cooling Tower (Ref - ryowo: FW-200)	831461.2	814483.5	64.0	3.6	83.1	276.0	56.8	3.0	0.0	3.0	0.0	32.3
HKU-08	Cooling Tower (Ref - ryowo: FW-200)	831464.2	814481.7	64.0	3.6	83.1	272.6	56.7	3.0	0.0	3.0	0.0	32.4
HKU-09	Cooling Tower (Ref - ryowo: FW-200)	831466.8	814480.5	64.0	3.6	83.1	269.9	56.6	3.0	0.0	3.0	0.0	32.5
HKU-10	Cooling Tower (Ref - ryowo: FW-200)	831321.2	814330.0	64.0	3.6	83.1	336.1	58.5	3.0	-10.0	3.0	0.0	20.6
HKU-11	Cooling Tower (Ref - ryowo: FW-200)	831319.4	814321.3	64.0	3.6	83.1	336.8	58.5	3.0	-10.0	3.0	0.0	20.6
HKU-12	Cooling Tower (Ref - ryowo: FW-200)	831317.5	814312.0	64.0	3.6	83.1	337.9	58.6	3.0	-10.0	3.0	0.0	20.5
HKU-13	Cooling Tower (Ref - ryowo: FW-200)	831315.7	814303.0	64.0	3.6	83.1	339.1	58.6	3.0	-10.0	3.0	0.0	20.5
HKU-14	Cooling Tower (Ref - ryowo: FW-200)	831313.3	814290.4	64.0	3.6	83.1	341.2	58.7	3.0	-10.0	3.0	0.0	20.5
HKU-15	Cooling Tower (Ref - ryowo: FW-200)	831311.4	814281.7	64.0	3.6	83.1	343.0	58.7	3.0	-10.0	3.0	0.0	20.4
HKU-16	Cooling Tower (Ref - ryowo: FW-200)	831309.9	814273.2	64.0	3.6	83.1	344.8	58.8	3.0	-10.0	3.0	0.0	20.4
Noise standard:											65	Overall	52

Predicted Noise Level for Fixed Noise Impact Assessment - Base Case Scenario

Night Time

F01 NSR Coordinate: x = 831654.4 y = 814286.4

48

Source ID	Description	Industrial Noise Source Coordinate:		SPL	Ref dist.	SWL	Horizontal distance from source to NSR (m)	Distance Corr.	Façade Corr.	Barrier Corr.	Tonality Corr.	Impulsive Corr.	ANL
		x	y										
QMH-01	Chiller (Ref - Daikin: EWAD-C-SS H14)	831562.4	814549.2	--	--	102.0	278.5	56.9	3.0	-10.0	3.0	0.0	41.1
QMH-02	Chiller (Ref - Daikin: EWAD-D-XS 470)	831560.4	814517.8	--	--	99.0	249.7	55.9	3.0	-10.0	3.0	0.0	39.1
QMH-03	Chiller (Ref - Daikin: EWAD-D-XS 470)	831562.6	814513.6	--	--	99.0	245.0	55.8	3.0	-10.0	3.0	0.0	39.2
QMH-04	Chiller (Ref - Daikin: EWAD-D-XS 470)	831564.7	814509.4	--	--	99.0	240.4	55.6	3.0	-10.0	3.0	0.0	39.4
QMH-05	Chiller (Ref - Daikin: EWAD-D-XS 470)	831566.6	814505.7	--	--	99.0	236.2	55.5	3.0	-10.0	3.0	0.0	39.5
QMH-06	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831606.8	814470.5	--	--	93.0	190.2	53.6	3.0	-10.0	3.0	0.0	35.4
QMH-07	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831609.3	814466.7	--	--	93.0	185.8	53.4	3.0	-10.0	3.0	0.0	35.6
QMH-08	VRV (Ref - Daikin: RUXYQ88BB)	831610.9	814471.2	66.0	1.0	74.0	189.8	53.6	3.0	-10.0	3.0	0.0	16.4
QMH-09	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831614.0	814465.1	--	--	93.0	183.2	53.3	3.0	-10.0	3.0	0.0	35.7
QMH-10	VRV (Ref - Daikin: RUXYQ44BB)	831621.2	814462.1	63.0	1.0	71.0	178.8	53.0	3.0	-10.0	3.0	0.0	14.0
HKU-01	Cooling Tower (Ref - ryowo: FW-200)	831459.7	814435.4	64.0	3.6	0.0	245.2	55.8	3.0	-10.0	3.0	0.0	0.0
HKU-02	Cooling Tower (Ref - ryowo: FW-200)	831461.8	814434.8	64.0	3.6	0.0	243.1	55.7	3.0	-10.0	3.0	0.0	0.0
HKU-03	Cooling Tower (Ref - ryowo: FW-200)	831465.5	814433.5	64.0	3.6	0.0	239.4	55.6	3.0	-10.0	3.0	0.0	0.0
HKU-04	Cooling Tower (Ref - ryowo: FW-200)	831467.7	814432.7	64.0	3.6	0.0	237.2	55.5	3.0	0.0	3.0	0.0	0.0
HKU-05	VRV (Ref - Daikin: RUXYQ44BB)	831466.8	814495.1	63.0	1.0	0.0	280.6	57.0	3.0	0.0	3.0	0.0	0.0
HKU-06	Chiller (Ref - Daikin: EWAD-C-SS 970)	831473.6	814491.8	--	--	0.0	273.7	56.7	3.0	0.0	3.0	0.0	0.0
HKU-07	Cooling Tower (Ref - ryowo: FW-200)	831461.2	814483.5	64.0	3.6	0.0	276.0	56.8	3.0	0.0	3.0	0.0	0.0
HKU-08	Cooling Tower (Ref - ryowo: FW-200)	831464.2	814481.7	64.0	3.6	0.0	272.6	56.7	3.0	0.0	3.0	0.0	0.0
HKU-09	Cooling Tower (Ref - ryowo: FW-200)	831466.8	814480.5	64.0	3.6	0.0	269.9	56.6	3.0	0.0	3.0	0.0	0.0
HKU-10	Cooling Tower (Ref - ryowo: FW-200)	831321.2	814330.0	64.0	3.6	0.0	336.1	58.5	3.0	-10.0	3.0	0.0	0.0
HKU-11	Cooling Tower (Ref - ryowo: FW-200)	831319.4	814321.3	64.0	3.6	0.0	336.8	58.5	3.0	-10.0	3.0	0.0	0.0
HKU-12	Cooling Tower (Ref - ryowo: FW-200)	831317.5	814312.0	64.0	3.6	0.0	337.9	58.6	3.0	-10.0	3.0	0.0	0.0
HKU-13	Cooling Tower (Ref - ryowo: FW-200)	831315.7	814303.0	64.0	3.6	0.0	339.1	58.6	3.0	-10.0	3.0	0.0	0.0
HKU-14	Cooling Tower (Ref - ryowo: FW-200)	831315.7	814303.0	64.0	3.6	0.0	339.1	58.6	3.0	-10.0	3.0	0.0	0.0
HKU-15	Cooling Tower (Ref - ryowo: FW-200)	831311.4	814281.7	64.0	3.6	0.0	343.0	58.7	3.0	-10.0	3.0	0.0	0.0
HKU-16	Cooling Tower (Ref - ryowo: FW-200)	831309.9	814273.2	64.0	3.6	0.0	344.8	58.8	3.0	-10.0	3.0	0.0	0.0
									Noise standard:		55	Overall	48

Predicted Noise Level for Fixed Noise Impact Assessment - Base Case Scenario
Day/Evening Time

F02		NSR Coordinate: x = 831654.6 y = 814223.4											47
Source ID	Description	Industrial Noise Source Coordinate:		SPL	Ref dist.	SWL	Horizontal distance from source to NSR (m)	Distance Corr.	Façade Corr.	Barrier Corr.	Tonality Corr.	Impulsive Corr.	ANL
		x	y										
QMH-01	Chiller (Ref - Daikin: EWAD-C-SS H14)	831562.4	814549.2	--	--	102.0	338.6	58.6	3.0	-10.0	3.0	0.0	39.4
QMH-02	Chiller (Ref - Daikin: EWAD-D-XS 470)	831560.4	814517.8	--	--	99.0	309.1	57.8	3.0	-10.0	3.0	0.0	37.2
QMH-03	Chiller (Ref - Daikin: EWAD-D-XS 470)	831562.6	814513.6	--	--	99.0	304.4	57.7	3.0	-10.0	3.0	0.0	37.3
QMH-04	Chiller (Ref - Daikin: EWAD-D-XS 470)	831564.7	814509.4	--	--	99.0	299.8	57.5	3.0	-10.0	3.0	0.0	37.5
QMH-05	Chiller (Ref - Daikin: EWAD-D-XS 470)	831566.6	814505.7	--	--	99.0	295.7	57.4	3.0	-10.0	3.0	0.0	37.6
QMH-06	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831606.8	814470.5	--	--	93.0	251.7	56.0	3.0	-10.0	3.0	0.0	33.0
QMH-07	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831609.3	814466.7	--	--	93.0	247.4	55.9	3.0	-10.0	3.0	0.0	33.1
QMH-08	VRV (Ref - Daikin: RUXYQ88BB)	831610.9	814471.2	66.0	1.0	74.0	251.6	56.0	3.0	-10.0	3.0	0.0	14.0
QMH-09	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831614.0	814465.1	--	--	93.0	245.1	55.8	3.0	-10.0	3.0	0.0	33.2
QMH-10	VRV (Ref - Daikin: RUXYQ44BB)	831621.2	814462.1	63.0	1.0	71.0	241.0	55.6	3.0	-10.0	3.0	0.0	11.4
HKU-01	Cooling Tower (Ref - ryowo: FW-200)	831459.7	814435.4	64.0	3.6	83.1	288.0	57.2	3.0	-10.0	3.0	0.0	21.9
HKU-02	Cooling Tower (Ref - ryowo: FW-200)	831461.8	814434.8	64.0	3.6	83.1	286.1	57.1	3.0	-10.0	3.0	0.0	22.0
HKU-03	Cooling Tower (Ref - ryowo: FW-200)	831465.5	814433.5	64.0	3.6	83.1	282.7	57.0	3.0	-10.0	3.0	0.0	22.1
HKU-04	Cooling Tower (Ref - ryowo: FW-200)	831467.7	814432.7	64.0	3.6	83.1	280.7	57.0	3.0	-10.0	3.0	0.0	22.1
HKU-05	VRV (Ref - Daikin: RUXYQ44BB)	831466.8	814495.1	63.0	1.0	71.0	330.3	58.4	3.0	-10.0	3.0	0.0	8.6
HKU-06	Chiller (Ref - Daikin: EWAD-C-SS 970)	831473.6	814491.8	--	--	101.0	323.8	58.2	3.0	-10.0	3.0	0.0	38.8
HKU-07	Cooling Tower (Ref - ryowo: FW-200)	831461.2	814483.5	64.0	3.6	83.1	324.1	58.2	3.0	-10.0	3.0	0.0	20.9
HKU-08	Cooling Tower (Ref - ryowo: FW-200)	831464.2	814481.7	64.0	3.6	83.1	320.9	58.1	3.0	-10.0	3.0	0.0	21.0
HKU-09	Cooling Tower (Ref - ryowo: FW-200)	831466.8	814480.5	64.0	3.6	83.1	318.4	58.1	3.0	-10.0	3.0	0.0	21.1
HKU-10	Cooling Tower (Ref - ryowo: FW-200)	831321.2	814330.0	64.0	3.6	83.1	350.1	58.9	3.0	-10.0	3.0	0.0	20.2
HKU-11	Cooling Tower (Ref - ryowo: FW-200)	831319.4	814321.3	64.0	3.6	83.1	349.2	58.9	3.0	-10.0	3.0	0.0	20.3
HKU-12	Cooling Tower (Ref - ryowo: FW-200)	831317.5	814312.0	64.0	3.6	83.1	348.6	58.8	3.0	-10.0	3.0	0.0	20.3
HKU-13	Cooling Tower (Ref - ryowo: FW-200)	831315.7	814303.0	64.0	3.6	83.1	348.1	58.8	3.0	-10.0	3.0	0.0	20.3
HKU-14	Cooling Tower (Ref - ryowo: FW-200)	831315.7	814303.0	64.0	3.6	83.1	348.1	58.8	3.0	-10.0	3.0	0.0	20.3
HKU-15	Cooling Tower (Ref - ryowo: FW-200)	831311.4	814281.7	64.0	3.6	83.1	348.1	58.8	3.0	-10.0	3.0	0.0	20.3
HKU-16	Cooling Tower (Ref - ryowo: FW-200)	831309.9	814273.2	64.0	3.6	83.1	348.3	58.8	3.0	-10.0	3.0	0.0	20.3
									Noise standard:		65	Overall	47

Predicted Noise Level for Fixed Noise Impact Assessment - Base Case Scenario

Night Time

F02 NSR Coordinate: x = 831654.6 y = 814223.4

46

Source ID	Description	Industrial Noise Source Coordinate:		SPL	Ref dist.	SWL	Horizontal distance from source to NSR (m)	Distance Corr.	Façade Corr.	Barrier Corr.	Tonality Corr.	Impulsive Corr.	ANL
		x	y										
QMH-01	Chiller (Ref - Daikin: EWAD-C-SS H14)	831562.4	814549.2	--	--	102.0	338.6	58.6	3.0	-10.0	3.0	0.0	39.4
QMH-02	Chiller (Ref - Daikin: EWAD-D-XS 470)	831560.4	814517.8	--	--	99.0	309.1	57.8	3.0	-10.0	3.0	0.0	37.2
QMH-03	Chiller (Ref - Daikin: EWAD-D-XS 470)	831562.6	814513.6	--	--	99.0	304.4	57.7	3.0	-10.0	3.0	0.0	37.3
QMH-04	Chiller (Ref - Daikin: EWAD-D-XS 470)	831564.7	814509.4	--	--	99.0	299.8	57.5	3.0	-10.0	3.0	0.0	37.5
QMH-05	Chiller (Ref - Daikin: EWAD-D-XS 470)	831566.6	814505.7	--	--	99.0	295.7	57.4	3.0	-10.0	3.0	0.0	37.6
QMH-06	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831606.8	814470.5	--	--	93.0	251.7	56.0	3.0	-10.0	3.0	0.0	33.0
QMH-07	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831609.3	814466.7	--	--	93.0	247.4	55.9	3.0	-10.0	3.0	0.0	33.1
QMH-08	VRV (Ref - Daikin: RUXYQ88BB)	831610.9	814471.2	66.0	1.0	74.0	251.6	56.0	3.0	-10.0	3.0	0.0	14.0
QMH-09	Chiller (Ref - Daikin: EWAQ-F-XS 200)	831614.0	814465.1	--	--	93.0	245.1	55.8	3.0	-10.0	3.0	0.0	33.2
QMH-10	VRV (Ref - Daikin: RUXYQ44BB)	831621.2	814462.1	63.0	1.0	71.0	241.0	55.6	3.0	-10.0	3.0	0.0	11.4
HKU-01	Cooling Tower (Ref - ryowo: FW-200)	831459.7	814435.4	64.0	3.6	0.0	288.0	57.2	3.0	-10.0	3.0	0.0	0.0
HKU-02	Cooling Tower (Ref - ryowo: FW-200)	831461.8	814434.8	64.0	3.6	0.0	286.1	57.1	3.0	-10.0	3.0	0.0	0.0
HKU-03	Cooling Tower (Ref - ryowo: FW-200)	831465.5	814433.5	64.0	3.6	0.0	282.7	57.0	3.0	-10.0	3.0	0.0	0.0
HKU-04	Cooling Tower (Ref - ryowo: FW-200)	831467.7	814432.7	64.0	3.6	0.0	280.7	57.0	3.0	-10.0	3.0	0.0	0.0
HKU-05	VRV (Ref - Daikin: RUXYQ44BB)	831466.8	814495.1	63.0	1.0	0.0	330.3	58.4	3.0	-10.0	3.0	0.0	0.0
HKU-06	Chiller (Ref - Daikin: EWAD-C-SS 970)	831473.6	814491.8	--	--	0.0	323.8	58.2	3.0	-10.0	3.0	0.0	0.0
HKU-07	Cooling Tower (Ref - ryowo: FW-200)	831461.2	814483.5	64.0	3.6	0.0	324.1	58.2	3.0	-10.0	3.0	0.0	0.0
HKU-08	Cooling Tower (Ref - ryowo: FW-200)	831464.2	814481.7	64.0	3.6	0.0	320.9	58.1	3.0	-10.0	3.0	0.0	0.0
HKU-09	Cooling Tower (Ref - ryowo: FW-200)	831466.8	814480.5	64.0	3.6	0.0	318.4	58.1	3.0	-10.0	3.0	0.0	0.0
HKU-10	Cooling Tower (Ref - ryowo: FW-200)	831321.2	814330.0	64.0	3.6	0.0	350.1	58.9	3.0	-10.0	3.0	0.0	0.0
HKU-11	Cooling Tower (Ref - ryowo: FW-200)	831319.4	814321.3	64.0	3.6	0.0	349.2	58.9	3.0	-10.0	3.0	0.0	0.0
HKU-12	Cooling Tower (Ref - ryowo: FW-200)	831317.5	814312.0	64.0	3.6	0.0	348.6	58.8	3.0	-10.0	3.0	0.0	0.0
HKU-13	Cooling Tower (Ref - ryowo: FW-200)	831315.7	814303.0	64.0	3.6	0.0	348.1	58.8	3.0	-10.0	3.0	0.0	0.0
HKU-14	Cooling Tower (Ref - ryowo: FW-200)	831315.7	814303.0	64.0	3.6	0.0	348.1	58.8	3.0	-10.0	3.0	0.0	0.0
HKU-15	Cooling Tower (Ref - ryowo: FW-200)	831311.4	814281.7	64.0	3.6	0.0	348.1	58.8	3.0	-10.0	3.0	0.0	0.0
HKU-16	Cooling Tower (Ref - ryowo: FW-200)	831309.9	814273.2	64.0	3.6	0.0	348.3	58.8	3.0	-10.0	3.0	0.0	0.0
									Noise standard:		55	Overall	46

Appendix 5 Reference Catalogue of Fixed Noise Source



Applied catalogue Chillers & air side



High performance and reliability for comfort and process applications

Air cooled multi-scroll chiller

High efficiency

Standard/low sound

- › Reliable and efficient scroll compressors with **high EER values**
- › A series of advantages thanks to the use of large-capacity scroll compressors: increased competitiveness, reduced weight, clearances around the unit
- › **2 truly independent refrigerant circuits**
- › Reduced footprint thanks to the **V-shaped frame**
(EWAQ170-310/350F-XS/XL & EWAQ170-300/330F-XR)
- › Large operation range: ambient temperatures up to 52°C and down to -18°C
- › The unit can be equipped with a hydraulic module optimizing installation time, space and cost
- › Ideal solution for a broad range of comfort and process applications
- › MicroTech III controller with superior control logic and easy interface

EWAQ-F-XS 200

Cooling only		EWAQ-F-XS/XL		170	200	220	250	310	320	350	360	400	430	450	520	610	680
Cooling capacity	Nom.		kW	170	194	220	244	316		356		403	428	457	528	607	672
Power input	Cooling	Nom.	kW	54.8	62.2	70.6	78.3	102		115		130	137	146	170	198	219
Capacity control	Method																
	Minimum capacity		%	25.0	21.0	25.0	22.0	23.0		25.0		21.0	20.0	25.0	17.0	14.0	17.0
EER				3.11	3.13	3.12			3.09			3.10	3.12		3.10	3.07	
ESEER				3.90	4.10	3.95	4.08	4.04	4.30	4.05	4.33	4.24	4.27	4.23	4.35	4.30	4.23
Dimensions	Unit	Height	mm			2,271			2,221	2,271					2,221		
		Width	mm			1,224			2,258	1,224					2,258		
		Depth	mm	4,413		5,313		6,213	3,210	6,213	3,210		4,110		5,010		5,910
Weight (XS)	Unit		kg	1,688	1,958	2,210	2,339	2,500	2,600	2,632	2,732	2,744	2,845	2,861	3,569	3,667	4,054
	Operation weight		kg	1,700	1,973	2,225	2,353		2,514	2,672	2,772	2,784	2,891	2,907	3,615	3,727	4,115
Weight (XL)	Unit		kg	1,909	2,193	2,457	2,592	2,761	2,861	2,900	3,000	3,017	3,124	3,141	3,923	4,026	4,434
	Operation weight		kg	1,921	2,207	2,472	2,607	2,776	2,876	2,940	3,040	3,057	3,170	3,187	3,970	4,087	4,494
Water heat exchanger	Type																
	Water volume		l	12		14				40			46		60		
	Water flow rate	Cooling	Nom.	l/s	8.2	9.3	10.5	11.7	15.1	17.0		19.3	20.5	21.8	25.3	29.0	32.2
	Water pressure drop	Cooling	Nom.	kPa	25	27	34	42	22	23		31	29	30	41	44	55
Air heat exchanger	Type																
Compressor	Type																
	Quantity									4						6	
Fan	Type																
	Quantity			4		5			6			8			10		12
	Air flow rate	Nom.	l/s	21,845	21,148	26,874	25,204		31,722		30,245	42,296		40,326		50,408	60,489
	Speed		rpm							900							
Sound power level (XS)	Cooling	Nom.	dBA	91	93	94	95		96			97		98		99	100
Sound power level (XL)	Cooling	Nom.	dBA	90	91		92		93				95			96	97
Sound pressure level (XS)	Cooling	Nom.	dBA	72	74	75	76		77	76	77		78	79	78		79
Sound pressure level (XL)	Cooling	Nom.	dBA	71		73			74				75				76
Operation range	Water side	Cooling	Min.~Max.	°CDB						-13~-18							
	Air side	Cooling	Min.~Max.	°CDB						-18~-52							
Refrigerant	Type / GWP									R-410A / 2,087.5							
	Circuits	Quantity								2							
Refrigerant charge	Per circuit		kg/TCO,Eq	14.0/29.2	15.5/32.4	16.5/34.4	20.0/41.8		26.0/54.3			31.0/64.7		37.0/77.2	36.0/75.2	41.5/86.6	
Piping connections	Evaporator water inlet/outlet (OD)									3"							
Unit	Maximum starting current		A	281	338	353	408		480		509	629	643	657	642	768	818
	Nominal running current (RLA)	Cooling	A	110	117	128	141		181		202	229	240	254	300	343	379
	Maximum running current		A	138	149	164	180		229		258	294	308	322	391	433	482
Power supply	Phase/Frequency/Voltage		Hz/V								3~/50/400						

Air cooled multi-scroll chiller

High efficiency

Reduced sound



EWAQ-F-XS/XL/XR

MicroTech III

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

Air cooled screw chiller

High efficiency

Standard sound

- › 2 truly independent refrigerant circuits
- › 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-XS 470

Cooling only				EWAD-D-XS		250	280	300	330	350	380	400	470	520	580	620
Cooling capacity	Nom.			kW	246	274	300	326	350	374	399	467	522	573	620	
Power input	Cooling	Nom.		kW	80.1	88.2	95.4	105	114	121	129	152	169	183	196	
Capacity control	Method			Stepless												
	Minimum capacity			%	12.5											
EER					3.07	3.11	3.15	3.10	3.06	3.08	3.10	3.07	3.09	3.12	3.16	
ESEER					3.45	3.49	3.51	3.73	3.56	3.47	3.48	3.72	3.88	3.89	3.75	
Dimensions	Unit	Height	mm	2,355												
		Width	mm	2,234												
		Depth	mm	3,138	4,040											
Weight	Unit			kg	2,905	3,285		3,235	3,240			3,510	4,670	4,685		
	Operation weight			kg	3,000	3,400						3,780	4,940			
Water heat exchanger	Type			Single pass shell & tube												
	Water volume			l	95	115		165	160			270	255			
	Water flow rate	Cooling	Nom.	l/s	11.8	13.1	14.4	15.6	16.7	17.9	19.1	22.4	25.0	27.4	29.7	
	Water pressure drop	Cooling	Nom.	kPa	48	45	49	46	51	58	64	47	63	56	38	
Air heat exchanger	Type			High efficiency fin and tube type with integral subcooler												
Compressor	Type			Single screw compressor												
	Quantity			2												
Fan	Type			Direct propeller												
	Quantity			6	8								10			
	Air flow rate	Nom.		l/s	22,302	30,591	29,736			43,001	42,306	43,696	54,620			
	Speed			rpm	900								890			
Sound power level	Cooling	Nom.		dBA	97								99			
Sound pressure level	Cooling	Nom.		dBA	78								79			
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	29.0 / 41.5	33.0 / 47.2	35.0 / 50.1	38.0 / 54.3	35.0 / 50.1		39.0 / 55.8	42.0 / 60.1	45.0 / 64.4		50.0 / 71.5	
Piping connections	Evaporator water inlet/outlet (OD)				4"											
Unit	Maximum starting current			A	224	240		283	292	312			423	480	498	
	Nominal running current (RLA)			Cooling	A	132	145	158	172	185	203	213	253	283	305	324
	Maximum running current			A	178	199	216	227	239	268	283	328	365	387	410	
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/400											

Air cooled screw chiller

High efficiency

Reduced sound



EWAD-D-XS/XR

MicroTech III

Cooling only				EWAD-D-XR	240	270	300	320	350	370	390	460	510	560	600	
Cooling capacity	Nom.			kW	242	271	294	321	343	369	393	453	510	559	598	
Power input	Cooling	Nom.		kW	81.6	88.0	96.3	107	117	121	129	154	169	185	200	
Capacity control	Method				Stepless											
	Minimum capacity			%	12.5											
EER					2.96	3.07	3.06	3.00	2.94	3.06	3.05	2.95	3.01	3.02	2.99	
ESEER					3.52	3.59	3.58	3.71	3.60	3.89	3.71	3.77	3.99		3.81	
Dimensions	Unit	Height	mm	2,355								2,223				
		Width	mm	2,234												
		Depth	mm	3,138	4,040								4,940			
Weight	Unit			kg	3,005	3,385		3,335	3,340			3,610	4,770	4,785		
	Operation weight			kg	3,100	3,500						3,880	5,040			
Water heat exchanger	Type				Single pass shell & tube											
	Water volume			l	95	115		165	160			270		255		
	Water flow rate	Cooling	Nom.	l/s	11.6	13.0	14.1	15.4	16.4	17.7	18.8	21.7	24.4	26.8	28.6	
	Water pressure drop	Cooling	Nom.	kPa	47	44	48	45	49	56		45	60	54	36	
Air heat exchanger	Type				High efficiency fin and tube type with integral subcooler											
Compressor	Type				Single screw compressor										Asymmetric single screw compressor	
	Quantity				2											
Fan	Type				Direct propeller											
	Quantity				6	8							10			
	Air flow rate	Nom.		l/s	17,892	24,777	23,856			33,035	32,576	33,493	41,867			
	Speed			rpm	680								705			
Sound power level	Cooling	Nom.		dBA	92					93			94			
Sound pressure level	Cooling	Nom.		dBA	73								74			
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,Eq	30.0 / 42.9	31.0 / 44.3	38.0 / 54.3	39.0 / 55.8	40.0 / 57.2	39.0 / 55.8		34.0 / 48.6	45.0 / 64.4	47.0 / 67.2	50.0 / 71.5	
Piping connections	Evaporator water inlet/outlet (OD)				4"											
Unit	Maximum starting current			A	222	237		280	289	306			417	473	491	
	Nominal running current (RLA)			Cooling	A	134	144	160	175	188	200	213	256	283	308	330
	Maximum running current			A	173	193	210	222	233	257	272	317	351	373	396	
Power supply	Phase/Frequency/Voltage			Hz/V	3~/50/400											

Air cooled screw chiller

Standard efficiency

Standard/low sound

- › Stepless single-screw compressor
- › Large operation range (ambient temperature down to -18°C and up to 46°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-SS C15

EWAD-C-SS H14

EWAD-C-SS 970

Cooling only		EWAD-C-SS/SL		650	740	830	910	970	C11	C12	C13	H14	C15	C16	C17	C18	C19	C20
Cooling capacity	Nom.	kW		645	741	829	908	962	1,059	1,146	1,315	1,412	1,532	1,615	1,706	1,797	1,870	1,917
Power input	Cooling	Nom. kW		223	265	302	322	355	382	408	446	479	557	586	627	669	687	721
Capacity control	Method			Stepless														
	Minimum capacity	%		7.0														
EER				2.89	2.80	2.74	2.82	2.71	2.77	2.81	2.95	2.75	2.72	2.69	2.72	2.66		
ESEER				3.79	3.69	3.72	3.65	3.60	3.69	3.63	3.88	3.86	3.73	3.68	3.59	3.71	3.68	
Dimensions	Unit	Height	mm	2,540														
		Width	mm	2,285														
		Depth	mm	6,285														
Weight (SS)	Unit	kg		5,330	5,740	5,760	6,280	6,560	7,010	7,280	7,900	10,320	10,710	10,770	11,240	11,600		
	Operation weight	kg		5,610	5,990	6,010	6,530	6,810	7,250	7,520	8,280	10,730	11,110	11,260	12,110	12,480		
Weight (SL)	Unit	kg		5,920	6,030	6,050	6,570	6,850	7,300	7,570	8,190	10,770	11,150	11,210	11,680	12,040		
	Operation weight	kg		6,200	6,280	6,300	6,820	7,100	7,540	7,810	8,570	11,170	11,550	11,700	12,560	12,920		
Water heat exchanger	Type			Single pass shell & tube														
	Water flow rate	Cooling	Nom. l/s	30.9	35.5	39.7	43.5	46.1	50.8	55.0	62.9	67.6	73.4	77.4	81.8	86.0	89.5	91.7
	Water pressure drop	Cooling	Nom. kPa	73	54	53	62	69	64	74	54	58	62	68	75	36	39	40
	Water volume	l		266			251		243		386		408		474		850	
Air heat exchanger	Type			High efficiency fin and tube type														
	Compressor			Asymmetric single screw compressor														
Fan	Type			Direct propeller														
	Quantity			2														
	Quantity			3														
Air flow rate	Nom.	l/s		53,442			64,131		74,819	85,508	96,196	106,885		117,573		128,262		
	Speed	rpm		900														
Sound power level (SS)	Cooling	Nom. dBA		102	100		101		102				103		104			
Sound power level (SL)	Cooling	Nom. dBA			96		98	97		98		99		100		101		
Sound pressure level (SS)	Cooling	Nom. dBA		81		80					81					82		
Sound pressure level (SL)	Cooling	Nom. dBA			76						77					78		
Operation range	Air side	Cooling	Min.~Max. °CDB	-18~45														
	Water side	Cooling	Min.~Max. °CDB	-8~15														
Refrigerant	Type / GWP			R-134a / 1,430														
	Circuits	Quantity		2														
Refrigerant charge	Per circuit	kg/TCO,Eq		64.0/91.5			76.5/109.4	80.0/114.4	91.0/130.1	94.0/134.4	110.0/157.3	130.0/185.9	73.3/104.9		86.7/123.9		91.7/131.1	101.7/145.4
Piping connections	Evaporator water inlet/outlet (OD)			168.3mm														
Unit	Starting current	Max A		604	649		915	962	1,017	1,021	1,068	1,081	1,312	1,363	1,367	1,410	1,456	1,470
	Running current	Cooling Nom. A		366	432	492	524	577	624	667	726	773	909	959.0	1,023	1,092	1,116	1,164
		Max A		476	545	589	656	715	787	859	921	974	1,144	1,217	1,281	1,334	1,395	1,449
Power supply	Phase/Frequency/Voltage	Hz/V		3~/50/400														

Air cooled screw chiller

Standard efficiency

Reduced sound



EWAD-C-SS/SL/SR

MicroTech III

Cooling only					EWAD-C-SR	620	720	790	880	920	C10	C11	C12	H14	C13	C14	C15	C16	C17	C18	C19			
Cooling capacity	Nom.				kW	616	712	786	872	918	1,016	1,107	1,266	1,316	1,363	1,465	1,550	1,616	1,710	1,790	1,828			
Power input	Cooling	Nom.			kW	226	276	317	334	373	398	422	461	499	522	582	609	654	706	722	762			
Capacity control	Method					Stepless																		
	Minimum capacity					%	12.5									7.0								
EER						2.74	2.59	2.48	2.61	2.46	2.55	2.63	2.75	2.63	2.61	2.52	2.54	2.47	2.42	2.48	2.40			
ESEER						3.91	3.78	3.81	3.79	3.98	3.76	3.95	3.92	3.81	3.78	3.70	3.72	3.66	3.70	3.71	3.66			
Dimensions	Unit	Height		mm	2,540																			
				Width	2,285																			
				Depth	mm																			
Weight	Unit				kg	5,920	6,030	6,050	6,570	6,850	7,300	7,570	8,190	10,750	10,770	11,150	11,210	11,680	12,040					
	Operation weight			kg	6,200	6,280	6,300	6,820	7,100	7,540	7,810	8,570	11,170	11,550	11,700	12,560	12,920							
Water heat exchanger	Type				Single pass shell & tube																			
	Water flow rate	Cooling	Nom.		l/s	29.5	34.1	37.6	41.8	44.0	48.7	53.1	60.6	63.0	65.2	70.2	74.2	77.3	81.8	85.6	87.5			
	Water pressure drop	Cooling	Nom.		kPa	43	50	48	58	63	60	69	50	54	45	57	63	46	33	36	37			
Air heat exchanger	Water volume				l	266		251		243		386		421	408		474	850						
	Type	High efficiency fin and tube type																						
	Compressor	Type	Asymmetric single screw compressor																					
Fan	Quantity				2										3									
	Type	Direct propeller																						
	Quantity					10		12		14	16	18		20		22		24						
	Air flow rate	Nom.			l/s	41,007		49,208		57,410	65,611	73,812		82,014		90,215		98,417						
	Speed				rpm	700																		
	Sound power level	Cooling	Nom.			dB(A)	92		93		94				95				96					
Sound pressure level	Cooling	Nom.			dB(A)	71	72					73										74		
Operation range	Air side	Cooling	Min.~Max.	°CDB	-18~46																			
	Water side	Cooling	Min.~Max.	°CDB	-8~15																			
Refrigerant	Type / GWP				R-134a / 1,430																			
	Circuits	Quantity			2										3									
Refrigerant charge	Per circuit				kg/TCO ₂ Eq	64.0/91.5		76.5/109.4		80.0/114.4	91.0/130.1	94.0/134.4	110.0/157.3			86.7/123.9				91.7/131.1		101.7/145.4		
Piping connections	Evaporator water inlet/outlet (OD)				168.3mm										219.1mm						273mm			
Unit	Starting current	Max			A	597	642		906	953	1,007	1,010	1,055	1,068	1,241	1,292	1,344	1,346	1,389	1,434	1,447			
	Running current	Cooling	Nom.		A	371	450	518	548	609	654	694	755	811	857	954	1,002	1,075	1,158	1,179	1,238			
		Max			A	462	531	575	639	698	767	837	895	949	1,052	1,116	1,186	1,250	1,303	1,362	1,415			
Power supply	Phase/Frequency/Voltage				Hz/V	3~/50/400																		



FRP

CROSS FLOW 橫流式 FW SERIES

玻璃鋼矩形冷卻塔

COOLING TOWER

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東莞菱和實德冷熱設備有限公司

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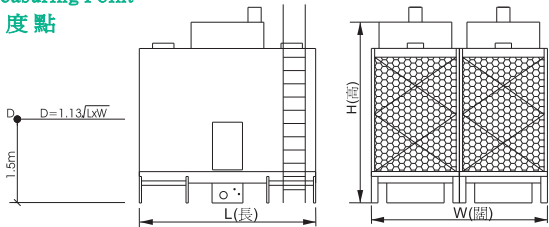
FW LOW NOISE TYPE SPECIFICATION

Model 型號	Overall Dimension 外圍尺碼			Nominal Flow Rate 處理水量 (m³/hr)		Fan 風扇 Ø x Nos (mm)	Motor 馬達 k W x Nos	Piping 喉管						Weight 重量 (kg公斤)		Noise 噪音 SPL dB(A)
	L 長 (mm)	W 闊 (mm)	H 高 (mm)	28℃	27℃			Inlet 入水 (mm)	Outlet 出水 (mm)	Fv 浮波 (mm)	Mm 手動 補充水 (mm)	Of 滿水 (mm)	Dr 排水 (mm)	Dry 淨重	Wet 運行重	
FW-125	4000	2000	4125	125	146	1600x1	2.2x1	100x2	150x1	25x1	25x1	50x1	50x1	1325	3140	61
FW-150	4000	2000	4125	150	176	1600x1	3.7x1	100x2	150x1	25x1	25x1	50x1	50x1	1335	3150	62
FW-175	4400	2300	4125	175	205	1800x1	3.7x1	100x2	150x1	25x1	25x1	50x1	50x1	1525	3650	63
FW-200	4400	2300	4125	200	234	1800x1	5.5x1	125x2	200x1	40x1	40x1	80x1	50x1	1570	3695	64
FW-225	4400	2600	4125	225	263	2000x1	5.5x1	125x2	200x1	40x1	40x1	80x1	50x1	1680	4040	64
FW-250	4400	2600	4125	250	293	2000x1	7.5x1	125x2	200x1	40x1	40x1	80x1	50x1	1690	4050	65
FW-300	4000	4000	4125	300	351	1600x2	3.7x2	100x4	200x1	40x1	40x1	80x1	50x1	2620	5805	65
FW-350	4400	4600	4125	350	410	1800x2	3.7x2	100x4	250x1	50x1	50x1	80x1	50x1	3000	6800	66
FW-400	4400	4600	4125	400	468	1800x2	5.5x2	125x4	250x1	50x1	50x1	80x1	50x1	3090	6890	66
FW-450	4400	5200	4125	450	527	2000x2	5.5x2	125x4	250x1	50x1	50x1	80x1	50x1	3310	7580	67
FW-500	4400	5200	4125	500	585	2000x2	7.5x2	125x4	250x1	50x1	50x1	80x1	50x1	3330	7600	68
FW-600	4400	6900	4125	600	702	1800x3	5.5x3	125x6	200x2	40x2	40x2	80x2	50x2	4660	10590	68
FW-675	4400	7800	4125	675	790	2000x3	5.5x3	125x6	200x2	40x2	40x2	80x2	50x2	4990	11625	69
FW-750	4400	7800	4125	750	878	2000x3	7.5x3	125x6	250x2	50x2	50x2	80x2	50x2	5020	11655	69
FW-800	4400	9200	4125	800	936	1800x4	5.5x4	125x8	250x2	50x2	50x2	80x2	50x2	6180	13785	70
FW-900	4400	10400	4125	900	1053	2000x4	5.5x4	125x8	250x2	50x2	50x2	80x2	50x2	6620	15165	71
FW-1000	4400	10400	4125	1000	1170	2000x4	7.5x4	125x8	250x2	50x2	50x2	80x2	50x2	6660	15205	71
FW-1250	4400	13000	4125	1250	1463	2000x5	7.5x5	125x10	250x3	40x3	40x3	80x3	50x3	8350	19255	73
FW-1500	4400	15600	4125	1500	1755	2000x6	7.5x6	125x12	250x3	40x3	40x3	80x3	50x3	9990	22805	74
FW-125SL	4000	2000	5125	125	146	1600x1	2.2x1	100x2	150x1	25x1	25x1	50x1	50x1	1375	3190	58
FW-150SL	4000	2000	5125	150	176	1600x1	3.7x1	100x2	200x1	25x1	25x1	50x1	50x1	1390	3205	58
FW-175SL	4400	2300	5125	175	205	1800x1	3.7x1	100x2	200x1	25x1	25x1	50x1	50x1	1590	3715	59
FW-200SL	4400	2300	5125	200	234	1800x1	5.5x1	125x2	200x1	40x1	40x1	80x1	50x1	1635	3760	60
FW-225SL	4400	2600	5125	225	263	2000x1	5.5x1	125x2	200x1	40x1	40x1	80x1	50x1	1750	4110	60
FW-250SL	4400	2600	5125	250	293	2000x1	7.5x1	125x2	200x1	40x1	40x1	80x1	50x1	1760	4120	61
FW-300SL	4000	4000	5125	300	351	1600x2	3.7x2	100x4	200x1	40x1	40x1	80x1	50x1	2730	5915	61
FW-350SL	4400	4600	5125	350	410	1800x2	3.7x2	100x4	250x1	50x1	50x1	80x1	50x1	3130	6930	61
FW-400SL	4400	4600	5125	400	468	1800x2	5.5x2	125x4	250x1	50x1	50x1	80x1	50x1	3220	7020	62
FW-450SL	4400	5200	5125	450	527	2000x2	5.5x2	125x4	250x1	50x1	50x1	80x1	50x1	3450	7720	62
FW-500SL	4400	5200	5125	500	585	2000x2	7.5x2	125x4	250x1	50x1	50x1	80x1	50x1	3470	7740	62
FW-600SL	4400	6900	5125	600	702	1800x3	5.5x3	125x6	200x2	40x2	40x2	80x2	50x2	4855	10780	63
FW-675SL	4400	7800	5125	675	790	2000x3	5.5x3	125x6	200x2	40x2	40x2	80x2	50x2	5200	11830	63
FW-750SL	4400	7800	5125	750	878	2000x3	7.5x3	125x6	250x2	50x2	50x2	80x2	50x2	5230	11860	64
FW-800SL	4400	9200	5125	800	936	1800x4	5.5x4	125x8	250x2	50x2	50x2	80x2	50x2	6440	14045	67
FW-900SL	4400	10400	5125	900	1053	2000x4	5.5x4	125x8	250x2	50x2	50x2	80x2	50x2	6900	15445	68
FW-1000SL	4400	10400	5125	1000	1170	2000x4	7.5x4	125x8	250x2	50x2	50x2	80x2	50x2	6940	15485	68
FW-1250SL	4400	13000	5125	1250	1463	2000x5	7.5x5	125x10	250x3	40x3	40x3	80x3	50x3	8700	19605	69
FW-1500SL	4400	15600	5125	1500	1755	2000x6	7.5x6	125x12	250x3	40x3	40x3	80x3	50x3	10410	23225	70

Note: Nominal cooling capacity is based on 1.0 m³/hr/WT at 37°C hot water in, 32°C cold water out and 28°C ambient wet bulb.

備註： 標準冷卻性能為 1.0 立方米/小時/噸 37°C 入水溫，32°C 出水溫，28°C 室外濕球溫度設計

Noise Measuring Point
噪音量度點



GUARANTEE 保用

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

菱和產品於正常運行使用下均可享有一年免費保用（於出廠之日起）。當損壞零件送回本公司或當地代理銷售商，經檢查證實符合上述條件，其維修或替換費用全免。



用 | 空 | 气 | 创 | 造 | 答 | 案



无限灵感
一气呵成



Sustainable Energy
Pure Air System



VRV X7 α

大金商用中央空调系统 L 系列

室外机阵容



室外机																											
型号	HP		RUXYQ88B	RUXYQ108B	RUXYQ128B	RUXYQ148B	RUXYQ168B	RUXYQ188B	RUXYQ208B	RUXYQ228B	RUXYQ248B	RUXYQ268B	RUXYQ288B	RUXYQ308B	RUXYQ328B	RUXYQ348B	RUXYQ368B	RUXYQ388B	RUXYQ408B	RUXYQ428B	RUXYQ448B	RUXYQ468B	RUXYQ488B				
匹数			8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48				
组合方式			—	—	—	—	—	—	—	—	RUXYQ108B RUXYQ148B	RUXYQ128B RUXYQ148B	RUXYQ88B RUXYQ208B	RUXYQ88B RUXYQ228B	RUXYQ108B RUXYQ228B	RUXYQ128B RUXYQ228B	RUXYQ148B RUXYQ208B	RUXYQ188B RUXYQ208B	RUXYQ188B RUXYQ228B	RUXYQ208B RUXYQ228B	RUXYQ228B RUXYQ228B	RUXYQ108B RUXYQ148B RUXYQ128B RUXYQ148B	RUXYQ128B RUXYQ148B RUXYQ128B RUXYQ148B				
电源			三相 380V 50Hz										三相 380V 50Hz														
额定制冷容量 ^①			22.4	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	111.9	118.0	123.0	129.5	135.0				
额定制热容量 ^②			25.0	31.5	37.5	45.0	50.0	56.5	63.0	69.0	76.5	82.5	88.0	94.0	100.5	106.5	114.0	119.5	125.5	132.0	138.0	145.5	151.5				
额定耗电量	制冷	kW	4.70	6.71	8.10	9.88	11.80	14.70	17.30	19.6	21.5	22.5	23.5	24.5	25.5	26.5	27.5	28.5	29.5	30.5	31.5	32.5	33.5				
	制热	kW	5.24	6.72	8.48	10.50	12.10	13.30	15.30	17.00	17.2	19.0	20.5	22.2	23.7	25.5	27.5	28.6	30.3	32.3	34.0	34.2	36.0				
风扇风量	m³/min		162	175	185	223	280	271	271	271	175+223	185+223	162+271	162+271	175+271	185+271	223+271	271+271	271+271	271+271	271+271	175+223+271	185+223+271				
机器尺寸(H×W×D)	mm		1657×930×765					1657×1240×765					1657×930×765+1657×1240×765										1657×1240×765+1657×1240×765				
运转音 ^③	正面运转音	dB(A)	53	54	56	57	58	59	60	58	59	60	61	62	63	64	62	63	64	63	62	62	63				
	四面运转音	dB(A)	56	57	59	60	61	62	63	61	62	63	64	65	66	67	65	66	67	66	65	65	66				
夜间静音运转			40					40					43										45				
室内/外机配管连接口径 ^④	液管	mm	Φ9.5	Φ9.5	Φ12.7 ☆	Φ12.7	Φ12.7	Φ15.9 ☆	Φ15.9 ☆	Φ15.9 ☆	Φ15.9	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1				
	气管	mm	Φ19.1	Φ22.2 ☆	Φ25.4	Φ25.4	Φ25.4	Φ28.6	Φ28.6	Φ28.6	Φ28.6	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8				
室外机配管连接口径 ^④	液管	mm	Φ9.5	Φ9.5	Φ12.7 ☆	Φ12.7	Φ12.7	Φ15.9 ☆	Φ15.9 ☆	Φ15.9 ☆	Φ15.9	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1				
	气管	mm	Φ19.1	Φ25.4 ☆	Φ25.4	Φ25.4	Φ25.4	Φ28.6	Φ28.6	Φ28.6	Φ28.6	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8	Φ31.8				
重量	kg		189	196	196	250	280	300	300	300	446	446	489	489	496	496	550	600	600	600	600	746	746				
净重	名称	kg	R410A										R410A										R410A				
	自带填充量	kg	8.4	8.6	8.7	11.1	11.1	15.6	15.6	15.6	8.6+11.1	8.7+11.1	8.4+15.6	8.4+15.6	8.6+15.6	8.7+15.6	11.1+15.6	15.6+15.6					8.6+11.1+15.6	8.7+11.1+15.6			
运转范围	制冷	℃DB	-15~54℃DB										-15~54℃DB										-15~54℃DB				
	制热	℃DB	-25~27℃DB										-25~27℃DB										-25~27℃DB				
最小线路电流 ^⑤	MCA	A	16.1	18.0	20.1	24.4	26	34.8	39.6	43.6	40.2	44	46.1	59.7	61.6	63.7	68	69.6	78.4	83.2	87.2	85.7	87.6				
最大线电流 ^⑤	MFA	A	20.1	20	25	32	32	40	50	50	50	50	63	80	80	80	80	80	100	100	100	100	100				

室外机																										
型号	匹数	HP	RUXYQ500BB	RUXYQ528B	RUXYQ548B	RUXYQ568B	RUXYQ588B	RUXYQ608B	RUXYQ628B	RUXYQ648B	RUXYQ668B	RUXYQ688B	RUXYQ708B	RUXYQ728B	RUXYQ748B	RUXYQ768B	RUXYQ788B	RUXYQ808B	RUXYQ828B	RUXYQ848B	RUXYQ868B	RUXYQ888B				
组合方式			RUXYQ888B RUXYQ208B RUXYQ228B	RUXYQ108B RUXYQ208B RUXYQ228B	RUXYQ108B RUXYQ208B RUXYQ228B	RUXYQ128B RUXYQ228B RUXYQ228B	RUXYQ148B RUXYQ228B RUXYQ228B	RUXYQ208B RUXYQ208B RUXYQ208B	RUXYQ188B RUXYQ228B RUXYQ228B	RUXYQ208B RUXYQ228B RUXYQ228B	RUXYQ228B RUXYQ228B RUXYQ228B	RUXYQ128B RUXYQ128B RUXYQ228B	RUXYQ128B RUXYQ168B RUXYQ228B	RUXYQ128B RUXYQ168B RUXYQ228B	RUXYQ128B RUXYQ168B RUXYQ228B	RUXYQ108B RUXYQ228B RUXYQ228B	RUXYQ128B RUXYQ228B RUXYQ228B	RUXYQ148B RUXYQ228B RUXYQ228B	RUXYQ168B RUXYQ228B RUXYQ228B	RUXYQ188B RUXYQ228B RUXYQ228B	RUXYQ208B RUXYQ228B RUXYQ228B	RUXYQ228B RUXYQ228B RUXYQ228B				
电源			三相 380V 50Hz										三相 380V 50Hz													
额定制冷容量 ¹⁾		kW	140.4	146.0	151.0	156.5	163.0	169.5	173.4	179.5	184.5	190.0	196.5	201.5	202.9	212.5	218.0	224.5	229.5	234.9	241.0	246.0				
额定制热容量 ²⁾		kW	157.0	163.5	169.5	175.0	189.0	194.5	201.0	207.0	213.0	220.5	225.5	232.0	238.5	244.5	257.0	263.0	269.0	275.0	280.0	276.0				
额定耗电量	制冷	kW	36.7	38.7	41.3	42.7	44.1	47.4	49.3	51.9	50.8	52.4	54.5	55.5	58.6	60.0	61.8	63.7	64.7	66.4	67.2	68.0				
	制热	kW	37.5	39.0	40.7	42.5	44.5	45.9	47.3	49.3	51.0	51.0	53.0	54.6	55.8	57.7	59.5	61.5	63.1	64.3	66.3	68.0				
风量/风速		m³/min	162*21*271	175*271*271	175*271*271	185*271*271	223*271*271	271*271*271	271*271*271	271*271*271	271*271*271	185*185*271*271	185*223*271*271	185*280*271*271	185*271*271*271	175*271*271*271	185*271*271*271	223*271*271*271	280*271*271*271	271*271*271*271	271*271*271*271	271*271*271*271				
机器尺寸(H×W×D)		mm	1657×930×765 + 1657×1240×765 + 1657×1240×765						1657×1240×765 + 1657×1240×765 + 1657×1240×765						1657×930×765 + 1657×1240×765 + 1657×1240×765 + 1657×1240×765						1657×1240×765 + 1657×1240×765 + 1657×1240×765 + 1657×1240×765					
运转音 ³⁾	正面运转音	dB(A)	63						64						65						66					
	四面运转音	dB(A)	66						67						68						69					
	夜间静音运转	dB(A)	45						46						46						46					
室内/外机配管连接口管径 ⁴⁾	液管	mm	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ22.2	Φ22.2	Φ22.2	Φ22.2				
	气管	mm	Φ38.1	Φ38.1	Φ38.1	Φ41.3	Φ41.3	Φ41.3	Φ41.3	Φ41.3	Φ41.3	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5	Φ44.5				
室外机配管连接口管径 ⁴⁾	液管	mm	—										—													
	气管	mm	—										—													
重量		kg	789	796	796	796	850	900	900	900	900	992	1046	1076	1096	1096	1096	1150	1180	1200	1200	1200				
净重	名称	kg	R410A										R410A													
冷媒	自带填充量	kg	8.4*15.6*15.6	8.6*15.6*15.6	8.6*15.6*15.6	8.7*15.6*15.6	11.1*15.6*15.6	15.6*15.6*15.6					8.7*8.7*15.6*15.6	8.7*11.1*15.6*15.6	8.7*15.6*15.6*15.6	8.6*15.6*15.6*15.6	8.7*15.6*15.6*15.6	11.1*15.6*15.6*15.6	15.6*15.6*15.6*15.6							
运转范围 ⁵⁾	制冷	℃DB	-15~54℃DB										-15~54℃DB													
	制热	℃DB	-25~27℃DB										-25~27℃DB													
最小线路电流 ⁶⁾	MCA	A	89.7	101.2	105.2	107.3	111.6	113.2	122	126.8	130.8	127.4	131.7	133.3	142.1	148.8	150.9	155.2	156.8	165.6	170.4	174.4				
最大回路电流 ⁷⁾	MCA	A	100	125	140	125	125	125	140	140	160	160	160	160	160	200	200	200	200	200	200	200				

*1 室内温度: 27°CDB, 19°CWB / 室外温度: 35°CDB

*1 室内温度: 27°CDB, 19°CWB / 室外温度: 35°CDB

*2 室内温度: 20°CDB / 室外温度: 7°CDB, 6°CWB

*3 四面运转音是按照 GB18837 要求进行四点测试得到的值, 正面运转音为公司内部测量值, 在实际安装状态下, 因为周围噪音及反射的原因, 一般高于样本登载值

*4室内/外机配管连接口管径与室外机配管连接口管径不同时(☆标识处),要进行变径处理,以室内/外机配管连接口管径为主

*5 在-15~-5℃DB进行制冷运转时,需满足以下条件

a. 室内机连接率不超过100%

b. 根据室内/室外温度的不同, 必须开启的室内机最小额定制冷量如右

室外干球温度 A	室内干球温度 B	最小开启室内机的额定制冷量 C
-15° CDB<A<-5° CDB	17° CWB<B	C>2.2kW
	14° CWB<B<17° CWB	C>2.8kW
	11° CWB<B<14° CWB	C>3.6kW
	8° CWB<B<11° CWB	C>5.6kW