

Appendix 3

Environmental Assessment

Prepared by

Ramboll Hong Kong Limited

**PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING
HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND
ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD
NORTH, TUNG CHUNG, LANTAU ISLAND**

ENVIRONMENTAL ASSESSMENT STUDIES REPORT

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CHAPTERS

| | Page |
|---|------------|
| 1.1 Background and Objectives..... | 2-1 |
| 1.2 Site Location and its Environs..... | 2-1 |
| 1.3 Proposed Development..... | 2-1 |
| 1.4 Appraisal of Environment Impact..... | 2-2 |
| 2. ROAD TRAFFIC NOISE IMPACT ASSESSMENT..... | 2-1 |
| 2.1 Introduction..... | 2-1 |
| 2.2 Assessment Criteria..... | 2-1 |
| 2.3 Assessment Methodology..... | 2-1 |
| 2.4 Noise Sensitive Receivers (NSRs)..... | 2-1 |
| 2.5 Assessment Result under Base Case Scenario..... | 2-1 |
| 2.6 Use of Noise Mitigation Measures..... | 2-2 |
| 2.7 Assessment Result of the Mitigated Scenario..... | 2-6 |
| 3. FIXED NOISE SOURCE IMPACT ASSESSMENT..... | 3-1 |
| 3.1 Assessment Criteria..... | 3-1 |
| 3.2 Fixed Noise Sources within 300 from the Subject..... | 3-2 |
| 3.3 Assessment Approach and Methodology..... | 3-2 |
| 3.4 Noise Sensitive Receivers and Assessment Result..... | 3-3 |
| 3.5 Potential Fixed Noise Impacts on the NSRs In the Vicinity..... | 3-3 |
| 3.6 Conclusion..... | 3-4 |
| 4. AIR QUALITY IMPACT ASSESSMENT..... | 4-1 |
| 4.1 Introduction..... | 4-1 |
| 4.2 Relevant Legislations, Standards and Guidelines..... | 4-1 |
| 4.3 Existing Air Quality in Tung Chung District..... | 4-4 |
| 4.4 Construction Phase Air Quality Impact..... | 4-6 |
| 4.5 Operational Phase - Vehicular Emissions Impact..... | 4-12 |
| 4.6 Operational Phase - Industrial Chimney Emissions, Marine Emissions and Odour Impact..... | 4-12 |
| 4.7 Conclusion..... | 4-13 |
| 5. WASTE MANAGEMENT IMPLICATIONS..... | 5-1 |
| 5.1 Introduction..... | 5-1 |
| 5.2 Environmental Legislation and Guidelines..... | 5-1 |
| 5.3 Impact Assessment..... | 5-2 |
| 5.4 Conclusion..... | 5-8 |
| 6. WATER QUALITY IMPACT ASSESSMENT..... | 6-1 |
| 6.1 Introduction..... | 6-1 |
| 6.2 Project Construction Phase..... | 6-1 |
| 6.3 Relevant Legislation, Standards and Guidelines for Construction Phase..... | 6-1 |
| 6.4 Potential Impacts during the Construction of the Project..... | 6-2 |
| 6.5 Mitigation Measures during the Construction of the Project..... | 6-3 |
| 6.6 Monitoring and Audit Requirements..... | 6-6 |
| 6.7 Potential Impacts and Mitigation Measures during Operation of the Project..... | 6-6 |
| 6.8 Relevant Legislation, Standards and Guidelines for Operation Phase..... | 6-6 |
| 6.9 Storm Water Discharge..... | 6-6 |

| | | |
|-----------|--|------------|
| 6.10 | Best Management Practices (BMPs) for Stormwater Discharge..... | 6-6 |
| 6.11 | Summary | 6-7 |
| 7. | LAND CONTAMINATION | 7-8 |
| 7.1 | Introduction | 7-8 |
| 7.2 | Legislation and Guidelines..... | 7-8 |
| 7.3 | Desktop Review..... | 7-8 |
| 7.4 | Site Appraisal and Observation..... | 7-9 |
| 7.5 | Conclusion | 7-10 |
| 8. | CONCLUSION | 8-1 |

TABLES

| | | |
|-----------|--|-----|
| Table 1.1 | Key Development Parameters | 2-2 |
| Table 2.1 | Key Parameters of Acoustic Window (Baffle Type) of the Reference Case in PN and the Associated Noise Reduction Effects | 2-2 |
| Table 2.2 | Key Parameters of Enhanced Acoustic Balcony (Baffle Type) of the Reference Case in PN and the Associated Noise Reduction Effects | 2-3 |
| Table 2.3 | Key Parameters of Acoustic Balcony (Baffle Type) of the Reference Case in NPE and the Associated Noise Reduction Effects..... | 2-5 |
| Table 2.4 | Summary of INMD proposed at Sensitive Facades..... | 2-5 |
| Table 3.1 | Area Sensitivity of NSRs | 3-1 |
| Table 3.2 | Representative Noise Sensitive Receivers for Fixed Noise..... | 3-1 |
| Table 3.3 | Identified Area Sensitivity Rating and Acceptable Noise Level of NSRs in the subject site | 3-2 |
| Table 3.4 | Summary of Predicted Noise Levels..... | 3-3 |
| Table 4.1 | Hong Kong Air Quality Objectives | 4-1 |
| Table 4.2 | Limits of Air Pollutant Concentrations Inside Car Parks | 4-3 |
| Table 4.3 | Recommended Minimum Buffer Distance from Roads | 4-3 |
| Table 4.4 | Recommended Minimum Buffer Distance from Industrial Chimneys... | 4-4 |
| Table 4.5 | Air Quality Monitoring Data at Tung Chung AQMS | 4-4 |
| Table 4.6 | Year 2030 Background Annual Average Concentrations of the Air Pollutants from PATH v3.0 | 4-6 |
| Table 4.7 | Representative Air Sensitive Receivers | 4-7 |
| Table 4.8 | Potential Concurrent Project..... | 4-9 |
| Table 4.9 | Monitoring Data under the EM&A of the AEIAR – 196/2016 | 4-9 |
| Table 5.1 | Estimated Quantities of C&D materials | 5-2 |
| Table 7.1 | Departmental Replies Summary | 7-8 |
| Table 7.2 | Aerial Photo Record | 7-9 |

FIGURES

| | |
|------------|--------------------|
| Figure 1.1 | Site Location Plan |
|------------|--------------------|

| | |
|------------|--|
| Figure 2.1 | Location of Representative Noise Sensitive Receivers |
| Figure 2.2 | Proposed Noise Mitigation Measures |
| Figure 3.1 | Representative NSRs for Fixed Noise Source Impact Assessment |
| Figure 4.1 | Locations of ASRs during Construction Phase |
| Figure 4.2 | Potential Concurrent Projects |
| Figure 4.3 | Buffer Distance from the Kerb Side of Carriageways |
| Figure 4.4 | Location of the Carpark and its Exhaust |
| Figure 4.5 | Marine Route of Local Vessels |

APPENDICES

| | |
|--------------|---|
| Appendix 1.1 | Indicative Development Scheme |
| Appendix 1.2 | Site Visit Photos |
| Appendix 1.3 | Extracted information from AEIAR-235/2022 for Tung Chung Line Extension |
| Appendix 1.4 | Extracted Information from Planning Brief of Public Housing Development at Tung Chung Area 23 |
| Appendix 2.1 | Traffic Forecast for Year 2046 |
| Appendix 2.2 | Modelling Layout for Road Traffic Noise Impact Assessment |
| Appendix 2.3 | Result of Road Traffic Noise Impact Assessment (Base Scenario) |
| Appendix 2.4 | Relative Noise Reduction (RNR) for Innovative Noise Mitigation Measures (INMD) and results of Road Traffic Noise Impact Assessment (Mitigated Scenario) |
| Appendix 2.5 | Schematic Diagram of INMD Proposed |
| Appendix 3.1 | Site Survey Records |
| Appendix 3.2 | Fixed Noise Source Impact Assessment |
| Appendix 4.1 | Tentative Construction Programme |
| Appendix 4.2 | Extracted Information from AEIAR-196/2016 |
| Appendix 7.1 | Reply correspondences from EPD & FSD |
| Appendix 7.2 | Aerial Photos |
| Appendix 7.3 | Site Walkover Checklist |
| Appendix 7.4 | Site Photo Record |

1. INTRODUCTION

1.1 Background and Objectives

- 1.1.1 The site is located at Tung Chung Town various lots, D.D. 3TC and adjoining Government Land, Tung Chung Road North, Tung Chung (the subject site).
- 1.1.2 A private residential development is proposed by the applicant to be built at the subject site. The application site is occupied with construction offices and a temporary private vehicle car park. It falls primarily within an area zoned "Residential (Group B)3"("R(B)3"), with a minor portion of it shown as "Road" on the Approved Tung Chung Town Centre Area Outline Zoning Plan (OZP) No. S/I-TCTC/24.
- 1.1.3 The Site was the subject of an approved planning application by the Town Planning Board (TPB) on 14 January 2022 (Application No. A/I-TCTC/59). The Project Proponent submit this S16 Planning Application which seeks to allow for minor relaxation of building height restriction from 55mPD in approved scheme to 60.3mPD under current Application. The proposed increase in building height is for adopting the modular integration construction (MiC) as well as slightly increased floor-to-floor height from 3.3m to 3.5m.
- 1.1.4 An Indicative Development Scheme ("IDS") of the proposed redevelopment is provided in **Figure 1.1** Site Location Plan
- 1.1.5 Appendix 1.1. The master layout plan is provided by the Project Architect – Andrew Lee King Fun & Associates Architects Limited (ALKF). The traffic forecast for traffic noise impact assessment purpose is provided by the Project Traffic Consultant – CTA Consultants Limited.
- 1.1.6 This Environmental Assessment Studies (EAS) is prepared in support of the S16 Planning Application. The intention of this EAS is to demonstrate that there are no unacceptable adverse environmental impacts as a result of the development.

1.2 Site Location and its Environs

- 1.2.1 The subject site falls primarily within an area zoned "Residential (Group B)3"("R(B)3"), with a minor portion of it shown as "Road" on the Approved Tung Chung Town Centre Area Outline Zoning Plan (OZP) No. S/I-TCTC/24. The location of the subject site is shown in **Figure 1.1a**.
- 1.2.2 The subject site is located at an area with residential developments and village houses nearby. There is a public housing estate, Yat Tung Estate, with high-rise residential buildings located at the south of the Subject Site, and packs of village houses located at the west of the site. Traffic-related noise impacts on the proposed development scheme are attributed to the road network. Tung Chung Road North is the potential dominant sources of noise and vehicular emissions in view of their proximity to the Site. To the east of Site separated by the Tung Chung Road North is Public Housing Development at Tung Chung Area 23 Phase 1 under construction. To the further east is natural slope.

1.3 Proposed Development

- 1.3.1 The proposed development comprises of two residential towers of 14 storeys and providing 290 residential flats. The indicative development scheme is illustrated in **Appendix 1.1**. The anticipated population intake year of the development is 2031. The key development parameters are summarized in **Table 1.1** below.

Table 1.1 Key Development Parameters

| Item | Proposed |
|---|-----------------------------------|
| Site Area | Approximately 5,400m ² |
| No. of domestic storeys | 14 |
| Floor to floor height for domestic floors | 3.5m |
| First NSR level (mPD) | 11.3 |
| Main roof level (mPD) | 60.3 |
| Total number of flats | 290 |
| Proposed intake year | 2031 |

- 1.3.2 The setback of the building façade to Tung Chung Road North to the east is 6.8 m (ref: **Figure 1.1b**), i.e. from the building facade to the kerb side of new proposed Tung Chung Road North layout is at least 5m.

1.4 Appraisal of Environment Impact

- 1.4.1 The surrounding areas are mainly zoned as "G/IC", "Residential (Group B)" and "V" in the OZP. The surrounding area are mainly roads, village houses and public housing development.
- 1.4.2 Based on the site visit in October 2025, there are no active chimneys within 200m from the subject site. The Tung Chung Road North is classified as local road, and the relevant HKPSG buffer distance for vehicular emission is 5m from its road kerb.
- 1.4.3 The identified noise sources in the vicinity of the subject site including road traffic noise from nearby road network, and fixed noise sources from the surrounding area.
- 1.4.4 Tung Chung Community Service Complex was identified in Year 2021 to the East of Subject Site as mentioned in the EAS supporting of Application No. A/I-TCTC/59. As observed in October 2025, the complex was removed and construction of Housing Department Public Housing Development at Tung Chung Area 23 was in progress. The extracted information for Tung Chung Area 23 is attached in **Appendix 1.4**. As such potential noise impact from the complex is no longer valid. A car-washing facility was identified to the south of the Subject Site and no significant changes in operation was identified during site visit in October 2025. DSD Chung Yan Road sewage pumping station was identified to south of Subject Site boundary at about 119m separation, no noise emission nor odorous emission was noticeable during site visits. Site visit photos are provided in **Appendix 1.2**.
- 1.4.5 There is no railway noise source identified in the vicinity (i.e. 300m) of the Subject Site. The planned Tung Chung Line extension is underground within 300m study boundary of subject site. The planned Tung Chung West Station and North Vent Shaft Structure are about 300m separated from subject site boundary and largely blocked by existing building blocks at Yat Tung Estate in between. Therefore, no impact is anticipated on the Proposed Development. Extracted information from Environmental Impact Assessment (EIA) Report of Tung Chung Line Extension (AEIAR-235/2022) is provided in **Appendix 1.3**.

2. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

2.1 Introduction

- 2.1.1 This road traffic noise impact assessment is prepared to address road traffic noise impact on the noise sensitive uses of the proposed development and recommend mitigation measures where practicable to attenuate the impact.

2.2 Assessment Criteria

- 2.2.1 Noise standards are recommended in Chapter 9, "Environment", of the Hong Kong Planning Standards and Guidelines (HKPSG) for planning against possible noise impact from road traffic. According to the guidelines, the maximum allowable road traffic noise level, measured in terms of L10(1 hr), at 1m away from openable window for ventilation for all domestic premises like the proposed development is recommended to be 70 dB(A).

2.3 Assessment Methodology

- 2.3.1 The assessment concerns the prediction of L10 (1-hour) traffic noise level at Noise Sensitive Receivers (NSRs) of the proposed development due to the projected traffic flow on the adjacent major road networks for year 2046, which is considered as the worst case scenario within 15 years upon completion of the proposed development in year 2031. Traffic noise will be predicted using the model "RoadNoise", which has been used before in other similar NIA studies. The model has fully incorporated the procedures and methodology documented in "Calculation of Road Traffic Noise (CRTN)" (1988) published by the U.K. Department of Transport.
- 2.3.2 The subject site is affected by the road traffic noise from the roads at the southern and eastern side, mainly from Tung Chung Road North which is immediate east of the subject site. The road section within the 300m noise study area is shown in **Appendix 2.1**.
- 2.3.3 Traffic flow was predicted by the Project Traffic Consultant – CTA Consultancy Limited. The information on traffic volume and percentage of heavy vehicle using these roads is attached in **Appendix 2.1**. The traffic forecast will be submitted to the Transport Department for comment, and its reply will be provided once it is available.
- 2.3.4 The predicted noise levels were then compared with the HKPSG noise criterion for assessing the impact. Practicable environmental mitigation measures have been recommended, where necessary.

2.4 Noise Sensitive Receivers (NSRs)

- 2.4.1 A number of NSRs, which represent the opening in residential units for prescribed ventilation purpose are selected for the assessment as they are likely to be impacted by traffic noise. All assessment points are taken at 1.2m above the floor level and 1m away from the facade opening of rooms with noise sensitive use (living rooms and bedrooms). **Figure 2.1** shows the location of the selected NSRs for road traffic noise impact assessment.
- 2.4.2 There are no NSRs rely on openable window for ventilation at the clubhouse.

2.5 Assessment Result under Base Case Scenario

- 2.5.1 Modelling layout for Road Traffic Noise Impact Assessment is provided in **Appendix 2.2**. **Appendix 2.3** shows the predicted road traffic noise impacts on the selected NSRs at base case scenario. Noise exceedances are found with a maximum noise level of **75 dB(A)** under base case scenario.

- 2.5.2 There are 41 out of 290 number of flats with noise exceedance at the Subject Site, equivalent to a compliance level of 84%. The maximum predicted road traffic noise level is L10(1-hour) 75dB(A). Detailed result is presented in **Appendix 2.3**.

2.6 Use of Noise Mitigation Measures

- 2.6.1 In view of predicted traffic noise exceedance above, noise mitigation measures are considered. Innovative noise mitigation measures are being explored in recent years. According to EPD's website regarding innovative noise mitigation design and measures (<http://www.epd.gov.hk/epd/Innovative/greeny/eng/index.html>), different balconies and special design window systems have been implemented in public rental housing, private residential and hostel developments. In King Tai Court project, baffle type acoustic window is adopted for the residential dwellings with road traffic noise sound attenuation of about 4 to 8 dB(A) (i.e. additional noise reduction indoors when compared with case using conventional window; or the relative insertion loss of acoustic window and conventional window).

Consideration of Innovative Noise Mitigation Designs (INMD) in Practice Note (PN)

- 2.6.2 In the "Practice Note on Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact" in ProPECC PN 5/23 (PN), different configurations of Innovative Noise Mitigation Designs (INMD) in form of acoustic window and enhanced acoustic balcony are suggested. The configurations are listed out in and **Table 2.2** below.

Table 2.1 Key Parameters of Acoustic Window (Baffle Type) of the Reference Case in PN and the Associated Noise Reduction Effects

| Type | Parameters ^[1] | | | | | RNR ^[2] in dB(A), Orientation ^[3] | | | |
|---------|---------------------------|--------------------|--------------------|------------------------|------------------------------|---|---------|----------------|----------------|
| | Room Area, sqm | Inner Opening, sqm | Outer Opening, sqm | Overlapping Length, mm | Gap width between panels, mm | Parallel | 30°-60° | 30° + 1.5m fin | 60° + 1.5m fin |
| PN_8sqm | 8 | 0.5046 | 0.522 | ≥100 | 100 - 175 | 6.0 | 7.0 | 8.0 | 9.0 |
| PN_18 | 18 | 1.125 | 1.125 | | | 7.0 | 8.0 | 9.0 | 10.0 |

[1] No other ventilation opening should be provided at the same room at noise exceedance location(s)

[2] RNR: Noise attenuation in terms of Relative Noise Reduction (RNR); Further reduction of 1.5dB(A) with application of Sound Absorptive Material (SAM) with Noise Reduction Coefficient (NRC) of not less than 0.7 applied at top and outer opening side of mullion.

[3] Orientation: Horizontal Angle to Dominant Line Source

Table 2.2 Key Parameters of Enhanced Acoustic Balcony (Baffle Type) of the Reference Case in PN and the Associated Noise Reduction Effects

| Type | Parameters | | | | | | | | RNR ^[2] in dB(A), Orientation ^[3] | |
|-----------|----------------|-------------------------|------------------------|---|--------------------|--------------------|-----------------------------|---------------|---|---------|
| | Room Area, sqm | Min. Balcony Width, sqm | Min. Balcony Depth, mm | Min. Parapet Height ^[4] , mm | Inner Opening, sqm | Outer Opening, sqm | Min. Overlapping Length, mm | Gap Width, mm | Paral lel | 30°-60° |
| EAB_PN_14 | 14 | 1440 | 1300 | 1450 | 2.265 | 2.541 | 100 | 100 | 8.0 | 11.0 |
| EAB_PN_18 | 18 | 2055 | 1300 | | 2.541 | 2.541 | | | 9.0 | 11.0 |

[1] No other ventilation opening should be provided at the same room at noise exceedance location(s)

[2] RNR: Noise attenuation in terms of Relative Noise Reduction (RNR); Further reduction of 1.5dB(A) with application of Sound Absorptive Material (SAM) with Noise Reduction Coefficient (NRC) of not less than 0.7 applied at top and outer opening side of mullion.

[3] Orientation: Horizontal Angle to Dominant Line Source

[4] In addition to solid parapet, **full height side** wall is provided on one side of balcony

Use of Acoustic Window with reference to PN 5/23

- 2.6.3 Predicted traffic noise level at some bedrooms (**T2-18, T2-19, T2-22, T2-23, T2-26**) exceeded assessment criteria and are upto 75 dB(A) (i.e. 5 dB(A) noise exceedance). The sizes of these habitable rooms are about 4 sqm to 11 sqm. Acoustic Window design would be based on configuration **PN_8sqm** as listed in above, with sliding panel provided behind openable side-hung window at a gap width of 100mm, with overlapping length not less than 100mm and outer opening area will be limited to not more than **0.52 sqm**. For ease of reference, this configuration would be abbreviated as "**PN_8sqm**" in this document.

Room Size Adjustment

- 2.6.4 It is understood that the room size will affect the sound attenuation performance of the acoustic window (baffle type), therefore, further adjustment is needed by using the equation " $10 \times \log (R_{ref}/R_{design})$ ", where R_{ref} and R_{design} refer to the area of the room of the reference case respectively. In addition, for conservative approach, the corrected noise level would not be greater than the reference case even the room size of the Proposed Development is larger than the reference case.

Enhanced Noise Reduction

- 2.6.5 Subject to predicted noise level during peak traffic hours, enhancements by use of Sound Absorptive Material (SAM) will be incorporated to acoustic window to enhance noise reduction performance. By addition of SAM of not less than 30mm thickness with Noise Reduction Coefficient (NRC) 0.7 or above, at top and two sides of window frame between outer glazing and inner sliding panel can offer additional 1.5dB(A) noise reduction.

Relative Noise Reduction

- 2.6.6 The RNR evaluated for **PN_8sqm** for abovementioned bedrooms are presented in **Appendix 2.4**. For conservative purpose, the assumed noise reduction will be not higher than the predicted noise exceedance of 5 dB(A) in this assessment.

Use of Enhanced Acoustic Balcony

- 2.6.7 Innovative noise mitigation measures are being explored in recent years. Baffle type acoustic windows and acoustic doors have been adopted for numerous residential developments for attenuating road traffic noise. It is understood that Environmental Protection Department (EPD) has issued the Practice Note on Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact (hereafter referred as "ProPECC PN5/23") for mitigating road traffic noise impact.
- 2.6.8 However, after checking with the Project Architect that some major parameters (i.e. window openings) of the reference case in ProPECC PN5/23 cannot be followed. In this Proposed Development, the design of the proposed baffle type acoustic window has made reference to the designs of the baffle type acoustic window system in the redevelopment project of ex-North Point Estate (hereinafter referred to as "**NPE-Liv-SD**"), according to the on-site noise measurement results, balcony with acoustic sliding panel only (i.e. no MPA at the sliding panel, no solid balustrade and no absorptive material at balcony ceiling) at living rooms were found to be able to achieve sound attenuation performance of up to 8.8 dB(A) when compared with the conventional window system. The indicative design of **NPE-Liv-SD** adopted in the Proposed Development is shown in **Appendix 2.5**.
- 2.6.9 Predicted traffic noise at some living rooms' facades (i.e. balconies at **T2-20, T2-21, T2-24 and T2-25**) was upto 75 dB(A). The room size is about 11 sqm to 12 sqm. INMD in form of Enhanced Acoustic Balcony (Baffle Type) is recommended. The proposed configuration consists of sliding panel behind outer opening, with not less than 275mm overlapping, 100mm air gap between sliding panel and outer opening, and outer opening area not larger than 3.2sqm. For ease of reference, this configuration would be abbreviated as "**NPE-Liv-SD**" in this document.
- 2.6.10 With reference to residential development project at North Point (reference project, NPE), sliding panel is applied behind balcony opening for living room of 38sqm. The design concept and mechanism of acoustic balcony are basically similar to the acoustic window (Baffle Type). Based on the on-site noise measurement results of the reference case – NPE, balcony with acoustic sliding panel only (i.e. no MPA at the sliding panel, no solid balustrade and no absorption material at balcony ceiling) at living rooms were found to be able to achieve sound attenuation performance of up to 8.8 dB(A) when compared with the conventional window system. Configuration of the reference case is provided in **Table 2.3** below.

Table 2.3 Key Parameters of Acoustic Balcony (Baffle Type) of the Reference Case in NPE and the Associated Noise Reduction Effects

| Type | Parameters | | | | | RNR ^[2] in dB(A), Orientation ^[3] |
|------------|-------------------|--------------------------|--------------------------|-----------------------------------|---------------------|--|
| | Room Area, sqm | Inner Opening, sqm | Outer Opening, sqm | Min. Overlapping Length, mm | Gap Width, mm | |
| NPE-Liv-SD | 38 | 3.75 | 3.23 | 275 | 100 | 8.8 |

[1] No other ventilation opening should be provided at the same room at noise exceedance location(s)

[2] RNR: Noise attenuation in terms of Relative Noise Reduction (RNR); RNR achieved with no solid parapet provided, no Sound Absorptive Material (SAM) provided at balcony ceiling and no Micro-Perforated Absorber (MPA) provided.

Enhanced Noise Reduction (NPE-Liv-SD_Enh)

- 2.6.11 The enhancements include provision of MPA on the inner sliding panel. An on-site measurement result related to this mitigation measure is taken as a reference case in this project. In accordance with the reference case, the range of the difference of sound attenuation performance between cases with the MPA and without MPA on the sliding panel is from 1.6 to 2.3 dB(A). Sound Absorptive Material (SAM) will also be applied on frame between outer balcony door and inner sliding panel, as well as ceiling of balcony. It is believed that additional 1.5 dB(A) noise reductions could be further provided by SAM.
- 2.6.12 By provision of MPA on the sliding panel, SAM on frame and balcony ceiling and the solid balcony front balustrade, additional 3.0 dB(A) noise reduction is offered.
- 2.6.13 The proposed INMD configuration (e.g. outer opening area, overlapping length, gap width) is not worse than the **NPE-Liv-SD**. Room size adjustment applied with respect to **Section 2.6.9** above. the RNR are evaluated as detailed in **Appendix 2.4**. Schematic diagram of INMD proposed are illustrated in **Appendix 2.5**.
- 2.6.14 In view of 2 reference cases above, noise reduction of not less than 4 dB(A) is considered achievable. For conservative purpose, the assumed noise reduction will be not higher than the predicted noise exceedance level in this assessment.

Summary of Mitigation Measures

- 2.6.15 A summary of proposed INMD at sensitive facades are provided in **Table 2.4** below.

Table 2.4 Summary of INMD proposed at Sensitive Facades

| Habitable Room | RA, sqm | NAP | PNL, LA10, dB | Consideration of Noise Mitigation Measure |
|-----------------------|---------|-------|------------------|---|
| Bedrooms (Tower 2) | 10.0 | T2-18 | 71 | PN_8sqm |
| | 7.2 | T2-19 | 75 | PN_8sqm |
| | 7.2 | T2-22 | 75 | PN_8sqm_Enh |
| | 7.2 | T2-23 | 75 | PN_8sqm_Enh |

| Habitable Room | RA, sqm | NAP | PNL, L _{A10} , dB | Consideration of Noise Mitigation Measure |
|--|---------|-------|-------------------------------|---|
| | 7.2 | T2-26 | 74 | PN_8sqm |
| Living Rooms (Tower 2) | 12.3 | T2-20 | 75 | NPE-Liv-SD_Enh |
| | 12.3 | T2-21 | 75 | NPE-Liv-SD_Enh |
| | 11.2 | T2-24 | 74 | NPE-Liv-SD_Enh |
| | 11.7 | T2-25 | 74 | NPE-Liv-SD_Enh |
| Notes: RA = Room Area; NAP = Noise Assessment Point; PNL = Predicted Noise Level , L _{A10} in dB; INMD = Innovative Noise Mitigation Design | | | | |

2.7 Assessment Result of the Mitigated Scenario

- 2.7.1 The traffic noise impacts on the NSRs under mitigated scenario of the worst case scenario were predicted and provide in **Appendix 2.4**.
- 2.7.2 With the noise mitigation measures proposed, the Proposed Development would comply with the HKPSG road traffic noise standard criteria of 70 dB(A) (100% compliance).
- 2.7.3 Noise impact assessment shall be conducted in the detailed design stage if necessary to identify appropriate noise mitigation measures for the proposed developments to address the potential noise impact in accordance with the requirement under HKPSG.

3. FIXED NOISE SOURCE IMPACT ASSESSMENT

3.1 Assessment Criteria

- 3.1.1 Noise assessments will normally be conducted in accordance with the “Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites” (IND-TM), published under the Noise Control Ordinance (NCO). The appropriate Acceptable Noise Level (ANL) can be determined based on the Area Sensitivity Rating (ASR). There are 4 types of area described in the IND-TM which are summarised in **Table 3.1**.

Table 3.1 Area Sensitivity of NSRs

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

- 3.1.2 The selected Representative Noise Sensitive Receivers for fixed noise source impact assessment are summarized in **Table 3.2** below.

Table 3.2 Representative Noise Sensitive Receivers for Fixed Noise

| NSRs | Type of Area Containing | Degree to which NSR is affected by Influencing Factors (IFs) | Identified ASR (Area Sensitivity Rating) |
|-------|--|---|--|
| T1-01 | II. Low density residential area consisting of low-rise or isolated high-rise developments | Not Affected | A |
| T1-29 | | | |

Notes: In any event, the Area Sensitivity Rating and the ANLs adopted in this report are only indicative and they are used for assessment only. Noise from fixed noise sources is controlled under the NCO. Therefore, the Noise Control Authority shall determine the noise impact on the basis of prevailing legislation and practices being in force, and taking into account of contemporary conditions/ situation of adjoining land uses.

Where the noise under investigation is being received within a building from a noise source located on or within the same or an adjoining building such that the noise is transmitted primarily through the structural elements of the building or buildings, the appropriate ANL shall be 10 dB(A) less than the relevant ANL as shown above. A similar adjustment should be made to the relevant ANL if the point of assessment is at an internal location of a building in which the NSR is located.

- 3.1.3 The Acceptable Noise Level (ANL) for the proposed development is tabulated in **Table 3.3**.

Table 3.3 Identified Area Sensitivity Rating and Acceptable Noise Level of NSRs in the subject site

| Noise Sensitive Receivers (NSR) | Directly/ Indirectly Affected/ Not Affected | Area Sensitivity Rating (ASR) | Acceptable Noise Level (ANL) | |
|---------------------------------|---|-------------------------------|-----------------------------------|-------------------------|
| | | | Day and evening (0700 – 2300 hrs) | Night (2300 – 0700 hrs) |
| T1-01, T1-29 | Not Affected | A | 60 | 50 |

3.2 Fixed Noise Sources within 300 from the Subject

DSD Chung Yan Road sewage pumping station

- 3.2.1 DSD Chung Yan Road sewage pumping station was identified to south of Subject Site. No noise emission nor odorous emission was noticeable during site visits. It is separated to Subject Site boundary by about 119m separation. No adverse fixed noise impact is anticipated upon the application.

Car Washing Facility

- 3.2.2 A car-washing facility is located at the southeast of the subject site. The operation hour of the facility is from 10am to 7pm. It was observed in the site visit that the main operation of the facility is car-washing. No vehicle maintenance activity is involved in the facility operation. It is noticed that noise was emitted from the car washing activity. A noise measurement was carried out at the facility entrance with no block of sight during operation. The measurement point is around 35m away from the facility operation, as shown in **Appendix 3.1**. The measurement lasted for 30min.
- 3.2.3 Noise measurements were carried out using a calibrated Sound Level Meter Nor139, which complies with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1). The weather condition was fine with calm wind during measurements, which satisfied the required criteria. The equipment was properly calibrated immediately prior to and following each measurement with a B&K Sound Level Calibrator Type 4231. The sound pressure level recorded from the measurement was $Leq,30min$ 57.7dB(A).
- 3.2.4 Their locations are shown in **Figure 3.1**. Site Survey and photos are attached in **Appendix 1.2**.

3.3 Assessment Approach and Methodology

- 3.3.1 Noise impact from the identified noise sources were determined based on standard acoustical principle and practice.

$$PNL = SWL + C_{dist} + C_{fac} + C_{ton} + C_{barr}$$

Where

PNL is the predicted noise level at the Noise Sensitive Receiver in dB(A);

SWL is the sound power level of the noisy industrial activities in dB(A);

C_{dist} is the distance correction in dB(A) Distance Attenuation Correction, $dB(A) = 20 \times \log(Dist) + 8$ where Dist = shortest horizontal distance measured from noise source to NSR as a worst case scenario;

Cfac is façade correction, +3 dB(A);

Cton is tonality correction, +6 dB(A) is adopted for both fixed noise source to present a worst-case scenario, and;

Cbarr is barrier correction,.

3.4 Noise Sensitive Receivers and Assessment Result

- 3.4.1 Potential fixed noise impact at the representative NSRs (T1-01, T1-29) that would be subject to the worst possible fixed noise impact have been selected for the assessment. The locations of NSRs are shown in **Figure 3.1** and they were situated at 1m away from the façade of the openable window and at 1.2m above the floor slab of the unit.
- 3.4.2 The summary of the predicted fixed plant noise levels at the selected NSRs is tabulated in **Table 3.4**. Detailed calculations of fixed plant noise impact assessment are presented in **Appendix 3.2**.
- 3.4.3 The estimated noise levels at the representative NSRs due to operational noise from the identified fixed noise source is well below the noise criteria.

Table 3.4 Summary of Predicted Noise Levels

| NSRs | Identified ASR (Area Sensitivity Rating) | Predicted Noise Levels (Daytime & Evening), Leq (30mins) dB(A) | Noise Criteria (Daytime & Evening), Leq (30mins) dB(A) |
|-------|--|--|--|
| T1-01 | A | 43 | 60 |
| T1-29 | A | 53 | 60 |

3.5 Potential Fixed Noise Impacts on the NSRs In the Vicinity

- 3.5.1 Potential fixed noise sources associated with the proposed Development includes mechanical ventilation and air conditioning (MVAC) system equipment. Other building services equipment, such as water pumps, lift machine etc., will be enclosed within the plant rooms.
- 3.5.2 MVAC and E&M plants, such as pump units, transformers, emergency generator and lift machines, are not yet designed in this early stage. All E&M plants will be placed at enclosed plant rooms. The ventilation louvres, mechanical ventilation intakes or exhausts of MVAC equipment and E&M plant rooms will be treated by silencers and enclosures as required.
- 3.5.3 The choice of equipment and the requirement of noise control measures, such as acoustic treatments by silencers and enclosures, will be determined during detailed design stage to ensure that the noise level at potentially affected NSRs will comply with the HKPSG noise criteria. The cumulative noise impact on nearby NSRs shall comply with statutory requirement under Noise Control Ordinance stipulated in IND-TM. For the design of plant noise control treatment, the plant noise shall be controlled and designed to meet the HKPSG requirement, i.e. 5 dB below ANL or the prevailing background noise level, whichever is the lower. The prevailing background noise levels shall be determined at detailed design stage, before construction commencement, for determining the planning criteria. The design requirement for the compliance to HKPSG criteria will be stated in the tender specification. The Contractor shall be responsible for the design of MVAC and E&M plants and associated mitigation measures.
- 3.5.4 In view that the concerned noise sources are typical provisions for residential development as well as abovementioned control measures, there would be no

insurmountable noise impact from fixed noise sources of proposed Development to nearby noise sensitive receivers.

3.6 Conclusion

- 3.6.1 The results of predicted fixed noise impact at the selected NSRs for proposed development are well below during the noise criteria. Therefore, it can be concluded that the proposed development will not be subject to adverse fixed noise impact.
- 3.6.2 Potential fixed noise sources associated with the proposed Development are identified. With the mitigation measures, it is expected there would be no insurmountable noise impact from fixed noise sources of proposed Development to nearby noise sensitive receivers.

4. AIR QUALITY IMPACT ASSESSMENT

4.1 Introduction

4.1.1 The assessment qualitatively assesses the potential air quality impacts during construction phase and operational phase of the proposed development. For the operational phase, the impact due to the vehicular emissions from the surrounding roads and other possible emissions upon the sensitive receivers of the Proposed Development have been reviewed and also compares the design with the recommended buffer distance in the Hong Kong Planning Standards and Guidelines (HKPSG). The potential odorous emission from the proposed development is also addressed.

4.2 Relevant Legislations, Standards and Guidelines

4.2.1 The following legislation and regulations provide the standards and guidelines for evaluation of air quality and odour impacts and the type of works that are subject to air pollution and odour control:

- Air Pollution Control Ordinance (APCO) (Cap. 311) and the Air Quality Objectives (AQO)
- Air Pollution Control (Construction Dust) Regulation
- Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation
- Air Pollution Control (Fuel Restriction) Regulations
- Recommended Pollution Control Clauses for Construction Contracts
- Development Bureau Technical Circular (Works) No.13/2020, Timely Application of Temporary Electricity and Water Supply for Public Works Contracts and Wider Use of Electric Vehicles in Public Works Contracts (DEVB TC No. 13/2020)
- Development Bureau Technical Circular (Works) No.1/2015, Emissions Control of NRMM in Capital Works Contracts of Public Work (DEVB TC No. 1/2015)
- Control of Air Pollution in Car Parks (ProPECC PN 2/96)
- Hong Kong Planning Standards and Guidelines (HKPSG)
- Criteria for Evaluating Air Quality Impact (Annex 4 of the EIAO-TM)

Air Pollution Control Ordinance (CAP 311)

4.2.2 Assessment criteria for aerial emission is based on the Hong Kong's Air Quality Objectives (AQOs), and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM) for controlling air pollutants. The prevailing AQOs, effective since 11 April 2025, is summarised in **Table 4.1** below and adopted for the air quality impact assessment.

Table 4.1 Hong Kong Air Quality Objectives

| Pollutant | Averaging time | Concentration limit [i] ($\mu\text{g}/\text{m}^3$) | Number of exceedances allowed per Calendar Year |
|--|----------------|--|---|
| Sulphur dioxide (SO ₂) | 10-minute | 500 | 3 |
| | 24-hour | 40 | 3 |
| Respirable suspended particulates (PM ₁₀) [ii] | 24-hour | 75 | 9 |
| | Annual | 30 | Not applicable |

| Pollutant | Averaging time | Concentration limit [i] ($\mu\text{g}/\text{m}^3$) | Number of exceedances allowed per Calendar Year |
|--|----------------|--|---|
| Fine suspended particulates (PM _{2.5}) [iii] | 24-hour | 37.5 | 18 |
| | Annual | 15 | Not applicable |
| Nitrogen dioxide (NO ₂) | 1-hour | 200 | 18 |
| | 24-hour | 120 | 9 |
| | Annual | 40 | Not applicable |
| Ozone (O ₃) | 8-hour | 160 | 9 |
| | Peak Season | 100 | Not applicable |
| Carbon monoxide (CO) | 1-hour | 30,000 | 0 |
| | 8-hour | 10,000 | 0 |
| | 24-hour | 4000 | 0 |
| Lead (Pb) | Annual | 0.5 | Not applicable |

Notes:

- [i] All measurements of the concentration of gaseous air pollutants, i.e. sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.
- [ii] Respirable suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 10 μm or less.
- [iii] Fine suspended particulates means suspended particles in air with a nominal aerodynamic diameter of 2.5 μm or less.

Air Pollution Control (Fuel Restriction) Regulations

- 4.2.3 The Air Pollution Control (Fuel Restriction) Regulations was enacted in 1990 to impose legal control on the type of fuels allowed for use and their sulphur contents in commercial and industrial processes to reduce sulphur dioxide (SO₂) emissions. In June 2008, the Regulation was amended to tighten the control requirements of liquid fuels. On 1 April 2025, the sulphur content of liquid fuel is further tightened to 0.001% by weight.

Practice Note on Control of Air Pollution in Car Parks

- 4.2.4 This practice notes include air quality guidelines required for the protection of public health and factors that should be considered in the design and operation of car parks in order to achieve the required air quality. The limits for air pollutants as recommended by the practice notes are summarised in **Table 4.2**.

Table 4.2 Limits of Air Pollutant Concentrations Inside Car Parks

| Air Pollutant | Average Time | Maximum Concentration ($\mu\text{g}/\text{m}^3$) [i] | Parts Per Million (ppm) |
|-------------------------------------|--------------|--|-------------------------|
| Carbon Monoxide (CO) | 5 minutes | 115,000 | 100 |
| Nitrogen Dioxide (NO ₂) | 5 minutes | 1,800 | 1 |

Notes:

[i] *All limits are expressed as at reference conditions of 298K and 101.325kPa.

Hong Kong Planning Standards and Guidelines (HKPSG)

- 4.2.5 Potential air quality impacts associated with the surrounding road carriageways and chimney emission from industrial stack shall be evaluated in accordance with the guidelines set out in the HKPSG.
- 4.2.6 Table 3.1 of Chapter 9 of the HKPSG provides the broad guidelines for locating open spaces close to potentially polluting uses, viz. road traffic. The recommended buffer distances are reproduced in **Table 4.3**.

Table 4.3 Recommended Minimum Buffer Distance from Roads

| Pollution Source | Parameter | Buffer Distance | Permitted Uses |
|-------------------|------------------------------------|---------------------------|--------------------------------------|
| Road and Highways | Type of Road | | |
| | Trunk Road and Primary Distributor | > 20 m | Active and passive recreation uses |
| | | 3 – 20 m | Passive recreational uses |
| | | < 3 m | Amenity areas |
| | District Distributor | > 10 m | Active and passive recreational uses |
| | | < 10 m | Passive recreational uses |
| | Local Distributor | > 5 m | Active and passive recreational uses |
| | | < 5 m | Passive recreational uses |
| Under Flyovers | - | Passive recreational uses | |

Source: HKPSG Chapter 9 Table 3.1: Guidelines on Usage of Open Space Site

- 4.2.7 Table 3.1 of Chapter 9 of the HKPSG also provides the broad guidelines for locating open spaces close to potentially polluting uses, viz. industrial chimneys emissions. The recommended buffer distances are reproduced in **Table 4.4**.

Table 4.4 Recommended Minimum Buffer Distance from Industrial Chimneys

| Pollution Source | Parameter | Buffer Distance | Permitted Uses |
|------------------|---|------------------------------------|--------------------------------------|
| Industrial Areas | Difference in Height between Industrial Chimney Exit and the Site | | |
| | < 20 m | > 200 m | Active and passive recreation uses |
| | | 5 – 200 m | Passive recreational uses |
| | 20 m – 30 m (*) | > 100 m | Active and passive recreational uses |
| | | 5 – 100 m | Passive recreational uses |
| | 30 m – 40 m | > 50 m | Active and passive recreational uses |
| | | 5 – 50 m | Passive recreational uses |
| > 40 m | 10 m | Active & Passive recreational uses | |

Notes:

- (i) In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.
- (ii) The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.
- (iii) The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishment which are likely to be significant air pollution sources. Consult EPD when planning open spaces close to such establishments.
- (iv) Amenity areas are permitted in any situation.

Source:HKPSG Chapter 9 Table 3.1: Guidelines on Usage of Open Space Site

4.3 Existing Air Quality in Tung Chung District

4.3.1 The nearest air quality monitoring station (AQMS) to the Subject Site is the Tung Chung AQMS. The five most recent years of air quality monitoring data, 2020 to 2024, from this station are summarized in **Table 4.5**.

Table 4.5 Air Quality Monitoring Data at Tung Chung AQMS

| Air Pollutant | Averaging Time | AQO ^(a) (b) | Concentration Level ($\mu\text{g}/\text{m}^3$) | | | | |
|-----------------|----------------------|------------------------|--|-----------|------------|------|------------|
| | | | 2020 | 2021 | 2022 | 2023 | 2024 |
| RSP | 10th Highest 24-hour | 75 (9) | 66 | 63 | 57 | 51 | 57 |
| | Annual | 30 | 25 | 26 | 23 | 22 | 23 |
| FSP | 19th Highest 24-hour | 37.5 (18) | 34 | 38 | 36 | 28 | 39 |
| | Annual | 15 | 14 | 17 | 14 | 14 | 16 |
| NO ₂ | 19th Highest hour | 200 (18) | 113 | 115 | 94 | 118 | 114 |
| | 10th Highest 24-hour | 120 (9) | 64 | 61 | 51 | 58 | 64 |
| | Annual | 40 | 28 | 26 | 25 | 26 | 31 |
| SO ₂ | 4th Highest 10-Min | 500 (3) | 24 | 19 | 26 | 22 | 15 |
| | 4th Highest 24-hour | 40 (3) | 8 | 9 | 11 | 11 | 9 |
| O ₃ | 10th Highest 8-hour | 160 (9) | 168 | 158 | 171 | 156 | 186 |

| Air Pollutant | Averaging Time | AQO ^(a) (b) | Concentration Level ($\mu\text{g}/\text{m}^3$) | | | | |
|---|---------------------|------------------------|--|------|------|------|------------|
| | | | 2020 | 2021 | 2022 | 2023 | 2024 |
| | Peak season | 100 | 90 | 82 | 89 | 79 | 106 |
| CO | 1st Highest hour | 30000 (0) | 1530 | 1240 | 1170 | 1280 | 1670 |
| | 1st Highest 8-hour | 10000 (0) | 1388 | 1073 | 1151 | 1095 | 1256 |
| | 1st Highest 24-hour | 4000 (0) | 1157 | 865 | 1011 | 1007 | 1137 |
| Notes: | | | | | | | |
| a. The measured concentrations are benchmarked against the prevailing AQOs. | | | | | | | |
| b. Numbers in brackets is the number of exceedances allowed per year. | | | | | | | |
| c. Bolded values exceed the relevant AQO. | | | | | | | |
| d. Data extracted from EPD's Smart Air Modelling Platform (SAMP) | | | | | | | |

- 4.3.2 Apart from the air quality monitoring data, EPD has released a set of background levels from "Pollutants in the Atmosphere and their Transport over Hong Kong", PATH model (PATHv3.0). As the tentative completion year of the Proposed Development is 2031, the PATH background concentrations in Year 2030 has been reviewed. The hourly background concentrations of pollutants of the year of 2030 in Grid 16,29; 16,30; 17,29 and 17,30 is summarized in **Table 4.6**.

Table 4.6 Year 2030 Background Annual Average Concentrations of the Air Pollutants from PATH v3.0

| Pollutant | Averaging Time | AQO | Data Summary | Concentration Level ($\mu\text{g}/\text{m}^3$) ^(b) | | | |
|-----------------|----------------|--------------|-----------------|---|------------|------------|------------|
| | | | | 17,30 | 17,29 | 16,30 | 16,29 |
| RSP | 24-hour | 75 (9) | 10th | 50 | 49 | 49 | 48 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | Annual | 30 | - | 18 | 18 | 18 | 18 |
| FSP | 24-hour | 37.5 (18) | 19th | 27 | 27 | 26 | 27 |
| | | | Exceedance | 3 | 3 | 1 | 2 |
| | Annual | 15 | - | 11 | 11 | 11 | 11 |
| NO ₂ | 1-hour | 200 (18) | 19th | 91 | 84 | 92 | 86 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 24-hour | 120 (9) | 10th | 40 | 33 | 41 | 34 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | Annual | 40 | - | 16 | 13 | 16 | 13 |
| SO ₂ | 10-Min | 500 (3) | 4th | 35 | 33 | 32 | 36 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 24-hour | 40 (3) | 4th | 7 | 7 | 8 | 7 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| O ₃ | 8-Hour | 160 (9) | 10th | 185 | 184 | 187 | 186 |
| | | | Exceedance | 23 | 21 | 23 | 22 |
| | Peak | 100 | - | 114 | 115 | 115 | 116 |
| CO | 1-Hour | 30000 (0) | 1 st | 533 | 528 | 536 | 529 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 8-Hour | 10000 (0) | 1 st | 504 | 499 | 509 | 503 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 24-Hour | 4000 (0) | 1 st | 472 | 463 | 472 | 464 |
| Exceedance | | | 0 | 0 | 0 | 0 | |

(a) Bolded values exceed the relevant AQO

(b) Data extracted from EPD's Smart Air Modelling Platform (SAMP)

4.4 Construction Phase Air Quality Impact

4.4.1 Demolition and construction works will induce potential fugitive dust and gaseous emissions. Individual environmental impacts during construction of the project have been qualitatively addressed in this section.

Air Sensitive Receivers

4.4.2 There are residential developments and open space located within the 500m from the Subject Site, which are considered as representative Air Sensitive Receivers (ASRs). These representative ASRs are identified as shown in **Table 4.7** below. The locations of ASRs are shown in **Figure 4.1**.

Table 4.7 Representative Air Sensitive Receivers

| Ref | Air Sensitive Receiver | Type | Shortest Distance from the Subject Site (m) | Building Height (mPD) |
|-----|---|--------------|---|-----------------------|
| A01 | 91 Ma Wan Chung | Village | 19m | 10.1 |
| A02 | Wong Nai Uk | Village | 3m | 10 |
| A03 | Public Housing Development at Tung Chung Area 23 Phase 1 ^[1] | Residential | 13m | 75 |
| A04 | Yat Tung Estate, Shun Yat House | Residential | 92m | 122.8 |
| A05 | North Lantau Hospital | Institution | 234m | 56.8 |
| A06 | Tung Chung Crescent, Block 9 | Residential | 289m | 151.3 |
| A07 | 51 Ma Wan Chung | Residential | 17m | 10.1 |
| A08 | Future Town Park | Recreational | NA | NA |

[1] The expected completion for Public Housing Development at Tung Chung Area 23 Phase 1 is 2027 – 2028.

Ref: https://www.pland.gov.hk/file/resources/approved_pb/hd_pb/pdf/Phase_I_of_Area_23_Tung_Chung.pdf

[2] "Future Town Park" is recorded on the Outline Zoning Plan under Tung Chung Town Centre Area (Plan No S/I-TCTC/24)

Construction Air Quality

- 4.4.3 The application site, which includes the development of residential development, and 4 embraced lots, occupies an area of about 5,400 sqm in total. The residential development includes earthworks (excavation and backfilling), foundation and basement construction and superstructure works. The tentative earthwork area, where excavation or site formation is involved, is estimated to be about 3,500 sqm. Yet, it shall be noted that final works areas are subjected to further site investigations and detailed construction design at later stage. There is 4,550 m³ of estimated excavated material which will be delivered off-site. According to the tentative programme, construction period is planned from November 2026 to May 2029, i.e. 31 months. There is tentatively 9 months for earthworks. Based on 7m³ per truck and 12 working hour per day, there will be less than 1 trip of dump truck per hour travelling to and from the work site.
- 4.4.4 Fugitive dust and gaseous emissions will be the major potential source of air quality impact during the construction phase of the proposed development. Under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulations, only approved or exempted non-road mobile machineries (including mobile generator, air compressor, excavator, crawler crane, bulldozer, and etc.) with a proper label are allowed to be used in the construction site. In addition, dust potentially generated as a result of the concreting works for the construction of superstructure, floor slab, etc. would be insignificant as the concrete would be pre-mixed and transferred to the Subject Site by concrete lorry mixer. In view of the scale of work as abovementioned, it is anticipated that not more than 6 mechanical equipment such as excavator, dump truck, piling rig, mobile crane, concrete

lorry mixer will be used simultaneously at the work site, adverse air quality impact is not anticipated during the construction state with mitigation measures in place.

4.4.5 There are 2 potential concurrent Projects identified within 500m from project site boundary, as summarised in **Figure 4.2** and **Table 4.8** below.

- Item P1 - Tung Chung Line Extension, based on approved EIA report for Tung Chung Line Extension (AEIAR-253/2022), the construction works area for alignment between Tung Chung Station and Yat Tung Estate is underground tunnel. Tunnel Boring Machine (TBM) method will be used for construction of underground tunnel section and dust emission is not anticipated. The nearest non-underground works area is a section of works area at Yat Tung Estate about 141m to the southwest of the Subject Site which is separated by a number of existing developments such as Yat Tung Estate, Ma Wan Chung Village; as well as works area near Tung Chung Crescent and Fu Tung Estate located about 204m to the northeast of Subject Site. Extracted information of AEIAR-253/2022 is provided in **Appendix 1.3**.
- Item P2 - Tung Chung Area 23 Phase 1 –Public Housing Development (Area 23). According to the Planning Brief, the Gross Site Area is 0.49 ha and tentative building completion is Year 2027/ 2028. Extracted information of Area 23 is provided in **Appendix 1.4**.

Besides, there are ongoing project for Tung Chung West Development, and Tung Chung Road North widening works. However, no concurrent construction is anticipated with the proposed development:

- **NL/2020/05, Tung Chung New Town Extension – Site Formation and Infrastructure Works at Ma Wan Chung:** According to the latest Monthly EM&A report (Nov 2025) of Tung Chung New Town Extension (West), the contract include Tung Chung Road North widening work and the construction works except landscape were completed in Dec 2025. Therefore, NL 2020/05 is not concurrent project to proposed development
- **NL/2026/06, Site Formation and Infrastructure Works at Tung Chung Valley, Phase 1:** According to the latest Monthly EM&A report (Nov 2025) of Tung Chung New Town Extension (West), the construction works except landscape will be completed in June 2026. Therefore, it is expected that construction works of NL/2026/06 will be completed before the commencement of the Proposed Residential Development.
- **NL/2023/10 Sewerage Works at Road L22, Road L24, Road L25, Road L26, Road L28, Ngau Au, Lam Che, Nim Yuen, Mok Ka and Shek Lau Po and Sewage Pumping Stations in Area 61B, Area 45C and Area 68B, Tung Chung.** According to the Gazettal Documents downloaded from the Project Website of Tung Chung New Town Extension (https://www.tung-chung.hk/gazettal_documents.php?locale=en), the construction works areas fall outside 500m from the Project Site Boundary.

Table 4.8 Potential Concurrent Project

| Project | | Details | Shortest Distance from Site Boundary, m |
|---------|---|--|---|
| P1 | TCL Extension | Works area for alignment between Tung Chung Station and Yat Tung Estate is underground | 51m (underground works area) 141m (non-underground works area near Yat Tung Estate) 187m (non-underground works area near Tung Chung Crescent and Fu Tung Estate) |
| P2 | Area 23 Phae 1 Public Housing Development | 0.49 ha, Tentative building completion is Year 2027 / 2028 | 12m |

4.4.6 With reference to the dust monitoring data under the EM&A of the TCNTE EIA (AEIAR – 196/2016) of monitoring stations within 500m of the subject site (i.e. DM-3, DM-4 and DM-5), no exceedance of Limit Levels was recorded for construction air quality monitoring. Although two action levels exceedance were recorded in year 2025, compliance were recorded in repeated measurements conducted during similar activities and it have been concluded as isolated cases and non-project related in the corresponding EM&A reports, as summarised in **Table 4.9**. Also, in view of the separation from the potential concurrent project Item P1 to the proposed development, the additional contribution to the construction phase air quality impact arising from the proposed development is considered limited and insignificant.

Table 4.9 Monitoring Data under the EM&A of the AEIAR – 196/2016

| Dust Monitoring Locations | | Dust Monitoring Record from 5 September 2023 to 21 January 2026 ^[1] |
|---------------------------|---|---|
| DM-3 | Shops at Tung Chung Crescent (Nearby TCLE TBM launching/ retrieval shaft, located to Northeast of Subject Site) | No exceedance of Action and Limit Levels |
| DM-4 | Yat Tung Shopping Centre (Nearby Works area at TCW Station to the southwest of Subject Site) | No exceedance of Limit Levels. Only Two Action levels exceedance were only recorded on 1 st Dec 2025 and 25 th November 2025, which were considered isolated case and non-project related. ^[2] |
| DM-5 | Ma Wan Chung Village (Nearby Works area at TCW Station to the southwest of Subject Site) | No exceedance of Action and Limit Levels |

Notes:

[1] Dust monitoring data available from the TCLE project website (<https://eems.com.hk/tue/air.jsp>) under the EM&A of the TCNTE EIA (AEIAR – 196/2016)

[2] Action levels exceedance were only recorded on 09:00 1st Dec 2025 and 09:00 25th November 2025. According to Monthly EM&A Report No. 30 (Nov 25) and No. 31 (Dec 25) prepared under Condition 3.4 of EP-614/2022. Repeated measurements were carried out on 2nd and 6th December 2025 under similar construction activities to 25th November 2025 and 1st December 2025

respectively. No exceedance of Action Levels or Limit Levels were recorded at repeated measurements and exceedance were considered isolated case and non-project related.

- 4.4.7 The tentative completion year of potential concurrent project Item P2 at Year 2028. As observed during site inspection on October 2025, the Area 23 superstructure construction is on-going and thus substantial earthworks is not anticipated. Additional contribution of Item P2 to the construction phase air quality impact arising from the proposed development is considered limited and insignificant.
- 4.4.8 The tentative construction period of proposed development is from Nov 2026 to May 2029, as provided in **Figure 4.2**. The major construction dust and gaseous emission would be from earthworks and 9 months have been allowed in the tentative programme. It is recommended that the future Contractor of the proposed development to closely liaise with concurrent projects to avoid cumulative air quality nuisance on nearby ASRs due to construction by programme arrangement of major dust and gaseous emission activities.
- 4.4.9 Also, for the concurrent project, proper mitigation measures including watering frequently and good site practice will be implemented to ensure that their construction activities would not cause adverse construction dust impact. Therefore, adverse cumulative construction dust impact arising from construction activities of the concurrent project are not anticipated.

Mitigation Measures for Fugitive Dust and Gaseous Emission

- 4.4.10 With the implementation of sufficient suppression measures as stipulated under the APCO, Air Pollution Control (Construction Dust) regulation (Cap 311R) and good site practices (as detailed in **Section 4.4.15** to **4.4.18** below), fugitive dust and gaseous emission arising from the earthworks, etc. 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 demolition works or construction works and to adopt control measures while carrying out demolition activities or construction activities.
- 4.4.11 To mitigate potential air quality impacts, all control measures recommended in the Air Pollution Control (Construction Dust) Regulation, where applicable, shall be implemented. Relevant control measures include:
- The works area for site clearance shall be sprayed with water before, during and after the operation so as to maintain the entire surface wet;
 - Restricting heights from which materials are to be dropped, as far as practicable to minimise the fugitive dust arising from unloading/ loading;
 - Immediately before leaving a construction site, all vehicles shall be washed to remove any dusty materials from the bodies and wheels. However, all spraying of materials and surfaces should avoid excessive water usage;
 - Where a vehicle leaving a construction site is carrying a load of dusty materials, the load shall be covered entirely by clean impervious sheeting to ensure that the dusty materials will not leak from the vehicle;
 - Erection of hoarding of not less than 2.4 m high from ground level along the site boundary, where appropriate;
 - Any stockpile of dusty materials shall be covered entirely by impervious sheeting; and/or placed in an area sheltered on the top and 4 sides;

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- All dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet;
 - To reduce the traffic induced dust dispersion and re-suspension, the travelling speed of vehicles within the site should be controlled;
 - Locate the haul road away from those concerned ASRs;
 - Avoid dusty works or placing stockpiles near to those concerned ASRs; and
 - Minimization of unpaved, exposed earth by immediate covering/ permanent paving as soon as the works have been completed
- 4.4.12 In addition, emission control during the construction phase shall be carried out in accordance with the requirements of the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation. The emissions of non-road mobile machinery (NRMMs) include mobile machines and vehicles powered by internal combustion engines used primarily off-road. All NRMMs operating on-site which are subject to the emissions control of the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation shall be approved/exempted (as the case may be) and affixed with the requisite approval/exemption labels. To mitigate potential air quality impact, exempted NRMMs shall be avoided as far as practicable.
- 4.4.13 Appropriate exhaust emissions controls should also be adopted as required under Air Pollution Control (Fuel Restriction) Regulations. Electric power supply shall be provided for on-site machinery as far as practicable and diesel generators shall be avoided to minimize the gaseous and Particulate Matter (PM) emissions.
- 4.4.14 The recommended mitigation measures for protection of nearby ASRs are described below:
- Good Site Management
- 4.4.15 Good site management is important in reducing potential air quality impacts to an acceptable level. As a general guide, the contractor(s) shall maintain a high standard of housekeeping to prevent fugitive dust emissions. Loading, unloading, handling and storage of fuel, demolished debris and wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission.
- 4.4.16 Appropriate working methods should be devised and arranged to minimise dust emissions and to ensure any installed control system and/or measures are operated and/or implemented in accordance with their design merits. No free falling of debris should be allowed. Debris should be lowered by a hoist to the ground, preferably with an enclosed tunnel.
- 4.4.17 A high standard of housekeeping shall be maintained. Any piles of materials accumulated on or around the work areas shall be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas shall be carried out in a manner that does not generate fugitive dust emissions. Prior to cleaning, the materials should be handled properly to prevent fugitive dust emission.
- 4.4.18 Frequent mist spraying should be applied on dusty areas. The frequency of spraying will depend upon local conditions such as rainfall, temperature, wind speed and humidity.

The amount of mist spraying should be just enough to dampen the materials without over-watering, which could result in surface water runoff.

Dust Emissions from Site Traffic

- 4.4.19 Dust emission from construction traffic is generated predominantly from the travelling of waste removal lorries. Areas within the Subject Site where there are regular vehicle movements should have a hard surface. Speed controls at an upper limit of 10km/hr should be imposed and their movements should be confined to designated roadways within the Subject Site. All dusty vehicle loads should have side and tail boards covered by tarpaulin extending at least 300mm over the edges. Wheel-wash troughs and hoses should be provided at exit points of the Subject Site.
- 4.4.20 "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.
- 4.4.21 With the adoption of good practices, adverse air quality impact during the construction stage is not anticipated.

4.5 Operational Phase - Vehicular Emissions Impact

- 4.5.1 The potential impact due to vehicular emissions from road traffic have been considered. Tung Chung Road North is the major road segments close to the Project. In accordance with the HKPSG, the buffer distance between roads kerb and permitted uses is given in Table 3.1 of Chapter 9 of HKPSG.
- 4.5.2 With reference to approved Environmental Impact Assessment Report for Tung Chung New Town Extension (AEIAR-196/2016), Tung Chung Road North is Local Distributor. Extracted information of AEIAR-196/2016 is provided in **Appendix 4.2**. The proposed development would commence after the Tung Chung Road North Widening works. According to the Table 3.1 of Chapter 9 of HKPSG, the recommended buffer distance from Tung Chung Road North is >5m for Local Distributor.
- 4.5.3 The layout for residential tower showing the buffer distances from road kerbs is provided in **Figure 4.3**. A portion of the application site is within 5m buffer distance of Tung Chung Road North. However, no air sensitive uses of the proposed development (including fresh air intake, openable window, and open space for recreational use, etc) would be located within 5m buffer distance.
- 4.5.4 The buffer distances between the subject site and the nearby roads will comply with the recommended requirements. As such, it is considered that the Proposed Development would not be subject to adverse vehicular emission impact.
- 4.5.5 For the proposed carpark, ProPECC PN2/96 on Control of Air Pollution in Car Parks will be followed. The location of carpark and its exhaust are indicated in **Figure 4.4**.

4.6 Operational Phase - Industrial Chimney Emissions, Marine Emissions and Odour Impact

- 4.6.1 Regarding the industrial chimney emissions, there is no active chimney source identified within 200m from the subject site based on the site visit carried on 5th July 2021 and 31 October 2025. Also, there will be no chimney emissions from the proposed

development. Therefore, it is anticipated that the proposed development would not be subject to adverse industrial chimney emissions.

- 4.6.2 There are local vessels travelling between Tuen Mun, Tung Chung, Sha Lo Wan and Tai O. With reference to the EIA reports for Tung Chung Line Extension (AEIAR-235/2022) and Tung Chung New Town Extension (AEIAR-196/2016), the marine route of the local vessel are located outside 500m assessment boundary of the Subject Site as shown in **Figure 4.5**. It is anticipated that the proposed development would not be subject to adverse marine emissions.
- 4.6.3 Onsite surveys have been conducted to identify any the potential odour sources in July 2021, October 2025 and January 2026. No odour was noticeable along Subject Site boundary. Chung Yan Road Sewage Pumping Station is located at the southeast of the Subject Site separated by existing village type development at Wong Nai Uk. During site visits conducted on 31 October 2025 (between noon to 2pm, 29.8°C air temperature and 76% relative humidity) and 2 January 2026 (between 3pm to 4pm, 19.0°C air temperature and 64% relative humidity), no odour was identified at accessible locations along the northwest and southwest boundary of the Pumping Station even under downwind moments. Therefore, it is anticipated that the proposed development would not be subject to adverse odour impact.

4.7 Conclusion

- 4.7.1 The Project is for residential use. The minimum buffer distances between road kerbs complied with for the residential tower and the fresh air intake of the podium will be located outside the relevant HKPSG buffer distance. Therefore, no vehicular impact is anticipated.
- 4.7.2 Based on site visit, there is no active chimney within 200m from the Subject Site. There is no identifiable odour detected along the boundary of Chung Yan Road Sewage Pumping Stations. Also, there are no marine emissions sources within 500m from the Subject Site. Therefore, the proposed development would not be subject to adverse industrial chimney emissions, marine emissions and odour impact.
- 4.7.3 In conclusion, no potential adverse air quality impact is expected upon the proposed development.
- 4.7.4 With the adoption of good practices, adverse air quality impact during the construction stage is not anticipated.

5. WASTE MANAGEMENT IMPLICATIONS

5.1 Introduction

5.1.1 This section reviews the types of waste that will arise during the construction and operation phases of the Project.

5.2 Environmental Legislation and Guidelines

5.2.1 References have been made to the following relevant Hong Kong legislation governing waste management and disposal. Directly relevant legislations include:

- The Waste Disposal Ordinance (Cap. 354) and subsidiary legislations, such as the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C), set out requirements for the storage, handling and transportation of all types of wastes; Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N), set out the charges for public fill, sorting and landfill.
- Land (Miscellaneous Provisions) Ordinance (Cap 28);
- Public Health and Municipal Services Ordinance (Cap 132) – Public Cleansing and Prevention of Nuisance Regulation – control of disposal of general refuse;

5.2.2 Other relevant documents and guidelines that are applicable to waste management and disposal include:

- Project Administration Handbook for Civil Engineering Works (PAH).
- ETWB TCW No. 22/2003A - Additional Measures to Improve Site Cleanliness and Control Mosquito Breeding on Construction Sites;
- ETWB Technical Circular (Works) No. 19/2005 - Environmental Management on Construction Sites;
- DEVB TC(W) No.8/2010 - Enhanced Specification for Site Cleanliness and Tidiness (supersedes WBTC No.6/2002 and ETWB TCW No.6/2002A);
- Works Branch Technical Circular No. 2/93 - Public Dumps;
- Works Branch Technical Circular No. 2/93B - Public Filling Facilities;
- Works Bureau Technical Circular No. 12/2000 - Fill Management;
- Development Bureau Technical Circular (Works) No. 06/2010 - Trip-ticket System for Disposal of Construction and Demolition Materials;
- Practice Note for Authorized Persons and Registered Structural Engineers – Construction and Demolition Waste (PNAP ADV – 19) issued by the Buildings Department;
- Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes;
- A Guide to the Chemical Waste Control Scheme;
- Code of Practices and Guidelines for Asbestos Control and Handling; and
- ProPECC PN2/97 Handling of Asbestos Containing Materials in Building
- Works Branch Technical Circular (WBTC) No. 32/92, The Use of Tropical Hard Wood on Construction Site
- WBTC No. 19/2001 - Metallic Site Hoardings and Signboards;
- WBTC No. 12/2002, Specification Facilitating the Use of Recycled Aggregates
- Monitoring of Solid Waste in Hong Kong 2023;
- Relevant guidelines posted by EPD through EPD's website (https://www.epd.gov.hk/epd/english/environmentinhk/waste/manage_facility/ypark.html) and Y Park's website (<https://www.ypark.hk/zh-hant/>); and
- Guidelines on "Yard Waste Reduction and Treatment" issued by Development Bureau; and

- "Development Bureau Technical Circular (Works) No. 4/2020 Tree Preservation".

5.3 Impact Assessment

Construction Phase

- 5.3.1 The construction activities to be carried out for the proposed Project would generate a variety of wastes that can be divided into distinct categories based on their composition and ultimate method of handling. These activities include earthworks (foundation/ excavation and lateral support (ELS)/ pile cap), basement and transfer plant construction, superstructure construction (e.g. reinforced concrete core structure construction, Modular incorporated Construction (MiC) units installation, remaining in-situ works) and building services installations, landscaping works. Tentative excavation extent is 3,500 m² in area with depth 1.3m subjected to site investigation findings. The identified waste types include:
- Construction and demolition (C&D) materials, comprising inert and non-inert materials, from the construction works;
 - chemical waste from any maintenance of construction plant and equipment; and
 - general refuse from the workforce
- 5.3.2 It is recommended that different types of wastes should be segregated, stored, transported and disposed of separately in accordance with EPD's required procedures. Inert C&D materials (or public fills) such as soil, rock, concrete, etc. should be re-used on-site as filling materials or off-site as public fill at public fill reception facilities. The non-inert C&D materials (or C&D waste) such as timber, yard waste, paper, etc. should be reused or recycled as far as possible. Landfill disposal should be considered as the last resort for waste handling.
- 5.3.3 The estimated quantities of C&D materials provided by the Project Architect are summarized in **Table 5.1**. There are no existing buildings within the Subject Site. Therefore, C&D materials from the demolition works are not expected. Also, as there are no backfilling works, all inert C&D material will be delivered to Public Fill Reception Facilities for beneficial reuse. Non-inert C&D material from excavation and other works should be handled in accordance with **Section 5.3.2**.

Table 5.1 Estimated Quantities of C&D materials

| Generated From | Estimated Quantities of C&D materials (m ³) | | | |
|--|---|--|--|---|
| | C&D Materials to be Generated | Inert C&D Materials to be Reused On-site | Inert C&D Materials to be delivered to Public Reception Facilities | Non-inert C&D Materials to be Generated [1] |
| Excavation | 14000 | -- | 14000 | -- |
| Demolition of Existing Building | No or minimal demolition works envisaged | | | |
| Others: Site Clearance, Basement, Foundation, Works, car lifts, retaining | 6000 | -- | -- | 6000 |

| Generated From | Estimated Quantities of C&D materials (m ³) | | | |
|------------------------|---|--|--|---|
| | C&D Materials to be Generated | Inert C&D Materials to be Reused On-site | Inert C&D Materials to be delivered to Public Reception Facilities | Non-inert C&D Materials to be Generated [1] |
| walls, superstructures | | | | |
| Total | 20000 | -- | 14000 | 6000 |

5.3.4 The clearance/pruning of existing vegetation to facilitate site access and site formation works will generate timber material and yard waste. These material shall be handled in accordance with the principles of reduce, reuse, and recycle (3Rs). The following guidelines shall be taken into account when handling yard waste:

- Relevant guidelines posted by EPD through EPD's website (https://www.epd.gov.hk/epd/english/environmentinhk/waste/manage_facility/ypark.html) and Y Park's website (<https://www.ypark.hk/zh-hant/>); and
- Guidelines on "Yard Waste Reduction and Treatment" issued by Development Bureau; and
- "Development Bureau Technical Circular (Works) No. 4/2020 Tree Preservation".

5.3.5 Specifically, to minimize the generation of yard waste, the project proponent shall:

- Avoid unnecessary removal or excessive pruning of trees. Preserve trees in their original locations and implement tree transplanting when on-site preservation is not feasible.
- Segregate various types of yard waste and shred wood to facilitate reuse and recycling.
- Reuse yard waste on-site for a variety of purposes (e.g., decomposition and composting, recreational and decorative uses, and mulching in planting areas, etc.).
- Identify recycling options (e.g. delivery to Y·park) for yard waste that cannot be directly reused on-site.
- Where yard waste generation is unavoidable, sorting of yard waste for recycling and reuse on-site should always be prioritized. Yard waste shall be separated from C&D material to facilitate recycling, such as delivering them to Y·PARK so as to minimize the quantity of waste to be disposed of at the landfill site. Where appropriate, the Contractor should be responsible to cut and shred the yard waste in order to meet the collection requirement of the recycling outlet for processing. Disposal of yard waste directly at landfills should only be regarded as the last resort when no alternatives are available.

5.3.6 The amount of chemical waste that will be generated from the construction work will depend on the Contractor's on-site maintenance practices and the number of mechanical plant and vehicles used on-site. Regarding the nature of the construction activities involved, chemical waste such as lubricating oil or solvent generated are not expected to be in large quantity. It is preliminarily estimated that less than 50L/month and hence approximately 1.6m³ of chemical waste will be generated during a tentative 31-month construction period. The amount of chemical waste to be generated shall be quantified in the Waste Management

Plan (WMP) as part of the Environmental Management Plan (EMP) to be prepared by the Contractor in the construction stage.

5.3.7 The Contractor is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.

5.3.8 Chemical wastes should be handled in accordance with the "*Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*" and should be collected by licensed chemical waste collectors for subsequent disposal and appropriate treatment at licensed waste disposal facilities, for example the Chemical Waste Treatment Centre in Tsing Yi. Mitigation and control requirements for chemical waste are provided in the "*Recommended Pollution Control Clauses for Construction Contracts*" available in EPD website mentioned the handling, storage and disposal of chemical wastes. Recommended key control measures are listed below:

Containers used for storage of chemical wastes should:

- Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;
- Have a capacity of less than 450L unless the specifications have been approved by the EPD; and
- Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations.

The storage area for chemical wastes should:

- Be clearly labelled and used solely for the storage of chemical waste;
- Be enclosed on at least 3 sides;
- Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;
- Have adequate ventilation;
- Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and
- Be arranged so that incompatible materials are appropriately separated.

Chemical waste should be disposed of:

- Via a licensed waste collector; and
- To a facility licensed to receive chemical waste, such as the CWTC which also offers a chemical waste collection service and can supply the necessary chemical waste storage containers.

With good management and site particles, adverse environmental impacts should not result.

Asbestos Containing Materials

5.3.9 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. Asbestos is currently recognized as hazardous materials, due to its etiological effects on human respiratory system.

5.3.10 As there are no buildings are developed before 1980s, asbestos containing materials are not expected.

General Refuse

- 5.3.11 The workers in the construction site and the site office will generate a variety of general refuse which requires disposal. It consists mainly of food waste, aluminum cans, waste paper etc. Since the information on the number of workers on-site is not available at this preliminary stage, a maximum of 20 workers working simultaneously and a waste generation rate of about 0.65 kg per worker per day are assumed. It is estimated that the daily amount of general refuse that would be generated is in the order of 13 kg. The general refuse will be transferred to North Lantau Transfer Station and then ultimately to WENT Landfill.
- 5.3.12 The general waste management strategy is to avoid waste generation in the first place. Should it be unavoidable, reduction and segregation at-source should be exercised as far as practicable and recycling and reuse should be adopted at the same time to salvage all the recyclable and reusable materials as much as possible.
- 5.3.13 The Contractor(s) should be responsible for ensuring that waste is collected by approved waste collectors and appropriate measures are taken to minimise adverse impacts to the surrounding environment, such as dust generation. The Contractor(s) must also ensure that all necessary waste disposal permits are obtained.
- 5.3.14 The mitigation measures for construction phase are recommended based on the waste management hierarchy principles. Recommendations of (i) good site practices, (ii) waste reduction measures, (iii) waste collection, storage and transportation, (iv) Handling of Excavated C&D Material (v) On-site Sorting of C&D Materials and (v) Transportation of C&D Materials are described in following sub-sections.
- (i) Good Site Practices
- Implementation of the recommended mitigation measures in the "*Recommended Pollution Control Clauses for Construction Contracts*" available in EPD website, to minimise the potential environmental impacts resulting from the storage, handling and transportation of inert C&D materials, non-inert C&D materials, chemical wastes and general site wastes.
 - The Contractor is required to prepare a Waste Management Plan (WMP) including areas described in PNAP ADV-19 and submit to the Project Proponent for agreement.
 - The Contractor is required to nominate approved personnel, such as a site manager, to be responsible for good site practices, and making arrangements for collection of all wastes generated at the site and effective disposal to appropriate facilities.
 - Training of site personnel in proper waste management and chemical waste handling procedures.
 - The Contractor is required to maintain records of quantities of waste generated, recycled and disposed.
 - Provision of sufficient waste and recyclable collection points and arrange regular collection for disposal and recycling/reuse.
 - Covering material during heavy rainfall.
 - Locating stockpiles to minimise potential air quality, water quality and visual impacts; and
- (ii) Waste Reduction Measures
- Segregation and storage of different types of waste in different containers to enhance reuse or recycling of materials and their proper disposal. Recyclable materials such as paper, metal (e.g. cans), plastic and glass. Recyclable wastes shall be segregated from non-recyclable waste to be stored in enclosed bins or compaction units.

Recyclable material shall be collected in appropriate frequency to ensure no over stacking of recyclable wastes. .

- Separate labelled bins shall be provided to segregate aluminium cans from other general refuse generated by the work force, and to encourage collection of by individual collectors;
- Any unused chemicals or those with remaining functional capacity shall be recycled.
- The Contractor is encouraged to use recycled aggregates where appropriate
- Maximizing the use of reusable steel formwork to reduce the amount of C&D material. The excavated fill material shall be used on-site as backfill material as far as possible.
- For site hoardings and signboards, if applicable, all component should be specified in metal (using bolt and nut jointing method wherever possible) to reduce generation of C&D waste. Reference should be made to WBTC No. 19/2001.
- Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions (i.e. soil, rock, broken concrete, etc.);
- Inert C&D materials (or public fills) such as soil, rock, concrete, etc. should be re-used on-site as filling materials or off-site as public fill at public fills reception facilities.
- non-inert C&D materials (or C&D waste) such as timber, yard waste, paper, etc. should be reused or recycled as far as possible. Specific measures to minimize generation of yard waste shall also refer to **Section 5.3.5**
- Minimize over ordering of concrete, mortars and cement grout by doing careful check before ordering.
- Proper storage and site practices to minimise the potential for damage or contamination of construction materials.

(iii) Waste Storage, Collection and Transportation

- Provision of appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers.
- Non-inert C&D materials such as top soil should be handled and stored well to ensure secure containment of the materials;
- Ensuring that waste is collected by approved waste collectors and appropriate measures are taken to minimise adverse impacts to the surrounding environment.
- A reputable waste collector should be employed by the contractor to remove general refuse from the site on a daily basis in general.
- Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors, if applicable
- The Contractor is required to register as a chemical waste producer if chemical wastes would be produced from the construction activities;
- The Contractor is required to separate chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Centre. Specific mitigation measures for handling of chemical waste shall also refer to **Section 5.3.8**.

(iv) Excavated C&D Materials;

- Inert C&D materials should be temporarily stored on-site for use as backfill where practicable. Surplus inert C&D materials should be delivered to Public Fill Reception Facilities (PFRFs).
 - Inert C&D materials should be properly covered with tarpaulin or similar impervious sheeting to prevent dust nuisance and site runoff.
- (v) On-site Sorting of C&D materials
- Prior to disposal of non-inert C&D materials, it is recommended that wood, steel, glass and other metals shall be separated for re-use and/or recycling; while Inert C&D materials shall be utilized as fill materials to minimise the quantity of waste to be disposed of to the landfill.
 - The Contractor shall designate area for temporary storage of C&D materials in site layout and allocate space for on-site sorting as far as practicable.
 - The Contractor shall be required via contractual requirement to implement a trip-ticket system with reference to DEVB TCW No. 06/2010 to ensure that the disposal of C&D materials is properly documented and verified.
 - With reference to the DEVB TCW No. 6/2010, the Authorized Person (AP) shall write to the Public Fill Committee (PFC) through Fill Management Section of Civil Engineering and Development Division (CEDD) to request a designated disposal ground for incorporation into tender documents.
 - The Contractor shall be prohibited from disposing of C&D materials to place other than the designated disposal ground, and any alternative disposal ground proposed by the Contractor shall comply with requirement in the DEVB TCW No. 6/2010 and approved by the Authorized Person (AP) in prior.
 - The Contractor shall be required to install video recording system to monitor the vehicular exit/entrance of the site and checking the disposal records provided by disposal grounds against survey records routinely, if applicable.
- (vi) Transportation of C&D Materials
- All dump trucks engaged on-site for delivery of inert and non-inert C&D material from the site to the designated disposal location, including PFRFs, landfill etc., should be equipped with Global Positioning System (GPS) or equivalent system for tracking and monitoring of their travel routings and parking locations by the Contractor to prohibit illegal dumping and landfilling of materials; and
 - The data collected by GPS or equivalent system should be recorded properly to check and analyze the travel routing and parking locations of dump trucks engaged on site
 - In order to avoid dust impacts, any vehicle leaving a works area carrying inert or non-inert C&D materials should have their load covered up before leaving the construction site

Operation Phase

- 5.3.15 The major portion of solid waste arising from the redevelopment will be domestic waste. The storage and handling of such waste may give rise to adverse environmental effects. According to the Monitoring of Solid Waste in Hong Kong 2023 prepared by EPD, the domestic waste disposal per capita per day was 0.89 kg while the recovery rate of domestic waste was 21%. The domestic waste generation rate is calculated 1.127 kg per capita per day (0.89 / (1-21%)). By applying this figure to the projected maximum population of about 818 residents after occupation of the development, approximately 0.92 ton of domestic waste would be generated from the proposed development per day.

- 5.3.16 Waste generation from the residential units will be collected and removed regularly by an appointed party. Waste separation and recycling will be implemented, where practicable. General refuse and non-recyclables will be stored in enclosed bins and disposed offsite daily for avoidance of pest and odour nuisance. Recycling bins for recyclable materials (including aluminium can, waste paper, glass bottles and plastic bottles) will be transported off-site for recycling weekly.
- 5.3.17 For the food wastes such as leftovers, it is recommended an adequate number of enclosed waste containers will be provided to avoid over-spillage of waste. Also, leftovers will be placed in bags and stored in enclosed containers. Rather than disposing of the food waste to the designated landfill directly, the project proponent is recommended to deliver the food waste to the Organic Resources Recovery Centre (ORRC) to reduce the pressure on the existing landfill. Therefore, the chances of odour nuisance and hygiene issues are reduced.
- 5.3.18 Provided that the environmental control measures are properly implemented, no adverse environmental impact would be anticipated with respect to solid waste management.

5.4 Conclusion

- 5.4.1 The potential impacts of wastes arising from the construction and operation of the Proposed Development have been assessed. The construction activities (i.e. excavation site clearance, site formation, foundation works and superstructures) will generate a variety of wastes materials including C&D materials, chemical waste, general refuse M while operation of proposed development will generate general refuse.
- 5.4.2 With the implementation of the recommended mitigation measures discussed in **Section 5.3** and the potential environmental impacts resulting from the storage, handling and transportation of inert C&D materials, non-inert C&D materials, chemical wastes and general refuse would be minimal.
- 5.4.3 With the recommended waste management practices put in place, no unacceptable impacts associated with waste management during the construction and operational phases are envisaged.

6. WATER QUALITY IMPACT ASSESSMENT

6.1 Introduction

6.1.1 The subject site is located at inland urban developed area. Within the 500m study area of the subject site, there are Water Sensitive Receivers (WSRs), such as nullah to the West of Subject Site, Ma Wan Chung, as well as Tung Chung Bay as shown in **Figure 5.1**. Potential Water Quality Impact (WQI) of the construction and operation phases of the Proposed Development is addressed in the following section.

6.2 Project Construction Phase

6.2.1 The management and mitigation strategy of the wastewater generated from the construction work of the proposed development should be addressed and implemented. Environmental control measures have been proposed if considered necessary to reduce and minimize the identified water quality impacts on WSRs.

6.3 Relevant Legislation, Standards and Guidelines for Construction Phase

Water Pollution Control Ordinance (Cap.358)

6.3.1 The Water Pollution Control Ordinance (Cap. 358), in existence since 1980, is the major legislation relating to the protection and control of water quality in Hong Kong. According to the Ordinance and its subsidiary legislation, Hong Kong waters are divided into ten water control zones (WCZ). Corresponding statements of Water Quality Objectives (WQO) are stipulated for different water regimes (marine waters, inland waters, bathing beaches subzones, secondary contact recreation subzones and fish culture subzones) in each of the WCZ based on their beneficial uses. The assessment area is located within the Victoria Harbour (Phase 1) WCZ.

ProPECC PN 1/94

6.3.2 The other relevant guideline is the Professional Persons Environmental Consultative Committee Practice Note 1/94 "Construction Site Drainage" (ProPECC PN 1/94) which provides guidelines for the handling and disposal of construction discharges. This ProPECC Note is generally applicable for control of site runoff and wastewater generated during the construction of the Project.

ProPECC PN 5/93

6.3.3 Another relevant guideline is the Professional Persons Environmental Consultative Committee Practice Note 5/93 "Drainage Plans subject to Comment by the Environmental Protection Department" (ProPECC PN 5/93) which provides guidelines for the drainage plan of the construction site. This ProPECC Note is generally applicable for control of discharge of storm drains, foul sewers, drainage of commercial and industrial wastewater. Also, the control of sewage treatment and disposal is stipulated in this ProPECC.

Technical Memorandum

6.3.4 Besides setting the WQOs, the WPCO controls effluent discharging into the WCZs through a licensing system. The Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS) issued under Section 21 of the WPCO gives guidance on the permissible effluent discharges based on the type of receiving waters (foul sewers, storm water drains, inland and coastal waters). The limits given in the TM control the physical, chemical and microbial quality of effluents. Under the TM, effluents discharged into the sewerage system and the inshore and marine waters of the WCZ are subject to standards for particular volumes of discharge. These standards are defined by EPD and specified in

licence conditions for any discharge within a WCZ. Any effluent discharge during the construction and operation of the Project would be required to comply with the required discharge standards.

6.4 Potential Impacts during the Construction of the Project

6.4.1 Site construction activities will inevitably have the potential to generate wastewater. As such works should be carried out in such a manner as to minimize adverse impacts on the water quality. Apart from general construction activities, pollution sources could include:

- Construction site runoff and general construction activities;
- Sewage generated by construction workforce; and
- Potential accidental spillage of chemicals, e.g. oil, diesel and solvents etc.

General Construction Activities

6.4.2 All works for proposed development are land-based. The land-based construction works may have the potential to cause water pollution. Various types of construction activities would generate wastewater. These include general cleaning and polishing, wheel washing, dust suppression sprays and utility installation, which would contain high concentrations of suspended solids. Without proper control, these could lead to increase in suspended solids level in the neighbouring storm drain.

6.4.3 Adoption of the guidelines and good site practices for handling and disposal of construction discharges as part of the construction site management practices (as given in **Section 6.5**) would minimise the potential impacts.

Construction Site Runoff

6.4.4 Construction Site surface runoff contains high levels of sediments, other suspended solids and contaminants. Potential sources of pollution include runoff and erosion from the site surfaces, drainage channels, bentonite slurries and other grouting materials, concrete washout and drainage from dust suppression sprays, fuel, oil and lubricants from construction vehicles and other equipment.

6.4.5 Sufficient silt removal facilities should be installed to settle out sediment prior to discharge. Such facilities shall be properly designed in accordance with guidelines from the Civil Engineering and Development Department (CEDD) to achieve the desired mitigating effect. Typically, a detention time not less than 5 minutes for maximum design flow of inlet should achieve adequate sediment removal. Channels or earth berm or sandbag barriers should be provided on site to properly direct surface runoff to such silt removal facilities. Sediment traps, channels and manholes should be maintained, and the deposited silt and grit should be removed on regular basis.

Sewage Effluent from Construction Workforce

6.4.6 Water pollution due to site facilities, e.g. toilets could be the source of pollution if appropriate measures are not implemented properly in respect of storage and discharge.

6.4.7 In this construction site, portable chemical toilets will be provided. According to "Reference Materials on Construction Site Welfare, health and safety measures" Section 5.6.10, chemical toilets should be provided at a minimum rate of about 1 per 25 workers. The facility should be serviced and cleaned by a specialist contractor at regular intervals. Sewage generated from the construction workforce will be contained in chemical toilets and be tanked away. It is anticipated construction workforce would not cause adverse water quality impact after implementation of all recommended measures.

Liquid Spillage

- 6.4.8 To prevent spillage of chemicals, including fuel, solvents, oils and lubricants, it is recommended that all stocks should be stored within proper containers and sited at sealed and paved areas, preferable surrounded by bunds.
- 6.4.9 "Recommended Pollution Control Clauses for Construction Contracts" (RPCC) also recommends appropriate wastewater control measures to be implemented at the construction site by the contractor. The RPCC is available on EPD website.
- 6.4.10 The quality of any effluent discharges from the construction site should meet the standards specified in the Technical Memorandum – Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters.

6.5 Mitigation Measures during the Construction of the Project

- 6.5.1 The site practices outlined in ProPECC PN 1/94 Construction Site Drainage should be implemented as far as practicable to minimise the potential water quality impacts from various construction activities and construction site runoff.
- 6.5.2 The Contractor is required to apply to the EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. The beneficial uses of the treated effluent for other on-site activities such as dust suppression sprays, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase, monitoring works should be carried out in accordance with the discharge license.

Wheel Washing Water

- 6.5.3 The wheels of all vehicles should be washed before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable. Wash water should be recycled whenever possible to minimise the generation of wastewater and should have sand and silt removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.

Accumulation of Solid Waste Debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering nearby storm drains and inland watercourses. Stockpiles of cement and other construction materials should be kept covered when not being used.

- 6.5.4 Rubbish and litter from construction sites should also be collected and disposed offsite on a regular basis to prevent spreading of rubbish and litter from the site area.

Construction Site Runoff

- 6.5.5 Exposed soil surfaces should be covered by a tarpaulin or similar material during rainstorms to prevent the washing away of construction materials into any drainage system, watercourses and inshore water. Other measures which are proposed to be implemented before, during, and after rainstorms, as appropriate, are summarized in ProPECC PN 1/94. The surface run-off from construction sites as detailed below shall also be incorporated into the Construction Site Drainage Management Plan where practicable as an integral part of good practice:

- Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/ silt removal facilities such as sand traps, silt traps and sediment basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided where necessary.
- Sedimentation basins and sand traps designed in accordance with the requirements of ProPECC Note PN 1/94 should be installed at the construction site for collecting surface runoff.
- Silt removal facilities, channels and manholes should be maintained, and the deposited silt and grit should be removed regularly, and at the onset of and after each rainstorm to ensure that these facilities are functioning properly.
- Construction work should be programmed to minimize soil excavation works in rainy seasons (April to September). If excavation of soil could not be avoided in these months, temporarily exposed surfaces should be covered, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds.
- Slope exposure should be minimized where practicable especially during the wet season. Exposed soil surfaces should be protected from rainfall through covering the temporarily exposed slope surfaces with tarpaulin or the like.
- Earthworks final surfaces should be well compacted, and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed. Also, appropriate drainage like intercepting channels should be provided when necessary.
- Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.
- Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.
- Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm runoff from getting into foul sewers. Discharge of surface runoff into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.
- Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast and actions to be taken during or after rainstorms.
- Drainage facilities must be adequate for the controlled release of storm flows.
- High loading of suspended solids in construction site runoff should be prevented through proper site management by the contractor.
- Haul roads should be protected by crushed rock, gravel or other granular materials (i.e. hard paved) to minimize discharge of contaminated runoff.

Accidental Spillage

- 6.5.6 Oils and fuels should only be used and stored in designated areas which have pollution prevention facilities. Common chemical cabinets would be used to store the fuel tanks

and other chemical substances in order to prevent spillage of fuels and solvents to the nearby watercourses. All waste oils and fuels should be collected in designated tanks prior to disposal. Chemical wastes should be properly stored, collected and treated for compliance with the requirements set out in the Waste Disposal Ordinance and its subsidiary Waste Disposal (Chemical Waste)(General) Regulation. The relevant requirements are as follow:

- Storage in large containers only with the approval of the Director of Environmental Protection.
- Labelling of every container should be in proper format.
- Storage area for the containers should have adequate space and associated features such as at least 3 sides of wall, roof and ventilation system.
- During waste collection and delivery, waste producer and collector should follow the requirement for the trip ticket.

6.5.7 Drainage serving an open oil filling point, if any, should be connected to storm drains via a petrol interceptor with peak storm bypass, if present.

Sewage

6.5.8 Temporary sanitary facilities, such as sufficient chemical toilets, should be employed in the works areas. The toilet facilities should be more than 30 m away from any watercourses. A licensed contractor would be responsible for the cleaning and maintenance of the chemical toilets on a regular basis. The number of the temporary sanitary facilities required for the construction sites would be subject to later detailed design, the capacity of the chemical toilets, and contractor's site practices.

6.5.9 Notices would be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction of the Project. Regular environmental audit on the construction site would be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site.

6.5.10 Provided that sewage is not discharged directly into storm drain or inland waters and temporary sanitary facilities are used and properly maintained, and subject to the adoption of good site practice and the proper implementation of recommendation under this Section by the contractor, no adverse water quality impact will be anticipated.

Groundwater

6.5.11 According to ProPECC PN 1/94, groundwater pumped out of wells etc. for the lowering of ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction, if any, should be discharged into storm drains after the removal of silt in silt removal facilities.

Boring and Drilling Water

6.5.12 According to ProPECC PN 1/94, water used in ground boring and drilling for site investigation or rock/soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.

Bentonite Slurries

6.5.13 According to ProPECC PN 1/94, bentonite slurries used in diaphragm wall and bore-pile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of

at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis.

- 6.5.14 If the used bentonite slurry is intended to be disposed of through the public drainage system, it should be treated to the respective effluent standards applicable to foul sewers, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards.

6.6 Monitoring and Audit Requirements

- 6.6.1 Water quality impacts on the identified WSRs during the construction of the Project can be readily mitigated through implementation of standard mitigation measures and good housekeeping practices. Adverse water quality impact is not expected during construction of the Project. Water quality monitoring and audit is considered not necessary during the construction of the Project. However, regular site inspections should be taken to inspect the construction activities and works area in order to ensure the recommended mitigation measures are properly implemented

6.7 Potential Impacts and Mitigation Measures during Operation of the Project

- 6.7.1 As mentioned in **Section 6.1.1**, there are WSRs within the 500m study area of the proposed development, the management and mitigation strategy of the wastewater generated from the operation of the proposed development should be addressed and implemented.

6.8 Relevant Legislation, Standards and Guidelines for Operation Phase

- 6.8.1 The ProPECC PN 5/93, Drainage Plans subject to Comments by Environmental Protection Department, provides guidelines and practices for handling, treatment and disposal of various effluent discharges to stormwater drains and foul sewers, as discussed at **Section 6.3.3**. The design of site drainage and disposal of site effluents generated within the proposed development area should follow the relevant guidelines and practices as given in the ProPECC PN 5/93.

6.9 Storm Water Discharge

- 6.9.1 During operation, the surface runoff during rainfall events which is known as non-point source of pollution would be the only potential water quality impact. Fallen leaves, particles, litter from open areas, which is a source of organic and nutrient pollutants, can be washed into the drainage system during heavy rainfall if it is not properly controlled. Pollutants contributed by non-point source are often bound or adsorbed onto particles, thus an effective stormwater management system will be the removal of pollution sources prior to rainstorm and the provision of degritting/ screening facilities that collect sediment. As particles settle out, the associated pollutants will also settle out (then removed from stormwater).
- 6.9.2 Under normal condition, runoff carrying pollutants will not be generated in low rainfall intensity, but increased runoff may occur during heavy rainfall condition. The first flush flow would carry most of the pollutants and the subsequent overland flow generated from rainstorms is expected to be uncontaminated. Thus, prevention of "first flush" pollution in stormwater runoff will be an effective way in controlling pollution at source and to abate pollutants.

6.10 Best Management Practices (BMPs) for Stormwater Discharge

- 6.10.1 Surface runoff can be controlled by good drainage design and implementation of BMPs. The proposed development has adopted the following BMPs:

- Erosion Control

If uncontrolled, exposed surfaces may contribute to sediment laden in stormwater runoff and cause water pollution. The proposed development site is either hard paved or covered by landscaping area with appropriate planting species in order to eliminate any exposed surface.

- Prevention of "First Flush" Pollution

Appropriate drainage system will be constructed for the proposed development in order to control its surface runoff. During detailed design, site drainage system of the development will be designed in such way that surface runoff from the proposed development will be directed towards the internal surface drains, where appropriate drainage system with control facilities will be proposed. Additional paved U-channels with screening facilities will also be provided along the edge of the development site to avoid uncontrolled spillage of runoff.

- Devices for Removal of Pollutants

In addition to the above, screening facilities such as standard gully grating and trash grille, with spacing which is capable of screening off large substances such as fallen leaves and rubbish should be provided at the inlet of drainage system. It is expected that most of the large substances in stormwater runoff would be removed with such devices so as to prevent it from entering the drainage system. Road gullies with standard design and silt traps and oil interceptors should be incorporated during the detailed design to remove particles present in stormwater runoff.

6.11 Summary

Water quality impacts from construction are associated with the general construction activities, construction site run-off and sewage effluent from construction workforce, while the water quality impacts from operation are associated with normal urban surface runoff only. Potential water quality impacts can be controlled by implementing the recommended mitigation measures. With the implementation of mitigation measures, no adverse water quality impact on the identified WSRs is anticipated.

7. LAND CONTAMINATION

7.1 Introduction

- 7.1.1 Land contamination review (LCR) is conducted to preliminarily assess the potential land contamination impact on the Proposed Development due to previous and existing land use and to fulfil the Section 16 planning application.
- 7.1.2 A Contamination Assessment Plan (CAP), Contamination Assessment Report (CAR) and Remediation Action Plan (RAP), if necessary, will be prepared in later stages to address all potential land contamination issues at the Subject Site.

7.2 Legislation and Guidelines

- 7.2.1 This LCR has been prepared following the guidance and steps outlined in the guidelines published by EPD listed below:
- *Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management (Guidance Manual), dated April 2023;*
 - *Guidance Note for Contaminated Land Assessment and Remediation (Guidance Note), dated April 2023; and*
 - *Practice Guide for Investigation and Remediation of Contaminated Land (Practice Guide), dated April 2023.*

7.3 Desktop Review

- 7.3.1 According to the Practice Guide for Investigation and Remediation of Contaminated Land, information including site history and other available information regarding the site shall be reviewed during the site appraisal to identify potential current and historical, on and off-site activities that could result in contamination of the site.
- 7.3.2 Different Departments of the HKSAR Government have been enquired about the following information.
- Potentially contaminating activities that have occurred at the site such as storage and handling of chemicals, oils and/or hazardous waste, on-site waste disposal, burn pits, etc;
 - Accidents, fires, explosions, spillages and any pollution incidents attributed to the site and any remediation that has occurred at the site or neighbouring areas; and
 - Any land contamination assessment that has conducted at the site or neighbouring areas.
- 7.3.3 The reply correspondences from EPD and FSD are shown in **Appendix 7.1** and summarized in **Table 7.1**.

Table 7.1 Departmental Replies Summary

| Department | Departmental Ref | Date | Summary |
|-------------------------------------|-------------------------------|-----------------|---|
| Environmental Protection Department | N.A. (reply through email) | 31 October 2025 | No record of reported accidents of spillage/ leakage of chemicals. |
| Fire Services Department | (6) in FSD GR 6-5/4 R Pt. 61 | 4 November 2025 | There are no records of dangerous goods license, fire incidents nor incidents of spillage/ leakage of dangerous goods were found. |

7.3.4 Besides, the development history of the Subject Site was reviewed with the aid of aerial photos from Year 1995 to 2025. A total of 7 historical photographs are shown in **Appendix 7.2** and the key findings are summarized in **Table 7.2**.

Table 7.2 Aerial Photo Record

| Year | Photo No. | Flying Height | Site Description | Off-site Land Use |
|------|-----------|---------------|---|---|
| 1985 | A02632 | 15000 ft. | It was a site densely vegetated. | North, South, West: The area was densely vegetated. East: Tung Chung Road North was observed. |
| 1995 | CN12174 | 10000 ft. | It was a site densely vegetated. | North, East, South: No significant change in land use was observed. West: Village Houses are observed. |
| 2000 | A50726 | 4000 ft. | No significant change in land use was observed. | No significant change in land use was observed. |
| 2005 | CW69820 | 8000 ft. | No significant change in land use was observed. | No significant change in land use was observed. |
| 2010 | CW87163 | 8000 ft. | No significant change in land use was observed. | North, South, West: No significant change in land use was observed. East: Tung Chung Community Services Complex was observed. |
| 2015 | CW116986 | 3000 ft. | No significant change in land use was observed. | No significant change in land use was observed. |
| 2020 | E108178C | 6900 ft. | Trees are removed and became car park | No significant change in land use was observed. |
| 2025 | E251843C | 6900 ft. | No significant change in land use was observed. | Trees are removed and became a construction site for HKHA Area 23 PRH Development and Tung Chung Road North widening works is under construction. |

7.4 Site Appraisal and Observation

7.4.1 Site appraisal was carried out on 2 January 2026 to identify current land uses within the Subject Site and to verify the findings of the desktop appraisal.

7.4.2 The site walkover checklist is presented in **Appendix 7.3** and the site photos are attached **Appendix 7.4**. Part of the Subject Site is paved with concrete in good condition (See Photos 1-2, 4-7 of **Appendix 7.4**) while part of the Subject Site is covered in sand (See Photos 8-10 of **Appendix 7.4**). Small part of the Subject Site is densely vegetated (See Photos 3 & 11 of **Appendix 7.4**). Storage containers are observed but there is no direct contact between the containers and the ground. A boat and some construction machines are observed but they are not in operation. No oil stains and smells are observed within the Subject Site.

7.4.3 As there are no land contamination activities and the ground is paved with concrete in good condition, potential land contamination is not expected.

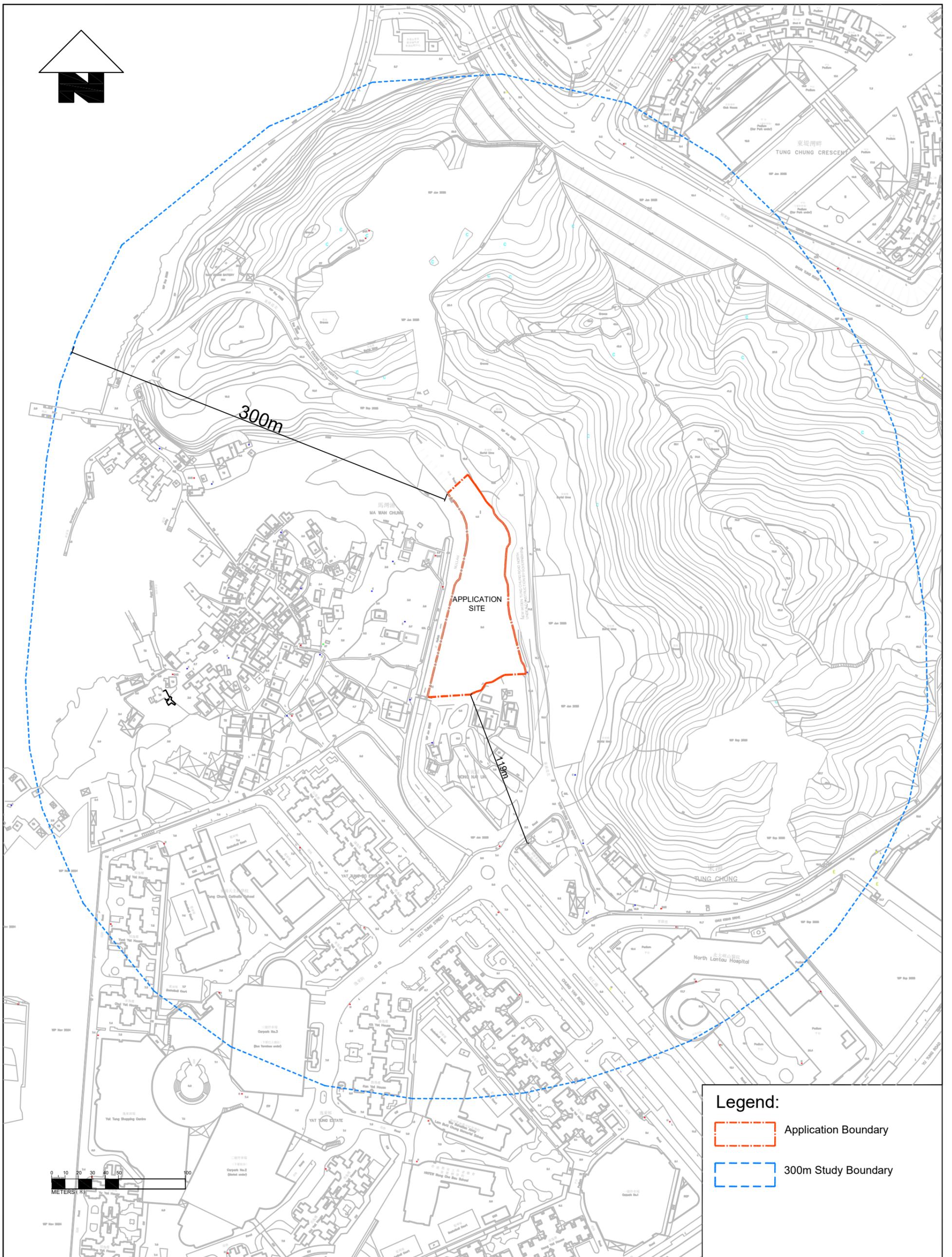
7.5 Conclusion

7.5.1 A site appraisal, in the form of desktop review and site walkover, had been carried out in January 2026 to identify the past and current potentially contaminating land uses within the Subject Site. Based on the desktop study and site appraisal, there are no land contamination activities and the ground is paved with concrete in good condition, potential land contamination is not expected.

8. CONCLUSION

- 8.1.1 The Application proposes to allow for minor relaxation of building height restriction from 55mPD in approved scheme to 60.3mPD adopting the modular integration construction (MiC) and slightly increasing floor-to-floor height from 3.3m to 3.5m. In order to confirm the environmental acceptability of the Application, Noise Impact Assessment, Air Quality Impact Assessment, Waste Management Implication Assessment, Water Quality Impact Assessment were carried out to examine the impacts associated with the Proposed Development.
- 8.1.2 With sufficient setback distance and the worst case scenario mitigation measure which would be subject to further review in the detailed design stage, it is anticipated that the future residents would not be subject to significant traffic and fixed noise impact.
- 8.1.3 No air sensitive uses, including openable windows and fresh air-intake of ventilation system, will be located within the vehicular emission buffer zone. Therefore, it is anticipated that the future residents would not be subject to adverse vehicular emission impact.
- 8.1.4 Based on site visits, there is no active chimney identified operating within 200m from the Development Site and therefore, significant chimney emission impact upon the proposed development is not anticipated. The Development Site would not be subject to insurmountable industrial emission impact.
- 8.1.5 Provided that the identified waste arising from the construction works are handled, transported and disposed of using approved methods and that the recommended good site practices are adhered to, adverse environmental impacts are not anticipated.
- 8.1.6 Waste will be removed regularly by an appointed party. Provided that the environmental control measures are properly implemented, no adverse environmental impact would be anticipated with respect to solid waste management.
- 8.1.7 Water quality impacts from construction are associated with the general construction activities, construction site run-off and sewage effluent from construction workforce, while the water quality impacts from operation are associated with normal urban surface runoff only. Potential water quality impacts can be controlled by implementing the recommended mitigation measures. With the implementation of mitigation measures, no adverse water quality impact on the identified WSRs is anticipated.
- 8.1.8 For land contamination review, a site appraisal, in the form of desktop review and site walkover, had been carried out in January 2026 to identify the past and current potentially contaminating land uses within the Subject Site. Based on the desktop study and site appraisal, there are no land contamination activities and the ground is paved with concrete in good condition, potential land contamination is not expected.
- 8.1.9 The environmental assessment study confirms the acceptability of the proposed development from environmental point of view.

Figures



| | |
|---|----------------------|
| Legend: | |
|  | Application Boundary |
|  | 300m Study Boundary |

Figure: 1.1a

Title: Site Location Plan

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island



Drawn by: SC

Checked by: TC

Rev.: 1.0

Date: Nov 2025



Figure: 2.1a

Title: Location of Representative Noise Sensitive Receivers (T1 - GF)

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026

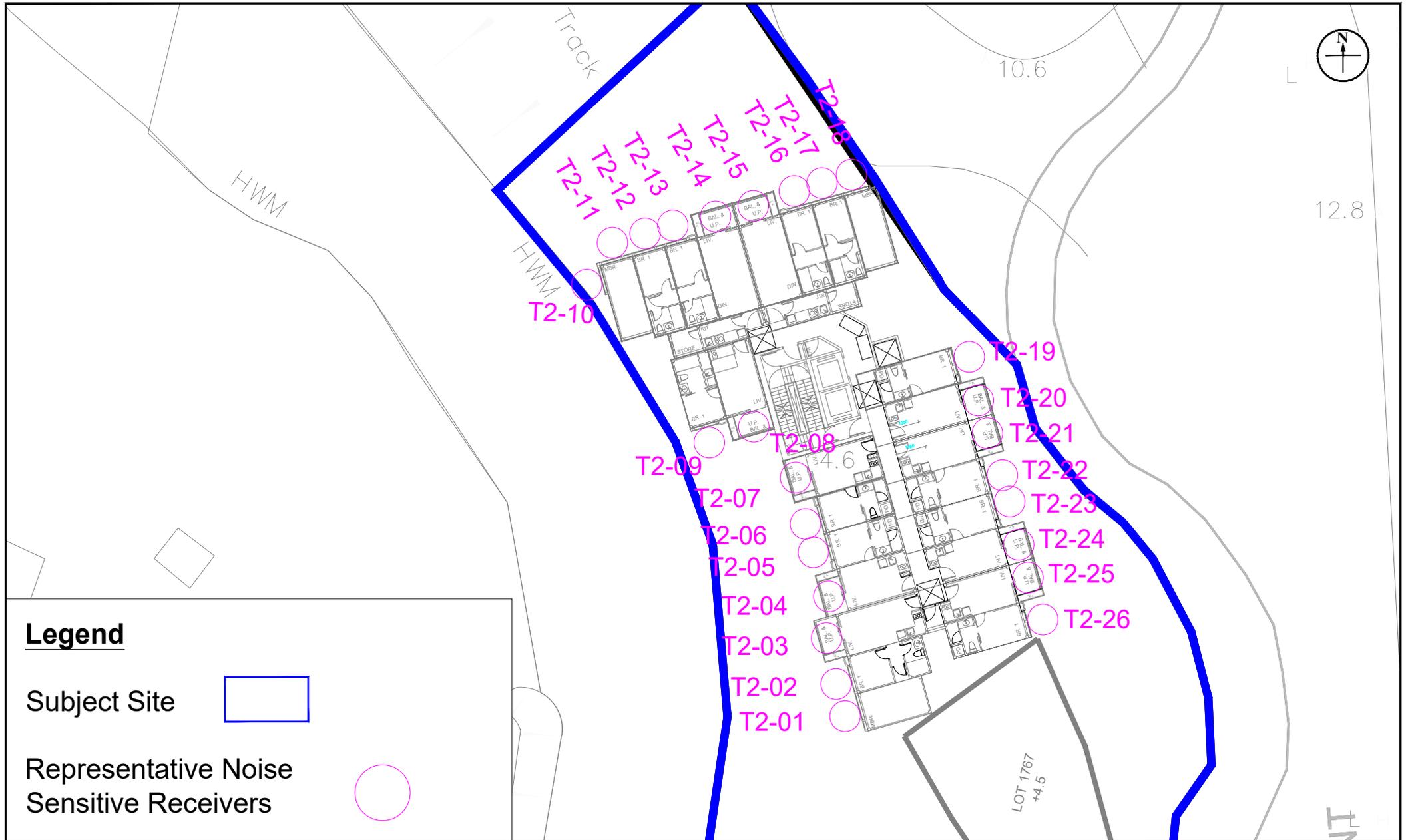


Figure: 2.1b

Title: Location of Representative Noise Sensitive Receivers (T2 - GF)

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

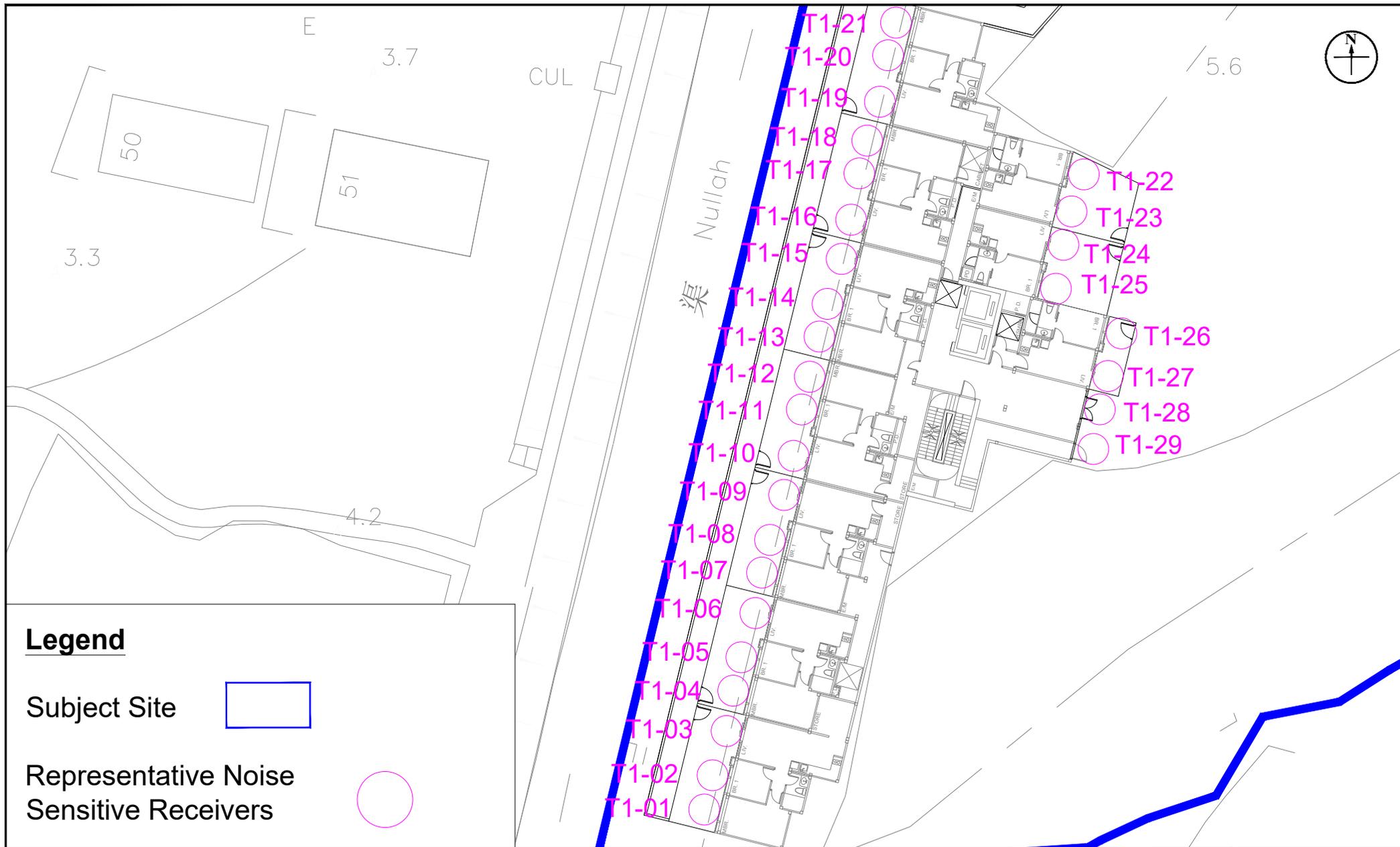
RAMBOLL

Drawn by: SC

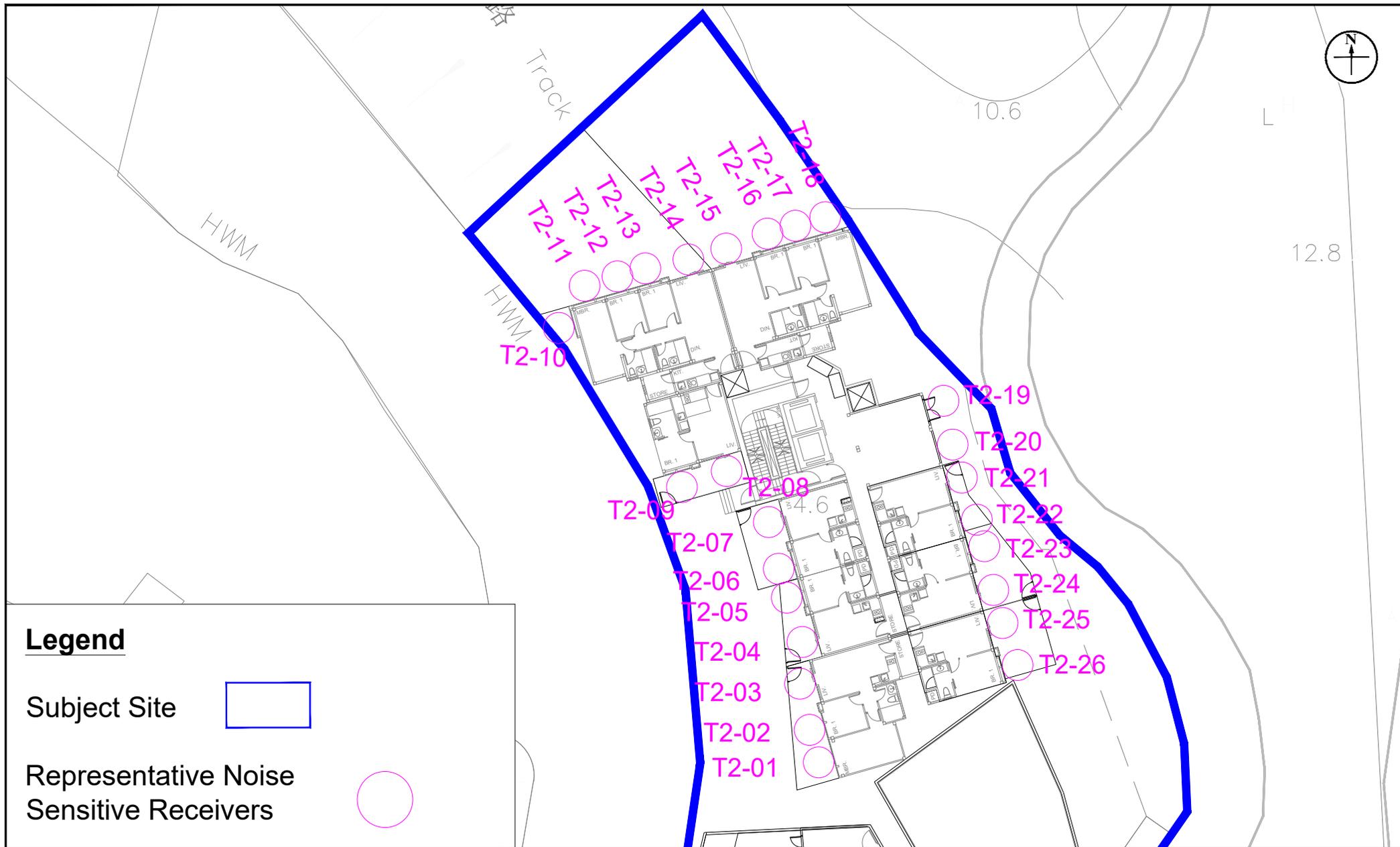
Checked by: TW

Rev.: 1.0

Date: Jan 2026



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| RAMBOLL | |
| Drawn by: | SC |
| Checked by: | TW |
| Rev.: | 1.0 |
| Date: | Jan 2026 |



Legend

- Subject Site 
- Representative Noise Sensitive Receivers 

Figure: 2.1d

Title: Location of Representative Noise Sensitive Receivers (T2 - 1F)

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Ajoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

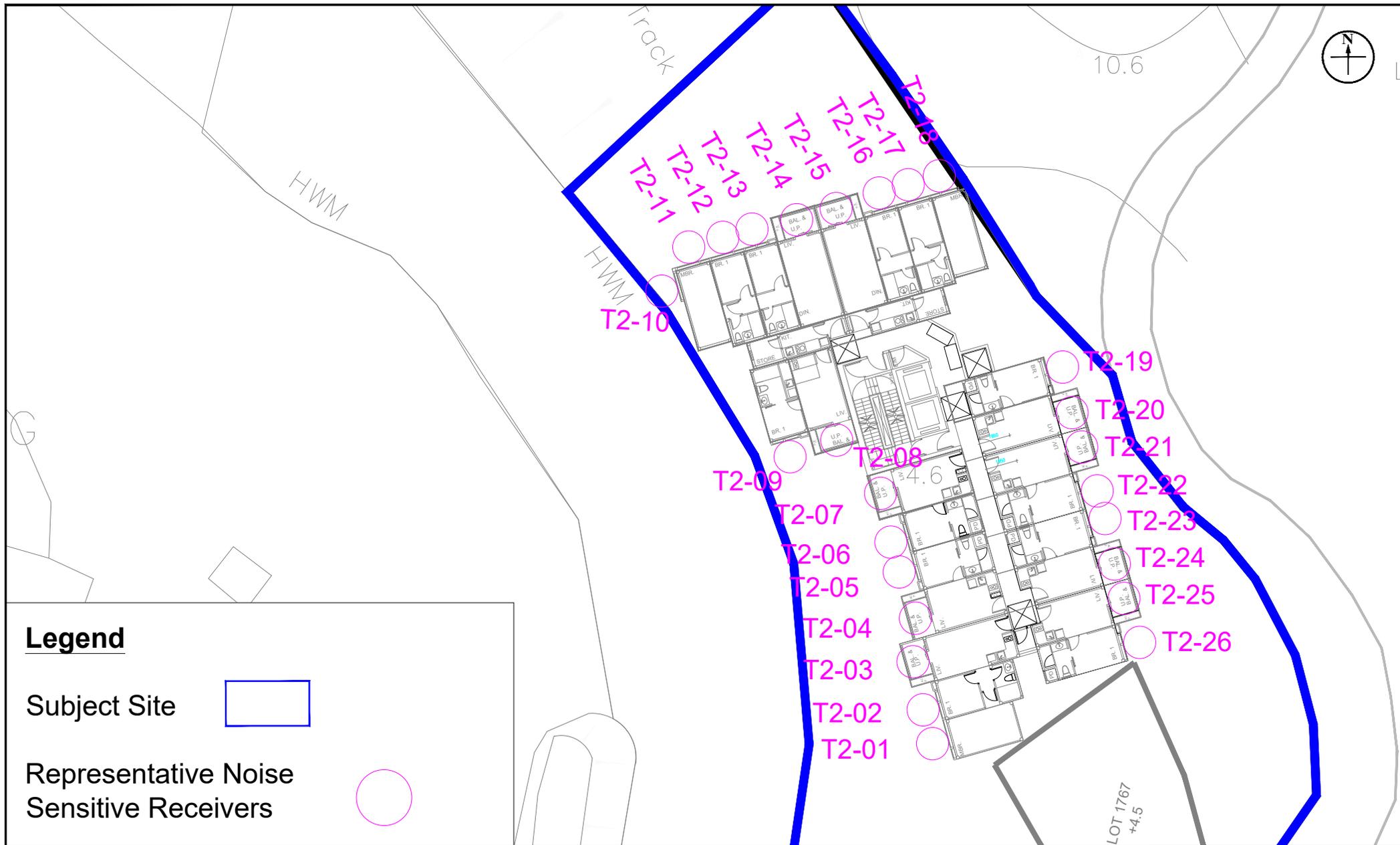
Date: Jan 2026



Legend

- Subject Site
- Representative Noise Sensitive Receivers

| | |
|--|----------------|
| Figure: 2.1e | RAMBOLL |
| Title: Location of Representative Noise Sensitive Receivers (T1 - 2F to 13F) | Drawn by: SC |
| Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Ajoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island | Checked by: TW |
| | Rev.: 1.0 |
| | Date: Jan 2026 |



Legend

Subject Site 

Representative Noise Sensitive Receivers 

| | | |
|---|---|--------------|
| Figure: 2.1f | RAMBOLL | |
| | Title: Location of Representative Noise Sensitive Receivers (T2 - 2F to 13F) | Drawn by: SC |
| Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island | Checked by: TW | |
| | Rev.: 1.0 | |
| | Date: Jan 2026 | |

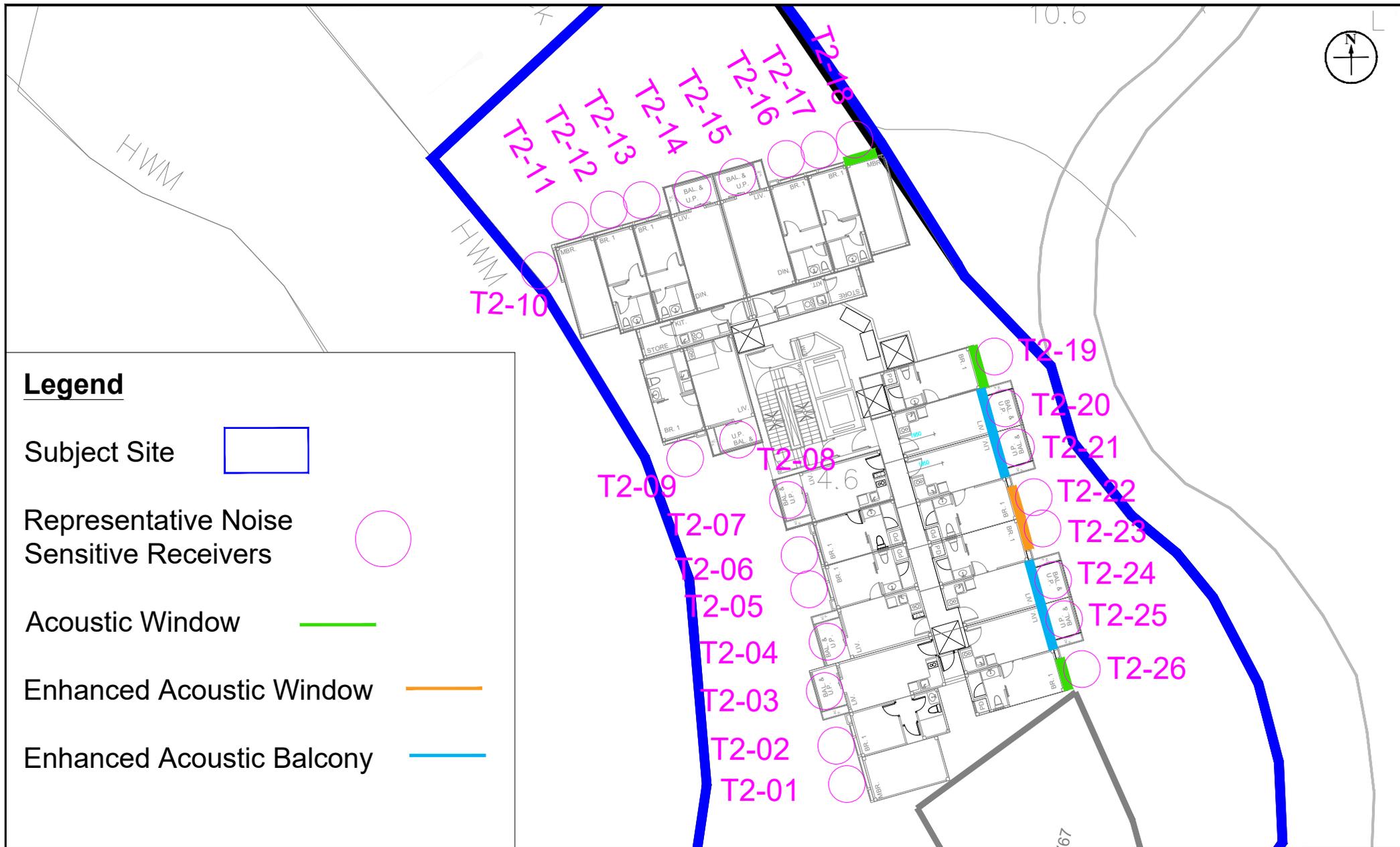


Figure: 2.2

Title: Proposed Noise Mitigation Measures (T2)

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

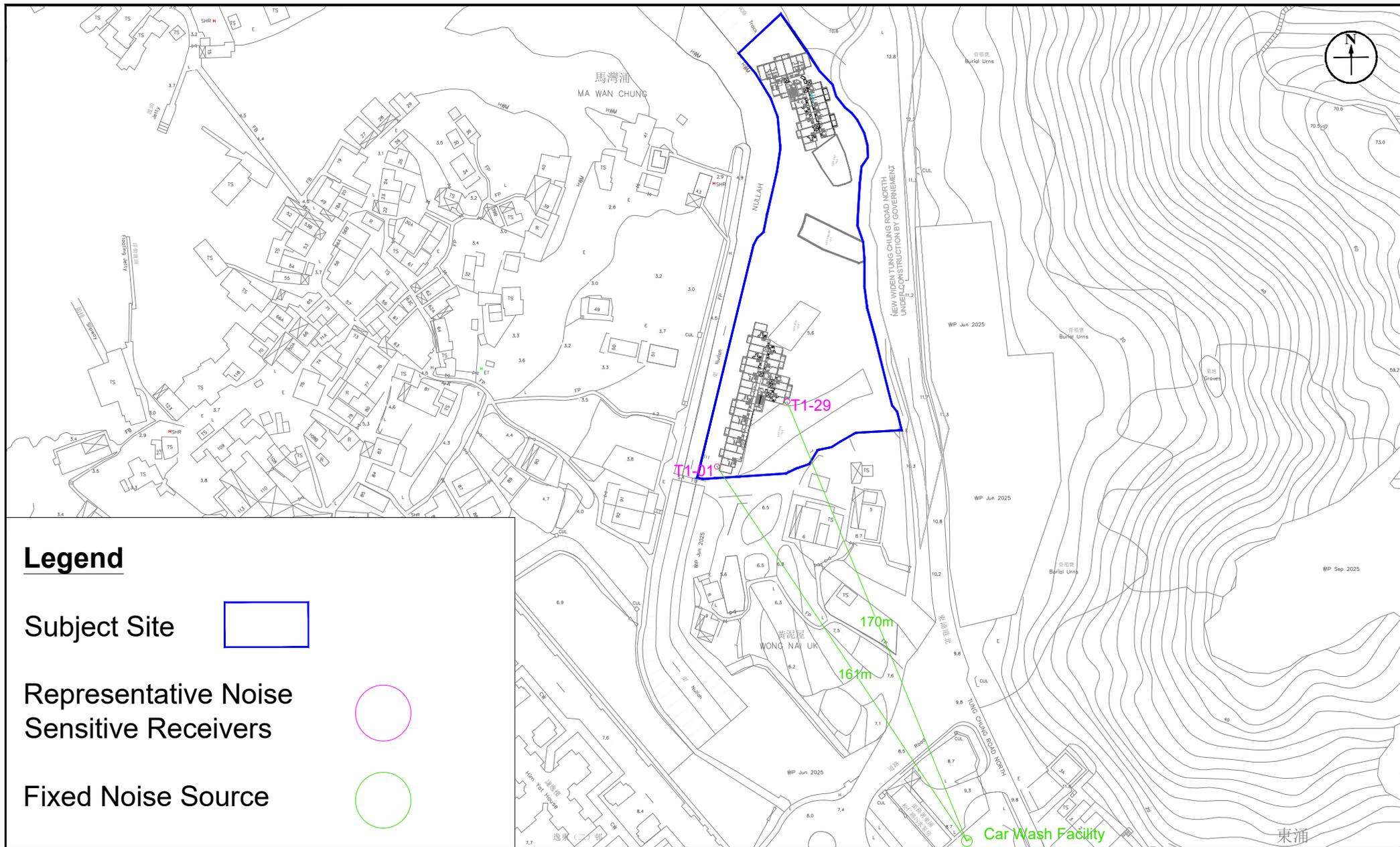
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Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



Legend

Subject Site



Representative Noise Sensitive Receivers



Fixed Noise Source



Figure: 3.1

Title: Representative NSRs for Fixed Noise Source Impact Assessment

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

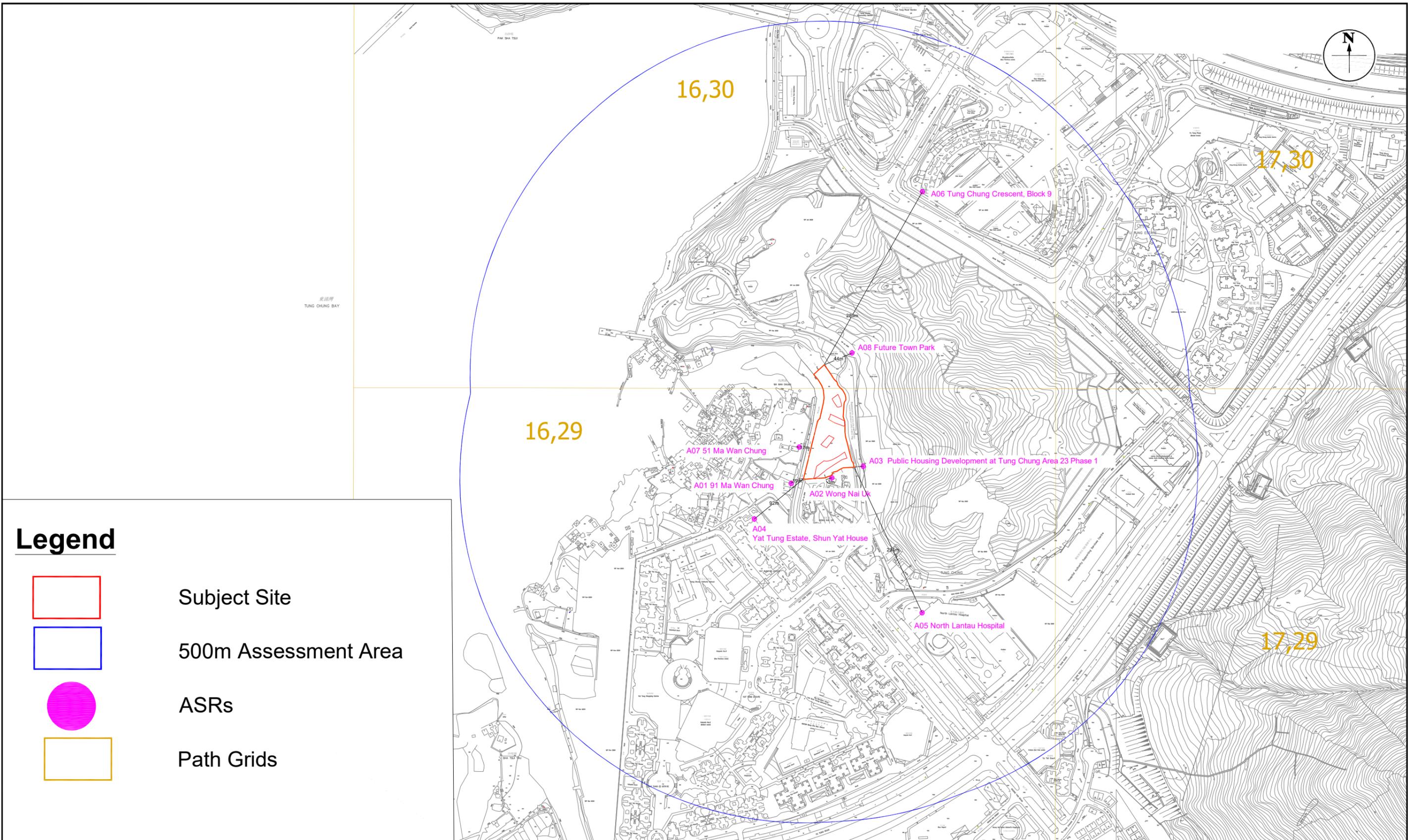
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Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



Legend

- Subject Site
- 500m Assessment Area
- ASRs
- Path Grids

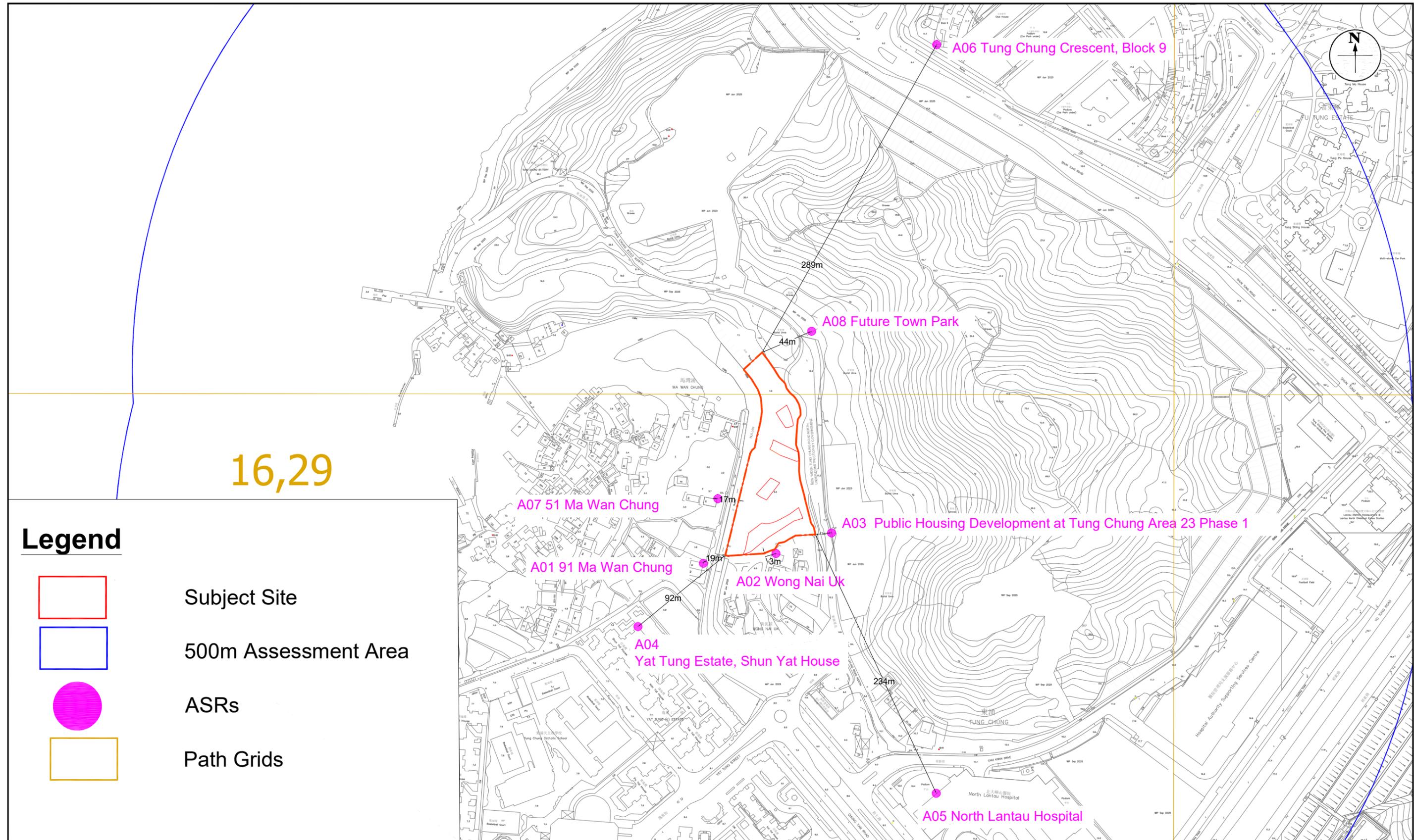
Figure: 4.1a

Title: Locations of ASRs during Construction Phase (Overall)

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island



| | |
|-------------|----------|
| Drawn by: | SC |
| Checked by: | TW |
| Rev.: | 1.0 |
| Date: | Jan 2026 |



Legend

- Subject Site
- 500m Assessment Area
- ASRs
- Path Grids

Figure: 4.1b

Title: Locations of ASRs during Construction Phase (Zoomed In)

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island



Drawn by: SC
 Checked by: TW
 Rev.: 1.0
 Date: Jan 2026

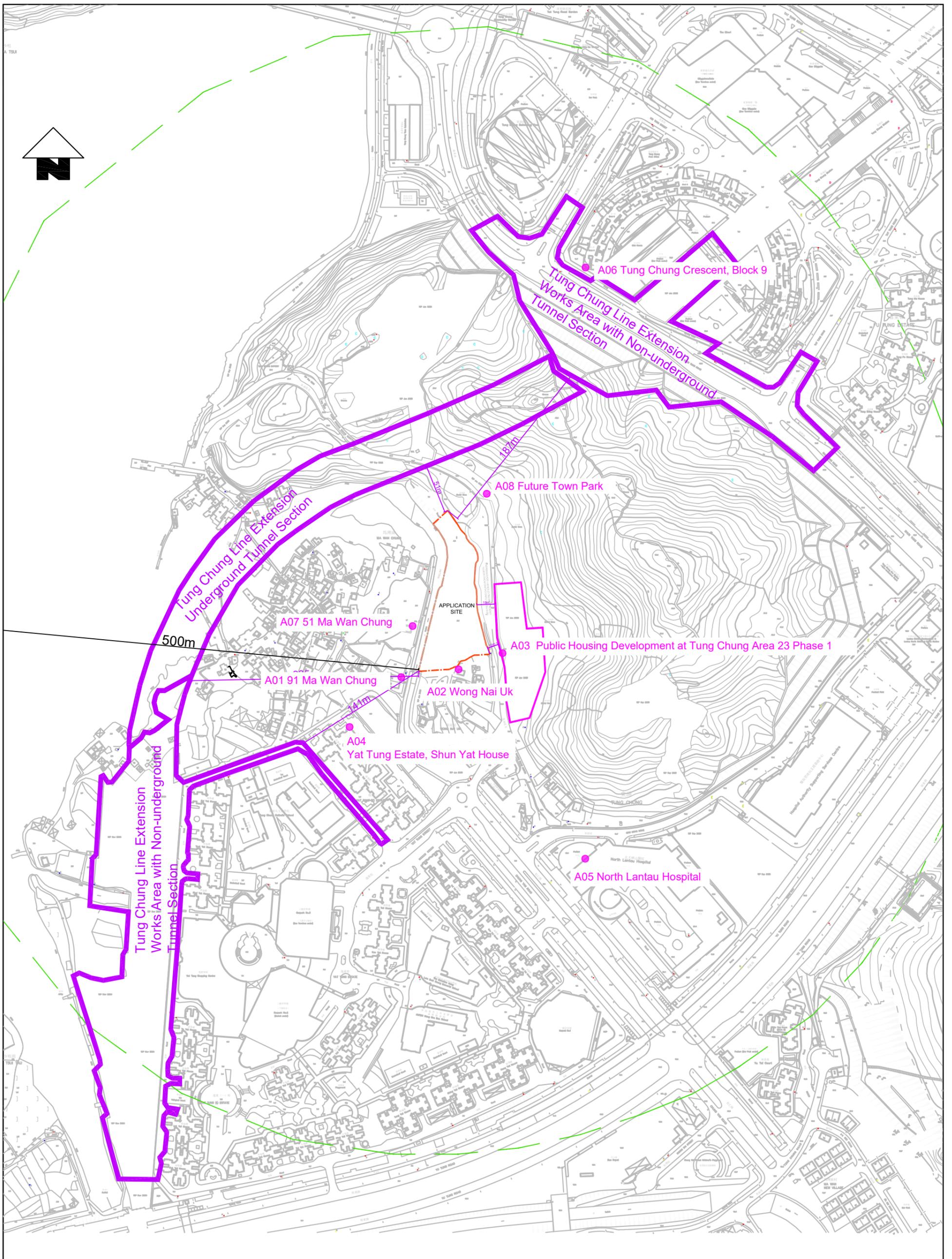


Figure: 4.2

Title: Potential Concurrent Projects

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island



Drawn by: SC

Checked by: TC

Rev.: 1.1

Date: Jan 2026

Remark

No air-sensitive uses including openable windows, fresh air intakes and recreational uses in the open space are allowed within the buffer zone



Legend

Subject Site



Buffer Distance from Access Road



Figure: 4.3a

Title: Minimum Buffer Distance Required from the Kerb Side of Carriageways (Ground Floor)

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

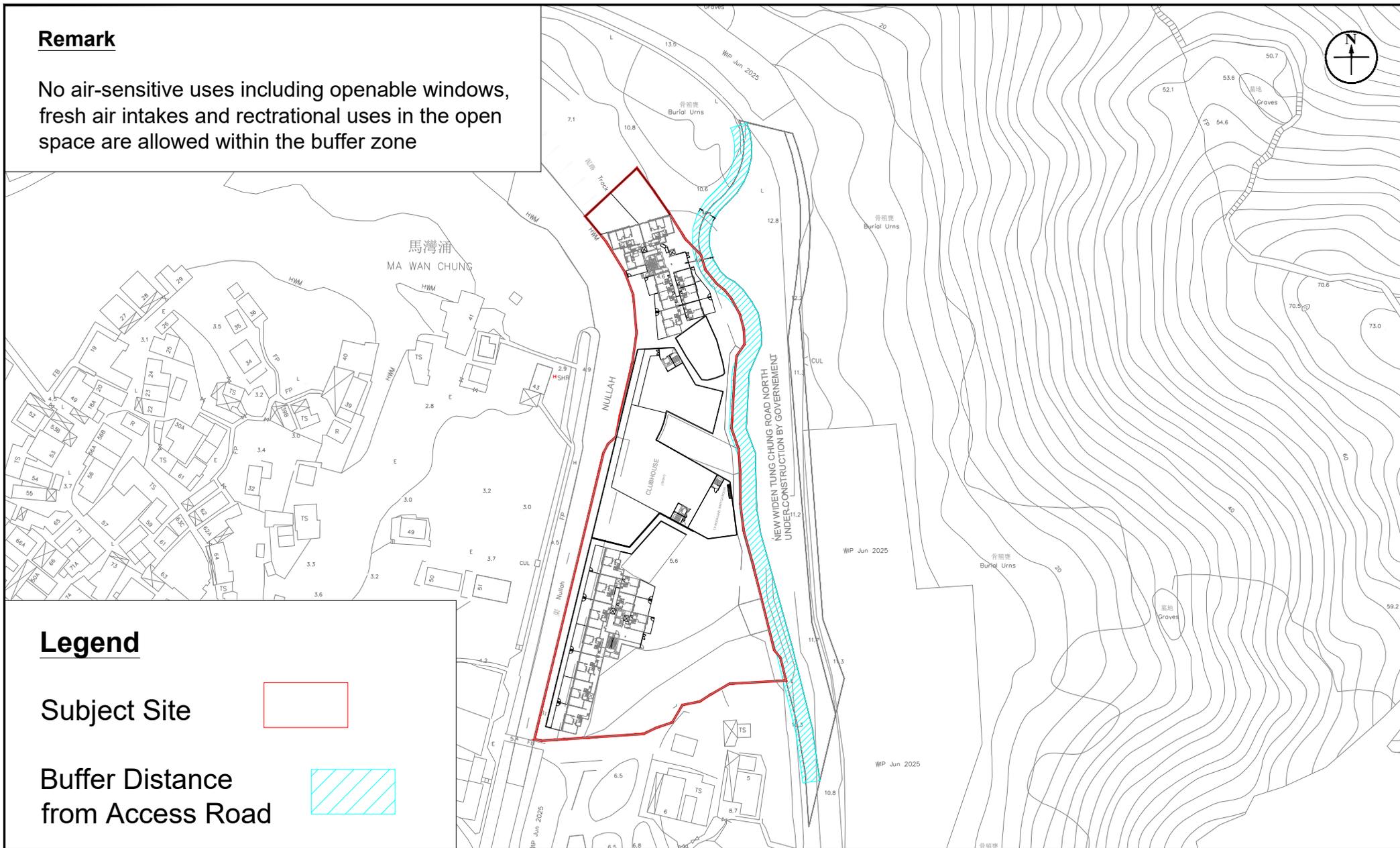
Checked by: TW

Rev.: 1.0

Date: Nov 2025

Remark

No air-sensitive uses including openable windows, fresh air intakes and recreational uses in the open space are allowed within the buffer zone



Legend

Subject Site



Buffer Distance from Access Road

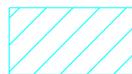


Figure: 4.3b

Title: Minimum Buffer Distance Required from the Kerb Side of Carriageways (First Floor)

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Nov 2025

Remark

No air-sensitive uses including openable windows, fresh air intakes and recreational uses in the open space are allowed within the buffer zone



Legend

Subject Site



Buffer Distance from Access Road

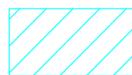


Figure: 4.3c

Title: Minimum Buffer Distance Required from the Kerb Side of Carriageways (Typical Floor)

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Nov 2025

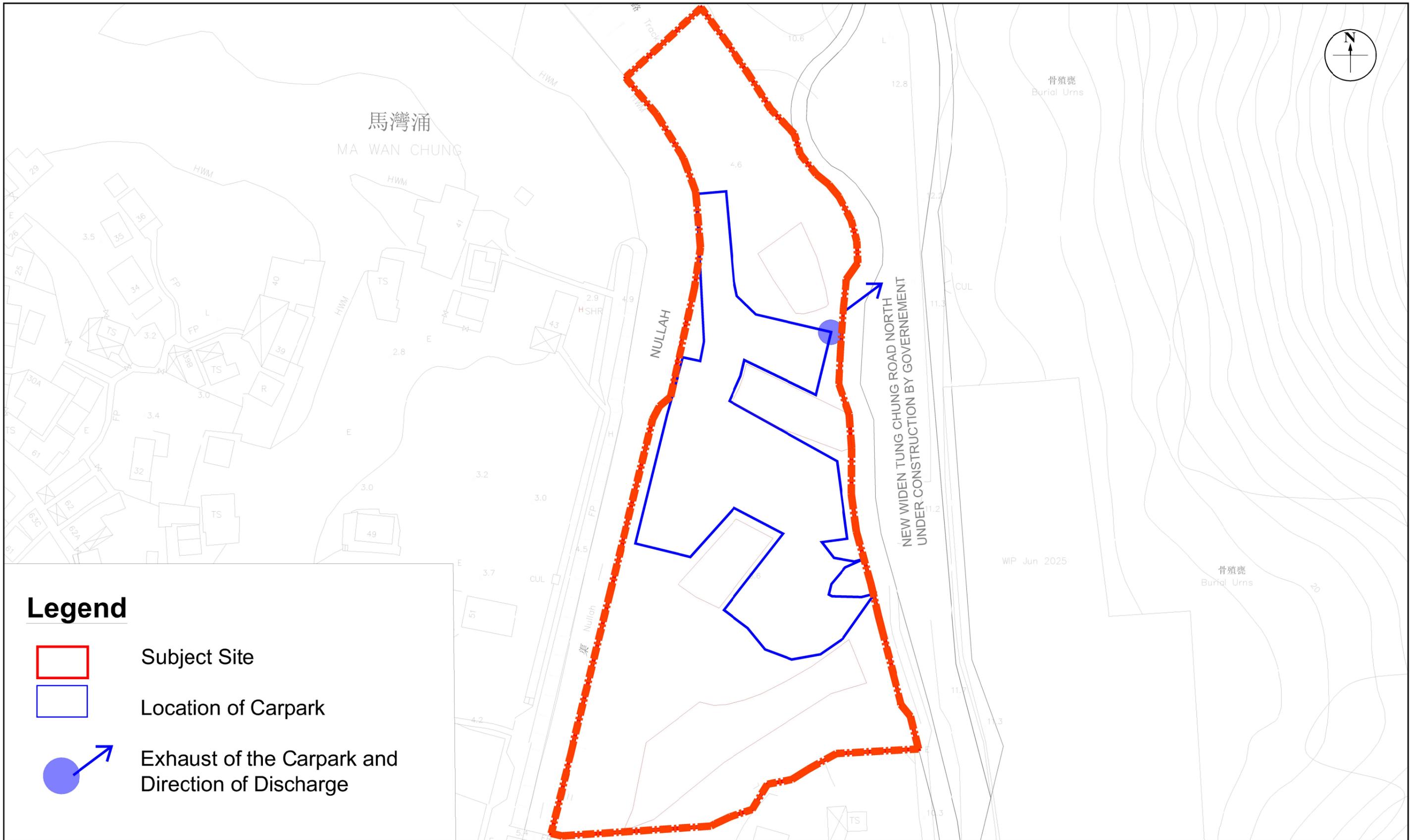


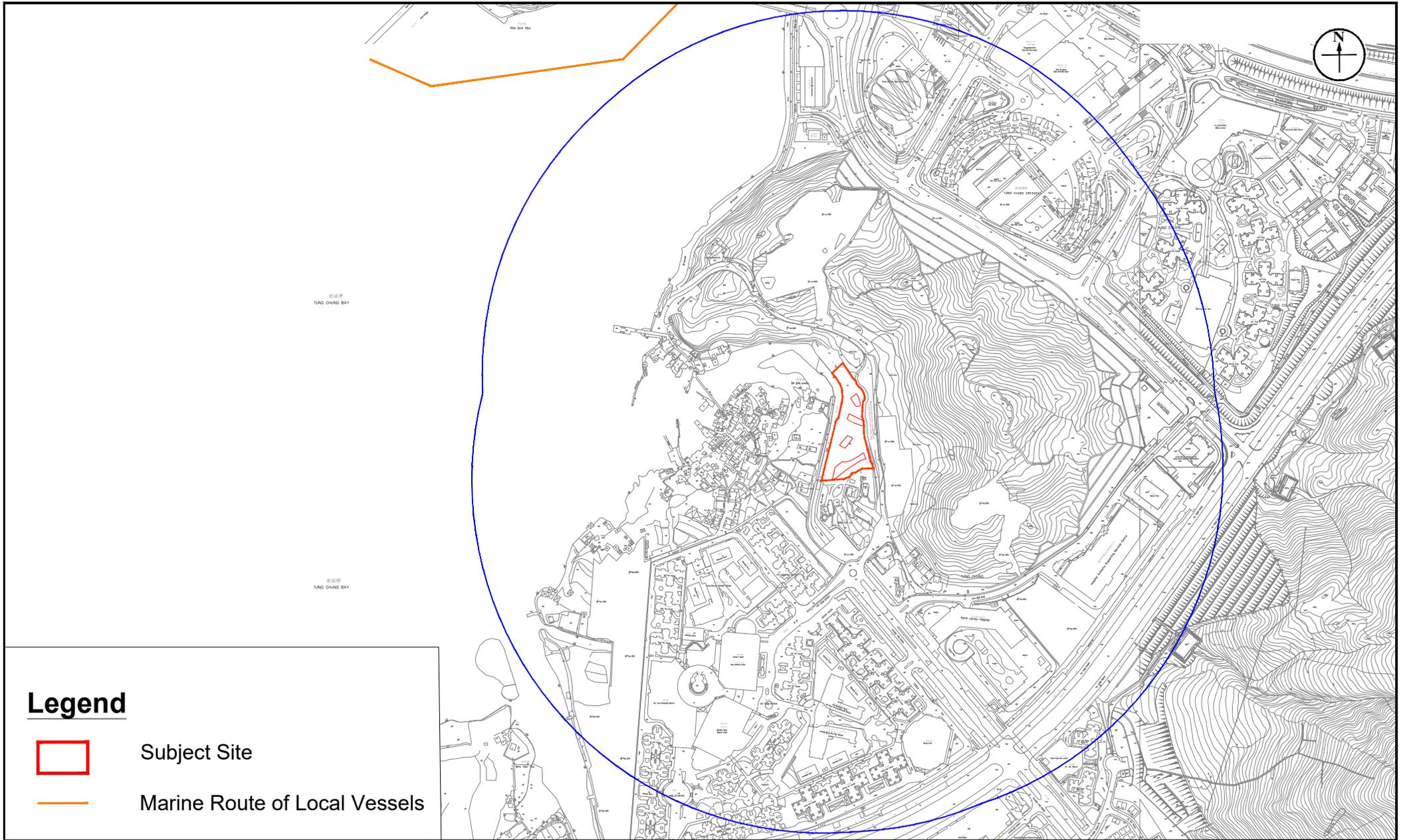
Figure: 4.4

Title: Locations of Carpark and its Exhaust

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC
 Checked by: TW
 Rev.: 1.0
 Date: Jan 2026



Legend

- Subject Site
- Marine Route of Local Vessels

Figure: 4.5

Title: Marine Route of Local Vessels

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



| Legend: | |
|---|---------------------------|
|  | Application Boundary |
|  | 500m Study Boundary |
|  | Water Sensitive Receivers |

Figure: 5.1

Title: Water Sensitive Receivers within 500m Study Boundary

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Government Land, Tung Chung Road North, Tung Chung, Lantau Island



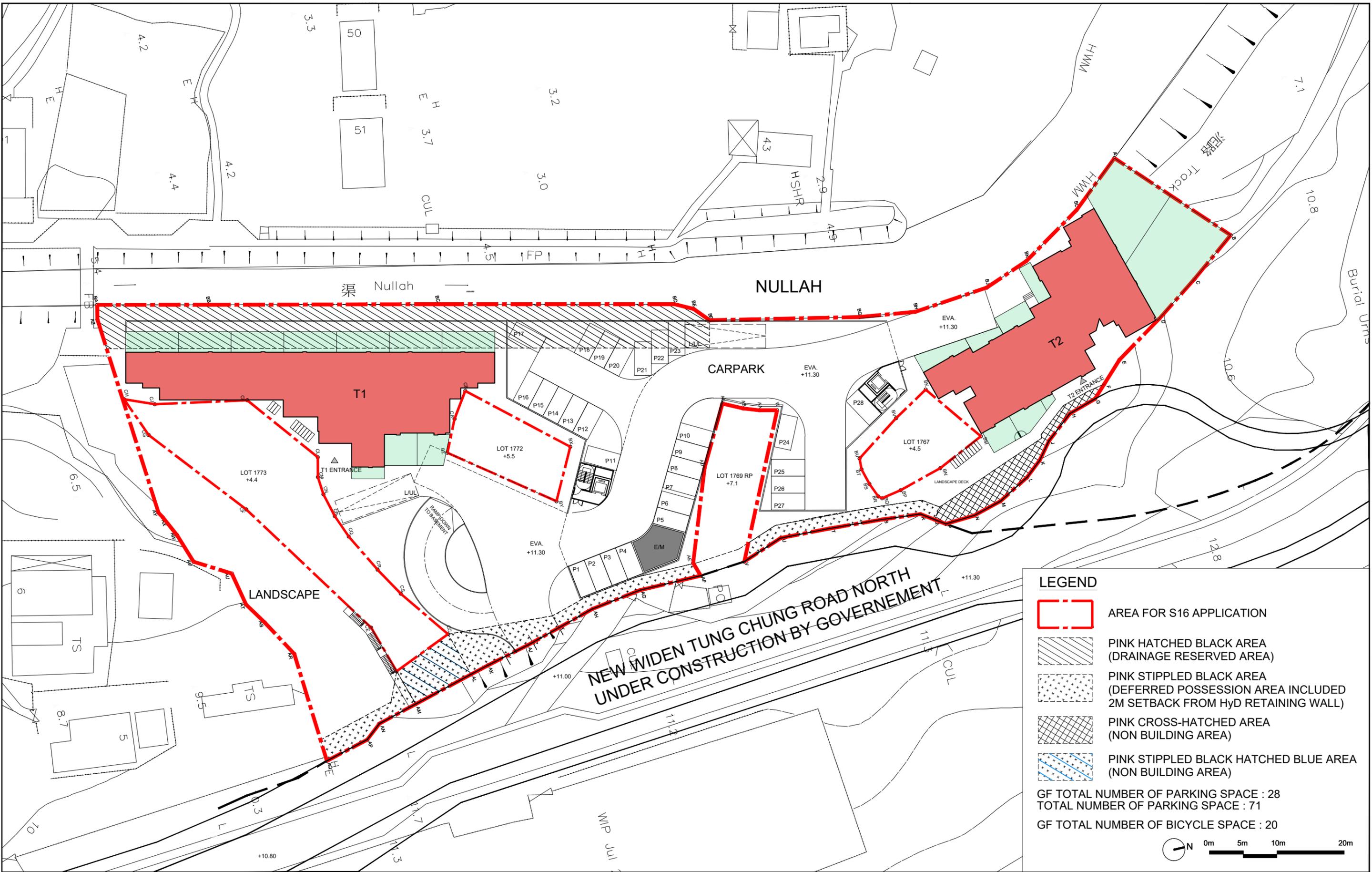
Drawn by: SC

Checked by: TC

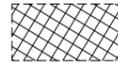
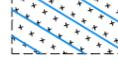
Rev.: 1.0

Date: Nov 2025

Appendix 1.1 Indicative Development Scheme



LEGEND

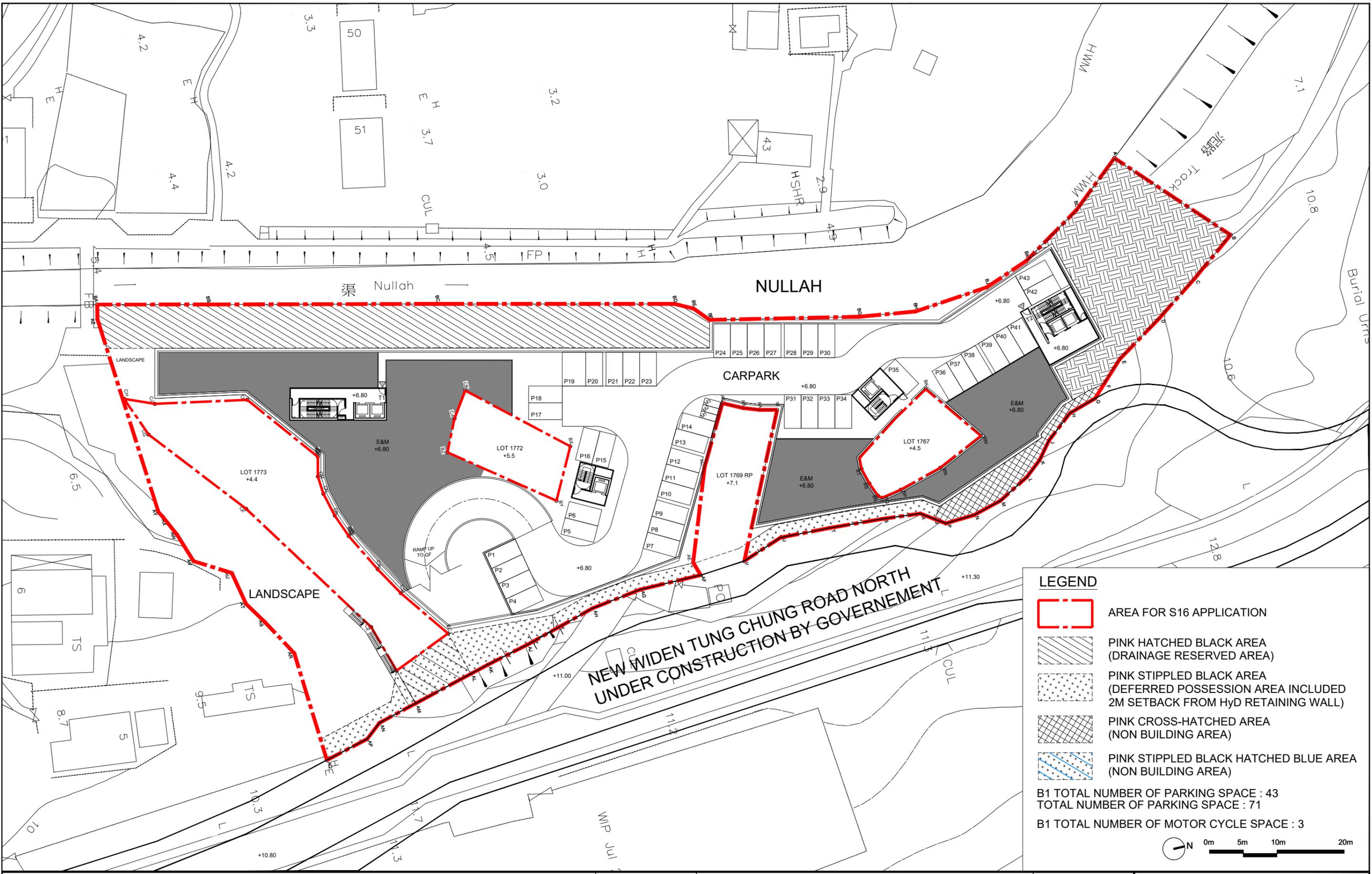
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-  PINK HATCHED BLACK AREA (DRAINAGE RESERVED AREA)
-  PINK STIPPLED BLACK AREA (DEFERRED POSSESSION AREA INCLUDED 2M SETBACK FROM Hyd RETAINING WALL)
-  PINK CROSS-HATCHED AREA (NON BUILDING AREA)
-  PINK STIPPLED BLACK HATCHED BLUE AREA (NON BUILDING AREA)

GF TOTAL NUMBER OF PARKING SPACE : 28
 TOTAL NUMBER OF PARKING SPACE : 71
 GF TOTAL NUMBER OF BICYCLE SPACE : 20

0m 5m 10m 20m

| | | | |
|---|----------------------------|---|--------------------------|
| Drawing Title GROUND FLOOR PLAN | Scale 1:500 (A3) | Project A-2517 | Job No. A-2517 |
| | Date 30/1/2026 | PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND | Dwg No. GP-01 |





Drawing Title
BASEMENT 1 FLOOR PLAN

Scale
1:500 (A3)

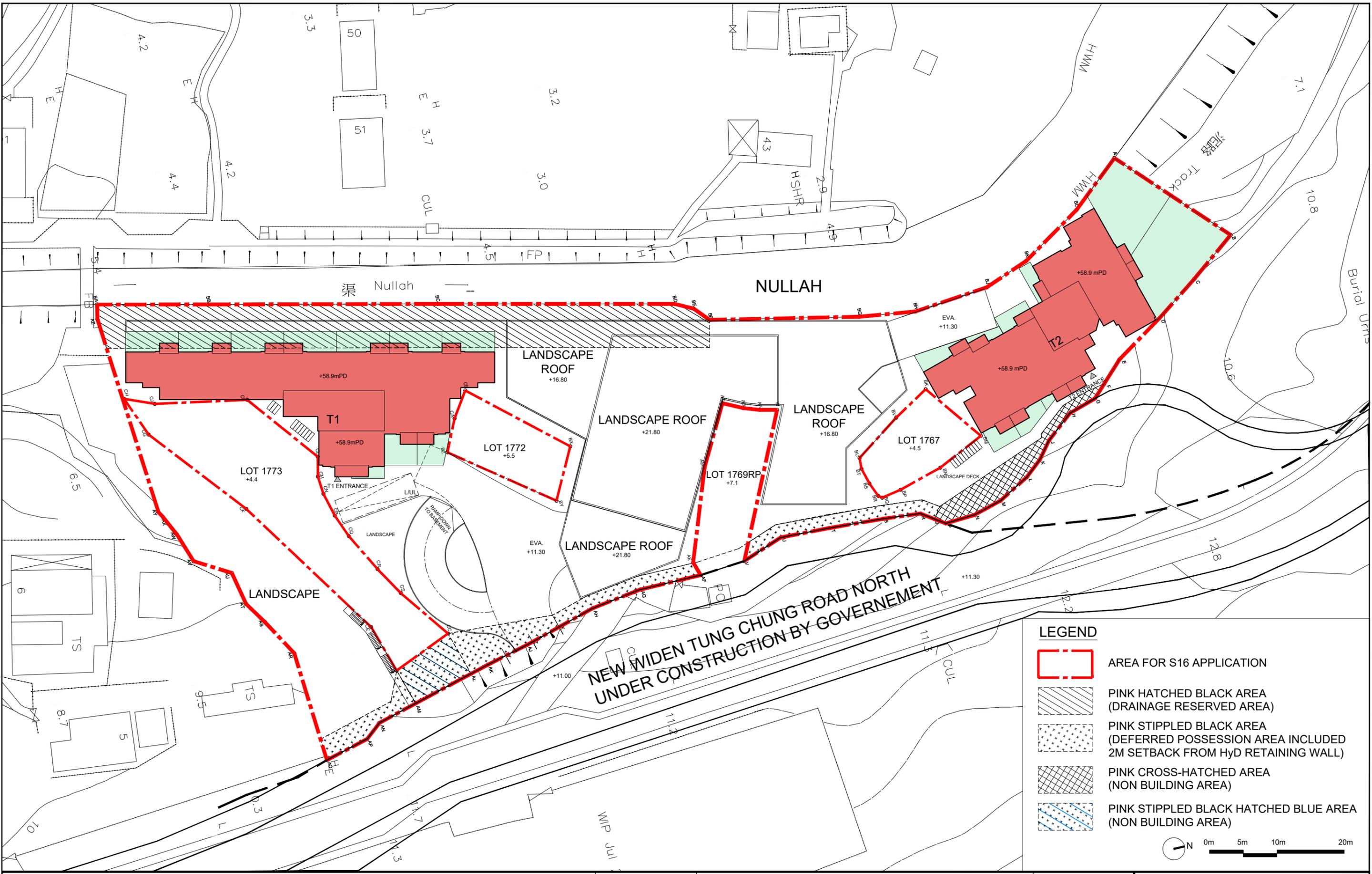
Date
30/1/2026

Project
A-2517
 PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND

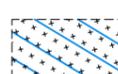
Job No.
A-2517

Dwg No.
GP-02



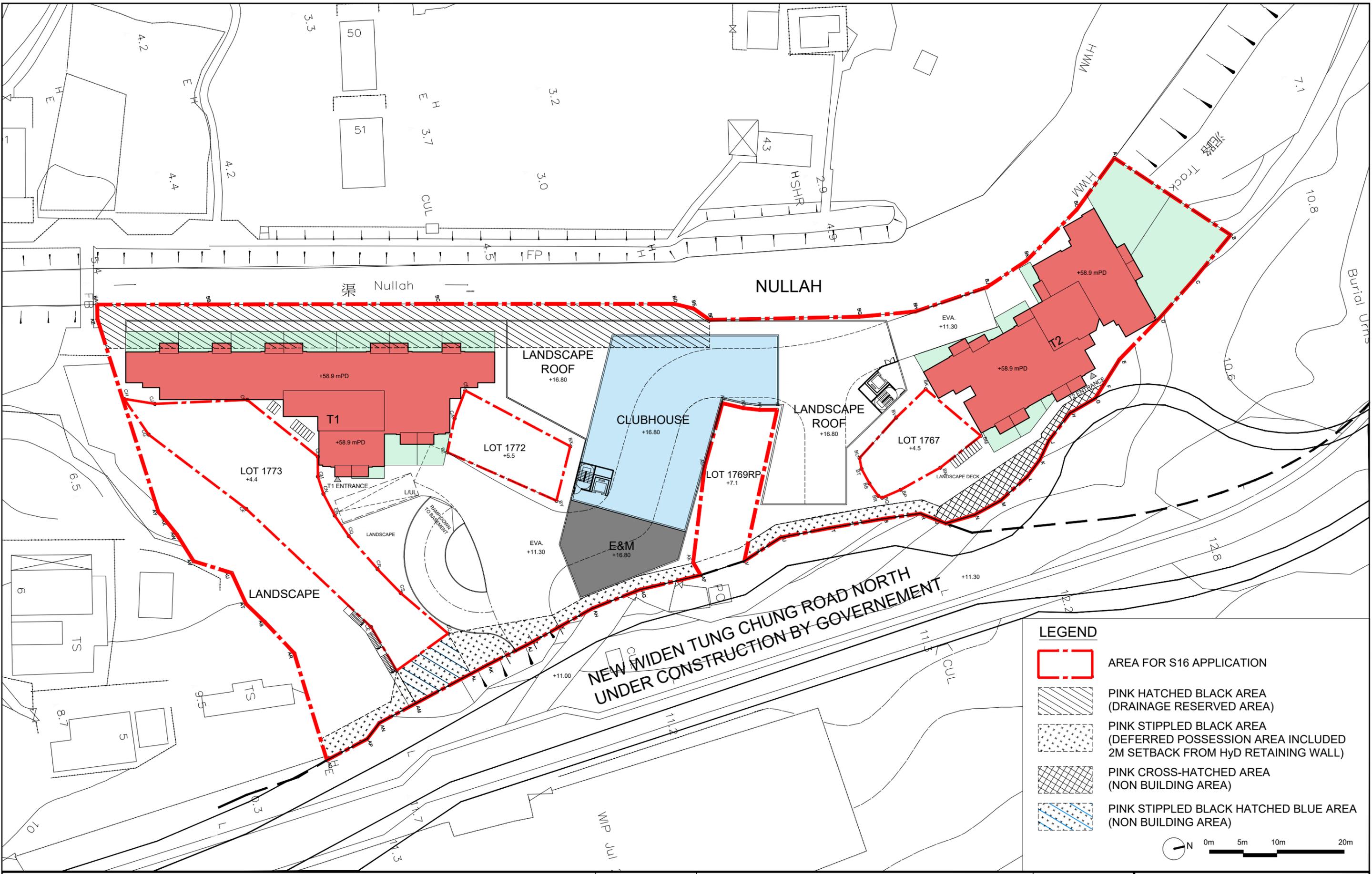


LEGEND

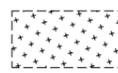
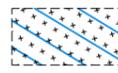
-  AREA FOR S16 APPLICATION
-  PINK HATCHED BLACK AREA (DRAINAGE RESERVED AREA)
-  PINK STIPPLED BLACK AREA (DEFERRED POSSESSION AREA INCLUDED 2M SETBACK FROM Hyd RETAINING WALL)
-  PINK CROSS-HATCHED AREA (NON BUILDING AREA)
-  PINK STIPPLED BLACK HATCHED BLUE AREA (NON BUILDING AREA)


 0m 5m 10m 20m

| | | | |
|---|----------------------------|---|---|
| Drawing Title TYPICAL LAYOUT PLAN | Scale 1:500 (A3) | Project A-2517 PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND | Job No. A-2517 |
| | Date 24/2/2026 | Dwg No. GP-03 |  ANDREW LEE KING FUN & ASSOCIATES ARCHITECTS LTD |

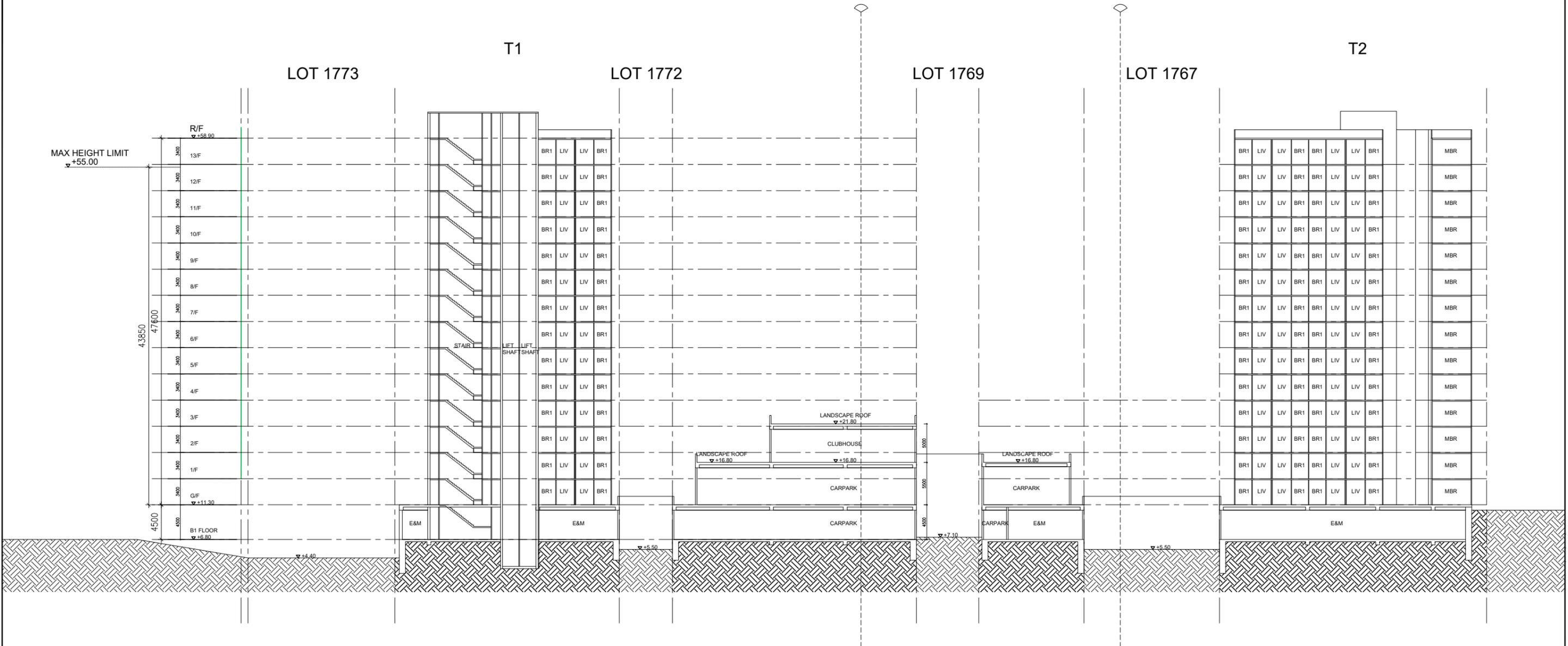
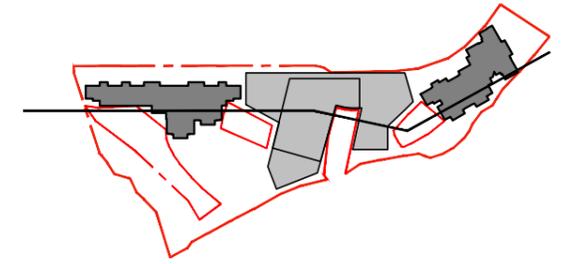


LEGEND

-  AREA FOR S16 APPLICATION
-  PINK HATCHED BLACK AREA (DRAINAGE RESERVED AREA)
-  PINK STIPPLED BLACK AREA (DEFERRED POSSESSION AREA INCLUDED 2M SETBACK FROM Hyd RETAINING WALL)
-  PINK CROSS-HATCHED AREA (NON BUILDING AREA)
-  PINK STIPPLED BLACK HATCHED BLUE AREA (NON BUILDING AREA)

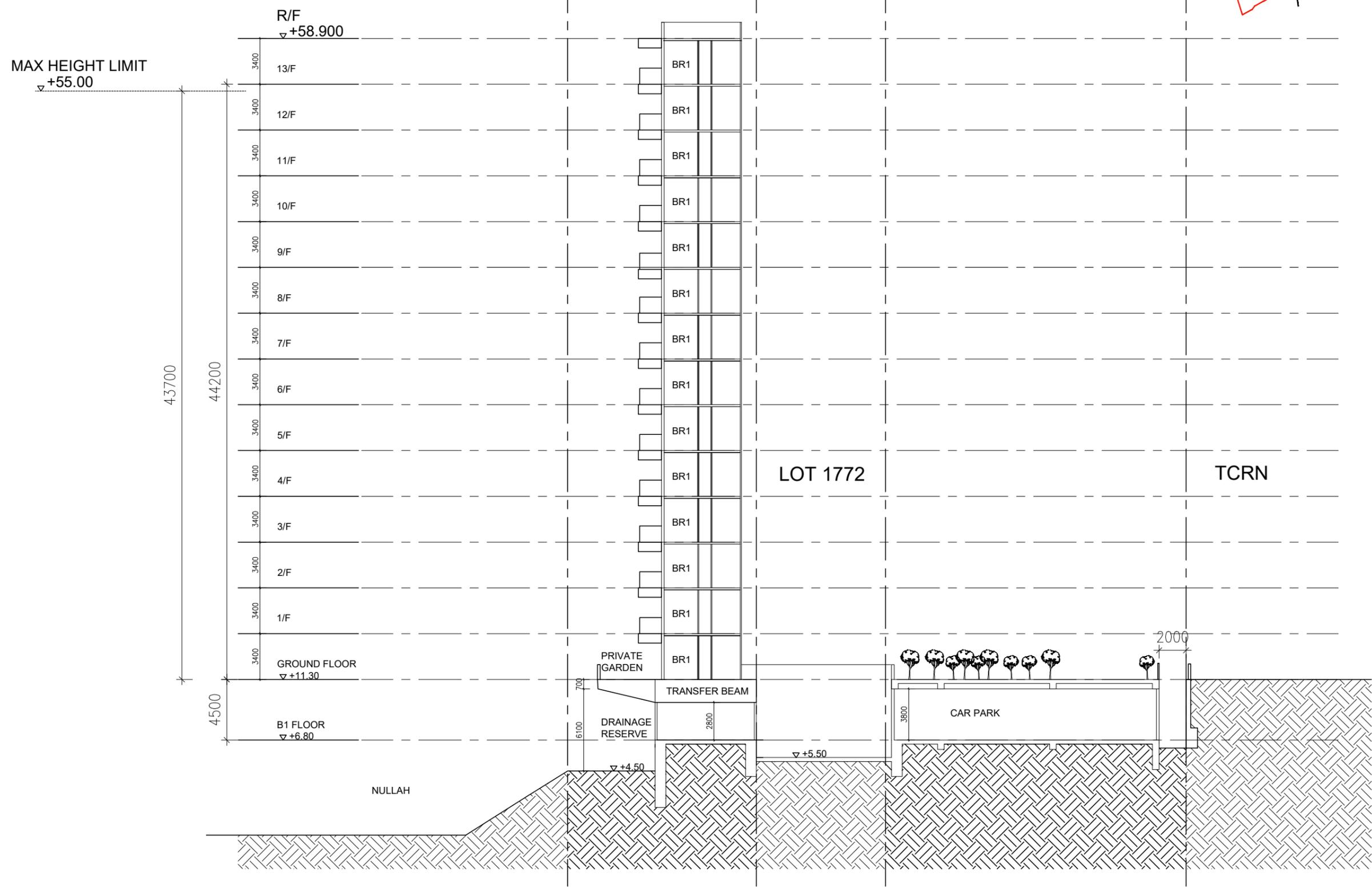
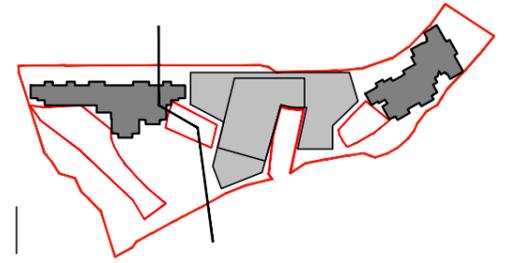

 0m 5m 10m 20m

| | | | |
|--|----------------------------|---|---|
| Drawing Title MASTER LAYOUT PLAN | Scale 1:500 (A3) | Project A-2517 PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND | Job No. A-2517 |
| | Date 24/2/2026 | Dwg No. MLP-01 |  ANDREW LEE KING FUN & ASSOCIATES ARCHITECTS LTD |



| | | | |
|--------------------------------------|---------------------|--|-------------------|
| Drawing Title LONG SECTION | Scale 1:500 (A3) | Project A-2517 PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND | Job No. A-2517 |
| | Date 30/01/2025 | | Dwg No. SEC-01 |





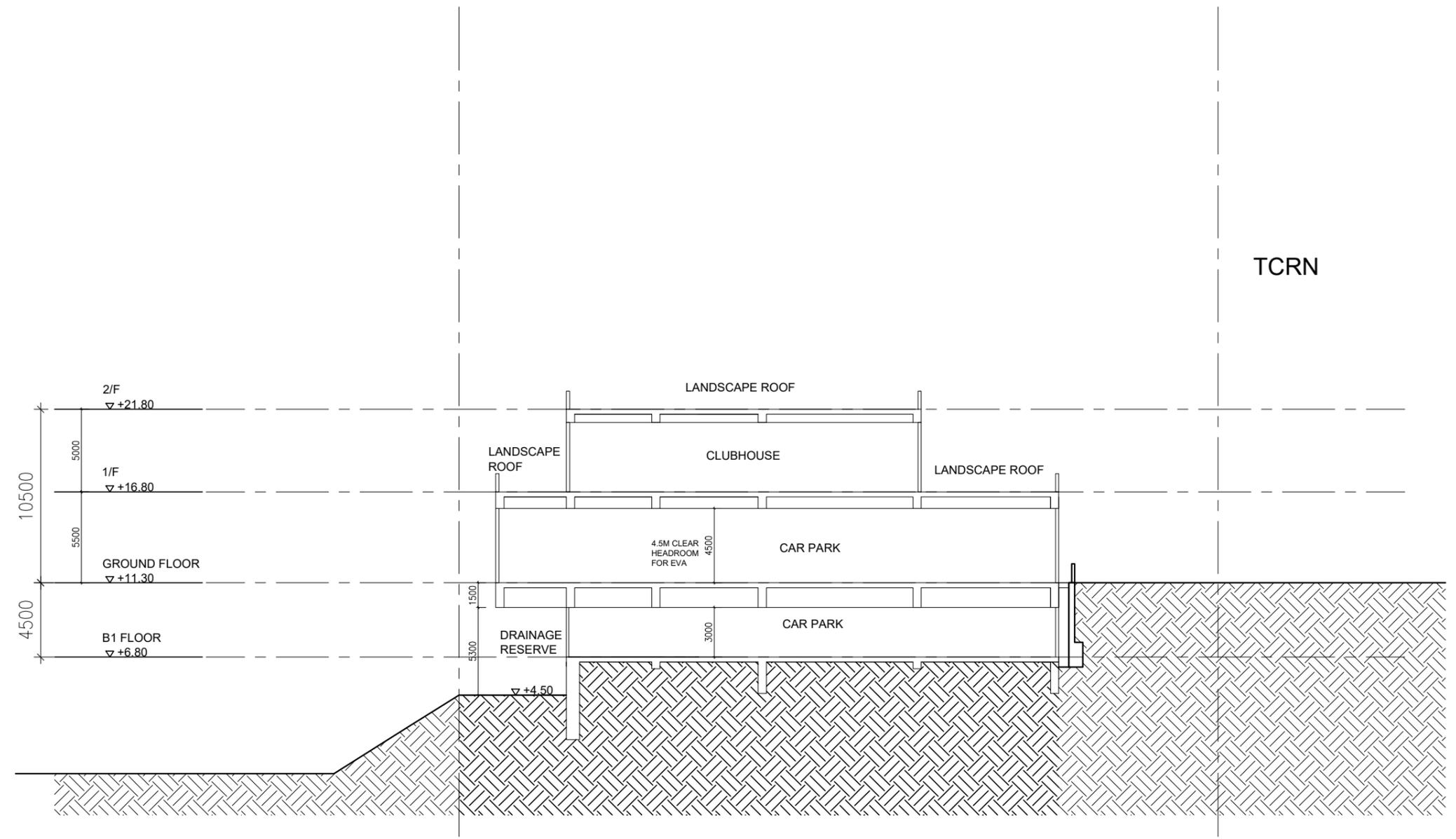
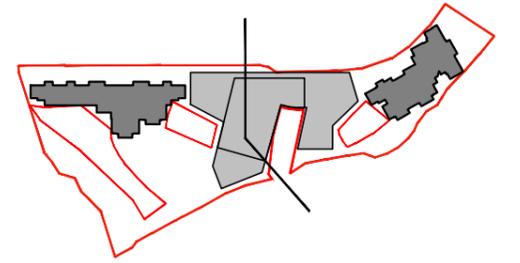
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**SECTION (3400 FLOOR TO FLOOR)
 1 BASEMENT SCHEME**

Scale
1:300 (A3)
 Date
30/01/2026

Project
A-2517
 PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT
 RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING
 GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG,
 LANTAU ISLAND

Job No.
A-2517
 Dwg No.
SEC-02





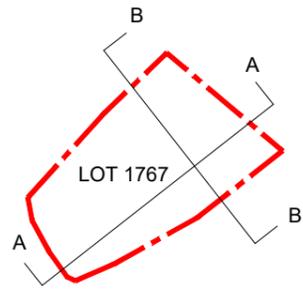
Drawing Title
SECTION (CLUBHOUSE & CARPARK)

Scale
1:300 (A3)
Date
30/1/2026

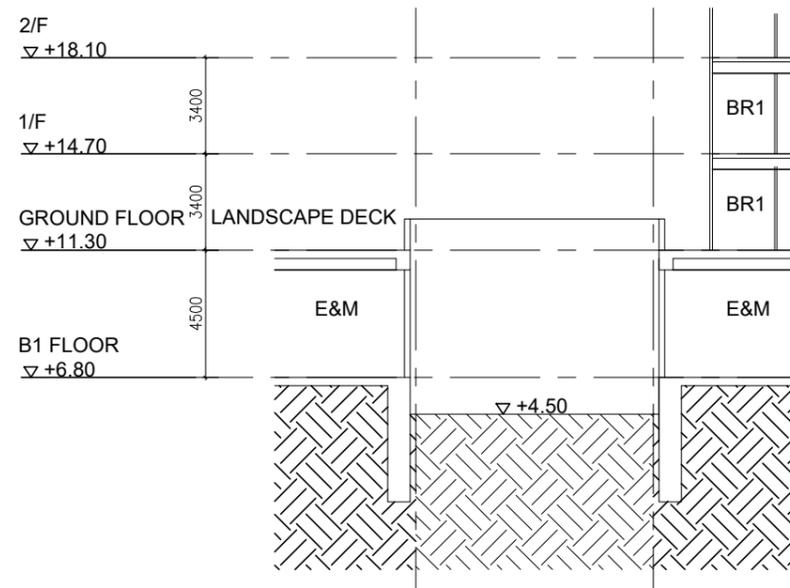
Project
A-2517
PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND

Job No.
A-2517
Dwg No.
SEC-03



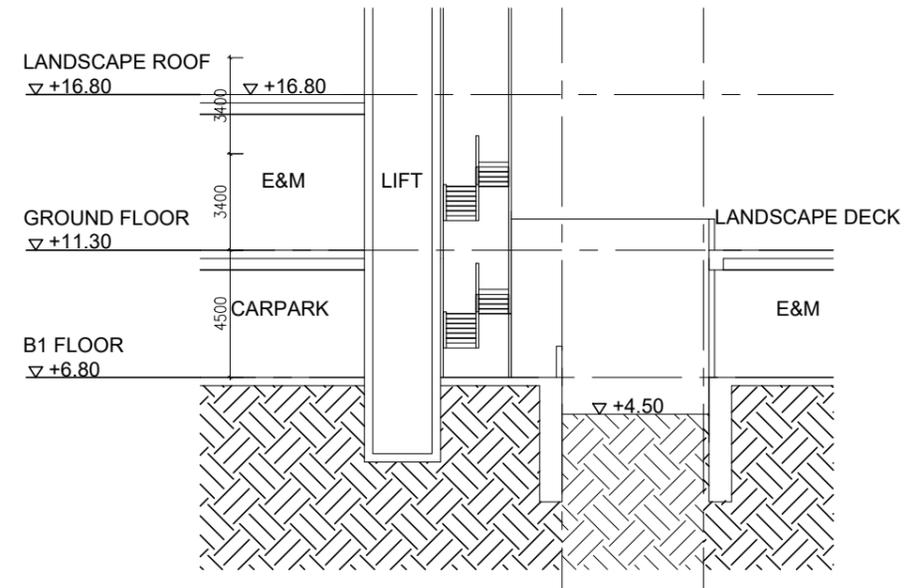


LOT 1767



SECTION A-A

LOT 1767



SECTION B-B

Drawing Title

BLOW UP SECTION

Scale

1:250 (A3)

Date

30/01/2026

Project

A-2517

PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND

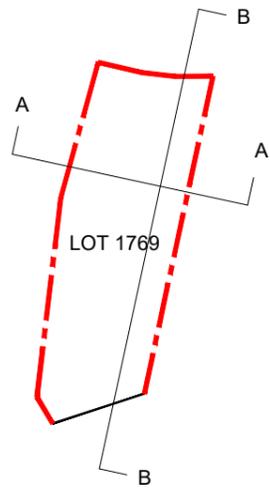
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A-2517

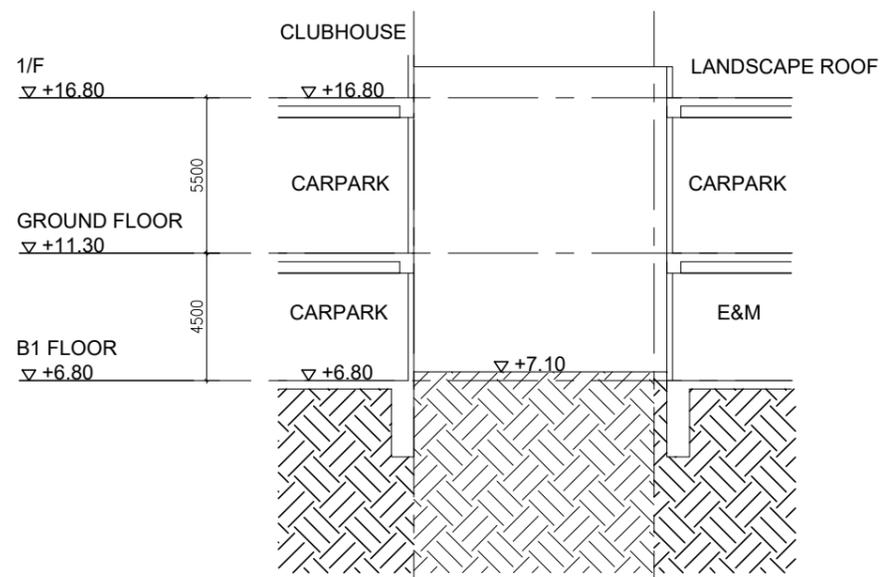
Dwg No.

SEC-04

ALKF+
ANDREW LEE KING FUN &
ASSOCIATES ARCHITECTS LTD

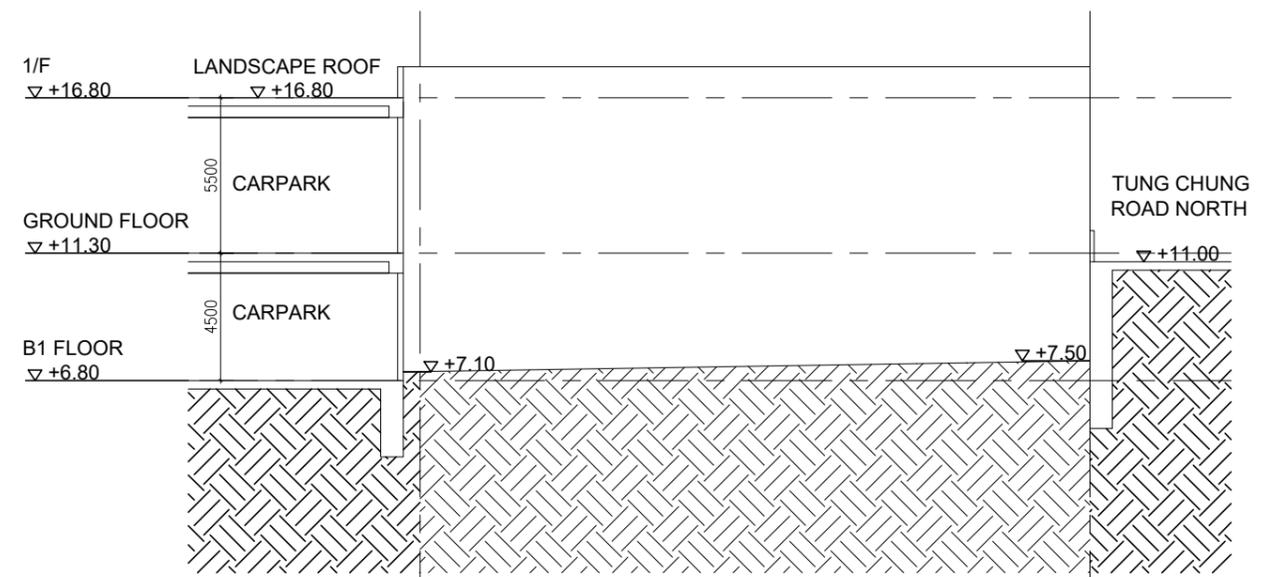


LOT 1769



SECTION A-A

LOT 1769



SECTION B-B

Drawing Title

BLOW UP SECTION

Scale

1:250 (A3)

Date

30/01/2026

Project

A-2517

PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND

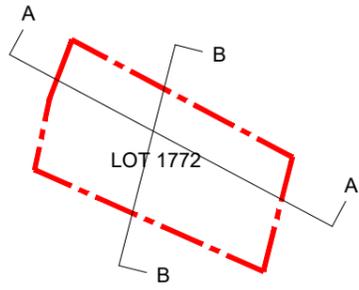
Job No.

A-2517

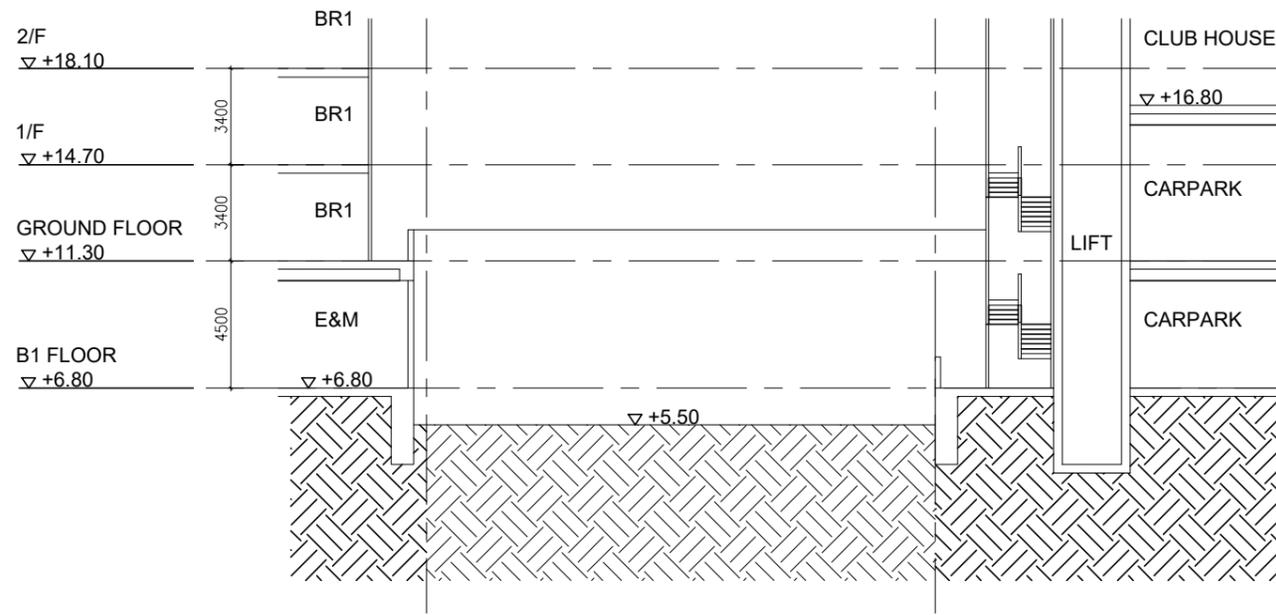
Dwg No.

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ANDREW LEE KING FUN &
ASSOCIATES ARCHITECTS LTD

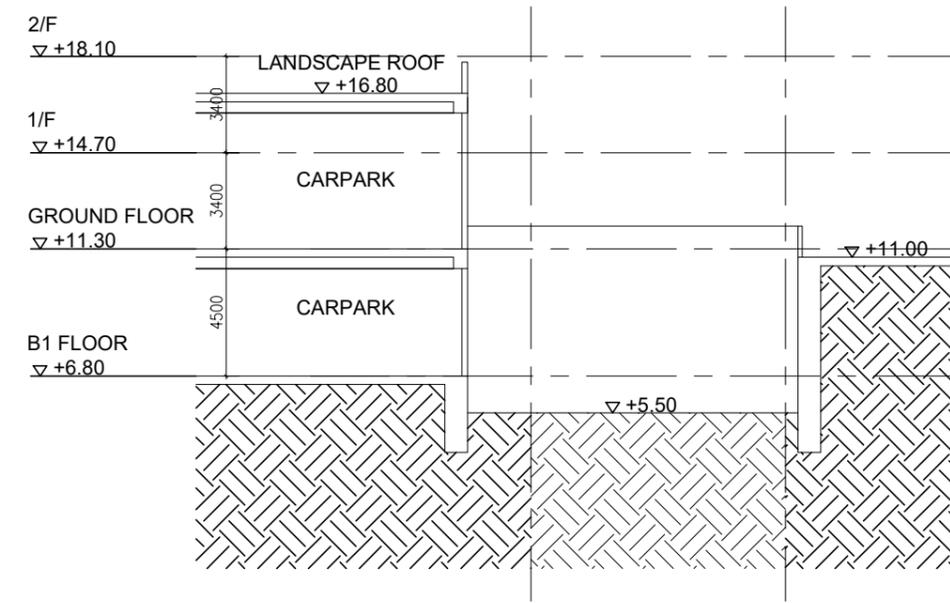


LOT 1772



SECTION A-A

LOT 1772



SECTION B-B

Drawing Title

BLOW UP SECTION

Scale

1:250 (A3)

Date

30/01/2026

Project

A-2517

CHUN WO RESIDENTIAL DEVELOPMENT AT
TUNG CHUNG TOWN Lot No 49

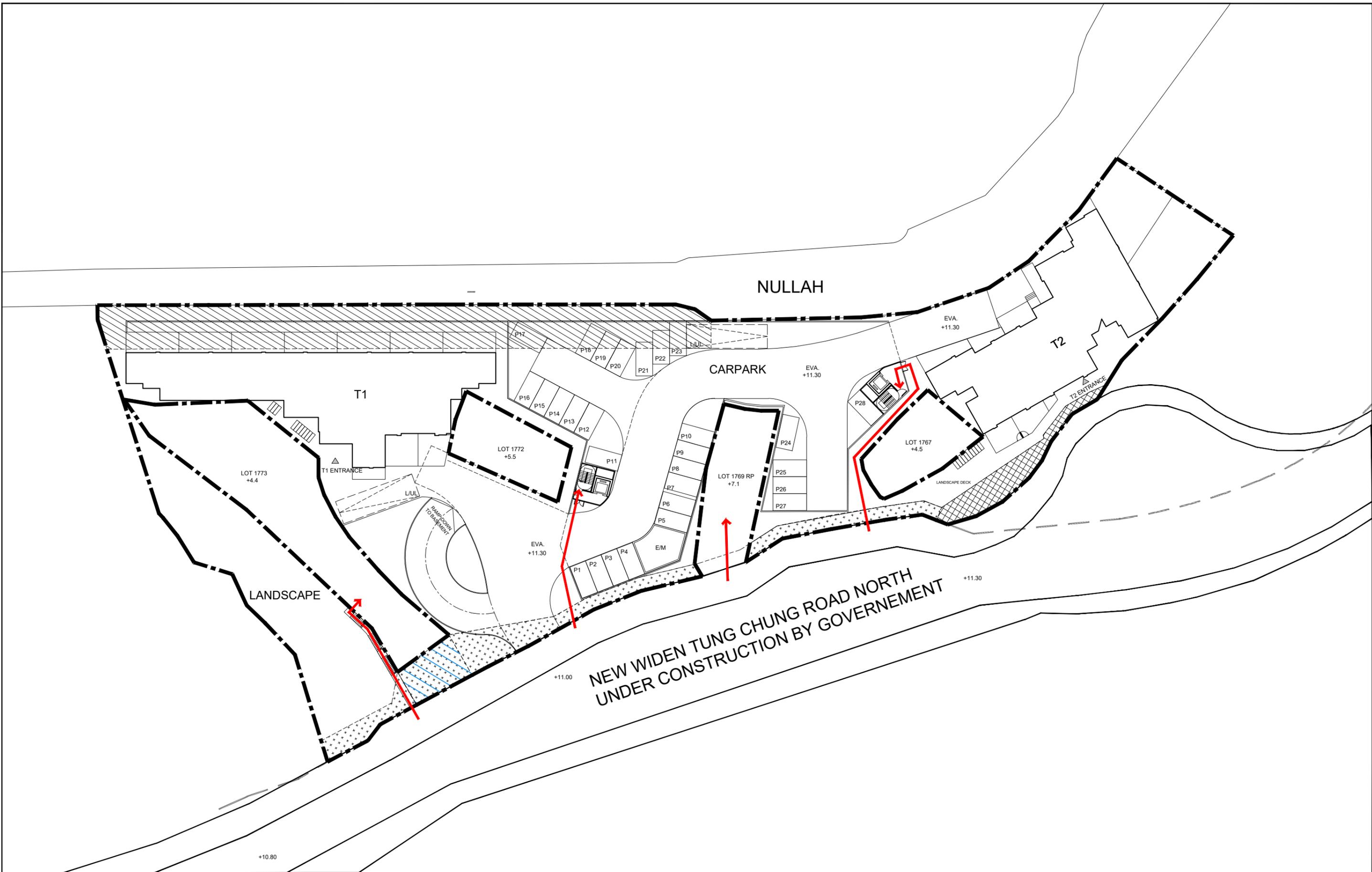
Job No.

A-2517

Dwg No.

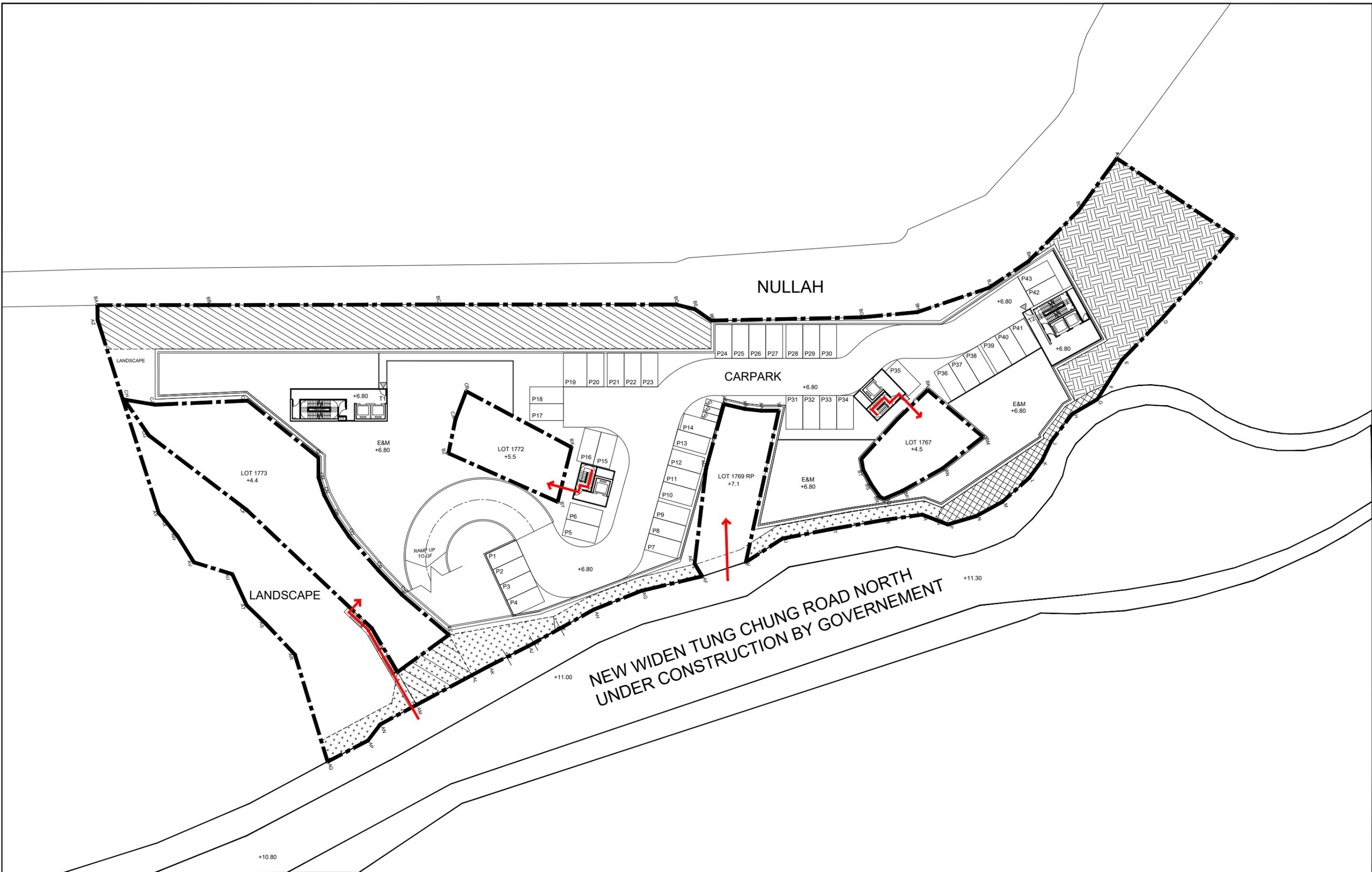
SEC-06

ALKF+
ANDREW LEE KING FUN &
ASSOCIATES ARCHITECTS LTD



| | | | |
|--|----------------------------|---|--------------------------|
| Drawing Title GROUND FLOOR PLAN ACCESS TO PRIVATE LOTS | Scale 1:500 (A3) | Project A-2517 | Job No. A-2517 |
| | Date 30/1/2026 | PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND | Dwg No. SK-01 |





| | | | |
|---|----------------------------|--|--------------------------|
| Drawing Title BASEMENT 1 FLOOR PLAN ACCESS TO PRIVATE LOTS | Scale 1:500 (A3) | Project A-2517 PROPOSED FLAT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT VARIOUS LOTS IN D.D. 3 TC AND ADJOINING GOVERNMENT LAND, TUNG CHUNG ROAD NORTH, TUNG CHUNG, LANTAU ISLAND | Job No. A-2517 |
| | Date 30/1/2026 | | Dwg No. SK-02 |



Appendix 1.2 Site Visit Photos

Environmental Assessment for S16 Application for Proposed Residential Development at Various Lots in D.D. 3TC and Adjoining Government Land, Tung Chung Road North, Tung Chung

Site Visit Photos



Public Housing Development at Tung Chung Area 23, Housing Department



Road Improvement Work at Tung Chung Road North

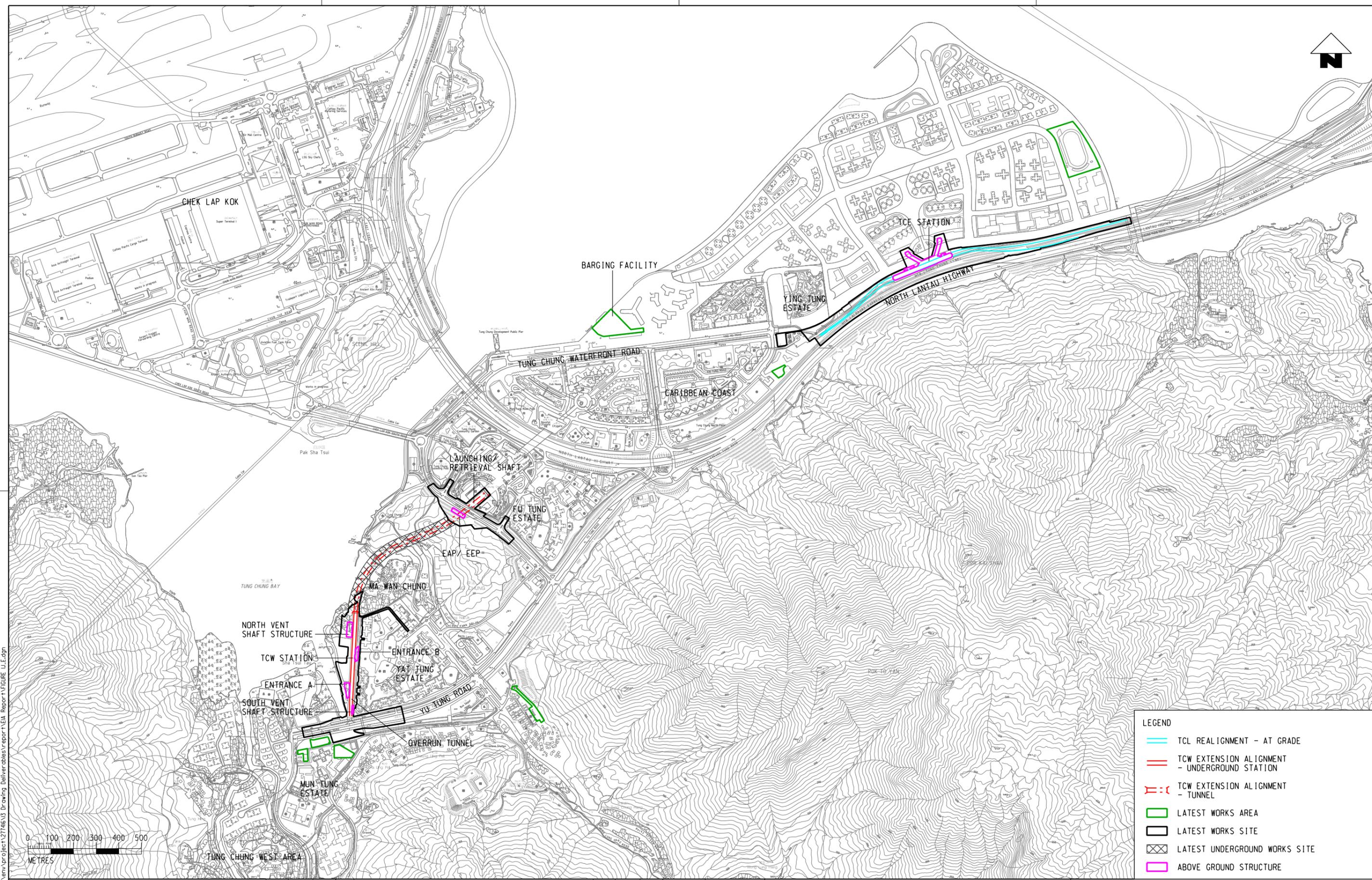


DSD Chung Yan Road Sewage Pumping Station



Car Washing Facility

**Appendix 1.3 Extracted information from AEIAR-235/2022 for Tung Chung
Line Extension**



| LEGEND | |
|--------|---|
| | TCL REALIGNMENT - AT GRADE |
| | TCW EXTENSION ALIGNMENT - UNDERGROUND STATION |
| | TCW EXTENSION ALIGNMENT - TUNNEL |
| | LATEST WORKS AREA |
| | LATEST WORKS SITE |
| | LATEST UNDERGROUND WORKS SITE |
| | ABOVE GROUND STRUCTURE |

G:\common\micr\ostation_s\andar\d\plot\dr\h\p\ar\phk_c3\pdf_c.env.dft
 PLOT DRW: 11/29/2021 11:29:59 PM
 MODELNAME: I:\KGT\RA04
 FILENAME: \Y\K\p1527\CEIN\env\p\p\p\12714613\p\aning\deliverables\report\A\EA_Report\Figure_1.1.dgn

| REV | DESCRIPTION | BY | DATE | APPROVED | REV | DESCRIPTION | BY | DATE | APPROVED |
|-----|--------------|----|--------|----------|-----|-------------|----|------|----------|
| E | FIFTH ISSUE | GL | 091121 | FC | | | | | |
| D | FOURTH ISSUE | GL | 151021 | FC | | | | | |
| C | THIRD ISSUE | GL | 090921 | FC | | | | | |
| B | SECOND ISSUE | GL | 130721 | FC | | | | | |
| A | FIRST ISSUE | GL | 170521 | FC | | | | | |

DRAWN: GL
 DESIGNED: GL
 CHECKED: EL
 APPROVED: FC
 DATE: 09/11/2021
 ORIGINATOR: ARUP
 Ove Arup & Partners
 Hong Kong Limited
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| | |
|--|------------------------|
| TITLE: LATEST ALIGNMENT AND KEY ELEMENTS | |
| SCALE: AS SHOWN | DRAWING NO: FIGURE 1.1 |
| CADD REF: FIGURE 1.1.E.dgn | REV: E |

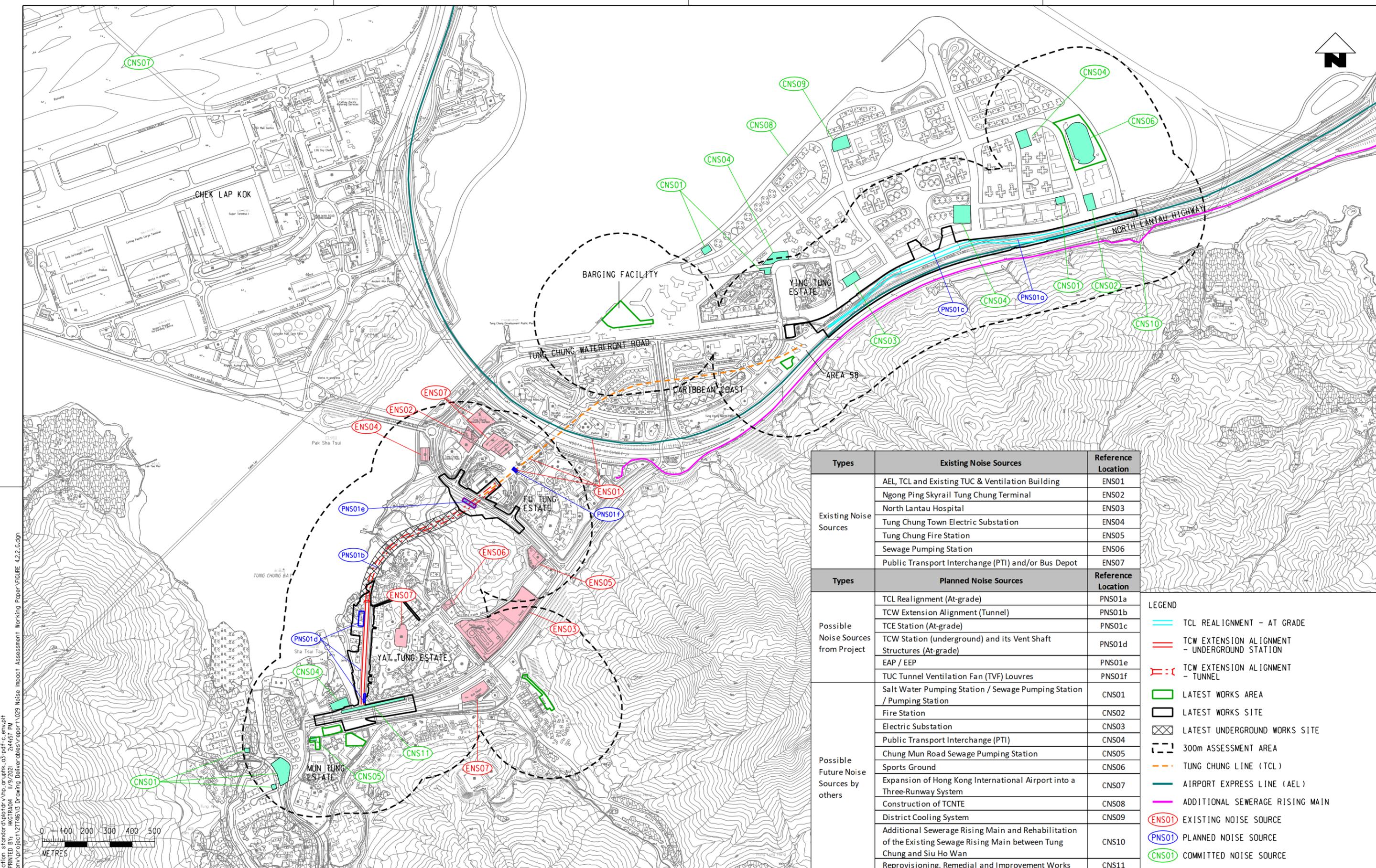
- Wind erosion from all exposed works sites with heavy construction activities.

3.4.2.3 The site excavation, construction and backfilling activities will involve large quantities of earthworks. In order to reduce the dust emission from the Project, regular watering on all exposed construction areas with dust emission (see **Appendix 3.1**) as a good site practice will be implemented. Vehicle washing facilities will be provided at every designated vehicular exit point. Since all vehicles will be washed at exit points and vehicle loaded with the dusty materials will be covered entirely by clean impervious sheeting before leaving the construction site, dust nuisance from construction vehicle movement outside the exposed construction areas with dust emission is unlikely to be significant.

3.4.2.4 The TCW Station is an underground station. As mentioned in **Section 2**, once excavation reaches a certain level that allows manoeuvring of construction plant, the station roof structure would be constructed. There will be small openings at location in the station roof structure for mucking out during the construction period and these small openings will be covered when not in use. After installation of the station roof structure, subsequent construction activities would be carried out underneath and dust impact could also be largely alleviated.

3.4.2.5 Tunnel Boring Machine (TBM) method will be used for construction of the underground tunnel section for the TCW extension alignment with the launching shaft and retrieving shaft near Tung Chung Crescent. According to the information provided by Design Consultant, bentonite will be used throughout the tunnel boring process. Bentonite is a naturally occurring clay mineral used extensively in the construction industry. The mineral is mixed with water to form a slurry, which is supplied to the TBM by a delivery pipeline. The slurry is contained in a chamber in the cutter head of the TBM. The slurry will be used and mixed with the excavated material by the cutter head within the chamber. The mixed slurry coming out from the process is in wet condition and it will then be transported out of the tunnel via a closed piped network. Dust emission is therefore not anticipated. The mucking out locations at both the launching and retrieving shafts will also be installed with the noise enclosures / screening structures which could also alleviate the dust impact.

3.4.2.6 As described in **Section 2**, there may require small scale drill-&-blast at possible granite layer at a level close to the bottom of the TCW Station (i.e. about -7mPD) and the bottom of the shaft between the proposed EAP / EEP and the tunnel (i.e. about -7mPD). The number of blasting would be limited to once per day. The concrete slabs for station concourses and platforms would have been completed when the excavation reaches the bottom of the TCW Station, and any drill-&-blast would be conducted underneath these slabs for concourses and platforms. For the shaft between the proposed EAP / EEP and the tunnel, a roof cover will also be provided and drill-&-blast will be carried out underneath. For safety reasons, all neighbouring construction activities will be suspended during blasting.



| Types | Existing Noise Sources | Reference Location |
|---|---|--------------------|
| Existing Noise Sources | AEL, TCL and Existing TUC & Ventilation Building | ENS01 |
| | Ngong Ping Skyrail Tung Chung Terminal | ENS02 |
| | North Lantau Hospital | ENS03 |
| | Tung Chung Town Electric Substation | ENS04 |
| | Tung Chung Fire Station | ENS05 |
| | Sewage Pumping Station | ENS06 |
| | Public Transport Interchange (PTI) and/or Bus Depot | ENS07 |
| Types | Planned Noise Sources | Reference Location |
| Possible Noise Sources from Project | TCL Realignment (At-grade) | PNS01a |
| | TCW Extension Alignment (Tunnel) | PNS01b |
| | TCE Station (At-grade) | PNS01c |
| | TCW Station (underground) and its Vent Shaft Structures (At-grade) | PNS01d |
| | EAP / EEP | PNS01e |
| | TUC Tunnel Ventilation Fan (TVF) Louvres | PNS01f |
| Possible Future Noise Sources by others | Salt Water Pumping Station / Sewage Pumping Station / Pumping Station | CNS01 |
| | Fire Station | CNS02 |
| | Electric Substation | CNS03 |
| | Public Transport Interchange (PTI) | CNS04 |
| | Chung Mun Road Sewage Pumping Station | CNS05 |
| | Sports Ground | CNS06 |
| | Expansion of Hong Kong International Airport into a Three-Runway System | CNS07 |
| | Construction of TCNTE | CNS08 |
| | District Cooling System | CNS09 |
| | Additional Sewerage Rising Main and Rehabilitation of the Existing Sewerage Rising Main between Tung Chung and Siu Ho Wan | CNS10 |
| | Reprovisioning, Remedial and Improvement Works | CNS11 |

LEGEND

- TCL REALIGNMENT - AT GRADE
- TCW EXTENSION ALIGNMENT - UNDERGROUND STATION
- - - TCW EXTENSION ALIGNMENT - TUNNEL
- LATEST WORKS AREA
- LATEST WORKS SITE
- LATEST UNDERGROUND WORKS SITE
- 300m ASSESSMENT AREA
- TUNG CHUNG LINE (TCL)
- AIRPORT EXPRESS LINE (AEL)
- ADDITIONAL SEWERAGE RISING MAIN
- ENS01 EXISTING NOISE SOURCE
- PNS01 PLANNED NOISE SOURCE
- CNS01 COMMITTED NOISE SOURCE

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 PLOT DATE: 11/09/2021 11:09:04 AM
 MODELNAME: ARUP\env\proj\env\12714613\drawing\deliverables\report_029\Noise Impact Assessment Working Paper\FIGURE 4.2.2.dgn
 FILENAME:

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|---|---------------|----|--------|----|--|------------|
| G | SEVENTH ISSUE | GL | 091121 | FC | DRAWN | GL |
| F | SIXTH ISSUE | GL | 061021 | FC | DESIGNED | GL |
| E | FIFTH ISSUE | GL | 170821 | FC | CHECKED | EL |
| D | FOURTH ISSUE | GL | 280421 | FC | APPROVED | FC |
| C | THIRD ISSUE | GL | 010421 | FC | DATE | 09/11/2021 |
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| A | FIRST ISSUE | GL | 250221 | FC | | |

C1202 - EIA for Tung Chung Line Extension
 ORIGINATOR

 Ove Arup & Partners
 Hong Kong Limited
 CADD REF.

| | | | |
|--------------|----------|---|--------------|
| TITLE | | EXISTING AND PLANNED NOISE SOURCES | |
| SCALE | AS SHOWN | DRAWING NO. | FIGURE 4.2.2 |
| REV. | | | G |

FIGURE 4.2.2.G.dgn

**Appendix 1.4 Extracted Information from Planning Brief of Public Housing
Development at Tung Chung Area 23**

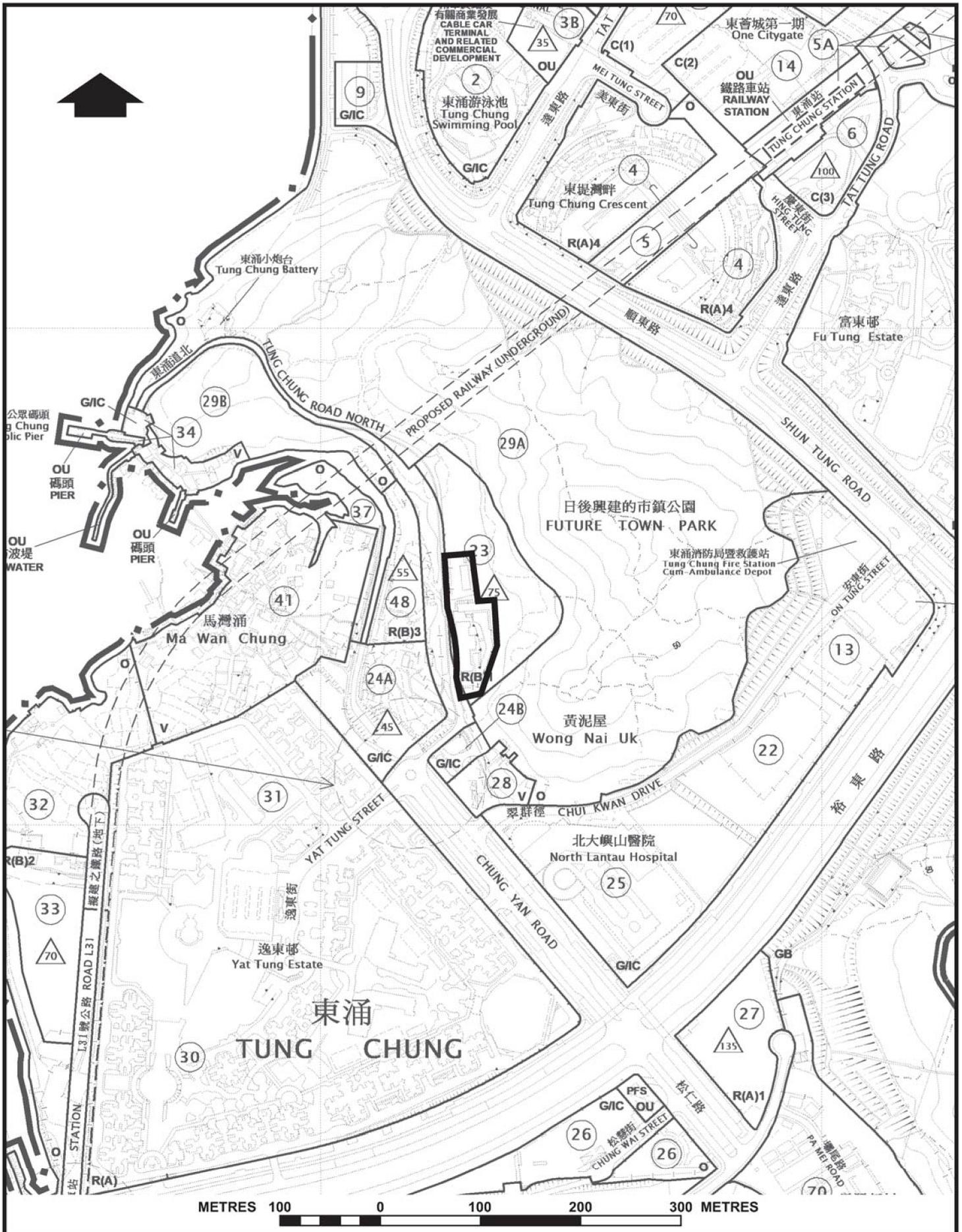
PLANNING BRIEF

| | | |
|---|-------------------------|---|
| PROJECT NAME: Tung Chung Area 23 Phase 1 | | |
| Date of Preparation: Jul 7, 2022 10:48:50 AM | | |
| 1. Site Particulars | Current Proposal | Remarks |
| 1.1 District Location | Islands | |
| 1.2 Site Location | Tung Chung Area 23 | Phase 1 only. |
| 1.3 Site Area | - | |
| 1.3.1 Gross Site Area (approx) (ha) | 0.49 | Subject to detailed design and site survey. |
| 1.3.2 Net Site Area (approx) (ha) | 0.46 | Subject to detailed design and site survey. |
| 1.4 Existing Land Use | GIC | |
| 1.5 Existing Zoning | R(B)1 | As stipulated in the Approved Tung Chung Town Centre Outline Zoning Plan (OZP) No. S/I-TCTC/24. |
| 1.6 Existing Land Status | Government land | |
| 2. Development Parameters | Current Proposal | Remarks |
| 2.1 Proposed Housing Type | Public Housing | Flexibility should be allowed to change the housing type to cater for demand change between Public Rental Housing (PRH) / Green Form Subsidised Home Ownership Scheme (GSH) and Other Subsidised Sale Flats (SSFs) subject to pro-rata adjustments of provision of ancillary facilities in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG). |
| 2.2 Proposed No. of Flats | 450 | A $\pm 10\%$ deviation is allowed for flexibility in detailed design subject to pro-rata adjustments of ancillary facilities and consultation with departments concerned. |
| 2.3 Design Population (approx) | 1,260 | Based on an average household size (AHS) of 2.8. Subject to change based on actual flat mix and |

| 4. Technical Considerations/Constraints | Current Proposal | Remarks |
|--|-------------------------|---|
| 4.2.5 Geotechnical Requirement | Per D&C Study by CEDD | |
| 4.3 Urban Design, Visual and Landscape | - | |
| 4.3.1 Pedestrian Wind Environment | Per D&C Study by CEDD | |
| 4.4 Greening | - | |
| 4.4.1 Green Coverage (% of Gross Site Area) | Not less than 20% | To achieve an overall of 20% green coverage, half of which will be provided at grade or on levels easily accessible by pedestrians. |
| 5. Development Programme | Current Proposal | Remarks |
| 5.1 Foundation Commencement Date | 2024/2025 | Tentative Date |
| 5.2 Building Completion Date | 2027/2028 | Tentative Date |
| 6. Attachments | | |
| 6.1 Location Plan (Plan 1) | | |
| 6.2 Development Concept Plan (Plan 2) | | |

Notes

- NET SITE AREA (NSA):** In accordance with the Hong Kong Planning Standards and Guidelines (HKPSG), the NSA should exclude the following for the purpose of PR/GFA calculation:
 - district and public open space, public recreation facilities, free-standing schools and free-standing social welfare / community facilities, open-air public transport terminal/interchange;
 - internal roads; and
 - natural vegetated slopes and man-made slopes (for the latter, except slopes regraded to form developable area).
- NUMBER OF FLATS AND DESIGN POPULATION:** To allow flexibility in the design, $\pm 10\%$ adjustment will be allowed for the number of flats and design population together with corresponding adjustments to ancillary facilities in line with HKPSG or the requirements of client departments. If a project remains within the 10% allowance, no revision to PB and no re-submission to DipCon is necessary subject to no adverse comments from client departments on the corresponding adjustments to ancillary facilities. For schemes approved by the TPB under s.16 planning application, the changes in the number of flats should comply with the requirements as set out under the Town Planning Board Guidelines No. 36B.
- PLOT RATIO (PR):** PR should be calculated on the basis of NSA.
- MAXIMUM GFA, PR AND NUMBER OF STOREYS OR BUILDING HEIGHT:** OZP restrictions have to be specified under the Remarks column. The maximum GFA, PR and No. of storeys or building height for the current proposal should be based on the optimal development intensities of the site with reference to relevant planning studies or proposal by PlanD, or HD, with justifications instead of blanket adoption of the maximum development restrictions stipulated in the OZP.
- MAXIMUM NUMBER OF STOREYS OR BUILDING HEIGHT in mPD:** Should there be variations in height limits across the site, the different maximum heights in mPD at main roof level or number of storeys permitted should be indicated on a plan.
- PLANNING REQUIREMENTS:** The requirements of HKPSG should be complied with, where appropriate.
- RETAIL AND COMMERCIAL FACILITIES:** HD will determine the amount of retail floor space required in the development.
- PEDESTRIAN WIND ENVIRONMENT:** HPLB/ETWB Joint Technical Circular on Air Ventilation Assessments to be



**LOCATION PLAN
TUNG CHUNG AREA 23 PHASE 1**



**HOUSING DEPARTMENT
PLANNING SECTIONS**

PLAN 1

**DATE :
21. 4. 2022**

Sally Chiu

From: Amy YM SIU [REDACTED]
Sent: Monday, 29 December 2025 9:59 am
To: Sally Chiu
Cc: Tak Kwong Wong
Subject: Re: Footprint of "Tung Chung Area 23 Phase 1 – Public Housing Development (Area 23)"

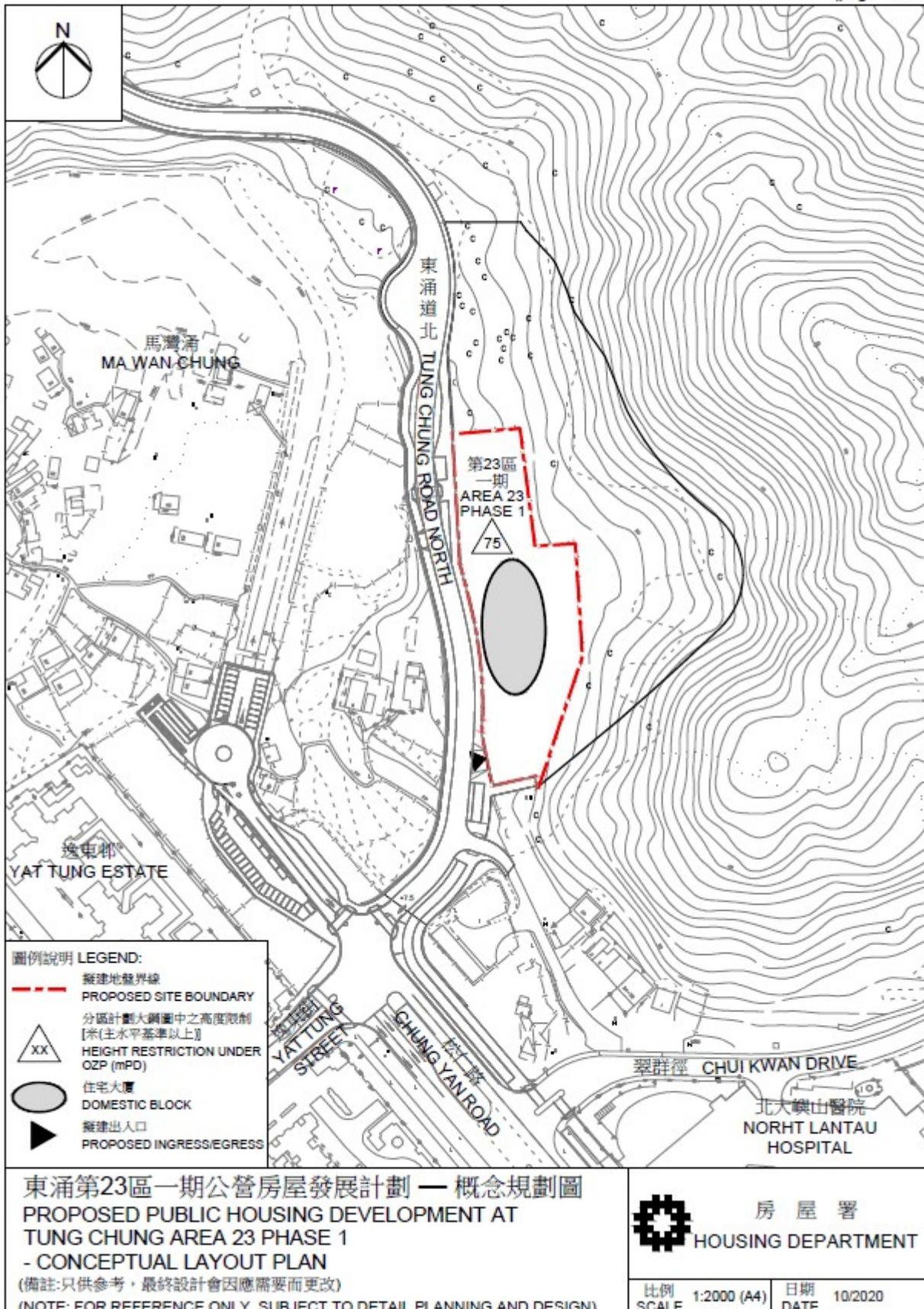
Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ms Chiu,

Further to our telecon this morning, please find our reply to your enquiry on Tung Chung Area 23 Phase 1 below.

Building height: +75mPD
Plot ratio: 4.0 max.
Flat no.: 470 approx.
Completion year: 2027-2028

For the MLP requested, please refer to attached diagram which we have presented at DC meeting before. Other drawings haven't been released to public yet as discussed. Thanks.



Regards,
Amy Siu
A/48
Tel: [REDACTED]

From: "Sally Chiu" [REDACTED]
To: [REDACTED]
Cc: "Tak Kwong Wong" [REDACTED]
Date: 12/23/2025 11:42 AM
Subject: Footprint of "Tung Chung Area 23 Phase 1 – Public Housing Development (Area 23)"

Dear Amy,

Called you but in vain.

We are the environmental consultant, working on the environmental assessment for the proposed residential development in DD3TC, Tung Chung. The Site Location is attached for your easy reference.

We have submitted the environmental assessment report to EPD and received a comment about our surrounding future development (i.e. Tung Chung Area 23 Phase 1 – Public Housing Development (Area 23)). Comment from EPD is shown in table below:

| Comment from EPD |
|---|
| Noise Model |
| Please include the footprint of "Tung Chung Area 23 Phase 1 – Public Housing Development (Area 23)" in the model. |

Therefore, we would like to seek the information from your department, including **MLP**, **building height** and **operation year** of Area 23 for our submission to EPD.

Your reply by 31 Dec 2025 is highly appreciated.

Should you have any enquiry, feel free to contact the undersigned.

Thank you.

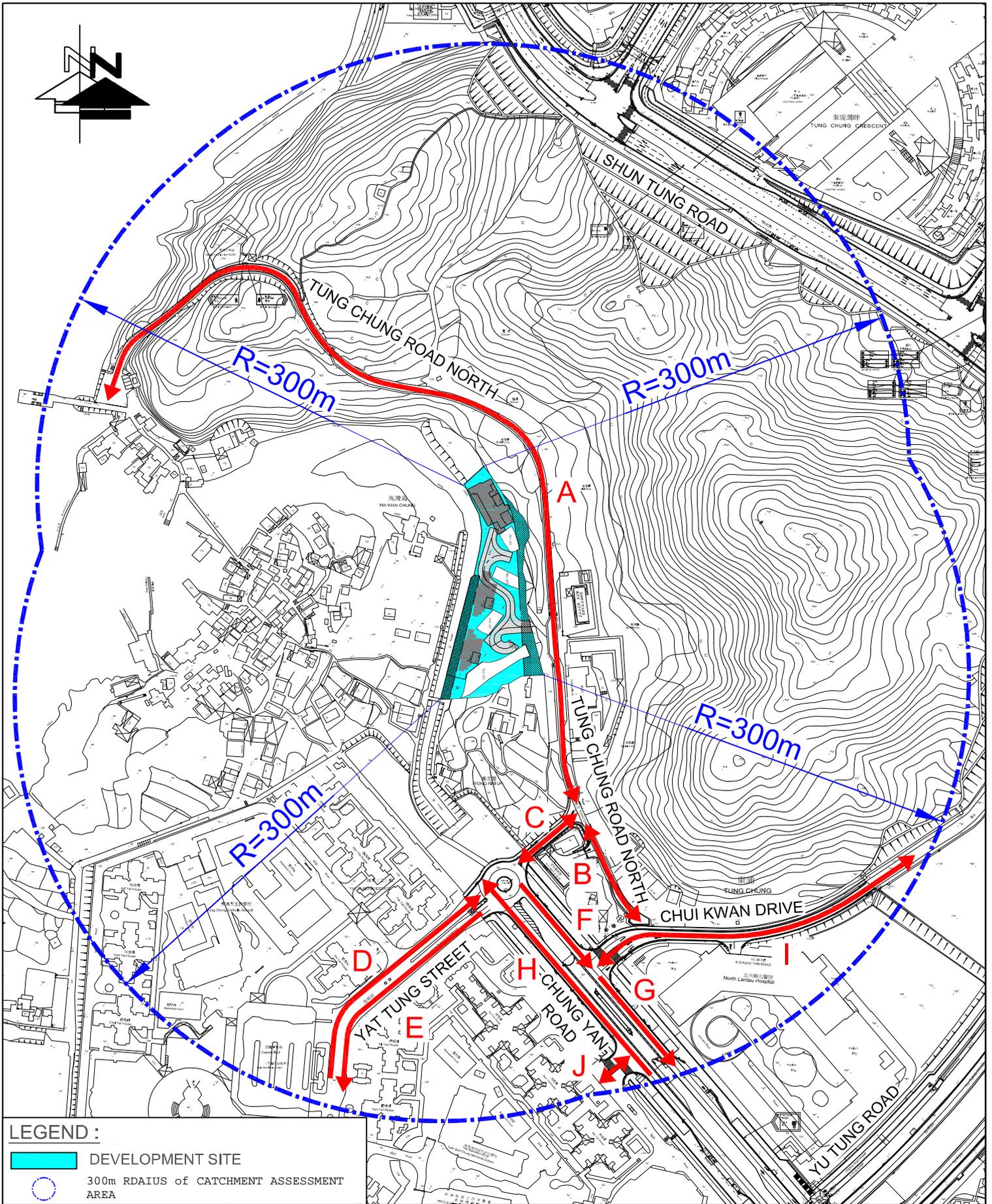
Kind regards

Sally Chiu

Assistant Environmental Consultant



Appendix 2.1 Traffic Forecast for Year 2046



LEGEND :

- DEVELOPMENT SITE
- 300m RADIUS of CATCHMENT ASSESSMENT AREA

| | | | |
|--------------|-------------|--|------------------------|
| FIGURE NO.: | 1 | PROJECT TITLE: | S16 for Tung Chung DD3 |
| PROJECT NO.: | 25065HK | DRAWING TITLE: | INDEX PLAN |
| SCALE: | DATE: | CTA Consultants Limited 志達顧問有限公司 | |
| 1 : 3500 @A4 | 17 OCT 2025 | | |

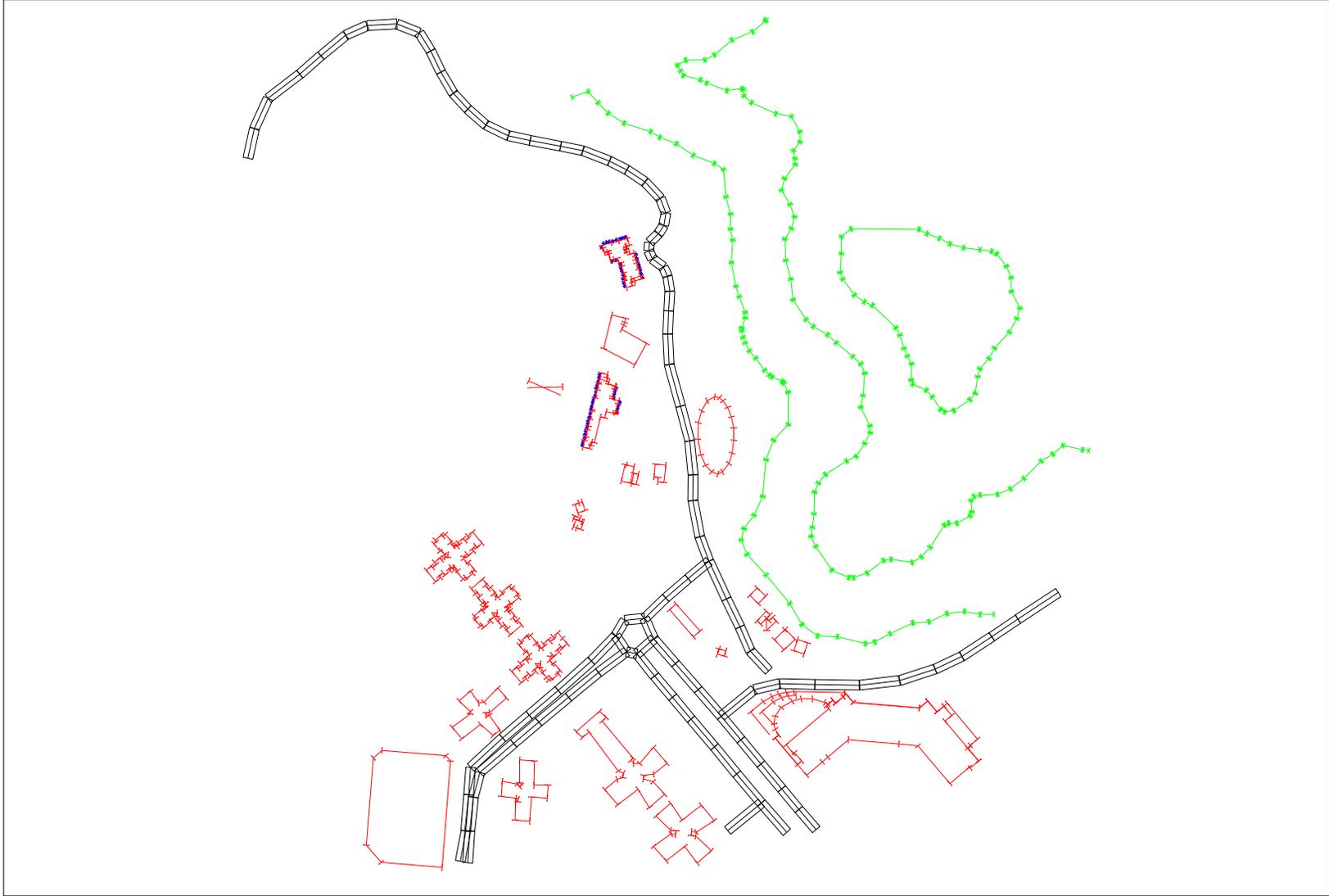
25065HK-Proposed Residential Development at Various Lots in
DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island
2046 Traffic Forecasts for Traffic Noise Impact Assessment (TNIA)

| Road Link | Road Name | Direction | Road Speed | AM Peak | | PM Peak | |
|-----------|-----------------------|-----------|------------|------------------------------|---------------------------|------------------------------|---------------------------|
| | | | | 2046 Peak Hour Traffic Flows | % of HV ⁽¹⁾⁽²⁾ | 2046 Peak Hour Traffic Flows | % of HV ⁽¹⁾⁽²⁾ |
| A | Tung Chung Road North | Two-way | 50 | 510 | 29% | 405 | 38% |
| B | Tung Chung Road North | Two-way | 50 | 40 | 9% | 40 | 12% |
| C | Tung Chung Road North | Two-way | 50 | 540 | 34% | 430 | 34% |
| D | Yat Tung Street | EB | 50 | 210 | 30% | 125 | 29% |
| E | Yat Tung Street | WB | 50 | 200 | 32% | 195 | 29% |
| F | Chung Yan Road | SB | 50 | 445 | 29% | 305 | 28% |
| G | Chung Yan Road | SB | 50 | 465 | 29% | 320 | 27% |
| H | Chung Yan Road | NB | 50 | 495 | 29% | 455 | 28% |
| I | Chui Kwan Drive | Two-way | 50 | 70 | 17% | 45 | 17% |
| J | Chung Yan Road | Two-way | 50 | 100 | 28% | 110 | 14% |

Notes:

- (1) HV includes Light Van, Public Light Bus, Light Goods Vehicle, Medium Goods Vehicle, Heavy Goods Vehicle and Container/Tractor, Coach and Bus.
(2) HV% based on survey result.

Appendix 2.2 Modelling Layout for Road Traffic Noise Impact Assessment



Appendix 2.3 Result of Road Traffic Noise Impact Assessment (Base Scenario)

Predicted Road Traffic Noise [L10(1h) dB(A)] at Representative Sensitive Receivers (Based on Year 2046 Traffic Forecast)
 Unmitigated Scenario (AM)

| 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 | T1-15 | T1-16 | T1-17 | T1-18 | T1-19 | T1-20 | T1-21 | T1-22 | T1-23 | T1-24 | T1-25 | T1-26 | T1-27 | T1-28 | T1-29 | |
|------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| G/F | 11.3 | 61 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 59 | 68 | 68 | 68 | 66 | 69 | 68 | NA | NA | |
| 1/F | 14.7 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | NA | NA | |
| 2/F | 18.1 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 3/F | 21.5 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 4/F | 24.9 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 5/F | 28.3 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 60 | 69 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 6/F | 31.7 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | 69 | |
| 7/F | 35.1 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | 69 | |
| 8/F | 38.5 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | 69 | |
| 9/F | 41.9 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 67 | 66 | 69 | 69 | 69 | 69 | |
| 10/F | 45.3 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 68 | 68 | 67 | 66 | 69 | 69 | 69 | 69 | |
| 11/F | 48.7 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 68 | 67 | 66 | 69 | 68 | 68 | 68 | |
| 12/F | 52.1 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 67 | 67 | 66 | 68 | 68 | 68 | 68 | |
| 13/F | 55.5 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 67 | 67 | 66 | 68 | 68 | 68 | 68 | |
| Exceedance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| No. of flats with exceedance | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Max. Noise Level | | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | 69 | |

| 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 | T2-13 | T2-14 | T2-15 | T2-16 | T2-17 | T2-18 | T2-19 | T2-20 | T2-21 | T2-22 | T2-23 | T2-24 | T2-25 | T2-26 | |
|------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| G/F | 11.3 | 66 | 64 | 61 | 60 | 57 | 56 | 50 | 44 | 60 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 75 | 75 | 75 | 75 | 75 | 74 | 74 | 74 | |
| 1/F | 14.7 | 66 | 64 | 61 | 60 | 57 | 56 | 50 | 45 | 60 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 74 | 74 | 75 | 75 | 75 | 74 | 74 | 74 | |
| 2/F | 18.1 | 65 | 64 | 61 | 60 | 57 | 56 | 51 | 47 | 60 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | |
| 3/F | 21.5 | 65 | 64 | 61 | 60 | 57 | 56 | 52 | 49 | 59 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 73 | 73 | 74 | 74 | 74 | 73 | 73 | 73 | |
| 4/F | 24.9 | 65 | 64 | 62 | 60 | 58 | 57 | 54 | 53 | 60 | 65 | 67 | 68 | 68 | 68 | 68 | 69 | 70 | 71 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | |
| 5/F | 28.3 | 66 | 64 | 62 | 61 | 59 | 59 | 56 | 56 | 61 | 65 | 67 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 72 | 72 | 72 | 73 | 73 | 72 | 72 | 72 | |
| 6/F | 31.7 | 66 | 64 | 63 | 61 | 60 | 59 | 57 | 58 | 61 | 66 | 67 | 67 | 68 | 68 | 68 | 69 | 69 | 70 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | |
| 7/F | 35.1 | 66 | 64 | 63 | 61 | 60 | 59 | 57 | 58 | 61 | 66 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 72 | 72 | 72 | 72 | 72 | |
| 8/F | 38.5 | 65 | 64 | 63 | 61 | 60 | 59 | 57 | 58 | 61 | 66 | 67 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | |
| 9/F | 41.9 | 65 | 64 | 63 | 61 | 60 | 59 | 58 | 58 | 61 | 66 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | |
| 10/F | 45.3 | 65 | 64 | 63 | 61 | 60 | 59 | 58 | 58 | 61 | 66 | 67 | 67 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 11/F | 48.7 | 65 | 64 | 63 | 61 | 60 | 59 | 58 | 58 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 12/F | 52.1 | 65 | 64 | 63 | 61 | 60 | 60 | 58 | 58 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 13/F | 55.5 | 65 | 64 | 63 | 61 | 60 | 60 | 58 | 58 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 67 | 68 | 69 | 69 | 69 | 69 | 69 | 70 | 70 | 70 | 70 | 70 |
| Exceedance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | |
| No. of flats with exceedance | | 0 | | | 0 | | | 0 | | | 0 | | | 5 | | | 10 | | | 10 | | | 11 | | | 11 | | |
| Max. Noise Level | | 66 | 64 | 63 | 61 | 60 | 60 | 58 | 58 | 61 | 66 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 75 | 75 | 75 | 75 | 75 | 74 | 74 | 74 | |

Noise level that will exceed limit of 70dB(A)

| | |
|--------------------------------|-----|
| Max Noise Level (dB(A)) = | 75 |
| Total no. of Exceedance = | 77 |
| Total no. of flat Exceedance = | 47 |
| Total no. of Premises = | 290 |
| % Compliance = | 84% |

Predicted Road Traffic Noise [L10(1h) dB(A)] at Representative Sensitive Receivers (Based on Year 2046 Traffic Forecast)
 Unmitigated Scenario (PM)

| 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 | T1-15 | T1-16 | T1-17 | T1-18 | T1-19 | T1-20 | T1-21 | T1-22 | T1-23 | T1-24 | T1-25 | T1-26 | T1-27 | T1-28 | T1-29 | |
|------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| G/F | 11.3 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 59 | 68 | 68 | 67 | 66 | 68 | 68 | NA | NA | |
| 1/F | 14.7 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 67 | 66 | 69 | 68 | NA | NA | |
| 2/F | 18.1 | 60 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 67 | 66 | 69 | 69 | 69 | 69 | |
| 3/F | 21.5 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 67 | 66 | 69 | 69 | 69 | 69 | |
| 4/F | 24.9 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 67 | 66 | 69 | 69 | 69 | 69 | |
| 5/F | 28.3 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 60 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 6/F | 31.7 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 69 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 7/F | 35.1 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 69 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 8/F | 38.5 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 9/F | 41.9 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 68 | 68 | 67 | 66 | 69 | 68 | 68 | 68 | |
| 10/F | 45.3 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 68 | 68 | 67 | 66 | 68 | 68 | 68 | 68 | |
| 11/F | 48.7 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 67 | 67 | 66 | 68 | 68 | 68 | 68 | |
| 12/F | 52.1 | 60 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 67 | 67 | 66 | 68 | 68 | 68 | 68 | |
| 13/F | 55.5 | 60 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 67 | 67 | 66 | 68 | 68 | 68 | 68 | |
| Exceedance | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| No. of flats with exceedance | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Max. Noise Level | | 60 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 68 | 66 | 69 | 69 | 69 | 69 |

| 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 | T2-13 | T2-14 | T2-15 | T2-16 | T2-17 | T2-18 | T2-19 | T2-20 | T2-21 | T2-22 | T2-23 | T2-24 | T2-25 | T2-26 | |
|------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| G/F | 11.3 | 66 | 64 | 61 | 60 | 57 | 56 | 50 | 44 | 59 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 74 | 75 | 75 | 75 | 75 | 74 | 74 | 74 | |
| 1/F | 14.7 | 65 | 64 | 61 | 60 | 57 | 56 | 50 | 45 | 59 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 74 | 74 | 75 | 75 | 74 | 74 | 74 | 74 | |
| 2/F | 18.1 | 65 | 64 | 61 | 60 | 57 | 56 | 51 | 46 | 59 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | |
| 3/F | 21.5 | 65 | 64 | 61 | 60 | 57 | 56 | 51 | 48 | 59 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | |
| 4/F | 24.9 | 65 | 64 | 61 | 60 | 58 | 57 | 53 | 52 | 60 | 65 | 67 | 68 | 68 | 68 | 68 | 69 | 70 | 71 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | |
| 5/F | 28.3 | 66 | 64 | 62 | 61 | 59 | 58 | 55 | 56 | 60 | 65 | 67 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | |
| 6/F | 31.7 | 65 | 64 | 62 | 61 | 59 | 59 | 56 | 57 | 61 | 66 | 67 | 67 | 68 | 68 | 68 | 69 | 69 | 70 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | |
| 7/F | 35.1 | 65 | 64 | 62 | 61 | 59 | 59 | 56 | 57 | 61 | 66 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 72 | 72 | 72 | 72 | 72 | |
| 8/F | 38.5 | 65 | 64 | 62 | 61 | 60 | 59 | 57 | 57 | 61 | 66 | 67 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | |
| 9/F | 41.9 | 65 | 64 | 62 | 61 | 60 | 59 | 57 | 57 | 61 | 65 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 69 | 70 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | |
| 10/F | 45.3 | 65 | 64 | 62 | 61 | 60 | 59 | 57 | 57 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 11/F | 48.7 | 65 | 64 | 62 | 61 | 60 | 59 | 57 | 57 | 60 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 12/F | 52.1 | 65 | 63 | 62 | 61 | 60 | 59 | 57 | 57 | 60 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | |
| 13/F | 55.5 | 64 | 63 | 62 | 61 | 60 | 59 | 57 | 57 | 60 | 65 | 67 | 67 | 67 | 67 | 67 | 67 | 68 | 69 | 69 | 69 | 69 | 69 | 69 | 70 | 70 | 70 | 70 |
| Exceedance | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | |
| No. of flats with exceedance | | 0 | | | 0 | | | 0 | | | 0 | | | 5 | | | 10 | | | 10 | | | 10 | | | 11 | | |
| Max. Noise Level | | 66 | 64 | 62 | 61 | 60 | 59 | 57 | 57 | 61 | 66 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 74 | 75 | 75 | 75 | 75 | 74 | 74 | 74 | 74 |

Noise level that will exceed limit of 70dB(A)

| | |
|--------------------------------|-----|
| Max Noise Level (dB(A)) = | 75 |
| Total no. of Exceedance = | 74 |
| Total no. of flat Exceedance = | 46 |
| Total no. of Premises = | 290 |
| % Compliance = | 84% |

Predicted Road Traffic Noise [L10(1h) dB(A)] at Representative Sensitive Receivers (Based on Year 2046 Traffic Forecast)
 Unmitigated Scenario (Max of AM and PM)

| 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 | T1-15 | T1-16 | T1-17 | T1-18 | T1-19 | T1-20 | T1-21 | T1-22 | T1-23 | T1-24 | T1-25 | T1-26 | T1-27 | T1-28 | T1-29 | |
|------------------------------|------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| G/F | 11.3 | 61 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 59 | 68 | 68 | 68 | 66 | 69 | 68 | NA | NA | |
| 1/F | 14.7 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | NA | NA | |
| 2/F | 18.1 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 3/F | 21.5 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 4/F | 24.9 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 5/F | 28.3 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 60 | 69 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 6/F | 31.7 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | 69 | |
| 7/F | 35.1 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | 69 | |
| 8/F | 38.5 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | 69 | |
| 9/F | 41.9 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 67 | 66 | 69 | 69 | 69 | 69 | |
| 10/F | 45.3 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 68 | 68 | 67 | 66 | 69 | 69 | 69 | 69 | |
| 11/F | 48.7 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 68 | 67 | 66 | 69 | 68 | 68 | 68 | |
| 12/F | 52.1 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 67 | 67 | 66 | 68 | 68 | 68 | 68 | |
| 13/F | 55.5 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 61 | 68 | 67 | 67 | 66 | 68 | 68 | 68 | 68 | |
| Exceedance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| No. of flats with exceedance | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Max. Noise Level | | 61 | 57 | 2/F to | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | 69 | 69 |

| 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 | T2-13 | T2-14 | T2-15 | T2-16 | T2-17 | T2-18 | T2-19 | T2-20 | T2-21 | T2-22 | T2-23 | T2-24 | T2-25 | T2-26 | |
|------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| G/F | 11.3 | 66 | 64 | 61 | 60 | 57 | 56 | 50 | 44 | 60 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 75 | 75 | 75 | 75 | 75 | 74 | 74 | 74 | 74 |
| 1/F | 14.7 | 66 | 64 | 61 | 60 | 57 | 56 | 50 | 45 | 60 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 74 | 74 | 75 | 75 | 75 | 74 | 74 | 74 | 74 |
| 2/F | 18.1 | 65 | 64 | 61 | 60 | 57 | 56 | 51 | 47 | 60 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| 3/F | 21.5 | 65 | 64 | 61 | 60 | 57 | 56 | 52 | 49 | 59 | 65 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 73 | 73 | 74 | 74 | 74 | 73 | 73 | 73 | 73 |
| 4/F | 24.9 | 65 | 64 | 62 | 60 | 58 | 57 | 54 | 53 | 60 | 65 | 67 | 68 | 68 | 68 | 68 | 69 | 70 | 71 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | 73 | 73 |
| 5/F | 28.3 | 66 | 64 | 62 | 61 | 59 | 59 | 56 | 56 | 61 | 65 | 67 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 72 | 72 | 72 | 73 | 73 | 72 | 72 | 72 | 72 |
| 6/F | 31.7 | 66 | 64 | 63 | 61 | 60 | 59 | 57 | 58 | 61 | 66 | 67 | 67 | 68 | 68 | 68 | 69 | 69 | 70 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 |
| 7/F | 35.1 | 66 | 64 | 63 | 61 | 60 | 59 | 57 | 58 | 61 | 66 | 67 | 67 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 71 | 71 | 72 | 72 | 72 | 72 | 72 | 72 |
| 8/F | 38.5 | 65 | 64 | 63 | 61 | 60 | 59 | 57 | 58 | 61 | 66 | 67 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| 9/F | 41.9 | 65 | 64 | 63 | 61 | 60 | 59 | 58 | 58 | 61 | 66 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| 10/F | 45.3 | 65 | 64 | 63 | 61 | 60 | 59 | 58 | 58 | 61 | 66 | 67 | 67 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 11/F | 48.7 | 65 | 64 | 63 | 61 | 60 | 59 | 58 | 58 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 12/F | 52.1 | 65 | 64 | 63 | 61 | 60 | 60 | 58 | 58 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 13/F | 55.5 | 65 | 64 | 63 | 61 | 60 | 60 | 58 | 58 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 67 | 68 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| Exceedance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | |
| No. of flats with exceedance | | 0 | | | 0 | | | 0 | | | 0 | | | 5 | | | 10 | | | 10 | | | 11 | | | 11 | | |
| Max. Noise Level | | 66 | 64 | 63 | 61 | 60 | 60 | 58 | 58 | 61 | 66 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 71 | 75 | 75 | 75 | 75 | 75 | 74 | 74 | 74 | 74 |

Noise level that will exceed limit of 70dB(A)

| | |
|--------------------------------|-----|
| Max Noise Level (dB(A)) = | 75 |
| Total no. of Exceedance = | 77 |
| Total no. of flat Exceedance = | 47 |
| Total no. of Premises = | 290 |
| % Compliance = | 84% |

Appendix 2.4 Relative Noise Reduction (RNR) for Innovative Noise Mitigation Measures (INMD) and results of Road Traffic Noise Impact Assessment (Mitigated Scenario)

RNR adopted for all NSR with traffic noise exceedance

| Project Case | | | | | | | Corrections | | Enhancement | Max RNR [5] | Reference Reduction | | | | | |
|--------------|------|-----------|-------------------------------|-------------------|--------------------|------------------|-------------|--------------|---------------------------|----------------|---------------------|----------------|---------|-------------------|---------------------|-----|
| NSR | Room | Room Area | Maximum Predicted Noise Level | Overlap / Gap [1] | Required OOA <=[3] | Provided OOA [4] | Room Area | Opening Area | | | Config | Room Area | OOA [2] | Overlap / Gap [1] | Noise Reduction [5] | |
| | | sqm | L10,peak hr, dB(A) | mm/mm | sqm | sqm | dB(A) | dB(A) | | | | sqm | sqm | mm/mm | dB(A) | |
| T2-18 | BR | 10.0 | 71 | 100 / 100 | 0.52 | 0.52 | 0.00 | 0.00 | | | 6.0 | PN_8sqm | 8 | 0.52 | 100 / 100 | 6.0 |
| T2-19 | BR | 7.2 | 75 | 100 / 100 | 0.52 | 0.52 | -0.46 | 0.00 | | | 5.5 | PN_8sqm | 8 | 0.52 | 100 / 100 | 6.0 |
| T2-20 | Liv | 12.3 | 75 | 275 / 100 | 3.23 | 3.23 | -4.93 | 0.00 | SAM (frame & ceiling)+MPA | 3.00 | 6.9 | NPE-Liv-SD_Enh | 38 | 3.23 | 275 / 100 | 8.8 |
| T2-21 | Liv | 12.3 | 75 | 275 / 100 | 3.23 | 3.23 | -4.93 | 0.00 | SAM (frame & ceiling)+MPA | 3.00 | 6.9 | NPE-Liv-SD_Enh | 38 | 3.23 | 275 / 100 | 8.8 |
| T2-22 | BR | 7.2 | 75 | 100 / 100 | 0.52 | 0.52 | -0.46 | 0.00 | SAM | 1.50 | 7.0 | PN_8sqm_Enh | 8 | 0.52 | 100 / 100 | 6.0 |
| T2-23 | BR | 7.2 | 75 | 100 / 100 | 0.52 | 0.52 | -0.46 | 0.00 | SAM | 1.50 | 7.0 | PN_8sqm_Enh | 8 | 0.52 | 100 / 100 | 6.0 |
| T2-24 | Liv | 11.2 | 74 | 275 / 100 | 3.23 | 3.23 | -5.34 | 0.00 | SAM (frame & ceiling)+MPA | 3.00 | 6.5 | NPE-Liv-SD_Enh | 38 | 3.23 | 275 / 100 | 8.8 |
| T2-25 | Liv | 11.7 | 74 | 275 / 100 | 3.23 | 3.23 | -5.15 | 0.00 | SAM (frame & ceiling)+MPA | 3.00 | 6.7 | NPE-Liv-SD_Enh | 38 | 3.23 | 275 / 100 | 8.8 |
| T2-26 | BR | 7.2 | 74 | 100 / 100 | 0.52 | 0.52 | -0.46 | 0.00 | | | 5.5 | PN_8sqm | 8 | 0.52 | 100 / 100 | 6.0 |

[1] **Gap / Overlap** Gap: Gap Width between interior sliding panel and exterior glazing, or between exterior glazing; Overlap: Overlapping Length

[2] **OOA** Outer Opening Area

[3] **Required OOA** The area of ventilation opening required under Building (Planning) Regulations and BEAM Plus requirements as advised by Project Architect

[4] **Provided OOA** The maximum OOA provided in design, complying with prescribed ventilation opening requirement under Building (Planning) Regulations. Only windows with "Provided OOA" larger than OOA in referenced configuration are presented here

[5] **RNR** *Relative Noise Reduction* - For NSRs proposed with Noise Mitigation Measures (NMM), the presented noise level is not the actual noise level at the external façade after the application of NMM, and these noise level are only the equivalent noise level at 1m from the external façade after accounting the reduction in noise levels inside the flat offered by proposed NMM.

Max RNR: The maximum allowable RNR in subject case, taken into account the room area correction and opening area correction

Schedule of Assets Window / Assets Balance

| Year | 4Q0 | 12-01 | 12-02 | 12-03 | 12-04 | 12-05 | 12-06 | 12-07 | 12-08 | 12-09 | 12-10 | 12-11 | 12-12 | 12-13 | 12-14 | 12-15 | 12-16 | 12-17 | 12-18 | 12-19 | 12-20 | 12-21 | 12-22 | 12-23 | 12-24 | 12-25 | 12-26 | 12-27 | 12-28 | 12-29 | |
|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 00 | 11.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 14.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 18.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 21.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 25.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 29.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 32.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70 | 36.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | 40.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90 | 43.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 47.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | 50.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 120 | 54.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Year | 4Q0 | 12-01 | 12-02 | 12-03 | 12-04 | 12-05 | 12-06 | 12-07 | 12-08 | 12-09 | 12-10 | 12-11 | 12-12 | 12-13 | 12-14 | 12-15 | 12-16 | 12-17 | 12-18 | 12-19 | 12-20 | 12-21 | 12-22 | 12-23 | 12-24 | 12-25 | 12-26 | 12-27 | 12-28 | 12-29 | | |
|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| 00 | 11.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 14.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 18.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 21.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 25.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 29.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 32.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70 | 36.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | 40.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90 | 43.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 47.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | 50.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 120 | 54.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Schedule of Assets Window / Assets Balance | | 00 |
|--|--|----|
| PH Asset | Account Window Year: 12/2021, Month: 01, Day: 01 | 15 |
| PH Asset | Account Window Year: 12/2021, Month: 01, Day: 01 | 20 |
| PH Asset | Account Window Year: 12/2021, Month: 01, Day: 01 | 42 |

Predicted Road Traffic Noise [L10(1h) dB(A)] at Representative Sensitive Receivers (Based on Year 2046 Traffic Forecast)
Mitigated Scenario

| 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 | T1-15 | T1-16 | T1-17 | T1-18 | T1-19 | T1-20 | T1-21 | T1-22 | T1-23 | T1-24 | T1-25 | T1-26 | T1-27 | T1-28 | T1-29 | |
|------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| G/F | 11.3 | 61 | 56 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 59 | 68 | 68 | 68 | 66 | 69 | 68 | 68 | 68 | |
| 1/F | 14.7 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 2/F | 18.1 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 3/F | 21.5 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 4/F | 24.9 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 68 | 68 | 68 | 66 | 69 | 69 | 69 | 69 | |
| 5/F | 28.3 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 60 | 69 | 68 | 68 | 66 | 69 | 69 | 69 | |
| 6/F | 31.7 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 61 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | |
| 7/F | 35.1 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 61 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | |
| 8/F | 38.5 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | |
| 9/F | 41.9 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 67 | 66 | 69 | 69 | 69 | |
| 10/F | 45.3 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 62 | 68 | 68 | 67 | 66 | 69 | 69 | 69 | |
| 11/F | 48.7 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 61 | 68 | 68 | 67 | 66 | 69 | 68 | 68 | |
| 12/F | 52.1 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 61 | 68 | 67 | 67 | 66 | 68 | 68 | 68 | |
| 13/F | 55.5 | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 59 | 61 | 68 | 67 | 67 | 66 | 68 | 68 | 68 | |
| Exceedance | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| No. of flats with exceedance | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Max. Noise Level (dB(A)) | | 61 | 57 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 62 | 69 | 68 | 68 | 67 | 69 | 69 | 69 | 69 | |

| 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 | T2-13 | T2-14 | T2-15 | T2-16 | T2-17 | T2-18 | T2-19 | T2-20 | T2-21 | T2-22 | T2-23 | T2-24 | T2-25 | T2-26 | |
|------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| G/F | 11.3 | 66 | 64 | 61 | 60 | 57 | 56 | 50 | 44 | 60 | 65 | 68 | 68 | 68 | 69 | 69 | 70 | 65 | 69 | 68 | 68 | 68 | 68 | 68 | 67 | 67 | 68 | 68 |
| 1/F | 14.7 | 66 | 64 | 61 | 60 | 57 | 56 | 50 | 45 | 60 | 65 | 68 | 68 | 68 | 69 | 69 | 70 | 65 | 69 | 68 | 68 | 68 | 68 | 67 | 67 | 67 | 68 | 68 |
| 2/F | 18.1 | 65 | 64 | 61 | 60 | 57 | 56 | 51 | 47 | 60 | 65 | 68 | 68 | 68 | 69 | 69 | 70 | 65 | 68 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 68 | 68 |
| 3/F | 21.5 | 65 | 64 | 61 | 60 | 57 | 56 | 52 | 49 | 59 | 65 | 68 | 68 | 68 | 68 | 69 | 70 | 65 | 68 | 67 | 67 | 66 | 66 | 66 | 66 | 67 | 68 | 68 |
| 4/F | 24.9 | 65 | 64 | 62 | 60 | 58 | 57 | 54 | 53 | 60 | 65 | 67 | 68 | 68 | 68 | 69 | 70 | 65 | 67 | 66 | 66 | 66 | 66 | 66 | 66 | 67 | 68 | 68 |
| 5/F | 28.3 | 66 | 64 | 62 | 61 | 59 | 59 | 56 | 56 | 61 | 65 | 67 | 68 | 68 | 68 | 68 | 69 | 70 | 67 | 65 | 65 | 65 | 65 | 65 | 65 | 66 | 66 | 67 |
| 6/F | 31.7 | 66 | 64 | 63 | 61 | 60 | 59 | 57 | 58 | 61 | 66 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 66 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 66 | 66 |
| 7/F | 35.1 | 66 | 64 | 63 | 61 | 60 | 59 | 57 | 58 | 61 | 66 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 66 | 64 | 65 | 64 | 65 | 65 | 65 | 65 | 66 | 66 |
| 8/F | 38.5 | 65 | 64 | 63 | 61 | 60 | 59 | 57 | 58 | 61 | 66 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 65 | 64 | 64 | 64 | 64 | 64 | 64 | 65 | 65 | 66 |
| 9/F | 41.9 | 65 | 64 | 63 | 61 | 60 | 59 | 58 | 58 | 61 | 66 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 65 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 65 |
| 10/F | 45.3 | 65 | 64 | 63 | 61 | 60 | 59 | 58 | 58 | 61 | 66 | 67 | 67 | 67 | 67 | 68 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 11/F | 48.7 | 65 | 64 | 63 | 61 | 60 | 59 | 58 | 58 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 12/F | 52.1 | 65 | 64 | 63 | 61 | 60 | 60 | 58 | 58 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| 13/F | 55.5 | 65 | 64 | 63 | 61 | 60 | 60 | 58 | 58 | 61 | 65 | 67 | 67 | 67 | 67 | 67 | 68 | 69 | 69 | 69 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| Exceedance | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No. of flats with exceedance | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Max. Noise Level (dB(A)) | | 66 | 64 | 63 | 61 | 60 | 60 | 58 | 58 | 61 | 66 | 68 | 68 | 68 | 68 | 69 | 69 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |

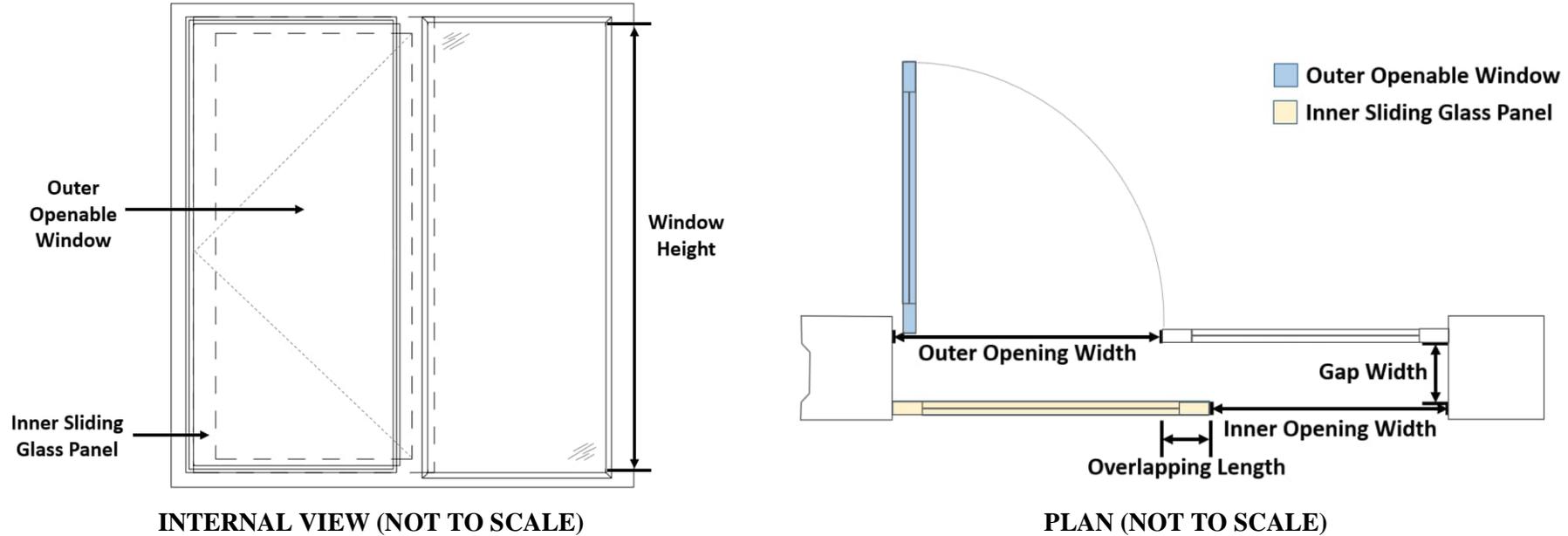
| Schedule of Acoustic Window / Acoustic Balcony | |
|--|--|
| PN_8sqm | Acoustic Window (Ref.: PN 5/23), Room area: 8sqm |
| PN_8sqm_Enh | Acoustic Window (Ref.: PN 5/23), Room area: 8sqm, SAM |
| NPE-Liv-SD_Enh | Acoustic Balcony (Ref.: NPE), Room area: 38sqm, MPA, SAM at door frame and balcony ceiling |

| | |
|--------------------------------|------|
| Max Noise Level (dB(A)) = | 70 |
| Total no. of Exceedance = | 0 |
| Total no. of flat Exceedance = | 0 |
| Total no. of Premises = | 294 |
| % Compliance = | 100% |

Remark: The predicted noise level after adopting the proposed noise mitigation measures does not necessarily represent the noise level at 1m from the external façade, but the equivalent noise level at 1m from the external façade after accounting the reduction in noise level inside the room offered by the proposed noise mitigation measures.

Appendix 2.5 Schematic Diagram of INMD Proposed

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



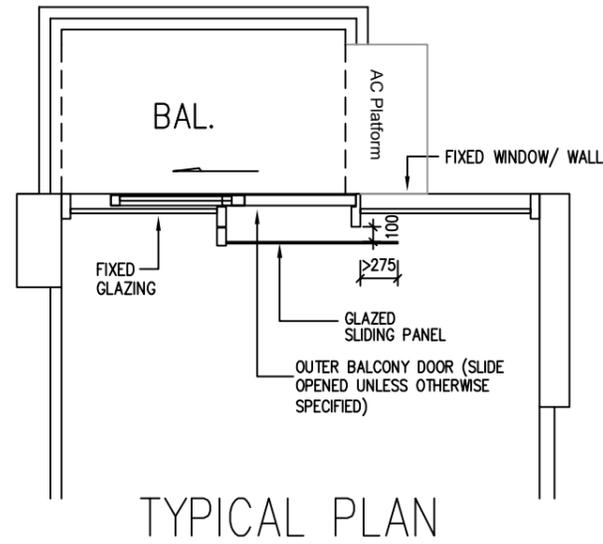
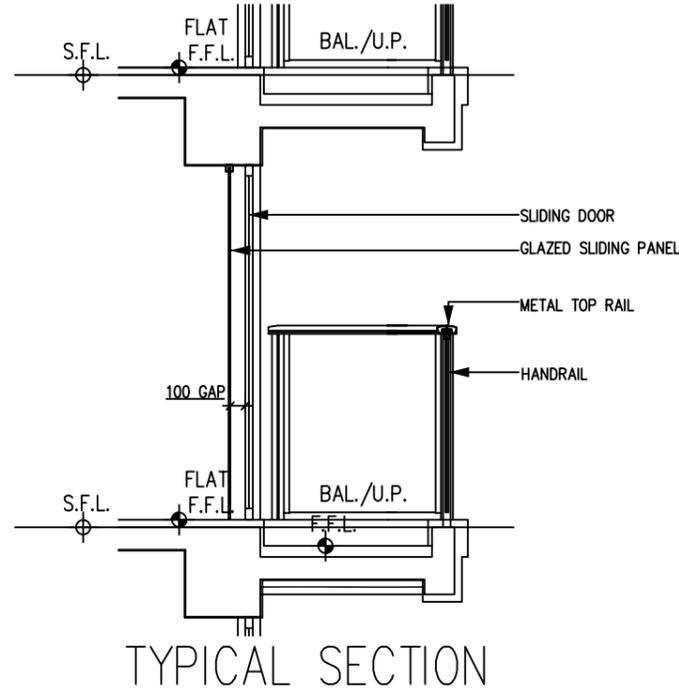
| Possible Designs of “Acoustic Window (Baffle Type)” for 8m ² and 18m ² rooms | | | | | |
|--|------------------------------------|---|---|-------------------------|----------------|
| Room Size (m ²) | Room Dimensions (mm ³) | Inner Window Opening (mm ²) | Outer Window Opening (mm ²) | Overlapping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

Notes:

- a. These are feasible designs of AW(BT) for 8m² and 18m² rooms.
- b. For optimum performance of noise reduction, the air gap should have a pane-to-pane overlapping length of ≥ 100mm and a gap width between 100mm and 175mm, with the inner sliding glass panel in a closed position. The window pane shall be ≥ 6mm in thickness.

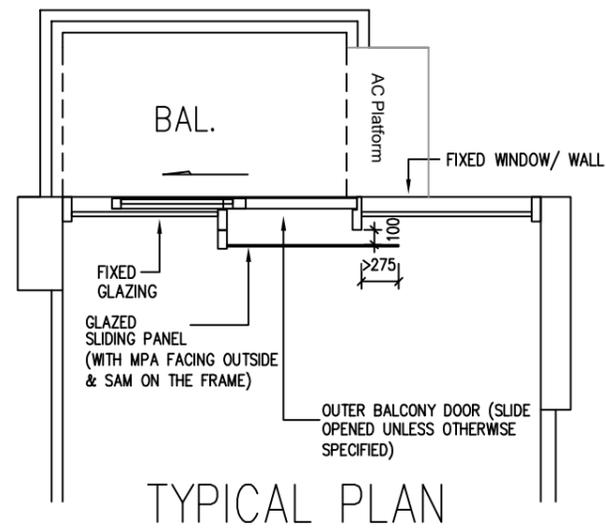
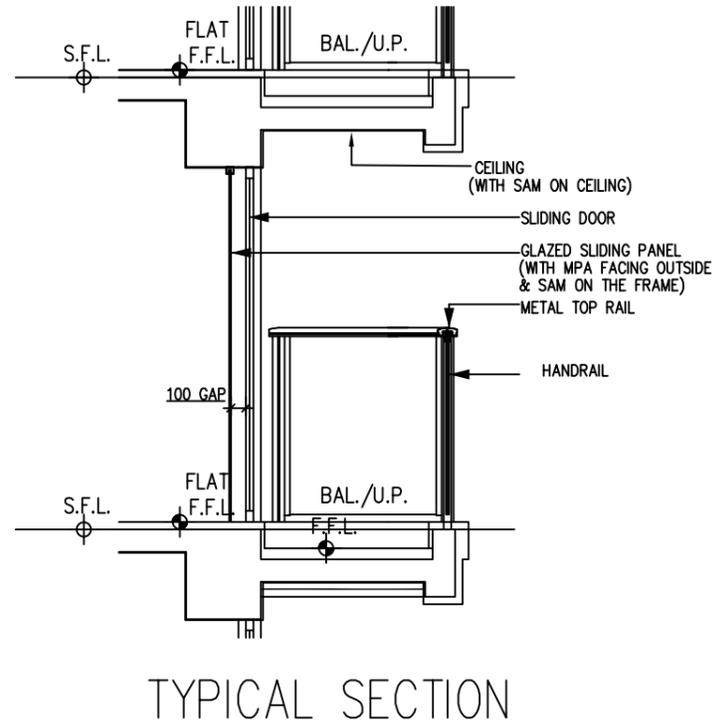
Reference for proposed Acoustic Window "PN_8sqm" and "PN_8sqm_Enh"

NPE-Liv-SD



FOR ABOVE PROPOSED ACOUSTIC BALCONY CONFIGURATION:
 MICRO-PERFORATED MEMBRANE ABSORBER (MPA) AT INNER SLIDING PANEL NOT REQUIRED
 SOUND ABSORPTIVE MATERIAL (SAM) AT DOOR FRAME AND BALCONY CEILING NOT REQUIRED

NPE-Liv-SD_Enh



FOR ABOVE PROPOSED ACOUSTIC BALCONY CONFIGURATION:
 MICRO-PERFORATED MEMBRANE ABSORBER (MPA) AT INNER SLIDING PANEL ADOPTED
 SOUND ABSORPTIVE MATERIAL (SAM) AT DOOR FRAME AND BALCONY CEILING ADOPTED

Note:
 The design is made reference to the reference case, it will be subject to further refinement at the detailed design stage.

Appendix: 2.5

Title: Indicative Design of Acoustic Balcony (Baffle Type)

Project: S16 Planning Application for Proposed Residential Development at Various Lots in D.D. 3TC and Adjoining Government Land, Tung Chung Road North, Tung Chung



Drawn by: TW

Checked by: TC

Rev.: 1.0

Date: Nov 2025

Appendix 3.1 Site Survey Records

Fixed Noise Survey Record for Environmental Assessment for S16 Application for Proposed Residential Development at Various Lots in D.D. 3TC and Adjoining Government Land, Tung Chung Road North, Tung Chung

| Location | Photos | Survey Record |
|-----------------------------|--|---|
| <p>Car washing facility</p> |  | <p>It is observed noise was emitted from the car washing facility during operation. The main operation of the facility is car-washing, which vehicle maintenance is not involved. The operation hour of the facility is from 10am to 7pm. Noise measurement of 30mins at the entrance of the facility is taken when the facility is in operation. The measured sound pressure level is 57.7 dB(A) at about 35m from the entrance of the facility.</p> |

Appendix 3.2 Fixed Noise Source Impact Assessment

**Table 1 : Fixed Noise Source Impact Assessment
Day and Evening Time Period**

T1-01

| Coordinate of NSR (X) | Coordinate of NSR (Y) | Source ID | Description | Coordinates of Noise Sources (X) | Coordinates of Noise Sources (Y) | Measured Sound Pressure Level dB(A) | Reference Distance (m) | SWL dB(A) | Shortest Horizontal Distance from NSR to noise source (m) | Distance Correction dB(A) | Barrier Correction dB(A) [1] | Tonality Correction dB(A) | Façade Correction dB(A) | Corrected Noise Level dB(A) |
|-----------------------|-----------------------|-----------|----------------------|----------------------------------|----------------------------------|-------------------------------------|------------------------|-----------|---|---------------------------|------------------------------|---------------------------|-------------------------|-----------------------------|
| 811552.2 | 816185.7 | S1 | Car-washing facility | 811642 | 816052 | 57.7 | 35 | -- | 161 | 13.3 | 10 | 6 | 3 | 43 |
| | | | | | | | | | | | | | Total | 43 |
| | | | | | | | | | | | | | Standard | 60 |
| | | | | | | | | | | | | | Complied? | Yes |

T1-29

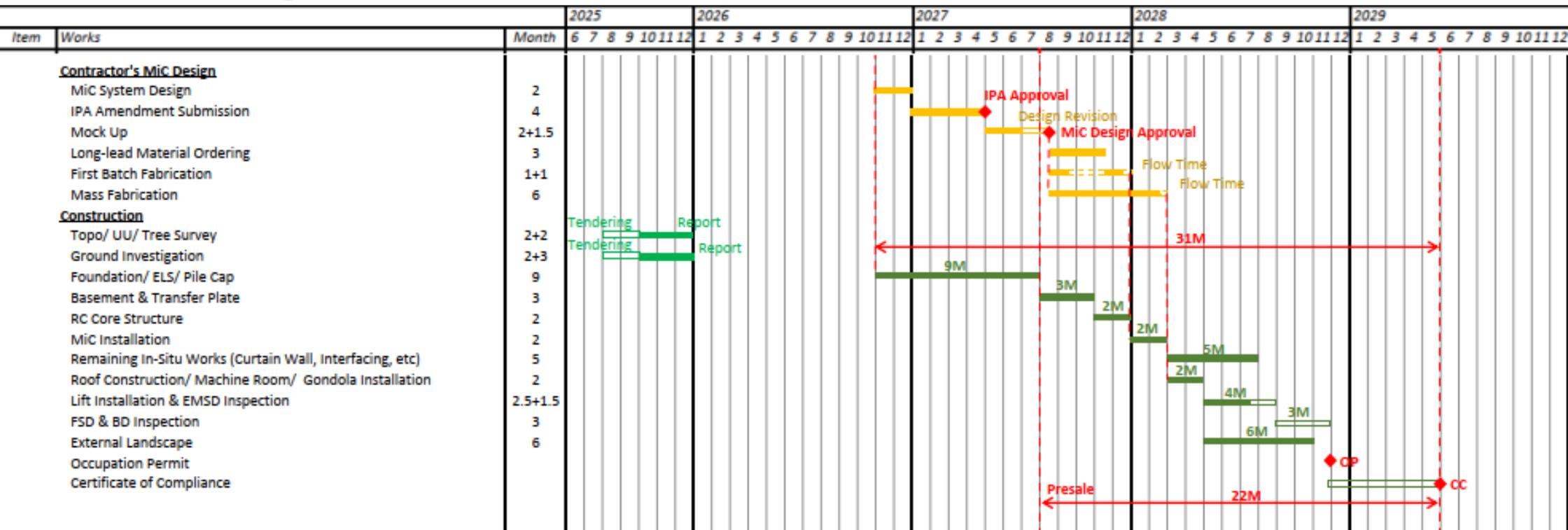
| Coordinate of NSR (X) | Coordinate of NSR (Y) | Source ID | Description | Coordinates of Noise Sources (X) | Coordinates of Noise Sources (Y) | Measured Sound Pressure Level dB(A) | Reference Distance (m) | SWL dB(A) | Shortest Horizontal Distance from NSR to noise source (m) | Distance Correction dB(A) | Barrier Correction dB(A) | Tonality Correction dB(A) | Façade Correction dB(A) | Corrected Noise Level dB(A) |
|-----------------------|-----------------------|-----------|----------------------|----------------------------------|----------------------------------|-------------------------------------|------------------------|-----------|---|---------------------------|--------------------------|---------------------------|-------------------------|-----------------------------|
| 811577.4 | 816208.9 | S1 | Car-washing facility | 811642 | 816052 | 57.7 | 35 | -- | 170 | 13.7 | 0 | 6 | 3 | 53 |
| | | | | | | | | | | | | | Total | 53 |
| | | | | | | | | | | | | | Standard | 60 |
| | | | | | | | | | | | | | Complied? | Yes |

Remark

[1] As the line of sight of T1-01 to S1 is blocked by the Proposed Building itself, thus 10 dB(A) barrier correction is adopted.

Appendix 4.1 Tentative Construction Programme

Steel MiC Scheme Master Programme



Appendix 4.2 Extracted Information from AEIAR-196/2016

water mark of the CA zone. Considered that there is only relatively limited works for the footing construction and the area affected would likely be the area above high water mark with relatively less disturbance on ecological habitat, adverse impact is thus not anticipated.

2.4.1.109 Regarding the northern portion of the development, Tung Chung Road North, L21 and L31 will be local distributors while L31 will involve formation of a new left-in-left-out vehicular access on Yu Tung Road.

2.4.1.110 In order to cater for the increased population within Tung Chung Valley, Shek Mun Kap Road has to be widened from the existing one-way configuration to two-way configuration to allow for the associated traffic demand. Given there are already existing village houses erected at the southern side of Shek Mun Kap Road, the proposed widening can only be made towards the northern side of the road which will inevitably touch the existing Fung Shui Woods. Although ecological constraints from natural habitat have been taken into account in the design of road connection network in TCW, a minor encroachment onto the Fung Shui Woods with approximately 0.04 ha in size is still inevitable due to limited separation distance away from existing village houses. Ecological impacts due to the road connection networks will be separately discussed in **Chapter 9. Table 2.11** summarizes the lengths and number of lanes of distributor roads involved in TCE and TCW.

Table 2.11 Summary table of distributor roads involved in TCE and TCW

| Internal Road | Number of Lane | Length (m) |
|-----------------------|----------------|------------|
| <i>TCE</i> | | |
| Road D1 | 4 | 930 |
| Road D2 | 4 | 790 |
| Road D3 | 4 | 840 |
| Road D4 | 4 | 220 |
| Road L1 | 2 | 390 |
| Road L2 | 2 | 730 |
| Road L3 | 2 | 720 |
| Road L4 | 2 | 460 |
| Road L5 | 2 | 360 |
| Road L6 | 2 | 300 |
| Road L7 | 2 | 430 |
| Road L8 | 2 | 110 |
| Road L9 | 2 | 110 |
| Road L10 | 2 | 80 |
| Tung Chung Road North | 2 | 360 |



LEGEND
 RD PROPOSED ROAD



| | | | |
|-----|--------------|----|-------|
| D | FOURTH ISSUE | GL | 11/15 |
| C | THIRD ISSUE | GL | 08/15 |
| B | SECOND ISSUE | GL | 06/15 |
| A | FIRST ISSUE | GL | 03/15 |
| Rev | Description | By | Date |

Consultant
ARUP

Project title
**Tung Chung
 New Town Extension**

Drawing title
**Locations of Road
 Land Use in RODP (TCW)**

| | | | |
|---------------------------------|---------------|-----------------------|----------------|
| Drawing no. Figure 2.18b | | Rev. D | |
| Drawn GL | Date 11/15 | Checked LK | Approved FC |
| Scale AS SHOWN | | Status PRELIMINARY | |

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土木工程拓展署
 Civil Engineering and
 Development Department

Appendix 7.1 Reply correspondences from EPD & FSD

Ref.: CWPTCDD3EI01_0_0001L.25.docx

16 October 2025
By Post & EmailEnvironmental Protection Department
Environmental Compliance Division
Regional Office (South), Islands8th floor, Chinachem Exchange Square,
1 Hoi wan Street, Quarry Bay, Hong Kong

Dear Ms. Fiona Wong,

Request for Land Contamination Information at Various Lots in DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island

We are the environmental consultant who are commissioned to conduct a land contamination assessment for the Proposed Residential Development in DD3TC and Adjoining Government Land, Tung Chung, Lantau Island. Location of the subject site is shown in **Figure 1.1**.

According to the "Practice Guide for Investigation and Remediation of Contaminated Land" published by Environmental Protection Department (EPD) of the HKSAR, information including site history and other available information regarding the site shall be reviewed during the site appraisal to identify potential current and historical, on and off-site activities that could result in contamination of the site.

In view of this, we would like to request for the following information for our assessment.

1. Potentially contaminating activities that have occurred at the site such as storage and handling of chemicals, oils and/or hazardous waste, on-site waste disposal, burn pits, etc;
2. Accidents, fires, explosions, spillages and any pollution incidents attributed to the site and any remediation that has occurred at the site or neighbouring areas; and
3. Any land contamination assessment that has conducted at the site or neighbouring areas.

Your reply by 31 October 2025 is highly appreciated as it would be very helpful to our assessment. Should you have any queries, please do not hesitate to contact the undersigned at [REDACTED] (email: [REDACTED]) or our Ms. Sally Chiu at [REDACTED].

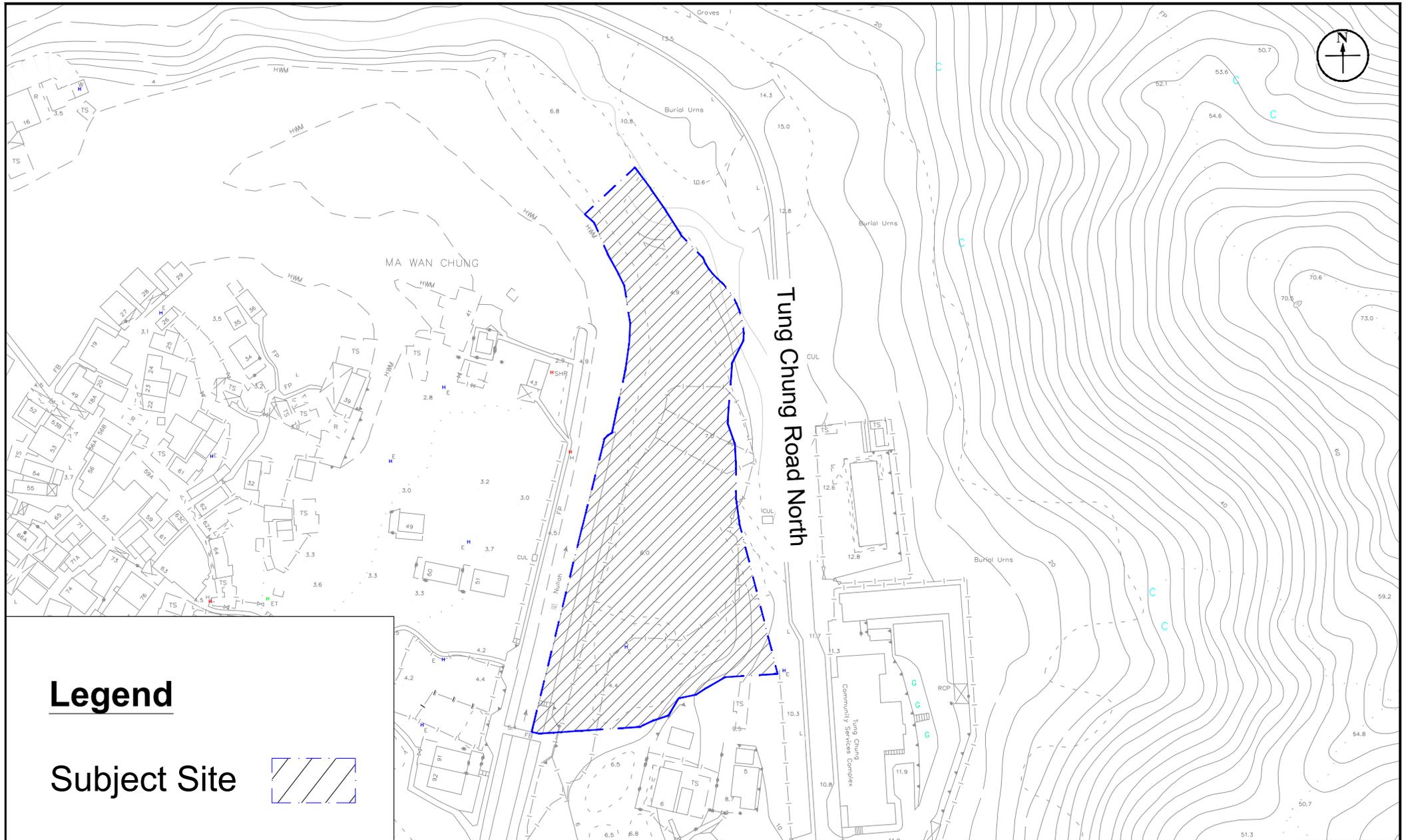
Thank you very much for your attention.

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



Tak Wong
Principal Consultant

Encl.
Annex 1 Location of Subject Site



Legend

Subject Site



Figure: 1.1

Title: Location of Subject Site and its Environs

Project: S16 Application for Proposed Residential Development at Various Lots in D.D. 3TC and Adjoining Government Land, Tung Chung Road North, Tung Chung

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Sep 2025

Sally Chiu

From: Cho Wing WONG/EPD [REDACTED]
Sent: Friday, 31 October 2025 5:07 pm
To: Sally Chiu
Cc: Tak Kwong Wong
Subject: Re: Request Information for Land Contamination Information at Various Lots in DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Sally Chiu,

I refer to your letter and email dated 16 October 2025 requesting the following information with respect to the subject site as shown in your attached figure of your email/ letter:

1. Potentially contaminating activities that have occurred at the site such as storage and handling of chemicals, oils and/or hazardous waste, on-site waste disposal, burn pits, etc;
2. Accidents, fires, explosions, spillages and any pollution incidents attributed to the site and any remediation that has occurred at the site or neighbouring areas; and
3. Any land contamination assessment that has conducted at the site or neighbouring areas.

You are advised to visit our territory-wide register of chemical waste producers by making an appointment for the access to the register at the Territory Control Office (in Wan Chai).

Concerning the study area in your attached figure, we do not have any records of chemical spillage or leakage incident. You are reminded that this information is not exhaustive and you are advised to check with other concerned parties/authorities responsible for handling chemical leakage/spillage incidents. For any previous land contamination assessment at the site or neighbouring areas, you are advised to obtain from other related parties/ publicly available document. You may also consider taking samples for your assessment on land contamination, if necessary.

Should you have any enquiries, please feel free to contact the undersigned. Many thanks.

Regards,
Fiona WONG
Environmental Protection Department
Tel: [REDACTED]

From: Sally Chiu [REDACTED]
Sent: Thursday, October 16, 2025 5:30 PM
To: Cho Wing WONG/EPD [REDACTED]
Cc: Tak Kwong Wong [REDACTED]
Subject: Request Information for Land Contamination Information at Various Lots in DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island

Dear Fiona,

We are the environmental consultant who are commissioned to conduct a land contamination assessment for the Proposed Residential Development in DD3TC and Adjoining Government Land, Tung Chung, Lantau Island. Location of the subject site is shown in **Figure 1.1** of the attached document.

According to the "Practice Guide for Investigation and Remediation of Contaminated Land" published by Environmental Protection Department (EPD) of the HKSAR, information including site history and other available information regarding the site shall be reviewed during the site appraisal to identify potential current and historical, on and off-site activities that could result in contamination of the site.

In view of this, we would like to request for the following information for our assessment.

1. Potentially contaminating activities that have occurred at the site such as storage and handling of chemicals, oils and/or hazardous waste, on-site waste disposal, burn pits, etc;
2. Accidents, fires, explosions, spillages and any pollution incidents attributed to the site and any remediation that has occurred at the site or neighbouring areas; and
3. Any land contamination assessment that has conducted at the site or neighbouring areas.

Your reply by 31 October 2025 is highly appreciated as it would be very helpful to our assessment. Should you have any queries, please do not hesitate to contact the undersigned at [REDACTED] or our Mr. Tak Wong at [REDACTED] (email: [REDACTED]).

Thank you very much for your attention.

Kind regards

Sally Chiu

Assistant Environmental Consultant

D [REDACTED]
[REDACTED]

Ramboll Hong Kong Limited

Classification: Confidential

Fire Services Department/ Management Group

9/F, Fire Services Headquarters Building,
1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong

Dear Sir/ Madam,

Request for Land Contamination Information at Various Lots in DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island

We are the environmental consultant who are commissioned to conduct a land contamination assessment for the Proposed Residential Development in DD3TC and Adjoining Government Land, Tung Chung, Lantau Island. Location of the subject site is shown in **Figure 1.1**.

According to the "Practice Guide for Investigation and Remediation of Contaminated Land" published by Environmental Protection Department (EPD) of the HKSAR, information including site history and other available information regarding the site shall be reviewed during the site appraisal to identify potential current and historical, on and off-site activities that could result in contamination of the site.

In view of this, we would like to request for the following information for our assessment.

1. Potentially contaminating activities that have occurred at the site such as storage and handling of chemicals, oils and/or hazardous waste, on-site waste disposal, burn pits, etc;
2. Accidents, fires, explosions, spillages and any pollution incidents attributed to the site and any remediation that has occurred at the site or neighbouring areas; and
3. Any land contamination assessment that has conducted at the site or neighbouring areas.

Your reply by 31 October 2025 is highly appreciated as it would be very helpful to our assessment. Should you have any queries, please do not hesitate to contact the undersigned at [REDACTED] (email: [REDACTED]) or our Ms. Sally Chiu at [REDACTED] (email: [REDACTED]).

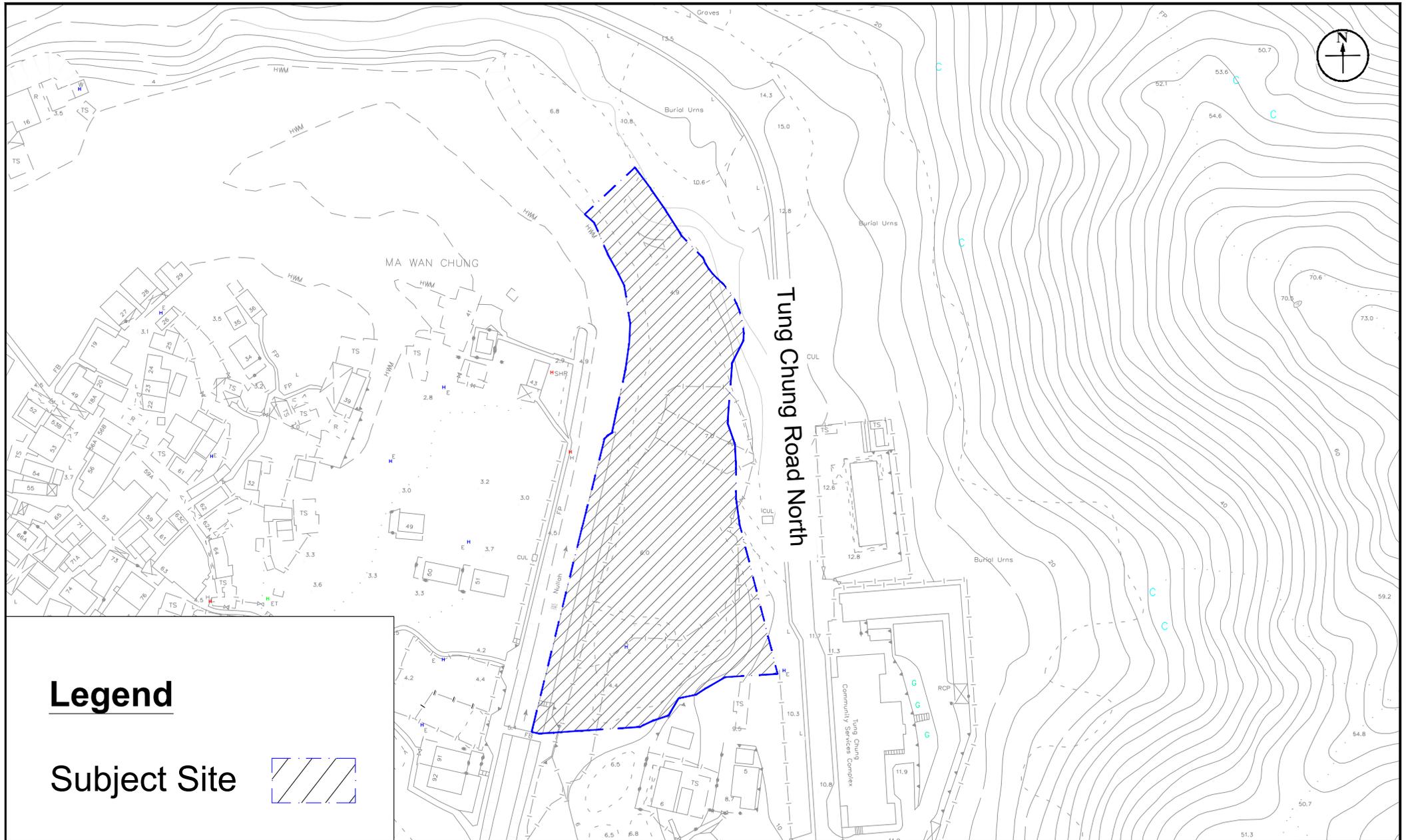
Thank you very much for your attention.

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



Tak Wong
Principal Consultant

Encl.
Figure 1.1 Location of Subject Site
Annex 2 Letter of Appointment



Legend

Subject Site



Figure: 1.1

Title: Location of Subject Site and its Environs

Project: S16 Application for Proposed Residential Development at Various Lots in D.D. 3TC and Adjoining Government Land, Tung Chung Road North, Tung Chung

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Sep 2025



廣譽發展有限公司

FULL FAME DEVELOPMENT LIMITED

(Subsidiary of Chun Wo Development Holdings Limited)

Your reference :

Our reference : HK12-14/0083-2025

14 October 2025

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

Mr. David Yeung / Tony Cheng

**Re: Request for Land Contamination Information
The Proposed Residential Development at DD3 TUNG CHUNG ("Project")**

We, Full Fame Development Limited, as the Applicant of the Captioned Project, write to confirm the appointment of Ramboll Hong Kong Limited as our environmental consultant to prepare the Environmental Report and liaise with the relevant government departments to clarify the environmental issues (including land contamination issue) in support of the proposed development at various lots in DD3TC and adjoining government land, Tung Chung.

Thank you very much for your attention.

Yours sincerely
for and on behalf of
Full Fame Development Limited

For and on behalf of
FULL FAME DEVELOPMENT LIMITED
廣譽發展有限公司

.....
Authorized Signature(s)
Ho Chun Wai
Director

Sally Chiu

From: [REDACTED]
Sent: Tuesday, 4 November 2025 7:29 pm
To: Sally Chiu
Cc: OE8 CS/FSD
Subject: Re: Request Information for Land Contamination Information at Various Lots in DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island
Attachments: CWPTCDD3EI01_0_0002L.25.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

Our reference: (6) in FSD GR 6-5/4 R Pt. 61
Your reference: CWPTCDD3EI01_0_0002L.25.docx

Dear Ms. CHIU,

Request for Land Contamination Information at Various Lots in DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island

Request for Information – Dangerous Goods Record and Records of accidents of spillage/leakage

I refer to your email of 16.10.2025 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

If you have further questions, please feel free to contact the undersigned.

Best regards,

LEE Yeung, Darwin
Assistant Divisional Officer (Legal Affairs)(Acting)
Corporate Services Division
Fire Services Department

Tel.: [REDACTED]

Disclaimer:

*Fire Services Department uses its best endeavor to ensure the accuracy and reliability of the information provided, but cannot guarantee its accuracy and reliability and accepts no liability of any nature for any loss or damage arising from any inaccuracies or omissions that may from the information provided.

From: ADO LEA CS [REDACTED]
Sent: Friday, October 17, 2025 14:32

To: [REDACTED]

Cc: OE8 CS/FSD

Subject: Re: Fw: Request Information for Land Contamination Information at Various Lots in DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island

Our reference: (6) in FSD GR 6-5/4 R Pt. 61

Your reference: CWPTCDD3EI01_0_0002L.25.docx

Dear Ms. CHIU,

Request for Land Contamination Information at Various Lots in DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island

Request for Information – Dangerous Goods Record and Records of accidents of spillage/leakage

I refer to your email dated 16.10.2025 regarding the captioned subject.

Your case is being handled, and a reply will be furnished to you as soon as possible. Please be advised that due to time lapse, this Department can only provide the following information for your requested information:

- (i) Dangerous Goods Licence Record: from the year of 1990 to present moment.
- (ii) Incident Record: Past three years of fire and special services incidents. Lift incidents will be excluded unless otherwise required.

Should you have further questions, please feel free to contact the undersigned.

Best regards,

LEE Yeung, Darwin
Assistant Divisional Officer (Legal Affairs)(Acting)
Corporate Services Division
Fire Services Department

Tel.: [REDACTED]

----- Forwarded by AccessIO/FSD/HKSARG on 16/10/2025 17:37 -----

From: "Sally Chiu" [REDACTED]
To: [REDACTED]
Cc: "Tak Kwong Wong" [REDACTED]
Date: 16/10/2025 17:32
Subject: Request Information for Land Contamination Information at Various Lots in DD3TC and Adjoining Government Land (GL), Tung Chung, Lantau Island

Dear Sir/ Madam,

We are the environmental consultant who are commissioned to conduct a land contamination assessment for the Proposed Residential Development in DD3TC and Adjoining Government Land,

Tung Chung, Lantau Island. Location of the subject site is shown in **Figure 1.1** of the attached document.

According to the "Practice Guide for Investigation and Remediation of Contaminated Land" published by Environmental Protection Department (EPD) of the HKSAR, information including site history and other available information regarding the site shall be reviewed during the site appraisal to identify potential current and historical, on and off-site activities that could result in contamination of the site.

In view of this, we would like to request for the following information for our assessment.

1. Potentially contaminating activities that have occurred at the site such as storage and handling of chemicals, oils and/or hazardous waste, on-site waste disposal, burn pits, etc;
2. Accidents, fires, explosions, spillages and any pollution incidents attributed to the site and any remediation that has occurred at the site or neighbouring areas; and
3. Any land contamination assessment that has conducted at the site or neighbouring areas.

Your reply by 31 October 2025 is highly appreciated as it would be very helpful to our assessment. Should you have any queries, please do not hesitate to contact the undersigned at [REDACTED] or our Mr. Tak Wong at [REDACTED] (email: [REDACTED]).

Thank you very much for your attention.

Kind regards

Sally Chiu

As [REDACTED] Environmental Consultant

D [REDACTED]

[REDACTED]
Ramboll Hong Kong Limited

Classification: Confidential
(File-Checksum-00000001)

Appendix 7.2 Aerial Photos



Legends

Site Boundary



Appendix: 8.2

Title: Historial Aerial Photo 1985 - A02632

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Governemnt Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



Legends

Site Boundary 

Appendix: 8.2

Title: Historial Aerial Photo 1995 - CN12174

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Governemnt Land, Tung Chung Road North, Tung Chung, Lantau Island



Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



Legends

Site Boundary



Appendix: 8.2

Title: Historical Aerial Photo 2000 - A50726

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Governemnt Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



Legends

Site Boundary



Appendix: 8.2

Title: Historial Aerial Photo 2005 - CW69820

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Governemnt Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



Legends

Site Boundary



Appendix: 8.2

Title: Historial Aerial Photo 2010 - CW87163

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Governemnt Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



Legends

Site Boundary



Appendix: 8.2

Title: Historial Aerial Photo 2015 - CW116986

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Governemnt Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



Scale 210mm

The Government

Legends

Site Boundary



Appendix: 8.2

Title: Historial Aerial Photo 2020 - E108178C

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Governemnt Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026



The Government of the Hong Kong Special Administrative Region

Legends

Site Boundary 

Appendix: 8.2

Title: Historial Aerial Photo 2025 - E251843C

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Governemnt Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: TW

Rev.: 1.0

Date: Jan 2026

Appendix 7.3 Site Walkover Checklist

Annex C1

Site Walkover Checklist

Date of Site Visit:

GENERAL SITE DETAILS

SITE OWNER/CLIENT Full Fame Development Limited

PROPERTY ADDRESS 10/F, Kimberland Centre, No.55 Wing Hong Street,
Cheung Sha Wan, Kowloon, Hong Kong

PERSON CONDUCTING THE QUESTIONNAIRE

NAME Mr. Wiki Leung

POSITION Project Manager

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME Mr. Ho Chun Wai

POSITION Director

TELEPHONE [REDACTED]

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled.
Obtain a flow schematic if possible.

Number of employees: Full-time: Nil

Part-time: Nil

Temporary/Seasonal: Nil

Maximum no. of people on site at any time: Nil

Typical hours of operation: Nil

Number of shifts: Nil

Days per week: Nil

Weeks per year: Nil

Scheduled plant shut-down: Nil

Detail the main sources of energy at the site:

| | |
|-------------|--------------------|
| Gas | Yes /No |
| Electricity | Yes/ No |
| Coal | Yes /No |
| Oil | Yes /No |
| Other | Yes /No |

SITE DESCRIPTION

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area: 5,400 m²

What area of the site is covered by buildings (%): /

Please list all current and previous owners/occupiers if possible. Temporary carpark

Is a site plan available? If yes, please attach. Yes /No

Are there any other parties on site as tenants or sub-tenants? Yes/No

If yes, identify those parties: /

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: Vacant woodland

South: Village houses and woodland

East: Tung Chung Road North, Construction Site

West: Open Nullah

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

Sloped, from high side of Tung Chung Road North to low side of Open of open nullah to the West

State the size and location of the nearest residential communities.

Scatter Village house to the South and to the West over open nullah

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

No

Questionnaire with Existing Site Owner

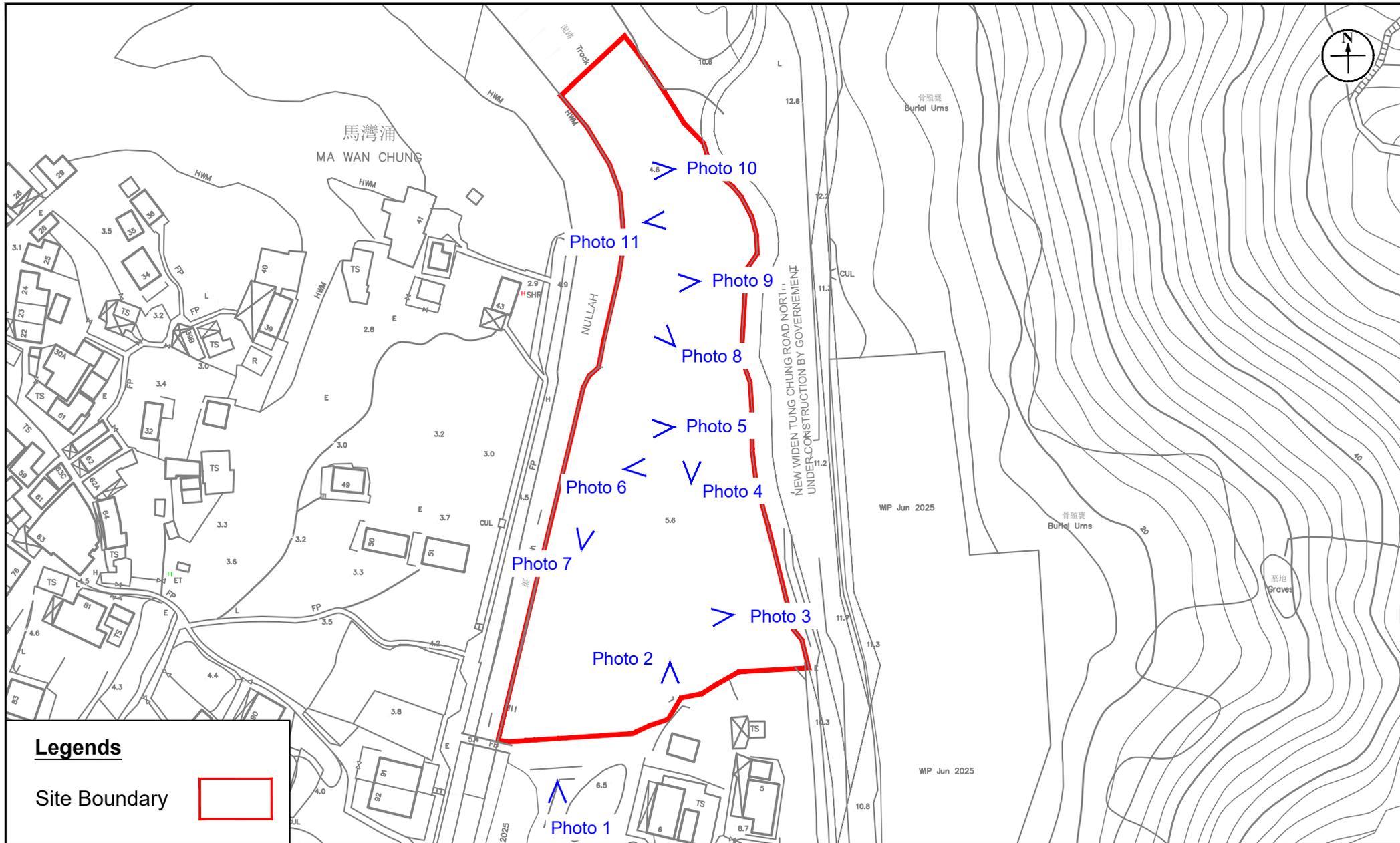
| | | Yes/No | Notes |
|-----|--|--------|----------|
| 1. | What are the main activities/operations at the above address? | | Car Park |
| 2. | How long have you been occupying the site? | | NA |
| 3. | Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy?) | No | |
| 4. | Prior to your occupancy, who occupied the site? | | NA |
| 5. | What were the main activities/operations during their occupancy? | | NA |
| 6. | Have there been any major changes in operations carried out at the site in the last 10 years? | No | |
| 7. | Have any polluting activities been carried out in the vicinity of the site in the past? | | No |
| 8. | To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage? | | No |
| 9. | Are there any boreholes/wells or natural springs either on the site or in the surrounding area? | | No |
| 10. | Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.) | No | |
| 11. | Are any chemicals used in your daily operations? (If yes, please provide details.) | No | |
| | • Where do you store these chemicals? | | |
| 12. | Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?) | No | |
| 13. | Has the facility produced a separate hazardous substance inventory? | No | |
| 14. | Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.) | | No |
| 15. | How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)? | | No |
| 16. | Do you have any underground storage tanks? (If yes, please provide details.) | No | |
| | ▪ How many underground storage tanks do you have on site? | | |
| | ▪ What are the tanks constructed of? | | |
| | ▪ What are the contents of these tanks? | | |
| | ▪ Are the pipelines above or below ground? | | |

| | | | |
|-----|---|----|-----|
| | <ul style="list-style-type: none"> ▪ If the pipelines are below ground, has any leak and integrity testing been performed? | | |
| | <ul style="list-style-type: none"> ▪ Have there been any spills associated with these tanks? | | |
| 17. | Are there any disused underground storage tanks? | No | |
| 18. | Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.) | No | |
| 19. | How are the wastes disposed of? | | Nil |
| 20. | Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.) | No | |
| 21. | Have any spills occurred on site? (If yes, please provide details.) | No | |
| | • When did the spill occur? | | |
| | • What were the substances spilled? | | |
| | • What was the quantity of material spilled? | | |
| | • Did you notify the relevant departments of the spill? | | |
| | • What were the actions taken to clean up the spill? | | |
| | • What were the areas affected? | | |
| 22. | Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.) | No | |
| 23. | Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)? | No | |
| 24. | Are there any known contaminations on site? (If yes, please provide details.) | No | |
| 25. | Has the site ever been remediated? (If yes, please provide details.) | No | |

Observations

| | | Yes/No | Notes |
|-----|---|--------|--|
| 1. | Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)? | NA | There are no chemical stored within the Site |
| 2. | What are the conditions of the bund walls and floors? | NA | |
| 3. | Are any surface water drains located near to drum storage and unloading areas? | No | |
| 4. | Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.) | No | |
| 5. | Is there a storage site for the wastes? | No | |
| 6. | Is there an on-site landfill? | No | |
| 7. | Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.) | No | |
| 8. | Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.) | No | |
| 9. | Are there any potential off-site sources of contamination? | No | |
| 10. | Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)? | No | |
| 11. | Are there any sumps, effluent pits, interceptors or lagoons on site? | No | |
| 12. | Any noticeable odours during site walkover? | No | |
| 13. | Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam? | No | |

Appendix 7.4 Site Photo Record



Legends

Site Boundary



Appendix: 8.4

Title: Photo Directions for Site Appraisal

Project: Proposed Flat with Minor Relaxation of Building Height Restriction at Various Lots in D.D. 3 TC and Adjoining Governemnt Land, Tung Chung Road North, Tung Chung, Lantau Island

RAMBOLL

Drawn by: SC

Checked by: CC

Rev.: 1.0

Date: Jan 2026

Appendix 8.4 Photo Records



Photo 1: The ground is paved with concrete in good condition. No oil stains and smells are observed.



Photo 2: Storage containers are observed. However, there are no direct contact between the containers and the ground and the ground is paved with concrete in good condition. No oil stains and smells are observed.



Photo 3: The area is planted with green trees.



Photo 4: The area is used as temporary car park. No oil refilling activities are observed. The ground is paved with concrete in good condition. No oil stains and smells are observed.

Appendix 8.4 Photo Records



Photo 5: The area is used as temporary car park. No oil refilling activities are observed. The ground is paved with concrete in good condition. No oil stains and smells are observed.



Photo 6: The area is used as temporary car park. No oil refilling activities are observed. The ground is paved with concrete in good condition. No oil stains and smells are observed.



Photo 7: The area is used as temporary car park. No oil refilling activities are observed. The ground is paved with concrete in good condition. No oil stains and smells are observed.



Photo 8: Entrance road of the Site. The area is covered with sand in good condition. No oil stains and smells are observed.

Appendix 8.4 Photo Records



Photo 9: Containers are observed but there is no direct contact between the container and the ground. Temporary toilets and water bottles are observed too. The area is covered in sand in good condition. No oil stains and smells are observed.



Photo 10: A boat and some construction machines are observed but they are not in operation. The area is covered in sand in good condition. No oil stains and smells are observed.



Photo 11: The area is planted with trees