# Annex 9

Revised Environmental Assessment

# Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South

Environmental Assessment Report

October 2026

**Submitted to**

Fonnie Holding Limited

**Prepared By**

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# 1. INTRODUCTION

## 1.1 Background

1.1.1.1 The Applicant, Fonnie Holdings Limited intends to develop the residential development cum Resident Care Home for the Elderly and Shop and Services (hereafter as "the Proposed Development") in D.D.92, D.D.94 and the adjoining Government land in Hang Tau Tai Po, Kwu Tung South (hereafter as "the Application Site").

1.1.1.2 The Application Site is the subject of a previous Section 12A application (No. Y/NE-KTS/13), which was agreed by the Town Planning Board on December 2021 (hereafter referred to as "the Approved Section 12A Application"). The Approved Section 12A Application was to divide the Comprehensive Development Area ("CDA") Zone into Area (a) and Area (b) for phased development, while relaxing the respective maximum Plot ratio, building height and site coverage restrictions to allow for a higher development intensity, including domestic flats and non-domestic uses for retail facilities and a RCHE.

1.1.1.3 This planning application is submitted under Section 16 of the Town Planning Ordinance ("the Ordinance") to facilitate the implementation of the CDA site. Under the current application, the minor relaxation of the plot ratio and building height restrictions is proposed for the Application Site corresponds to Area (a) of the "CDA" zone on the Approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22 ("the OZP") .

1.1.1.4 Meinhardt Infrastructure and Environment Limited (MIEL) was commissioned by the Applicant to conduct an Environment Assessment (EA) to support the Section 16 Planning Application of the Proposed Development, and to assess the environmental impact due to / upon the Proposed Development.

## 1.2 Objectives of the EA

1.2.1.1 This EA is prepared to identify the potential environmental impacts arising from and upon the Proposed Development and propose possible mitigation measures, as necessary to demonstrate the environmental acceptability of the Proposed Development on the Application Site.

1.2.1.2 This EA covers the following aspects:

- Assess and evaluate the environmental impacts from the surrounding environment upon the operation of Site;
- Assess and evaluate the potential environmental impacts due to the Application Site upon the nearby sensitive areas; and
- Propose mitigation measures, where necessary, to reduce the environmental impacts to an acceptable level.

## 1.3 Report Structure

1.3.1.1 The remaining chapters of this report are shown below:

Chapter 2 – Site Context

Chapter 3 – Air Quality Impact

Chapter 4 – Noise Impact

Chapter 5 – Water Quality Impact

Chapter 6 – Waste Management and Land Contamination

Chapter 7 – Conclusion

# 2. SITE CONTEXT

## 2.1 Site Location and Its Environs

2.1.1.1 The Proposed Development will be located at the various lots in D.D.92, D.D.94 and the adjoining Government land in Hang Tau Tai Po, Kwu Tung South.

2.1.1.2 The Application Site is currently occupied by unused structures including a 2-story house, a pavilion, swimming pool and landscape garden. The Proposed Development is located in "Comprehensive Development Area" Zone bounded by "Agriculture" (AGR) Zone, "Residential (Group D)" (R(D)) Zone and "Government Institution or Community" (G/IC) Zone according to the Draft Kwu Tung South Outline Zoning Plan (OZP) (OZP No.: S/NE-KTS/21). Existing land uses in the surroundings include low-rise village type development and temporary structures.

2.1.1.3 **Figure 2.1** shows the Application Site location and its environs.

## 2.2 Proposed Development

2.2.1.1 The Proposed Development consists of includes 4 nos. of residential towers, a clubhouse and aboveground carpark, a retail and a Residential Care Home for the Elderly (RCHE) with total site area of about 17,990.9 $m^2$. The development schedule of the Proposed Development is tabulated in **Table 2.1**. The layout plans of the Proposed Development are shown in **Appendix A**.

**Table 2.1 - Development Schedule**

| Development Items | | Design Parameter |
|---|---|---|
| Site (a) | No. of Tower | 4 |
| | No. of Flat Unit | 334 |
| | No. of Clubhouse and Aboveground Carpark | 1 |
| | No. of Swimming Pool | 1 |
| | No. of RCHE | 1 |
| | No. of Retail | 1 |
| | Site Area | 17,990.9 $m^2$ |

2.2.1.2 According to the latest programme, construction is expected to commence in 2029, while occupation of the Proposed Development is anticipated in 2031.

# 3. AIR QUALITY

## 3.1 Introduction

3.1.1.1 This section aims to assess the air quality impact upon the Proposed Development during operational stage.

## 3.2 Criteria and Guidelines

### 3.2.1 Background

3.2.1.1 This Proposed Development is not a Designated Project under the EIAO. However, the Technical Memorandum on EIA Process (EIAO-TM) (Annex 4) has been referenced. The following guidelines and legislations have also been referenced for the air quality impact assessment criteria of this EA:

- Hong Kong Planning Standards and Guidelines (HKPSG);
- Air Pollution Control Ordinance (APCO) (Cap 311);
- Air Pollution Control (Fuel Restriction) Regulations (Cap311I);
- Air Pollution Control (Construction Dust) Regulation (Cap 311R);
- Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap 311Z);
- Recommended Pollution Control Clauses for Construction Contracts;
- Meeting 5 odour units (OUs) based on an averaging time of 5 seconds for odour impact assessment.

### 3.2.2 Hong Kong Planning Standards and Guidelines (HKPSG)

3.2.2.1 The Hong Kong Planning Standards and Guidelines (HKPSG) is a Government manual of criteria for determining the scale, location and site requirements of various land uses and facilities. The purpose of the HKPSG is to provide general guidelines to ensure that, during the planning process, the Government will reserve adequate land to facilitate social and economic development and provide appropriate public facilities to meet the needs of the public.

3.2.2.2 The HKPSG is also a tool that helps to regulate development by providing guidance on the scale, intensity and site requirements of various developments as well as the supporting facilities required.

3.2.2.3 Apart from development purposes, the HKPSG also provides guidelines on environmental planning, conservation of our natural landscape and habitats, and conservation of our cultural heritage and townscape.

3.2.2.4 The HKPSG specify buffer distances between sources of pollution and sensitive land uses to ensure acceptable air quality at the sensitive land uses. Examples of recommended buffer distances extracted from the HKPSG for relevant source and sensitive land use combinations are given in **Table 3.1.**

**Table 3.1 HKPSG – Recommended Buffer Distance**

| Polluting Uses | Sensitive Uses | Buffer Distance |
|---|---|---|
| Odour sources | Sensitive uses | 200m |
| Dusty uses | Sensitive uses | 100m |

3.2.2.5 Under Chapter 9 of HKPSG, Section 3 Air Quality provides guidelines on buffer distances from different pollution sources. Such buffer distances as shown in **Table 3.2** below are also considered in this EA.

**Table 3.2 HKPSG – Recommended Minimum Buffer Distance from Roads and Industrial Chimneys**

| Pollution Source | Parameter | Buffer Distance | Permitted Uses |
|---|---|---|---|
| Road and Highways | Type of Road | | |
| | Trunk Road and Primary Distributor | > 20m | Active and passive recreational uses |
| | | 3 – 20m | Passive recreational uses |
| | | < 3m | Amenity areas |
| | District Distributor | > 10m | Active and passive recreational uses |
| | | < 10m | Passive recreational uses |
| | Local Distributor | > 5m | Active and passive recreational uses |
| | | < 5m | Passive recreational uses |
| | Under Flyover | - | Passive recreational uses |
| Industrial Areas | Difference in Height between Industrial Chimney Exit and the Site | | |
| | <20m | > 200m | Active and passive recreational uses |
| | | 5 – 200m | Passive recreational uses |
| | 20m – 30m | > 100m | Active and passive recreational uses |
| | | 5 – 100m | Passive recreational uses |
| | 30m – 40m | > 50m | Active and passive recreational uses |
| | | 5 – 50m | Passive recreational uses |
| | >40m | > 10m | Active and passive recreational uses |

Note:
1. 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.
2. 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.
3. The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishments which are likely to be significant air pollution sources. Consult Environmental Protection Department (EPD) when planning open space sites close to such establishments.
4. Amenity Areas are permitted in any situation.

3.2.2.6 Applicable buffer distance requirements are summarized in **Table 3.3**.

**Table 3.3 Required Buffer Distance between the Surrounding Roads and the ASRs of the Proposed Development**

| Road | Type of Road | Required Buffer Distance (m) |
|---|---|---|
| Hang Tau Road | Local Distributor | > 5 m |
| Access Road | Local Distributor | > 5 m |

Note:
1. As there is no specified buffer distance requirement of Access Road, buffer distance requirement for Local Road is adopted under worst-case condition.

### 3.2.3 Air Pollution Control Ordinance

3.2.3.1 The Air Pollution Control Ordinance provides the statutory authority for controlling air pollutants from a variety of sources. The Hong Kong Air Quality Objectives (AQOs), which stipulate the maximum allowable concentrations over specific periods for typical pollutants, should be met. The prevailing AQOs are implemented in April 2025 have been adopted as the assessment criteria, as shown in**Table 3.4**.

**Table 3.4 Hong Kong Air Quality Objectives**

| Pollutant | Averaging Time | Concentration Limit[i] (μg/m$^3$) | Number of Exceedances Allowed |
|---|---|---|---|
| Sulphur dioxide ($SO_2$) | 10-minute | 500 | 3 |
| | 24-hour | 40 | 3 |
| Respirable suspended particulates (RSP/ $PM_{10}$) [ii] | 24-hour | 75 | 9 |
| | Annual | 30 | Not applicable |
| Fine suspended particulates (FSP/ $PM_{2.5}$) [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 |

| Pollutant | Averaging Time | Concentration Limit[i] ($\mu g/m^3$) | Number of Exceedances Allowed |
|---|---|---|---|
| | 8-hour | 10,000 | 0 |
| | 24-hour | 4,000 | 0 |
| Lead (Pb) | Annual | 0.5 | Not applicable |

Remark:

(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 (19.85°C) and a reference pressure of 101.325 kilopascal (one atmosphere).
(ii) Respirable suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 10 μm or less.
(iii) Fine suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 2.5 μm or less.

### 3.2.4 Air Pollution Control (Fuel Restriction) Regulations (Cap311I)

3.2.4.1 The Air Pollution Control (Fuel Restriction) Regulations was enacted in 1990 and amended in 2024. The regulation imposes legal control on the type of fuels allowed for use and their sulphur contents in commercial and industrial processes. Gaseous fuel, conventional solid fuel with a sulphur content not exceeding 1% by weight or liquid fuel with a sulphur content of not more than 0.001% by weight and a viscosity not more than 6 centistokes at 40°C, such as Ultra Low Sulphur Diesel (ULSD) are permitted to be used in commercial and industrial processes.

### 3.2.5 Air Pollution Control (Construction Dust) Regulation (Cap 311R)

3.2.5.1 The Air Pollution Control (Construction Dust) Regulation specifies processes that require special dust control. The Contractors are required to inform EPD and adopt proper dust suppression measures while carrying out "Notifiable Works" (which requires prior notification by the regulation) and "Regulatory Works" to meet the requirements as defined under the regulation.

### 3.2.6 Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap 311Z)

3.2.6.1 The Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation came into effect on 1 June 2015. Under the Regulation, Non-road mobile machinery (NRMMs), except those exempted, are required to comply with the prescribed emission standards. From 1 September 2015, all regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Starting from 1 December 2015, only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites. The Contractor is required to ensure the adopted machines or non-road vehicle under the Project could meet the prescribed emission standards and requirement.

## 3.3 Existing Environment

3.3.1.1 The nearest EPD air quality monitoring station (AQMS) is the North AQMS located at Po Wing Road Sports Centre, 19 Pak Wo Road, Sheung Shui, New Territories. The latest 6 year air quality data from this station (i.e. 2020 to 2026) and, are summarized in **Table 3.5** to show the trend in air quality.

**Table 3.5 Air Quality Monitoring Data at North AQMS, 2020-2025**

| Pollutant | Averaging Time | AQO | Pollutant Concentration (μg/m$^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| RSP/$PM_{10}$ | 10th Highest 24-hour | 75 (9) | 55 | 62 | 50 | 57 | 56 | 62 |
| | Annual | 30 | - | 25 | 23 | 27 | 25 | 28 |
| FSP/$PM_{2.5}$ | 19th Highest 24-hour | 37.5 (18) | 29 | 29 | 28 | 28 | 29 | 29 |
| | Annual | 15 | - | 15 | 14 | **15** | **16** | **16** |
| $NO_2$ | 19th Highest 1-hour | 200 (18) | 112 | 135 | 115 | 116 | 114 | 131 |
| | 10th Highest 24-hour | 120 (9) | 54 | 70 | 58 | 58 | 56 | 64 |
| | Annual | 40 | - | 36 | 31 | 30 | 29 | 31 |
| $SO_2$ | 4th Highest 10-Min | 500 (3) | 19 | 18 | 27 | 27 | 18 | 39 |
| | 4th Highest 24-hour | 40 (3) | 8 | 7 | 7 | 7 | 7 | 5 |
| $O_3$ | 10th Highest 8-hour | 160 (9) | **166** | **187** | **197** | **164** | **169** | 156 |
| | Peak season | 100 | N.A. | 97 | 98 | 95 | **101** | 99 |
| CO | 1st Highest 1-hour | 30000 (0) | 1830 | 2150 | 1710 | 2390 | 1710 | 1700 |
| | 1st Highest 8-hour | 10000 (0) | 1238 | 1550 | 1304 | 1231 | 1311 | 1200 |
| | 1st Highest 24-hour | 4000 (0) | 1022 | 1213 | 994 | 1001 | 988 | 1000 |

Note:
1. Numbers in brackets () denote the number of exceedances allowed.
2. Conversion factors were referenced from the "EPD's Guidelines on the Estimation of 10-minute Average $SO_2$ Concentration for Air Quality in Hong Kong" to convert the 1-hr average concentration of $SO_2$.
3. Exceedance of relevant AQOs is shown as bold and underlined characters.

3.3.1.2 As shown in **Table 3.5**, concentrations of all concerned pollutants except $PM_{2.5}$ (Annual), $O_3$ (8-hour), $O_3$(peak season) in the past 6 years (2020 to 2025) were complied with the respective AQOs. For $PM_{2.5}$ (Annual), the corresponding AQO was exceeded in 2023, 2024 and 2025 but was in compliance in 2021 and 2022. No available data for $PM_{2.5}$(Annual) in 2020. In terms of $O_3$ (8-hour), the corresponding AQO was exceeded in 2020, 2021, 2022, 2023 and 2024 but was in compliance in 2025. $O_3$ (peak season) was exceeded in 2024, but was in compliance in 2021,2022,2023 and 2025. No available data for $O_3$(Peak) in 2020.

3.3.1.3 In order to predict the future background air quality within the assessment area, hourly background air pollutant concentrations of RSP, FSP, $NO_2$, $SO_2$, O3 and CO have been extracted from the EPD's Pollutants in the Atmosphere and their Transport over Hong Kong (PATH v3.0). The 500m assessment area covers PATH grids (32,53), (33,53), (32,52) and (33,52), which are shown in **Figure 3.1**. Based on the best available data in PATH v3.0,

the projected background air quality of Year 2029 (i.e. the commencing year of construction of the Project) and Year 2030 (i.e. the nearest year available to the commencing year of the occupancy of the Project) will be adopted in the construction and operational phase air quality impact assessments, respectively. **Table 3.6** and **Table 3.7** summarized the background levels from the PATH against the prevailing AQOs.

**Table 3.6 Future Background Air Quality from PATH3.0 for Year 2029**

| Pollutant | Averaging Time | AQO | Data Summary | PATH v3.0 Grid in Year 2029 | | | |
|---|---|---|---|---|---|---|---|
| | | | | 32,53 | 33,53 | 32,52 | 33,52 |
| $RSP/PM_{10}$ | 24-hour | 75 (9) | 10th | 61 | 62 | 61 | 62 |
| | | | Exceedance | 3 | 2 | 1 | 3 |
| | Annual | 30 | - | 23 | 23 | 23 | 23 |
| $FSP/PM_{2.5}$ | 24-hour | 37.5 (18) | 19th | **38** | **38** | 37 | **38** |
| | | | Exceedance | **19** | **20** | 17 | **20** |
| | Annual | 15 | - | 15 | 15 | 15 | 15 |
| $NO_2$ | 1-hour | 200 (18) | 19th | 73 | 74 | 62 | 61 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 24-hour | 120 (9) | 10th | 25 | 25 | 22 | 22 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | Annual | 40 | - | 15 | 15 | 13 | 13 |
| $SO_2$ | 10-Min | 500 (3) | 4th | 29 | 29 | 28 | 29 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 24-hour | 40 (3) | 4th | 8 | 8 | 8 | 8 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| $O_3$ | 8-Hour | 160 (9) | 10th | **178** | **176** | **178** | **176** |
| | | | Exceedance | **29** | **24** | **26** | **24** |
| | Peak Season | 100 | - | **122** | **122** | **123** | **123** |
| CO | 1-Hour | 30000 (0) | 1st | 624 | 625 | 622 | 622 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 8-Hour | 10000 (0) | 1st | 593 | 592 | 591 | 589 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 24-Hour | 4000 (0) | 1st | 540 | 540 | 537 | 537 |
| | | | Exceedance | 0 | 0 | 0 | 0 |

Note:
1. Numbers in brackets () denote the number of exceedances allowed.
2. Conversion factors were referenced from the "EPD's Guidelines on the Estimation of 10-minute Average $SO_2$ Concentration for Air Quality in Hong Kong" to convert the 1-hr average concentration of $SO_2$.
3. Exceedance of relevant AQOs is shown as bold and underlined characters.

**Table 3.7 Future Background Air Quality from PATH3.0 for Year 2030**

| Pollutant | Averaging Time | AQO | Data Summary | PATH v3.0 Grid in Year 2030 | | | |
|---|---|---|---|---|---|---|---|
| | | | | 32,53 | 33,53 | 32,52 | 33,52 |
| RSP/$PM_{10}$ | 24-hour | 75 (9) | 10th | 55 | 56 | 55 | 56 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | Annual | 30 | - | 21 | 21 | 21 | 21 |
| FSP/$PM_{2.5}$ | 24-hour | 37.5 (18) | 19th | 33 | 34 | 32 | 34 |
| | | | Exceedance | 10 | 11 | 8 | 11 |
| | Annual | 15 | - | 14 | 14 | 13 | 14 |
| NO2 | 1-hour | 200 (18) | 19th | 69 | 70 | 59 | 58 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 24-hour | 120 (9) | 10th | 23 | 24 | 20 | 21 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | Annual | 40 | - | 15 | 15 | 12 | 12 |
| SO2 | 10-Min | 500 (3) | 4th | 26 | 26 | 25 | 26 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 24-hour | 40 (3) | 4th | 7 | 7 | 7 | 7 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| O3 | 8-Hour | 160 (9) | 10th | **175** | **172** | **174** | **173** |
| | | | Exceedance | **22** | **19** | **22** | **20** |
| | Peak Season | 100 | - | **119** | **118** | **119** | **119** |
| CO | 1-Hour | 30000 (0) | 1st | 524 | 525 | 522 | 523 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 8-Hour | 10000 (0) | 1st | 495 | 494 | 493 | 492 |
| | | | Exceedance | 0 | 0 | 0 | 0 |
| | 24-Hour | 4000 (0) | 1st | 461 | 461 | 458 | 458 |
| | | | Exceedance | 0 | 0 | 0 | 0 |

Note:
1. Numbers in brackets ()denote the number of exceedances allowed.
2. Conversion factors were referenced from the "EPD's Guidelines on the Estimation of 10-minute Average $SO_2$ Concentration for Air Quality in Hong Kong" to convert the 1-hr average concentration of $SO_2$.
3. Exceedance of relevant AQOs is shown as bold and underlined characters.

## 3.4 Air Sensitive Receivers

3.4.1.1 A number of existing and planned residential, recreational, institution and community use located within 500m assessment area of the Proposed Development are Air Sensitive Receivers (ASR). The ASRs closest to the Application Site are anticipated to be the most affected during the construction stage. These first-tier ASRs have therefore been selected as the most representative for the worst-case scenario air quality impact assessment. ASRs located further away from these first-tier receivers are expected to experience lesser impacts. The representative ASRs are summarized in **Table 3.8** and shown in **Figure 3.2**.

3.4.1.2 During the construction stage, the existing residential, recreational, institution and

community uses at the first tier, and the planned residential developments under A/NE-KTS/528 and A/NE-KTS/466 with the anticipated completion years prior to Q4 2031 (i.e. the completion year of construction and commencement year of occupancy) are considered as representative ASRs.

3.4.1.3 For the operational stage, the existing residential, recreational, institution and community use and all planned residential developments at the first tier (i.e. A/NE-KTS/528, A/NE-KTS/466 and A/NE-KTS/541) are also considered as representative ASRs.

3.4.1.4 According to Appendix 3.2 of HKPSG Chapter 9, all residential areas, residential care homes for the elderly and the active recreational activities are considered as Air Sensitive Use. Accordingly, the 4 residential towers, RCHE and the Club house of the Proposed Development are classified as representative ASRs during operational stage as well.

**Table 3.8 Representative Air Sensitive Receivers for Air Quality Impact Assessment**

| ASR ID | Description | Use | Approximate Distance, m | Construction (C) / Operational (O) Stage |
|---|---|---|---|---|
| **Existing ASRs** | | | | |
| ASR1 | Beas River Country Club | Recreational | 30 | C,O |
| ASR2 | Sister Aquinas Memorial Women's Treatment Centre | Government | 140 | C,O |
| ASR 3 | Hang Tau Road Sitting out Area | Recreational | 120 | C,O |
| ASR4 | Goodwood Park No. 13 | Residential | 110 | C,O |
| ASR 5 | Fu Hin Kui | Residential | 50 | C,O |
| ASR 6 | Hang Tau Village House (1) | Residential | <5 | C,O |
| ASR 7 | Hang Tau Village House (2) | Residential | 6 | C,O |
| ASR 8 | Hang Tau Village House (3) | Residential | <5 | C,O |
| ASR 9 | Hang Tau Village House (4) | Residential | 15 | C,O |
| ASR 10 | Hang Tau Village House (5) | Residential | 15 | C,O |
| ASR 11 | Hang Tau Tsuen Playground Basketball Court | Recreational | <5 | C,O |
| ASR 12 | Hang Tau Village House (6) | Residential | 15 | C,O |

| ASR ID | Description | Use | Approximate Distance, m | Construction (C) / Operational (O) Stage |
|---|---|---|---|---|
| ASR 13 | Hang Tau Village House (7) | Residential | 15 | C,O |
| ASR 14 | Hang Tau Village House (8) | Residential | <5 | C,O |
| ASR 15 | Hang Tau Village House (9) | Residential | 15 | C,O |
| ASR 16 | Lotus Garden | Recreational | 8 | C,O |
| ASR 17 | Tang Ming Temple | Institution | 50 | C,O |
| **Planned ASRs** | | | | |
| PA1 | Proposed Development | Residential, Recreation | - | C,O |
| PA2 | Planned Residential Development (A/NE-KTS/528)[1, 2] | Residential | 10 | C,O |
| PA3 | Planned Residential Development (A/NE-KTS/541) [1,2] | Residential | 60 | O |
| PA4 | Planned Residential Development (A/NE-KTS/466) [1,2] | Residential | 10 | C,O |

**Remarks:**

1. These planned residential developments are the subject of the corresponding approved Section 16 planning applications. The shortest distances from the Application Site boundary of the Proposed Development to these developments have been taken into account in the table above.
2. Anticipated completion years are as follows:
   - A/NE-KTS/528: Unknown (assumed completed before construction stage of the Proposed Development as a worst-case scenario; consider as ASR for both construction and operational stages)
   - A/NE-KTS/541: 2032
   - A/NE-KTS/466: 2022

(Source: Available SIA reports of other planned developments from the Planning Department (Planning Enquiry Counters)

## 3.5 Air Quality Impact during Construction Phase

3.5.1.1 The construction activities, including site clearance and demolitions, site formation, foundations and excavation for basement and underground utilities, superstructure works, stockpiling and transferring or handling of dusty materials, are the potential sources of air

quality impacts during construction phase. Throughout the construction phase, the total quantity of 32,832$m^3$ of inert C&D materials and 609 $m^3$ of non-inert C&D waste are estimated to be generated. Among that, approximate 7,000$m^3$ of inert C&D materials will be reused on-site as backfilling materials, while about 25,832 $m^3$ will be delivered of public fill reception facilities. All the dusty materials will be covered or wetted on-site. The construction period will last for approximately 24 working months, from 4$^{th}$ quarter of 2029 to 4$^{th}$ quarter of 2031, and 26 working days for each working month are assumed for this Project. Accordingly, the amount of inert C&D materials to be handled per day is about 52.6 $m^3$, which is small amount of inert C&D materials. Given the relatively small amount of inert C&D materials to be handled, the fugitive dust impact arising from the construction activities are expected to be minimal.

3.5.1.2 To minimize potential air quality impact arising from the transportation of the inert C&D materials, the duration and the travelling distance of the dump trucks will be minimized while the use of highways would be maximized. In addition, the transportation routes will be selected away from ASRs as far as practicable and the dump trucks will be covered by clean impervious sheeting to minimize dust nuisance to the nearby ASRs. Therefore, the fugitive dust impact arising from the transportation of dusty materials is expected to be minimal.

3.5.1.3 Fuel combustion from the use of Powered Mechanical Equipment (PME) during construction works could be a source of $NO_2$, $SO_2$ and CO. Given the construction work is localized, a limited number of NRMM will be expected to be operated at any one time. In order to improve air quality and protect public health, EPD has introduced the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, which came in operation on 1 June 2015, to regulate emissions from machines and non-road vehicles. Starting from 1 December 2015, only approved or exempted non-road mobile machinery are allowed to be used in construction sites. According to the requirement stipulated in the Air Pollution Control (Fuel Restriction) Regulations, liquid fuel with a sulphur content of not more than 0.001% by weight should be adopted to minimise $SO_2$ emission from NRMM. Furthermore, good site practices stated in **Section 3.6** are recommended to further control and reduce the emission from the use of non-road mobile machinery from the Project. Hence, the emissions from NRMM are considered minimal.

3.5.1.4 In summary, with the implementation of sufficient dust suppression and air quality control measures as stipulated under the APCO, Air Pollution Control (Construction Dust) Regulation (Cap 311R), Air Pollution Control (Fuel Restriction) Regulations (Cap311I), Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation (Cap 311Z) and good site practices as detailed in **Section 3.6** below, no adverse air quality impact arising from the construction activities, transportation of dusty materials, as well as the emission of the construction plant is anticipated.

## 3.6 Mitigation Measures during Construction Phase

3.6.1.1 The implementation of sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, and good site practices should be carried out to further minimise the construction dust generated.

- Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;
- Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;

- A stockpile of dusty material should not extend beyond the pedestrian barriers, fencing or traffic cones;
- The load of dusty materials on vehicles leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;
- Where practicable, vehicles washing facilities including a high-pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;
- When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period;
- The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;
- Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation take place should be sprayed with water or a dust suppression chemical continuously;
- Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;
- For any wall of the building to be demolished that abuts or fronts upon a street, service lane or other open area accessible to the public, impervious dust screens or sheeting shall be used to enclose the whole wall to a height of at least 1 m higher than the highest level of the structure being demolished;
- Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;
- Any skip hoist for material transport should be totally enclosed by impervious sheeting;
- Every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the three sides;
- Immediately before leaving a construction site, all vehicles shall be washed to remove any dusty materials from its body and wheels;
- Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed; and
- Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabilizer within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.
- Connecting construction plant and equipment to mains electricity supply should be considered and use of diesel generators and diesel-powered equipment should be avoided as far as possible.

3.6.1.2 Fuel combustion from the use of PME during construction works would be a source of air

emission. Ultra-low sulphur diesel (ULSD) with a sulphur content of not more than 0.001% by weight and a viscosity of not more than 6 centistokes at 40oC will be used to minimise $SO_2$ emissions in accordance with Air Pollution Control (Fuel Restriction) Regulations. Under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, NRMMs, except those exempted, are required to comply with the prescribed emission standards. All regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites.

3.6.1.3 To further control and reduce the emission from the use of NRMM from the Project, the following good site practices are recommended:

- Regulated machines shall be used and exempted NRMMs should be avoided where practicable;
- Use cleaner fuel such as ultra-low sulphur diesel in diesel-operated construction plant to reduce sulphur dioxide emission;
- Zero emission or clean fuels shall be considered as far as practicable for transportation activities;
- Use of electric PMEs where practicable;
- Connect construction plant and equipment to main electricity supply and avoid use of diesel generators and diesel-powered equipment as far as practicable;
- Switch off the engine of PMEs when idling;
- Implement regular and proper maintenance for plant and equipment; and • Employ plant and equipment of adequate size and power output and avoid overloading of the plant.

3.6.1.4 Furthermore, guidelines stipulated in EPD's Recommended Pollution Control Clauses for Construction Contracts should also be incorporated in the contract documents to abate dust impacts. The clauses include:

- The Contractor shall observe and comply with the Air Pollution Control Ordinance and its subsidiary regulations, particularly the Air Pollution Control (Open Burning) Regulation, Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, Air Pollution Control (Fuel Restriction) Regulations and Air Pollution Control (Smoke) Regulation;
- In addition to the statutory requirements of the Regulations, the Contractor of the public works contracts shall also observe the requirements as set out in the government circulars, including DEVB's TC 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) and DEVB's TC No. 1/2015 (Emissions Control of NRMM in Capital Works Contracts of Public Works);
- The Contractor shall undertake at all times to prevent dust nuisance and smoke as a result of his activities, and minimise the emission of air pollutants from construction plant and equipment;
- The Contractor shall ensure that there will be adequate water supply/storage for dust suppression;
- The Contractor shall devise, arrange methods of working and carrying out the works in such a manner so as to minimise dust impacts on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented;

- For better smoke control, the Contractor shall not use diesel hammer for percussive piling; and
- Before the commencement of any work, the Engineer may require the methods of working, plant, equipment and air pollution control system to be used on the site to be made available for inspection and approval to ensure that they are suitable for the project.

3.6.1.5 With the implementation of these good practice and measures, adverse construction dust impacts on the ASRs are not anticipated..

## 3.7 Air Quality Impact during Operational Stage

### 3.7.1 Potential Vehicular Emission Impact

3.7.1.1 The Proposed Development is bounded by Hang Tau Road to the east and the access road to the north. Vehicular emission from the open roads may pose potential air quality impact upon the Proposed Development during operational stage.

3.7.1.2 No openable window or fresh air intakes will be located within 5m buffer zone,as stated in **Table 3.3.** The air sensitive uses on the northern side of Tower 1, which fall into the 5m buffer zone, are designed with the appropriated positioned openable windows and fresh air intakes located outside the 5m buffer zone to mitigate the potential vehicular emission impacts from surrounding roads. The 5m buffer zone and the proposed positioning of openable windows and fresh air intakes of these air sensitive uses are illustrated in **Figure 3.3**.

3.7.1.3 In addition, no intended use or any facilities (e.g benches) are proposed outside Tower 1 within 5m buffer zone that would attract the population stay the area. Furthermore, no fresh air intakes or open space for recreational use will be located within the 5m buffer zone. With the appropriated positioning of openable window of the concerned air sensitive uses and the proper design, the air quality impact from the vehicular emission from the surrounding roads on the Proposed Development is not considered significant.

3.7.1.4 The carpark of the Proposed Development will be located in the basement, on the ground floor and first floor of the carpark/ clubhouse building. The design of the carpark will comply with the requirements, including design, maintenance and operation of the ventilation systems, stipulated in the ProPECC PN2/96 – Control of Air Pollution in Car Park. As the detailed design of the carpark (i.e. the ventilation system) is not yet available at this early planning stage, only a tentative location can be provided at present. The exhaust outlet of the ventilation system will be located as far as possible from nearby air sensitive uses to avoid causing an air pollutant nuisance. Tentatively, the exhaust outlet is proposed on the southern façade facing the Green minibus layby. With the implementation of the requirement stipulated in the ProPECC PN2/96, the air quality impact from the proposed carpark on the Proposed Development and the nearby ASRs is not considered significant.

3.7.1.5 As such, no adverse air quality impact associated with vehicular emission on the Proposed Development is anticipated.

### 3.7.2 Potential Industrial Emission Impact

3.7.2.1 Three site visits were conducted in 11 March 2025, 27 August 2025 and 28 October 2025. Based on the site visits, it was found that the land uses of the surrounding areas are mainly residential and recreational uses, and there was no chimney identified within 500 m from the boundary of the Application Site. In addition, there will be no chimneys or other emission sources within the Proposed Development during the operation phase. No adverse air quality impact on the Proposed Development and the surrounding ASRs is anticipated due

to industrial emission.

### 3.7.3 Potential Odour Impact

3.7.3.1 Three odour patrols were conducted during the site visits on 11 March 2025, 27 August 2025 and 28 October 2025. The identified potential odour sources within 200m buffer distance are the Sewage Pumping Station (SPS) for Hang Tau Village, a licensed livestock farm and the sewage treatment plant (STP) at Beas River Country Club. The detailed weather conditions for these dates, including temperature, wind direction and wind speed, are presented in **Table 3.7.** The route of odour patrols and the 200m odour buffer zone are shown in **Figure 3.4.**

**Table 3.7 Detailed Weather Conditions for the Dates of Odour Patrol**

| Date | Temperature(℃) | Wind Direction | Wind Speed (km/h) |
|---|---|---|---|
| 11 March 2025 | 22 | SE | 5-10 |
| 27 August 2025 | 29 | E-SE | 5-10 |
| 28 October 2025 | 22 | E-NE | 5-10 |

3.7.3.2 Enquires on the odour-related complaints against the SPS and the STP has been made to EPD on 7 July 2026, and their reply were received on 9 July 2026. The correspondence reply from EPD is shown in **Appendix G**.

3.7.3.3 A SPS for Hang Tau Village was identified in the immediate northeast of the Application Site. As advised by Drainage Services Department (DSD), the SPS for Hang Tau Village is fully enclosed and equipped with odour control facilities. In addition, no noticeable odour was identified near the Hang Tau Village SPS, within and surround the Application Site during the odour patrols and, according to the reply from EPD, no complaint related to this SPS was received during 2023 to 2026. Therefore, no significant odour impact from the SPS on the Proposed Development is expected.

3.7.3.4 The suspended operation of STP at the Beas River Country Club was verbally confirmed by Beas River Country Club. In addition, no noticeable odor was identified near the STP, within and surround the Application Site during the odour patrols, and according to the reply from EPD, during years from 2020 to 2026, no complaint related to this sewage treatment plant was received during 2023 to 2026. No significant odour impact from the sewage treatment plan at the Beas River Country Club is anticipated.

3.7.3.5 According to Agriculture, Fisheries and Conservation Department (AFCD)'s records, a licensed livestock farm was previously located approximately 400m north of the Application Site. During the odour patrols, the livestock farm was no longer in operation and no noticeable odour was identified near to the licensed livestock farm. The concerned site area was used for storing miscellaneous items. No odour impact on the Proposed Development is expected from the livestock farm.

3.7.3.6 As such, no adverse odour impact is anticipated upon the Proposed Development.

## 3.8 Conclusion

3.8.1.1 With the implementation of these good practice and measures, no adverse air quality impact arising from the construction activities, transportation of dusty materials, as well as the emission of the construction plant is anticipated.

3.8.1.2 With the appropriated positioning of the openable window and fresh air intake and the proper design of the carpark, no adverse air quality impact due to vehicular emissions on the Proposed Development is anticipated. Moreover, as no chimney was observed during the site visits and no chimney and potential emission source will be contained within the Proposed Development, no adverse air quality impact due to industrial emissions is anticipated.

3.8.1.3 In terms of potential odour impacts, the SPS for Hang Tau Village is fully enclosed and equipped with odour control facilities. The licensed livestock farm located approximately 400 m north of the Application Site was not in operation, and the STP at the Beas River Country Club was suspended. No noticeable odour was identified during the odour patrols. As such, no adverse odour impact on the Proposed Development is anticipated.

# 4. NOISE

## 4.1 Introduction

4.1.1.1 The Proposed Development is noise sensitive and subject to road traffic noise impact as well as fixed source noise impact from the SPS. Apart from the noise impact upon the Proposed Development, the Proposed Development might induce noise impact associated with fixed noise source upon the surrounding noise sensitive uses.

## 4.2 Criteria and Guidelines

### 4.2.1 Road Traffic Noise

4.2.1.1 Noise standards are stipulated in Chapter 9 of the Hong Kong Planning Standard and Guideline (HKPSG) for planning against possible noise impact from road traffic, railway and aircrafts etc. According to the HKPSG, the road traffic noise criteria for domestic premises which rely on opened windows for ventilation is L10(1-hour) 70 dB(A).

### 4.2.2 Fixed Source Noise

4.2.2.1 The main piece of legislation controlling environmental noise nuisance is the Noise Control Ordinance (NCO). Under NCO, noise criteria for fixed noise sources are stipulated in the Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (IND-TM).

4.2.2.2 Given the Application Site is in rural setting and surrounded by village type development, the type of area for the subject site is classified as "Type (i) Rural area" and it will be not affected by any Influencing Factor (IF). The Area Sensitivity Rating of the noise sensitive uses within the subject site area is defined as "A". The determined ASR is for assessment purpose only and should not prejudice the Authority's discretion on the enforcement based on the contemporary conditions. The Acceptable Noise Levels (ANLs) for the fixed noise source is tabulated in **Table 4.1** below.

**Table 4.1 Noise Standards for Fixed Source Noise Impact**

| Time Period | ANL in IND-TM (ASR of "A") |
|---|---|
| Day and Evening<br>(0700 – 2300 hour) | 60 |
| Night<br>(2300 – 0700 hour) | 50 |

## 4.3 Noise Sensitive Receivers

4.3.1.1 According to Table 4.1 of HKPSG Chapter 9, all domestic premises including temporary housing accommodation that rely on opened windows for ventilation should be classified as noise sensitive receiver (NSR). Thus, 4 residential towers and a RCHE of the Proposed Development are classified as NSR for this noise impact assessment.

## 4.4 Road Traffic Noise

4.4.1.1 The nature of use of the Proposed Development is noise sensitive. Noise sensitive rooms such as bedrooms and living/dining rooms will be subject to road traffic noise impact mainly from Hang Tau Road to the east and access road to the north.

### 4.4.2 Assessment Locations

4.4.2.1 Locations of all assessment points are shown in **Figure 4.1a-n**.

Residential towers

4.4.2.2 All noise sensitive uses were assigned with assessment points, which are located at 1 m away from the façade of bedrooms and living/dining rooms with the assessment height of 1.2 m above floor level.

RCHE

4.4.2.3 All noise sensitive uses were assigned with assessment points, which are located at 1 m away from the façade of bedrooms with the assessment height of 1.2 m above floor level. Besides the bedrooms, no other rooms, including the function room, activity room, canteen and dining area, conference room, and offices, rely on openable windows for ventilation. In addition, no rooms relying on openable window for ventilation will be used as diagnostic rooms and wards.

### 4.4.3 Assessment Assumption and Methodology

4.4.3.1 All public roads within 300 m of the Application Site, including the public road located within the surrender area, were identified and assessed for road traffic noise impact.

4.4.3.2 The road traffic noise levels were predicted based on the projected peak hour flows for the worst year within 15 years from the day of occupancy (i.e. Year 2031 + 15 years = Year 2046. The traffic forecast in Year 2046 was obtained from the Traffic Consultant. The traffic forecasts/data for this assessment were derived by adopting the traffic forecast methodology as elaborated in the submitted Traffic Impact Assessment (TIA) report for the subject planning application. Traffic forecast for AM and PM peak hours of the public road fall into the Surrender Area in the Application Site and that within 300m from the Application Site are provided and summarized in **Appendix B**. To present the worse-case scenario, the AM peak hour traffic flow data for Year 2046 is adopted in this assessment.

4.4.3.3 The traffic speeds in the road traffic noise models for the road sections are presented in **Table 4.2**.

**Table 4.2 Traffic Speeds of the Roads in Noise Model**

| Roads | Traffic Speed (km/hr) |
|---|---|
| Hang Tau Road | 50 |
| Access Road | 50 |
| Access Road to Proposed Development | 50 |
| Access Road of GMB Layby | 50 |

4.4.3.4 The road traffic noise impact at the NSRs were predicted using the computer model "roadNoise" which implements the calculation method as prescribed in the Calculation of Road Traffic Noise (CRTN) developed by *UK Department of Transport, Welsh Office* in 1988. The predicted noise levels are then compared against the HKPSG noise criterion for evaluating the impact.

### 4.4.4 Assessment Results

4.4.4.1 The predicted road traffic noise levels at assessment points are summarized in **Appendix C**.

4.4.4.2 According to the results, the predicted road traffic noise levels at the assessment points range from 49 to 69 dB(A). It is anticipated that all the noise sensitive rooms at 4 residential towers and RCHE will comply with the road traffic noise standard of L10(1-hour) 70 dB(A) in the HKPSG. No adverse road traffic noise impact is anticipated at all noise sensitive rooms.

## 4.5 Fixed Source Noise from Surroundings

4.5.1.1 Fixed source noise arising from the operation of SPS for Hang Tau Village (horizontal distance 10m from the site boundary), an open storage area of construction equipment (horizontal distance approx. 100m from the site boundary) and open storage area of K&S Aluminum & Steel Works Limited (horizontal distance approx.140m from the site boundary) might pose potential noise impact upon the sensitive uses of Proposed Development. The locations of these potential fixed noise sources are shown in **Figure 4.2**.

4.5.1.2 Three rounds of site visits were conducted to the open storage area of construction equipment, open storage area of K&S Aluminum & Steel Works Limited in August 2025, October 2025 and June 2026. Each round covered daytime (both morning and afternoon), evening time and night-time period.

<u>SPS for Hang Tau Village</u>

4.5.1.3 As advised by the responsible officer of DSD, the operation of the SPS for Hang Tau Village is round-the-clock (24 hours), while the E&M systems starts/stops automatically depending on the flow conditions.

<u>Open storage area of construction equipment</u>

4.5.1.4 During the daytime site visit in August 2025, only one truck crane was observed in operation for less than 5 minutes. No other construction equipment or generators were in use. No activities, construction equipment, or generators use were observed during the evening or night-time periods.During the site visits in October 2025 and June 2026, which covering daytime (both morning and afternoon), evening time and night-time period, no operational activities, construction equipment or generators were observed.

4.5.1.5 Based on the observations from both site visits, lifting activities involving the truck crane are infrequent and occur only during the daytime hour. No equipment operation or other activities take place during evening or night-time periods. Therefore, the fixed noise impacts arising from open storage area of construction equipment are considered as insignificant.

Open storage area of K&S Aluminum & Steel Works Limited

4.5.1.6 No construction equipment, generator or other fixed noise sources were found within the open storage area of K&S Aluminum & Steel Works Limited during the site visits in August 2025, October 2025 and June 2026. No equipment operation or other activities take places during the site visits as well.

## 4.6 On-site Noise Measurement

4.6.1.1 An on-site noise measures was conducted in August 2025. The on-site noise measurement location and the relevant photo records are shown in **Figure 4.2**. The noise measurement result and the relevant noise criteria are summarized in **Table 4.3**.

**Table 4.3 Noise Measurement Results and the Relevant Noise Criter**

| Time Periods [(i)] | Measured Noise Level, dB(A) | ANL/ Noise Criteria, dB(A)[(ii)] |
|---|---|---|
| Day<br>0700 – 1900 | 48 | 60 |
| Evening<br>1900 – 2300 | 50 | 60 |
| Night<br>2300 – 0700 | 54 | 50 |

Notes:
(i) Noise measurement was conducted on 28 August 2025
(ii) The ANL/ Noise Criteria is determined according to the Area Sensitivity Rating of the noise sensitive uses within the subject site, which is identified as "A".

4.6.1.2 Daytime (i.e. 48 dB(A)) and evening (i.e. 50 dB(A)) noise levels at the nearest NSR facing the SPS louver were below the 60 dB(A) criterion, with compliance margins of 12 dB(A) and 10 dB(A), respectively. Noise from the open storage area of construction equipment was insignificant and would not cause non-compliance. No adverse fixed noise impact on the Proposed Development is anticipated.

4.6.1.3 Although the measured night-time noise level was 54 dB(A), exceeding the relevant noise criteria of 50dB(A), night-time noise levels were dominated by natural insect sounds. Based on the site visit, the operation of SPS for Hang Tau Village at night was consistent with daytime operation. In addition, the noise from open storage area of construction equipment is insignificant since there was no night-time activity operation/ construction equipment in use. It allowing the daytime noise level of 48 dB(A) to represent the night time noise level. This level was lower than the night time noise criteria of 50dB(A). Therefore, no adverse noise impact associated with the fixed noise sources upon the Proposed Development is anticipated at night.

4.6.1.4 If necessary, fixed glazing will be applied to the façade facing the concerned fix noise source or noise barrier will be proposed between the concerned fix noise source and the RCHE

along the site boundary in order to comply the noise criteria stipulated in the NCO.

## 4.7 Fixed Source Noise from the Proposed Development

4.7.1.1 The planned fixed noise source (i.e. outdoor units of E&M equipment) of the clubhouse of Proposed Development will be positioned in plant rooms, whose ventilation opening will be facing Hang Tau Road (eastward direction, with no NSRs).

4.7.1.2 Furthermore, all ventilation openings should be installed with acoustic louvres/silencers, if necessary, to comply the noise criteria stipulated in the HKPSG and NCO.

4.7.1.3 With implementation of the proper noise control measures, no adverse noise impact associated with the fixed noise source of the Proposed Development upon the surrounding sensitive uses is anticipated.

## 4.8 Conclusion

4.8.1.1 The Proposed Development is noise sensitive and subject to road traffic noise impact as well as fixed source noise impact from the SPS for Hang Tau Village. As the fixed noise source of the Proposed Development will be positioned in plant room whose opening will be facing Hang Tau Road (eastward direction, with no NSRs), no adverse fixed source noise impact is anticipated upon the surrounding NSRs. Based on the results of the road traffic noise impact assessment, all the noise sensitive rooms within the Proposed Development will comply with the HKPSG road traffic noise standard. As the measured noise levels on NSR of the Proposed Development are equal or lower than the relevant noise criteria, the fixed source noise impact arising from the SPS upon the Proposed Development is thus considered to be minimal. Therefore, no adverse noise impact upon or arising from the Proposed Development is anticipated.

# 5. WATER QUALITY

## 5.1 Introduction

5.1.1.1 This section focuses on a water quality impact assessment for the Proposed Development, including sewage and identifying the water quality issues, assessing he potential impacts and recommending mitigation measures where required.

## 5.2 Criteria and Guidelines for Water Quality

### 5.2.1 General

- The assessment refers to Water Pollution Control Ordinance, its TM and Annexes 6 and 14 of the EIAO-TM for the relevant criteria for evaluating the water quality impacts, as listed below:
- Environmental Impact Assessment Ordinance (Cap 499);
- Water Pollution Control Ordinance (Cap 358);
- Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS);and
- ETWB Technical Circular (Works) No. 5/2005 Protection of natural streams/ rivers from adverse impacts arising from construction works;

5.2.1.1 Other relevant guidelines include:

- Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN 2/24);
- Practice Note for the Professional Persons on Drainage Plans subject to Comment by the Environmental Protection Department – Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations (ProPECC PN 1/23);
- Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes;
- Sewerage Manual (SM) and the Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF); and
- Hong Kong Planning Standards and Guidelines (HKPSG)

### 5.2.2 Water Pollution Control Ordinance

5.2.2.1 The Water Pollution Control Ordinance (WPCO) (Cap 358) enacted in 1980 is the principal legislation to protect the water quality in Hong Kong. Under the WPCO, the Hong Kong waters are classified into 10 Water Control Zones (WCZs), within which the Water Quality Objectives (WQOs) are specified. WQOs establish limits for different parameters to be achieved in order to maintain the water quality inside the WCZs. The Project Site is located within the Deep Bay WCZ and the relevant WQOs are summarised in **5.1**.

**Table 5.1 Summary of WQOs for Deep Bay WCZ**

| Parameters | WQOs | Sub-Zone |
|---|---|---|
| Aesthetic Appearance | Waste discharges shall cause no objectionable odours or discolouration of the water. | Whole zone |

| Parameters | WQOs | Sub-Zone |
|---|---|---|
| | Tarry residues, floating wood, articles made of glass, plastic, rubber or of any other substance should be absent. | Whole zone |
| | Mineral oil should not be visible on the surface. Surfactants should not give rise to a lasting foam. | Whole zone |
| | There should be no recognizable sewage-derived debris. | Whole zone |
| | Floating, submerged and semi-submerged objects of a size likely to interfere with the free movement of vessels, or cause damage to vessels, should be absent. | Whole zone |
| | Waste discharges shall not cause the water to Whole Zone contain substances which settle to form objectionable deposits. | Whole zone |
| Bacteria | The level of Escherichia coli should not exceed 610 per 100 mL, calculated as the geometric mean of all samples collected in one calendar year. | Secondary Contact Recreation Subzone and Fish Culture Subzones |
| | The level of Escherichia coli should be zero per 100 mL, calculated as the running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days. | Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones |
| | The level of Escherichia coli should not exceed 1 000 per 100 mL, calculated as the running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days. | Yuen Long & Kam Tin (Lower) Subzone and other inland waters |
| | The level of Escherichia coli should not exceed 180 per 100 mL, calculated as the geometric mean of all samples collected from March to October inclusive in one calendar year. Samples should be taken at least 3 times in a calendar month at intervals of between 3 and 14 days. | Yung Long Bathing Beach Subzone |

| Parameters | WQOs | Sub-Zone |
|---|---|---|
| Colour | Waste discharges shall not cause the colour of water to exceed 30 Hazen units. | Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones |
| | Waste discharges shall not cause the colour of water to exceed 50 Hazen units. | Yuen Long & Kam Tin (Lower) Subzone and other inland waters |
| Dissolved oxygen (DO) | Waste discharges shall not cause the level of dissolved oxygen to fall below 4 milligrams per litre for 90% of the sampling occasions during the year; values should be taken at 1 metre below surface. | Inner Marine Subzone excepting Mariculture Subzone |
| | Waste discharges shall not cause the level of dissolved oxygen to fall below 4 milligrams per litre for 90% of the sampling occasions during the year; values should be calculated as water column average (arithmetic mean of at least 2 measurements at 1 metre below surface and 1 metre above seabed). In addition, the concentration of dissolved oxygen should not be less than 2 milligrams per litre within 2 metres of the seabed for 90% of the sampling occasions during the year. | Outer Marine Subzone excepting Mariculture Subzone |
| | The dissolved oxygen level should not be less than 5 milligrams per litre for 90% of the sampling occasions during the year; values should be taken at 1 metre below surface. | Mariculture Subzone |
| | Waste discharges shall not cause the level of dissolved oxygen to be less than 4 milligrams per litre. | Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Indus Subzone, Ganges Subzone, Water Gathering Ground Subzones and other inland waters of the Zone |

| Parameters | WQOs | Sub-Zone |
|---|---|---|
| pH | The pH of the water should be within the range of 6.5-8.5 units. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.2 units. | Marine waters excepting Yung Long Bathing Beach Subzone |
| | Waste discharges shall not cause the pH of the water to exceed the range of 6.5–8.5 units. | Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones |
| | The pH of the water should be within the range of 6.0–9.0 units. | Other inland waters |
| | The pH of the water should be within the range of 6.0–9.0 units for 95% of samples. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.5 units. | Yung Long Bathing Beach Subzone |
| Temperature | Waste discharges shall not cause the natural daily temperature range to change by more than 2.0℃. | Whole zone |
| Salinity | Waste discharges shall not cause the natural ambient salinity level to change by more than 10%. | Whole zone |
| Suspended Solids | Waste discharges shall neither cause the natural ambient level to be raised by 30% nor give rise to accumulation of suspended solids which may adversely affect aquatic communities. | Marine waters |

| Parameters | WQOs | Sub-Zone |
|---|---|---|
| | Waste discharges shall not cause the annual median of suspended solids to exceed 20 milligrams per litre. | Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Ganges Subzone, Indus Subzone, Water Gathering Ground Subzones and other inland waters |
| Ammonia | The un-ionized ammoniacal nitrogen level should not be more than 0.021 milligram per litre, calculated as the annual average (arithmetic mean). | Whole zone |
| Nutrients | Nutrients shall not be present in quantities sufficient to cause excessive or nuisance growth of algae or other aquatic plants. | Inner and Outer Marine Subzones |
| | Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.7 milligram per litre, expressed as annual mean. | Inner Marine Subzone |
| | Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.5 milligram per litre, expressed as annual water column average (arithmetic mean of at least 2 measurements at 1 metre below surface and 1 metre above seabed). | Outer Marine Subzone |
| 5-Day Biochemical Oxygen Demand | Waste discharges shall not cause the 5-day biochemical oxygen demand to exceed 3 milligrams per litre. | Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones |
| | Waste discharges shall not cause the 5-day biochemical oxygen demand to exceed 5 milligrams per litre. | Yuen Long & Kam Tin (Lower) Subzone and other inland waters |

| Parameters | WQOs | Sub-Zone |
|---|---|---|
| Chemical Oxygen Demand | Waste discharges shall not cause the chemical oxygen demand to exceed 15 milligrams per litre. | Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones |
| | Waste discharges shall not cause the chemical oxygen demand to exceed 30 milligrams per litre. | Yuen Long & Kam Tin (Lower) Subzone and other inland waters |
| Toxins | Waste discharges shall not cause the toxins in water to attain such levels as to produce significant toxic carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to toxicant interactions with each other. | Whole zone |
| | Waste discharges shall not cause a risk to any beneficial uses of the aquatic environment. | Whole zone |
| Phenol | Phenols shall not be present in such quantities as to produce a specific odour, or in concentration greater than 0.05 milligrams per litre as $C_6H_5OH$. | Yung Long Bathing Beach Subzone |
| Turbidity | Waste discharges shall not reduce light transmission substantially from the normal level. | Yung Long Bathing Beach Subzone |

### 5.2.3 Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters

5.2.3.1 Besides setting the WQOs, the WPCO controls effluent discharge into the WCZs through a licensing system. The guidance on permissible effluent discharges based on the type of receiving waters (foul sewers, inland/coastal/inshore/marine waters) is provided in the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters. The limits were given in this Technical Memorandum cover the physical, chemical and microbial quality of effluents. Any effluent discharge during the construction and operation phases should comply with the standards for effluents discharged into foul sewers or inland/inshore/marine waters of the Deep Bay WCZ.

### 5.2.4 ETWB Technical Circular (Works) No. 5/2005 Protection of natural streams/ rivers from adverse impacts arising from construction works

5.2.4.1 ETWB Technical Circular (Works) No. 5/2005 provides an administrative framework to better protect all natural streams/ rivers from the impacts of construction works. The procedures promulgated under this Circular aim to clarify and strengthen existing measures for protection of natural streams/rivers from government projects and private developments. The guidelines and precautionary mitigation measures given in the ETWB TC (Works) No. 5/2005 should be followed as far as possible to protect the inland watercourses at or near the Project area during the construction phase.

### 5.2.5 Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN 2/24)

5.2.5.1 The Practice Note for Professional Persons on Construction Site Drainage (ProPECC PN 2/24) was issued by the EPD to provide environmental guidelines for handling and disposal of construction site discharges. It provides good practice guidelines for dealing with various types of discharge from a construction site. Practices as outlined in the ProPECC PN 2/24 should be followed during the construction phase in order to minimize the water quality impact due to construction site drainage.

### 5.2.6 Practice Note for the Professional Persons on Drainage Plans subject to Comment by the Environmental Protection Department – Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations (ProPECC PN 1/23)

5.2.6.1 ProPECC PN 1/23 Drainage Plan provide surface water drainage guideline should be followed to minimize the environmental impact during operation phase. ProPECC PN 1/23 provides guidelines and practices for handling, treatment and disposal of various effluent discharges to stormwater drains and foul sewers during the operation phase.

### 5.2.7 Hong Kong Planning Standards and Guidelines (HKPSG)

5.2.7.1 Chapter 9 of the HKPSG outlines the environmental requirements that need to be considered during land use planning. The recommended guidelines, standards and guidance cover the selection of suitable locations for the developments and sensitive uses, provision of environmental facilities, and design, layout, phasing and operational controls to minimize adverse environmental impacts. It also lists out environmental factors influencing land use planning and recommends buffer distances for land uses.

## 5.3 Baseline Condition

### 5.3.1 Marine Water

5.3.1.1 The Proposed Development is located within Deep Bay WCZ. According to the Marine Water Quality in Hong Kong in 2024, the overall WQO compliance rate for the Deep Bay WCZ was 67%, as compared with a ten-year average of 47% in 2009-2018. Overall, with the measures taken progressively by the governments of Hong Kong and Shenzhen under the Deep Bay Water Pollution Control Joint Implementation Programme, there have been significant water quality improvements in Deep Bay. In particular, the NH3-N WQO has been fully met in the past ten years. Although Deep Bay, as compared with other WCZs, shows higher nutrient levels with annual depth-averaged TIN levels exceeding the respective TIN WQOs, a noticeable long-term decrease in TIN levels since mid-2000s has been seen. Details of marine water quality monitoring data recorded at the nearest

Monitoring Station DM1 Are presented in **Table 5.2** Below.

**Table 5.2 Summary of EPD's Routine Marine Water Quality Data for Deep Bay Water Control Zone in Year 2024**

| Parameter | | Deep Bay WCZ |
|---|---|---|
| | | DM1 |
| Temperature | | 24.9 (16.8 - 31.3) |
| Salinity | | 16.1 (6.4 - 24.9) |
| Dissolved Oxygen (mg/L) | Depth Averaged | 7.7 (5.0 - 9.9) |
| | Bottom | #N/A |
| Dissolved Oxygen (%Saturation) | Depth Averaged | 101 (65 - 123) |
| | Bottom | #N/A |
| pH | | 7.6 (7.1 - 8.0) |
| Secchi Disc Depth (m) | | 1.1 (0.7 - 1.4) |
| Turbidity (NTU) | | 24.8 (2.9 - 38.2) |
| Suspended Solids (mg/L) | | 22.2 (5.6 - 61.0) |
| 5-day Biochemical Oxygen Demand (mg/L) | | 1.2 (0.3 - 2.6) |
| Ammonia Nitrogen (mg/L) | | 0.374 (0.082 - 0.620) |
| Unionised Ammonia (mg/L) | | 0.007 (0.004 - 0.014) |
| Nitrite Nitrogen (mg/L) | | 0.118 (0.068 - 0.280) |
| Nitrate Nitrogen (mg/L) | | 1.210 (0.560 - 1.700) |
| Total Inorganic Nitrogen (mg/L) | | 1.70 (0.75 - 2.34) |
| Total Kjeldahl Nitrogen (mg/L) | | 0.80 (0.54 - 1.20) |
| Total Nitrogen (mg/L) | | 2.13 (1.20 - 2.92) |
| Orthophosphate Phosphorus *mg/L) | | 0.138 (0.094 - 0.180) |
| Total Phosphorus (mg/L) | | 0.26 (0.14 - 0.38) |
| Silica (as $SiO_2$) (mg/L) | | 5.70 (0.17 - 11.00) |
| Chlorophyll-a ( $\mu$ g/L) | | 5.4 (1.4 - 18.0) |

| | |
|---|---|
| *E.coli* (count/100mL) | 200 (14 - 1200) |
| Faecal Coliforms (count/ 100mL) | 480 (30 - 2900) |

Note:

1. The table above is extracted from the Annual Report of Marine Water Quality in Hong Kong in 2024.
2. Unless otherwise specified, data presented are depth-average (A) values calculated by taking the means of three depths: Surface (S), Mid-depth (M), Bottom (B).
3. Data presented are annual arithmetic means of the depth-averaged results except for *E.coli* and faecal coliforms, which are annual geometric means.
4. Data in brackets indicate the ranges.

## 5.4 Representative Water Sensitive Receivers

### 5.4.1 Assessment Area

5.4.1.1 The assessment area for water quality impact is delineated within 500m from the Application Site as illustrated in **Figure 5.1**.

### 5.4.2 Representative Water Sensitive Receivers

5.4.2.1 Representative Water Sensitive Receivers (WSRs) identified within the assessment area are summarized in **Table 5.3**, and their locations are shown in **Figure 5.1**.

**Table 5.3 Representative Water Sensitive Receivers**

| WSR ID | Description | Nearest Distance from Site Boundary (m) |
|---|---|---|
| WSR1 | Channelized Sheung Yue River | ~20 |
| WSR2 | Channelized river adjacent to the SPS for Hang Tau Village | ~200 |
| WSR3 | Pond within Beas River Country Club | ~50 |
| WSR4 | Pond within Beas River Country Club | ~200 |
| WSR5 | Pond and a channelized watercourse within Beas River Country Club | ~400 |
| WSR6 | Channelized watercourse within Beas River Country Club | ~320 |

## 5.5 Identification and Evaluation of Water Quality Impact during Construction Stage

### 5.5.1 Construction Site Runoff and General Construction Activities

5.5.1.1 Construction site runoff may cause physical, biological and chemical effects. The physical effects include potential blockage of drainage channels and increase of SS levels. Local flooding may also occur in heavy rainfall situations. The chemical and biological effects caused by the construction runoff are highly dependent upon its SS levels and pH values. Runoff containing significant amounts of concrete and cement-derived material may cause primary chemical effects e.g. increasing turbidity and discoloration, elevation in pH, and accretion of solids. A number of secondary effects may also result in toxic effects to water biota due to elevated pH values, and reduced decay rates of faecal micro-organisms and photosynthetic rate due to the decreased light penetration. Construction site runoff comprises:

- Surface run-off may be contaminated and turbid water may enter adjacent stormwater drainage system and marine area as excavated material is delivered to ground surface;
- Runoff and erosion from site surfaces, drainage channels, earth working areas and stockpiles, release of concrete washing with construction runoff and stormwater. Effluent discharge from temporary site facilities should be controlled to prevent direct discharge to the neighboring drainage system, marine water and storm drains. Such wastewater may include wastewater resulting from dust suppression sprays and wheel washing of site vehicles at site entrances; and
- Fuel, oil, solvents and lubricants from maintenance of construction machinery and equipment: The use of engine oil and lubricants, and their storage as waste materials has the potential to create impacts on the water quality of adjacent inland water bodies if spillage occurs and enters inland water bodies. Waste oil may infiltrate into the surface soil layer, or run-off into local water courses, increasing hydrocarbon levels.
- Wastewater discharge may arise from the use of wheel washing facilities and watering for dust suppression purpose. These wastewater sources will be contained within the construction site and discharged via silt removal facilities. In addition, perimeter cut-off drains will be provided to avoid untreated site runoff entering the stormwater drainage system or the inland water body.
- During rainstorms, site run-off would carry soil from exposed surfaces. If the site run-off is not treated, the discharged water could affect the nearby water environment by increasing the SS and turbidity level.

5.5.1.2 With the adoption of the relevant guidelines and good site practice for the construction runoff, as listed in **Section 5.6**, potential water quality impacts will be minimized during the construction stage of the Proposed Development and adverse water quality impacts would not be anticipated.

### 5.5.2 Sewage from Construction Workforce

5.5.2.1 Domestic sewage would be generated from the workforce during the construction stage. Suitable sanitary facilities such as portable toilets will be provided onsite. These portable toilets would be regularly maintained, cleaned and emptied by licensed contractor for off-site disposal to avoid any environmental nuisance. No adverse water quality impact is anticipated due to the sewage generated from the construction site provided that sewage is not discharged directly to the stormwater drainage system or the inland water body, and portable toilets are used and properly maintained.

### 5.5.3 Accidental Spillage of Chemicals

5.5.3.1 On-site general construction activities may cause potential water pollution due to any possible, unexpected and accidental spillages of chemicals and/or liquids possibly stored on-site for the construction works, e.g. fuel, lubricant oil and solvents, which could result in water quality impacts if they enter the nearby stormwater drainage channels or the inland water body.

5.5.3.2 Implementation of good construction and site management practices would ensure that litter, fuels and solvents do not enter the surrounding stormwater drains or the inland water body. As such, adverse water quality impacts due to accidental spillage of chemicals are not anticipated.

## 5.6 Mitigation Measures during Construction stage

### 5.6.1 Construction Site Run-off and General Construction Activities

5.6.1.1 In accordance with the Technical Memorandum standards for effluents discharge into drainage and sewerage systems, inland and coastal waters (TM-DSS) and Practice Note for Professional Persons on Construction Site Drainage, ETWB Technical Circular (Works) No. 5/2005; Environmental Protection Department, 2024 (ProPECC PN 2/24), the mitigation measures during construction stage would include the following:

5.6.1.2 At the establishment of work site, perimeter cut-off drains to direct off-site water around the construction site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes), earth bunds or sand bag barriers should be provided to divert the stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction;

- Dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff pass-through sediment trap and discharge into an appropriate drainage system;
- The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 2/24, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. The sizes may vary depending upon the flow rate, but for a flow rate of 0.1$m^3$/s, a sedimentation basin of 30$m^3$ would be required and for a flow rate of 0.5$m^3$/s, the basin would be 150$m^3$. The detailed design of the sand/silt traps should be undertaken by the Contractor prior to the commencement of construction;
- The construction works should be programmed to minimise surface excavation works during rainy seasons (April to September, as far as practicable). All exposed earth areas should be covered as soon as possible after the earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means;
- The overall slope of works sites should be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads should be protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during the prolonged periods of inclement weather and the reduction of surface sheet flows;

- All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure their proper and efficient operation at all times particularly following rainstorms. Deposited silts and grits should be removed regularly and disposed of by spreading evenly over stable, vegetated areas;
- Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet season is inevitable, they should be dug and backfilled in short sections wherever practicable. And if pumped out the groundwater, etc. for the lowering of ground water level in basement or foundation construction, the water should be discharged into storm drains after the removal of silt in silt removal facilities and wastewater treatment facilities;
- All open stockpiles of construction materials (for example, aggregates, sand and fill material) should be covered with tarpaulin or similar fabric during rainstorms. 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 being washed into the drainage system and storm runoff being directed into foul sewers;
- Precautions to be taken at any time of the year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted and during or after rainstorms, are summarised in Appendix A2 of ProPECC PN 2/24. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes;
- All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at the exit of every construction site where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-washing bay to public roads should be paved with sufficient backfill toward the wheel-washing bay to prevent vehicle tracking of soil and silty water to public roads and drains;
- Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. Oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for oil interceptors to prevent flushing during heavy rain;
- The construction solid waste, debris and rubbish on-site should be collected, handled and disposed of properly to avoid causing any water quality impacts. The requirements for solid waste management are detailed in **Section 6** Waste Management Implication of this report. All chemical storage area should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching the nearby WSRs; and
- By adopting the above mitigation measures with best management practices, it is anticipated that no adverse water quality impact is anticipated due to construction site runoff.

5.6.1.3 The Contractor shall 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. The appropriate mitigation measures for protecting natural stream/ rivers near the construction site listed in Appendix D of ETWB TCW No.5/2005 shall be carried out in an environmentally responsibility manner and to minimize

any adverse impacts so caused. 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, 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 stage of the Project, the monitoring should be carried out in accordance with the WPCO license.

### 5.6.2 Sewage from Construction Workforce

5.6.2.1 Sewage effluents will be arisen from the sanitary facilities provided for the on-site construction workforce. The Contractor should provide sufficient portable toilet to handle the sewage generated from construction workforce. Sewage from portable toilets will be collected and emptied by licensed contractors and thus no sewage effluent would be discharged during construction stage. With the use of portable toilets in which sewage generated by construction workforce will be properly collected and handled, no adverse water quality impact is anticipated.

### 5.6.3 Accidental Spillage of Chemicals

5.6.3.1 The Contractor must 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.

5.6.3.2 Any service shop and maintenance facilities should be located on hard standing within a bunded area and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.

## 5.7 Identification and Evaluation of Water Quality Impact during Operational Stage

### 5.7.1 Non-point Source Pollution

5.7.1.1 Non-point source pollution (NPS), unlike pollution from industrial and sewage treatment plants, comes from many diffuse sources. NPS pollution is caused by rainfall moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into nearby drains, streams, or coastal waters.

### 5.7.2 Sewage Effluent from the Proposed Development

5.7.2.1 The sewage effluent from the Proposed Development includes wastewater collected from kitchens and canteen that from basins, sinks and floor drains, and swimming pool. This sewage effluent would potentially overload the public sewerage system and ultimately affect receiving waters (e.g., Deep Bay Water Control Zone or other nearby water bodies.

## 5.8 Mitigation Measures during Operational Stage

### 5.8.1 Non-point Source Pollution

5.8.1.1 With the proper design of drainage system for the Project, all surface runoff from open paved and developed areas will be diverted to the public drains. A Drainage Impact

Assessment (DIA) has been conducted to assess the potential drainage impacts arising from the change in drainage generation due to the Proposed Development. As mentioned in DIA Report (dated July 2026), upgrading the public drainage pipe T1/A1 to A7 to 750mm should be capable of receiving the runoff.

5.8.1.2 Devices designed to control pollution in a drainage system, e.g. minimization of directly-connected impervious areas, provision of silt traps, detention facilities, and petrol interceptor could be installed if necessary. Best management practices, such as elimination of expedient connections, prevention of illegal dumping of wastes, coverage of chemical storage areas, prevention and containment of spills, minimization of chemical applications, catch basin cleaning, erosion control, and land use control, should be adopted. The final design of the pollution control and management practices will be carried out by the contractor in the later stage in order to minimise the NPS pollution.

5.8.1.3 Hence, the impact associated with non-point source pollution due to road runoff would be minimal given that good drainage system and best management practices would be provided.

### 5.8.2 Sewage Effluent from the Proposed Development

5.8.2.1 Sewage from the Proposed Development (e.g. from kitchens, canteen and the backwash of swimming pool) is subject to the control of WPCO, and the effluent discharge must comply with the TM-DSS and WPCO discharge license conditions. ProPECC PN 1/23 "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. The design of site drainage and disposal of various site effluents generated within the site boundary should follow the relevant guidelines and practices given in the ProPECC PN 1/23.

5.8.2.2 Sewage generated from the Proposed Development will be discharged to nearby public sewer with sufficient capacity. An adequate drainage system will be provided to collect the surface runoff. Drainage record plans and as-built drawings of the concerned channel were obtained from the DSD to gather the background information on sewerage infrastructure in the vicinity of the Site. According to the drainage record plans, sewage from the Proposed Development is discharged into the Government manhole FMH1029683, located to the east of the Application Site and close to Hang Tau Road.

5.8.2.3 A Sewerage Impact Assessment (dated July 2026) was conducted to evaluate the potential impacts on the public sewerage network resulting from the operation of the Proposed Development. Based on the sewerage assessment and the information obtained from DSD, PlanD and EPD, four existing sewers are inadequate to accommodate the Proposed Developments. It is recommended that the sizes of these four sewer mains be upgraded as follow:

- Sewer between manholes FMH1028569 and FMH1028568: From 400mm to 500mm
- Sewer between manholes FMH1021544 and FMH1021543: From 500mm to 600mm
- Sewer between manholes FMH1021546 and FMH1021547: From 600mm to 650mm
- Sewer between manholes FMH1021560 and FMH1021561: From 750mm to 800mm (If the 750 mm upgrade under A/NE-KTS/506 has been completed, the Applicant will implement the remaining upgrade from 750 mm to 800 mm)

5.8.2.4 Alternatively, twin pipes would be provided for the conveyed sewers as a mitigation measure to enhance conveyance capacity.

5.8.2.5 The proposed upgrading works will be undertaken by the Applicant prior to the occupation, except for any section already covered by the upgrading works committed under other planned developments, to ensure that the public sewerage system has sufficient capacity to accommodate the sewage generated.

5.8.2.6 The responsibility for the proposed upgrading works is allocated as follows. The upgrades at FMH1028569 and FMH1028568, FMH1021544 and FMH1021543, and FMH1021546 and FMH1021547 shall be undertaken by the Applicant. The FMH1021560 and FMH1021561 section is to be upgraded to 750 mm under A/NE-KTS/506; if that upgrade has not commenced, the Applicant will implement the full upgrade to the ultimate 800 mm, otherwise only the remaining 750 mm to 800 mm.

5.8.2.7 Upon completion of the proposed upgrading works, no adverse water quality impact is anticipated.

## 5.9 Conclusion

5.9.1.1 With the proper implementation of proposed mitigation measures, no adverse water quality impact is anticipated during the construction stage.

5.9.1.2 In term of the operational stage, no adverse impact associated with non-point source is anticipated, given that the good drainage system and best management practice will be provided. In addition, the sewerage effluent from the Proposed Development would be properly discharged to the public sewer during the operational stage. Upon the completion of the proposed upgrading works of the sewer mains , except for any section already covered by the upgrading works committed under other planned developments, there is no adverse water quality impact anticipated.

# 6. WASTE MANAGEMENT AND LAND CONTAMINATION

## 6.1 Criteria and Guidelines

6.1.1.1 The Waste Disposal Ordinance (WDO) prohibits the unauthorised disposal of wastes, with waste defined as any substance that is abandoned. All wastes should be properly stored and disposed in accordance with relevant waste management regulations and guidelines listed below:

- Waste Disposal Ordinance (Cap. 354);
- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C);
- Waste Disposal (Charges for Disposal of Chemical Waste) Regulation (Cap. 354J);
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N);
- Land (Miscellaneous Provisions) Ordinance (Cap. 28);
- Public Health and Municipal Services Ordinance (Cap. 132) - Public Cleansing and Prevention of Nuisances Regulation;
- Environment, Transport and Works Bureau Technical Circular (Works) No. 19/2005, Environmental Management on Construction Sites;
- Development Bureau (Works) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness;
- Practice Note for Authorized Persons and Registered Structural Engineers – Construction and Demolition Waste (ADV - 19)
- Code of Practice on the Packaging, Labelling and Storage of Chemical Waste;
- A Guide to the Chemical Waste Control Scheme; and
- Development Bureau (DEVB) Technical Circular (Works) (TC(W)) No. 6/2010 – Trip Ticket System for Disposal of C&D Materials.

6.1.1.2 Guidelines for carrying out the land contamination assessment are provided in the following:

- Guidance Note for Contaminated Land Assessment and Remediation;
- Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management; and
- Practice Guide for Investigation and Remediation of Contaminated Land.

## 6.2 Potential Land Contamination

6.2.1.1 In order to identify and evaluate the potential land contamination impacts associated with the Application Site, a desktop study has been undertaken to review the historical and current land uses. The following sources of information have been collected and reviewed:

- Historical aerial photographs from Survey and Mapping Office, Lands Department (LandsD); and
- Information of the potential land contamination from FSD.

6.2.1.2 The historical aerial photographs have been reviewed to identify potential land contamination areas associated with previous land uses within the Application Site. A list

of aerial photographs in **Table 6.1** has been reviewed. Copies of representative aerial photographs are given in **Appendix D**.

**Table 6.1 - Summary of Historical Aerial Photograph Review**

| Year | Ref. No. | Observation |
|---|---|---|
| 1963 | 1963-0137 | The Application Site was mainly occupied by vegetation. A pond and some scattered building structures were found inside the Site. |
| 1972 | 02645 | The land use of the Application Site was the same as in 1963. |
| 1990 | A21881 | A swimming pool was found within Application Site. The pond was reclaimed for storage of construction materials. The land use of other parts of the Application Site was the same as 1972. |
| 1991 | A26190 | Majority of the vegetation in the north portion of the Application Site was eliminated. The remaining part of land use of the Site was the same as in 1990. |
| 2017 | E016363C | Farmland was observed in the north portion of the Application Site, while the remaining part of land use of the Application Site was the same as 1991. |

6.2.1.3 Based on the aerial photographs, the Application Site was occupied by vegetation, building structures and a pond since 1963. In 1972, the land use of the Application Site remained as the same compared to 1963. In 1990, a swimming pool was observed within the Application Site, and the pond was reclaimed for storage of construction materials. The land use of other parts of the Application Site was the same as 1972. In 1991, majority of the vegetation in the north portion of the Application Site was eliminated. In 2017, farmland was observed in the north portion of the Application Site. The remaining part of land use of the Application Site in both 1991 and 2017 were the same as 1990.

6.2.1.4 Inquiries to FSD was made to obtain the relevant historical information about the Application Site related to potential land contamination. Referring to the reply from FSD **(Appendix E)**, there was no record of dangerous goods license, fire incidents and incident of spillage / leakage of dangerous goods at the Application Site. Furthermore, the Applicant (i.e. land owner) is confirmed that there is no registered chemical waste producer for the Application Site. No record on registered chemical waste producer/spillage records from EPD was found.

6.2.1.5 A site visit was conducted on March 2025, and the peripheral inspection (i.e., from the entrance and/ or boundary of the Application Site) was conducted. According to the inspection, the Application Site was mainly covered by vegetation and partial land surface was paved by concrete / brick / tile. Vacant houses were observed. Part of the Application

Site was used as open storage for construction materials. No sign of potential land contamination was observed during the site visit . The site photos during the site visit are provided in **Appendix F**.

6.2.1.6 In summary, no land contamination issue arising from the Application Site is anticipated.

## 6.3 Waste During Construction Stage

### 6.3.1 Construction Waste

6.3.1.1 Activities to be conducted during construction stage include demolition, site formation and superstructure construction. The demolition work involves 5 existing houses, a swimming pool and a few of ruins within the construction site. Site formation involves basement construction and excavation for building sub-structure. For superstructure construction, 4 residential towers , a retail, an RCHE and a clubhouse would be constructed by pre-cast construction.

6.3.1.2 The following types of wastes are anticipated during the construction of the Proposed Development:

- Construction and Demolition (C&D) materials;
- Chemical waste; and
- General refuse.

6.3.1.3 The estimated quantity of each type of waste during construction stage is presented in **Table 6.2.**

**Table 6.2 - Summary of Waste Generation during Construction Stage**

| Material Type | Source(s) | Handling | Disposal / Treatment | Estimated Quantity |
|---|---|---|---|---|
| C&D Materials | Demolition (5,397m$^3$), Site formation (25,000m$^3$) and Superstructure (3,044m$^3$). | Sort on-site into inert C&D materials (public fill) and non-inert C&D materials | Inert C&D materials reused as backfilling materials on-site | 7,000 m$^3$ |
| | | | Inert C&D materials to be disposed to public fill reception facilities for other beneficial uses | 25,832 m$^3$ |

| Material Type | Source(s) | Handling | Disposal / Treatment | Estimated Quantity |
|---|---|---|---|---|
| | | Sort on-site into inert C&D materials (public fill) and non-inert C&D materials | Non-inert C&D materials (e.g. timber, paper, plastics, etc.) reused or disposed of at landfill as the last resort | 609 $m^3$ |
| Chemical Waste | Cleansing fluids, solvent, lubrication oil and fuel from construction plant and equipment | Collected regularly and safely stored at a dedicated location and collected by a licensed chemical waste collector | To Chemical Waste Treatment Facility or other licensed facility for treatment | 70 Litres per month |
| General Refuse | Waste paper, discarded containers, etc. generated from workforce | To be stored in designated area prior to collection and disposal | To separate recyclable materials (e.g., paper, tin-cans, etc.) for collection by outside recyclers or disposal to landfill as the last resort | ~100.75 kg/day |

### 6.3.2 Construction and Demolition (C&D) Materials

6.3.2.1 C&D materials are expected be generated from demolition, excavation and construction activities during the course of the works. Soil and rock would be generated from piling works, and wood from formworks. Concrete debris and packaging material would also be produced.

6.3.2.2 All C&D materials generated shall be sorted into inert and non-inert C&D materials. Where practicable, inert C&D material generated on-site shall be encouraged to be reused on-site to minimise material volumes requiring off-site transport/ disposal. Disposal outlets such as public fill reception facilities shall be identified for inert materials if no on-site reuse opportunities exist. Landfill disposal should be considered as the last resort for non-inert C&D materials handling.

6.3.2.3 The Land (Miscellaneous Provisions) Ordinance requires that individuals or companies, who deliver inert C&D materials to the public fill reception facilities, must obtain Dumping Licences. The licences are issued by CEDD under delegated authority from the Director of Lands.

6.3.2.4 Disposal of C&D materials from the construction site to the public fill reception facilities and designated landfill shall be controlled under the trip-ticket system under the Development Bureau Technical Circular (Works) No. 6/2010.

### 6.3.3 Chemical Wastes

6.3.3.1 The maintenance and servicing of construction plant and equipment may generate a small amount of chemical wastes during construction works, such as cleaning fluids, solvents, lubrication oil and fuel. The exact amount of chemical waste arising from the construction activities dependent on the contractor's on-site maintenance activities and the quantity and / or types of plant and equipment utilized. With respect to the scale of the construction activities, it is anticipated that the quantity of chemical waste to be generated will be relatively small.

6.3.3.2 Chemical wastes arising during the construction stage may pose environmental, health and safety hazards if not stored and disposed of in an appropriate manner as stipulated in the Waste Disposal (Chemical Waste) (General) Regulations. The potential hazards include:

- Toxic effects to workers;
- Adverse impacts on water quality from spills; and
- Fire hazards.

6.3.3.3 Materials classified as chemical wastes will require special handling and storage arrangements before removal for appropriate treatment at the Chemical Waste Treatment Centre (CWTC) or other licensed facilities. Wherever possible opportunities should be taken to reuse and recycle materials.

6.3.3.4 Storage, handling, transport and disposal of chemical waste should be arranged in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste published by the EPD. A trip-ticket system should be operated in accordance with the Waste Disposal (Chemical Waste) (General) Regulation to monitor all movements of chemical wastes which would be collected by licensed chemical waste collectors to a licensed facility for final treatment and disposal.

6.3.3.5 Under the Waste Disposal (Chemical Waste) (General) Regulation, the contractor shall register as a chemical waste producer if chemical wastes such as spent lubricants, paints, etc. are generated onsite. Only licensed chemical waste collectors shall be employed to collect any chemical waste generated onsite. The handling, storage, transportation and disposal of chemical wastes shall be conducted in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes and A Guide to the Chemical Waste Control Scheme both published by the EPD.

6.3.3.6 Provided the waste is properly handled, stored and disposed of, no unacceptable impacts are expected.

### 6.3.4 General Refuse

6.3.4.1 The workforce is expected to generate refuse comprising food scraps, paper waste, empty containers, etc. It is estimated that about 155 management staff and construction workers will be working on site at any one time. With a general refuse generation rate of 0.65kg/ worker/day, the estimated quantity of general refuse is approximately 100.75 kg/day (i.e. 155workers x 0.65 kg/worker/day = 100.75 kg/day).

6.3.4.2 Such refuse will be properly stored in designated area prior to collection and disposal. Disposal of refuse at Site other than approved waste transfer or disposal facilities will be prohibited. Effective collection of site wastes will prevent waste materials being blown around by wind, or creating an odour nuisance or pest and vermin problem. Waste storage areas will be well maintained and cleaned regularly.

6.3.4.3 With the implementation of good waste management practices at the construction site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of workforce wastes.

## 6.4 Waste Management During Operational Stage

### 6.4.1 General Refuse

6.4.1.1 General refuse is anticipated during the operation of the Proposed Development. General refuse will arise from the daily activities of residents, employees and visitors of the Proposed Development and is expected to include food waste, paper waste and domestic waste. The estimated quantity is presented in **Table 6.3**. The storage of general refuse on site has the potential to give rise to odour and visual impact and may also attract pests and vermin if the waste storage area is not well maintained and cleaned regularly.

6.4.1.2 General refuse generated during the operational stage will be collected at the refuse collection point provided within the Application Site for further collection. The waste management practice will comply with the statutory requirements including Public Health and Municipal Services Ordinance (Cap. 132) - Public Cleansing and Prevention of Nuisances Regulation .

6.4.1.3 With the implementation of good waste management practices at the Application Site , the environmental impacts caused by storage, handling, transport and disposal of general refuse are expected to be minimal.

**Table 6.3 - Summary of Waste Generation during Operational Stage**

| Material Type | Source(s) | Handling | Disposal / Treatment | Estimated Quantity |
|---|---|---|---|---|
| General Refuse | Waste paper, discarded containers, etc. generated from residents | To be stored in designated area prior to collection and disposal | To separate recyclable materials (e.g., paper, tin-cans, etc.) for collection by outside recyclers or disposal to landfill as the last resort | ~1023 kg/day |

## 6.5 Recommended Waste Management Mitigation Measures

6.5.1.1 In line with the Government's position on waste minimisation, the practice of avoiding and minimising waste generation and waste recycling shall be adopted as far as practicable.

6.5.1.2 Proper planning for waste reduction shall be carried out at planning and design phase. It can be achieved by identify key waste types, set out waste reduction programmes and targets and also arrange on-site sorting and proper waste disposal.

6.5.1.3 The mitigation measures for construction stage are recommended as followings:

*Construction Stage*

- Soil generated from the piling activities shall be properly handled to avoid leakage or improper storage (i.e. onto bare ground instead of into tanks), which may cause contamination to surface waters and any exposed ground areas;
- The reuse/ recycling of all materials on-site shall be investigated prior to treatment/ disposal off-site;
- Good site practices shall be adopted from the commencement of works to avoid the generation of waste, reduce cross contamination of waste and to promote waste minimisation;
- All waste materials shall be sorted on-site into inert and non-inert C&D materials, and where the materials can be recycled or reused, they shall be further segregated. Inert material, or public fill will comprise stone, rock, masonry, brick, concrete and soil which is suitable for land reclamation and site formation whilst non-inert materials include all other wastes generated from the construction process such as plastic packaging and vegetation (from site clearance);
- The Contractor shall be responsible for identifying what materials can be recycled/ reused, whether on-site or off-site. In the event of the latter, the Contractor shall make arrangements for the collection of the recyclable materials. Any remaining non-inert waste shall be collected and disposed of at landfill whilst any inert C&D materials shall be reused on-site as far as possible. Alternatively, if no use of the inert material can be found on-site, the materials can be delivered to Public Fill Reception Facilities after obtaining the appropriate license. The storage, handling, transportation and disposal of C&D materials shall be conducted in accordance with the ETWB TCW No. 19/2005, Environmental Management on Construction Sites. The Contractor shall also prepare and implement an Environmental Management Plan (EMP), which includes the Waste Management Plan (WMP) to ensure that measures would be taken during the construction stage to reduce C&D materials. The WMP shall cover the information as recommended in Practice Note for Authorized Persons and Registered Structural Engineers – Construction and Demolition Waste (ADV - 19). The WMP as part of the EMP shall be submitted to the Project Proponent/ Representatives for approval.
- A sufficient number of covered bins shall be provided on-site for the containment of general refuse to prevent visual impacts and nuisance to the sensitive surroundings. These bins shall be cleared daily and the collected waste disposed of to the refuse transfer station. Further to the issue of ETWB TCW No. 6/2002A, Enhanced Specification for Site Cleanliness and Tidiness, the Contractor is required to maintain a clean and hygienic site throughout the project works;
- Tool-box talks should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling;
- Where the construction site has more than one exit point for vehicles leaving the construction site , a wheel washing system covering all exit points shall be provided to remove the dust and soil on the wheel;

- All dump trucks which enter or exit the construction site shall be equipped with real-time monitoring device for monitoring the transportation of C&D materials, and provided with mechanical covers which are well-maintained in good operating condition;
- Dusty materials shall be properly contained or covered by tarpaulin or other appropriate means under inclement weather;
- All necessary dykes, ditches, pipes and fittings of sufficient capacity shall be provided to collect surface run-off and wastewater from all locations of the construction site to appropriate treatment facility;

***7.*** **The Contractor shall comply with all relevant statutory requirements and guidelines and their updated versions that may be issued during the course of construction.**

7.1.1.1 While potentially significant waste management impacts are not envisaged, given the potential for secondary impacts (e.g., dust, noise, water quality and visual impacts) mitigation measures are required to ensure proper waste handling, storage, transportation and disposal during the operational stage.

*Operational Stage*

- General refuse generated from the Proposed Development shall be stored in enclosed bins or compaction units. A licensed waste collector shall be employed to remove general refuse from the Proposed Development on regular basis to minimise odour, pest and litter impacts.

## 7.2 Conclusion

7.2.1.1 Based on the site observation and the information obtained from historical aerial photographs and relevant government department, no land contamination issue arising from the Application Site is anticipated.

7.2.1.2 The potential impacts of wastes arising from operation of the Proposed Development have been assessed. With the recommended procedures/measures in place, waste generated/ disposed should not lead to any adverse impacts.

# 8. CONCLUSION

8.1.1.1 This Environmental Assessment (EA) Report has been prepared to identify all potential environmental impacts and relevant environmental requirements during the operational stage of the Proposed Development at Hang Tau Tai Po in Kwu Tung.

8.1.1.2 With the required buffer distances away from the surrounding roads, no adverse air quality impact due to vehicular emission upon the Proposed Development is anticipated. Moreover, since no chimney was found during the site survey, no adverse air quality impacts due to industrial emissions is anticipated. Since no odour nuisance was identified arising from the sewage treatment works and the SPS for Hang Tau Village is fully enclosed and equipped with odour control facilities, no adverse odour impact upon the Proposed Development is anticipated.

8.1.1.3 The Proposed Development is noise sensitive and subject to road traffic noise impact as well as fixed source noise impact from the SPS. As the fixed noise source of the Proposed Development will be positioned in plant room whose opening will be facing Hang Tau Road (eastward direction, with no NSRs), no adverse fixed source noise impact is anticipated upon the surrounding NSRs. Based on the results of the road traffic noise impact assessment, all the noise sensitive rooms within the Proposed Development will comply with the HKPSG road traffic noise standard. As the measured noise levels on NSR of the Proposed Development are equal or lower than the relevant noise criteria, the fixed source noise impact arising from the SPS upon the Proposed Development is thus considered to be minimal. Therefore, no adverse noise impact upon or arising from the Proposed Development is anticipated.

8.1.1.4 With the proper implementation of proposed mitigation measures, no adverse water quality impact is anticipated during the construction stage.

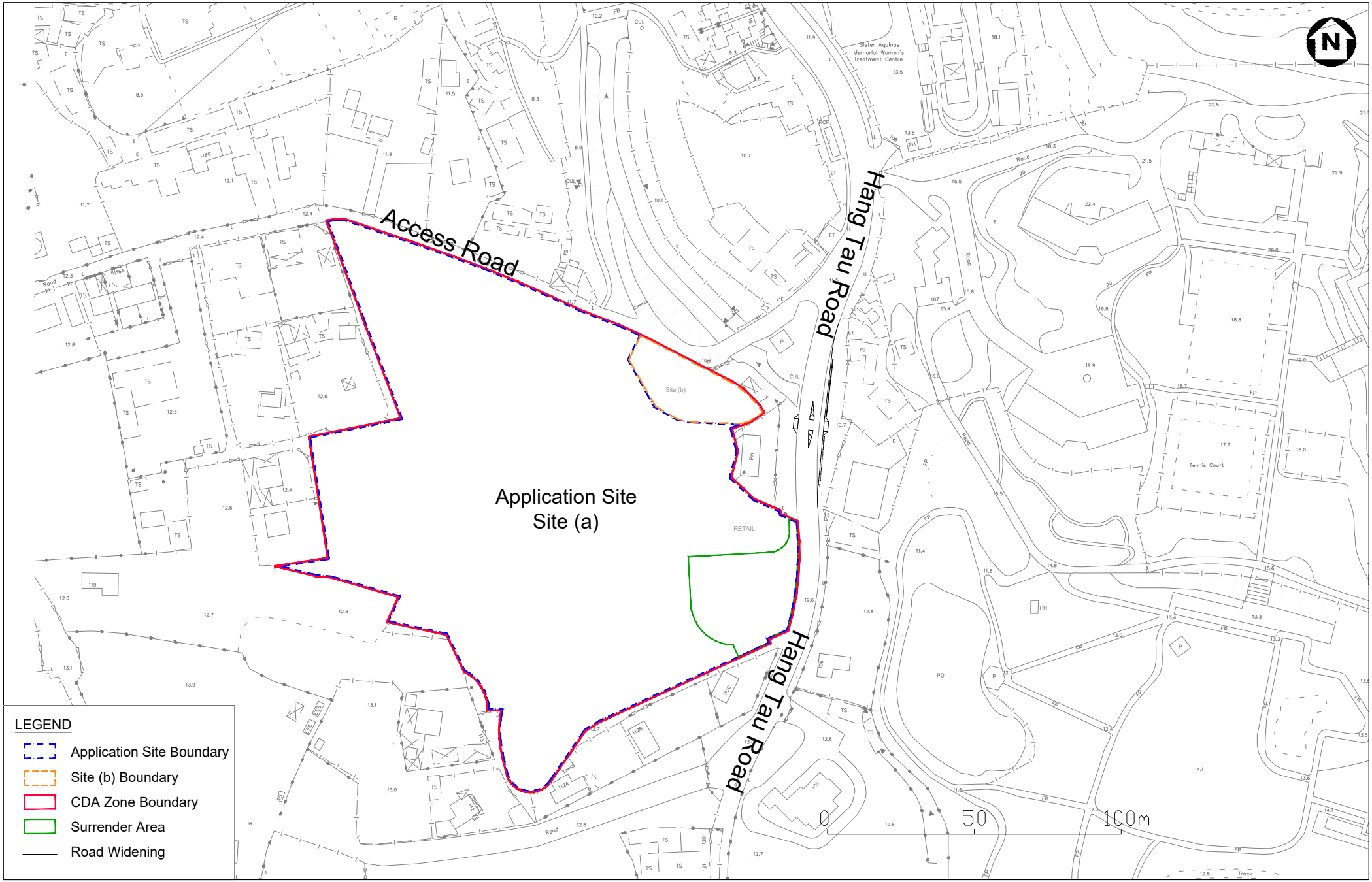
8.1.1.5 In term of the operational stage, no adverse impact associated with non-point source is anticipated, given that the good drainage system and best management practice will be provided. In addition, the sewerage effluent from the Proposed Development would be properly discharged to the public sewer during the operational stage. Upon the completion of the committed upgrading works of the proposed sewer mains, there is no adverse water quality impact anticipated.

8.1.1.6 Based on the site observation and the information obtained from historical aerial photographs and relevant government department, no land contamination issue arising from the Application Site is anticipated.

8.1.1.7 The potential impacts of waste arising from operation of the Proposed Development have been assessed. With the recommended procedures/measures in place, waste generated/ disposed should not lead to any adverse impacts.

8.1.1.8 Summarizing the above, the environmental impact associated with the Proposed Development is considered acceptable.

# FIGURES

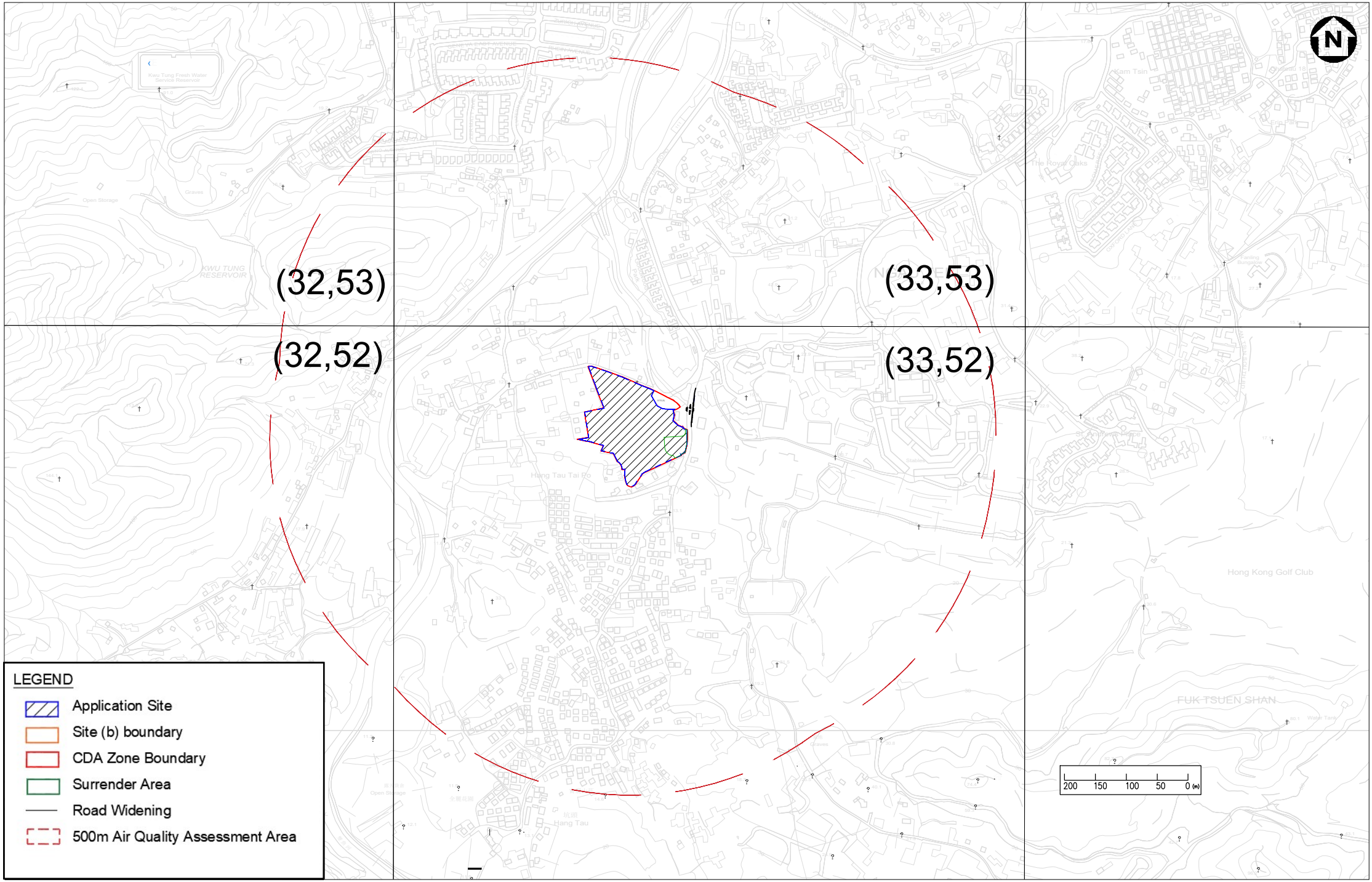



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Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South
Required Buffer Distance from Surrounding Roads

Figure 2.1

Scale As Shown

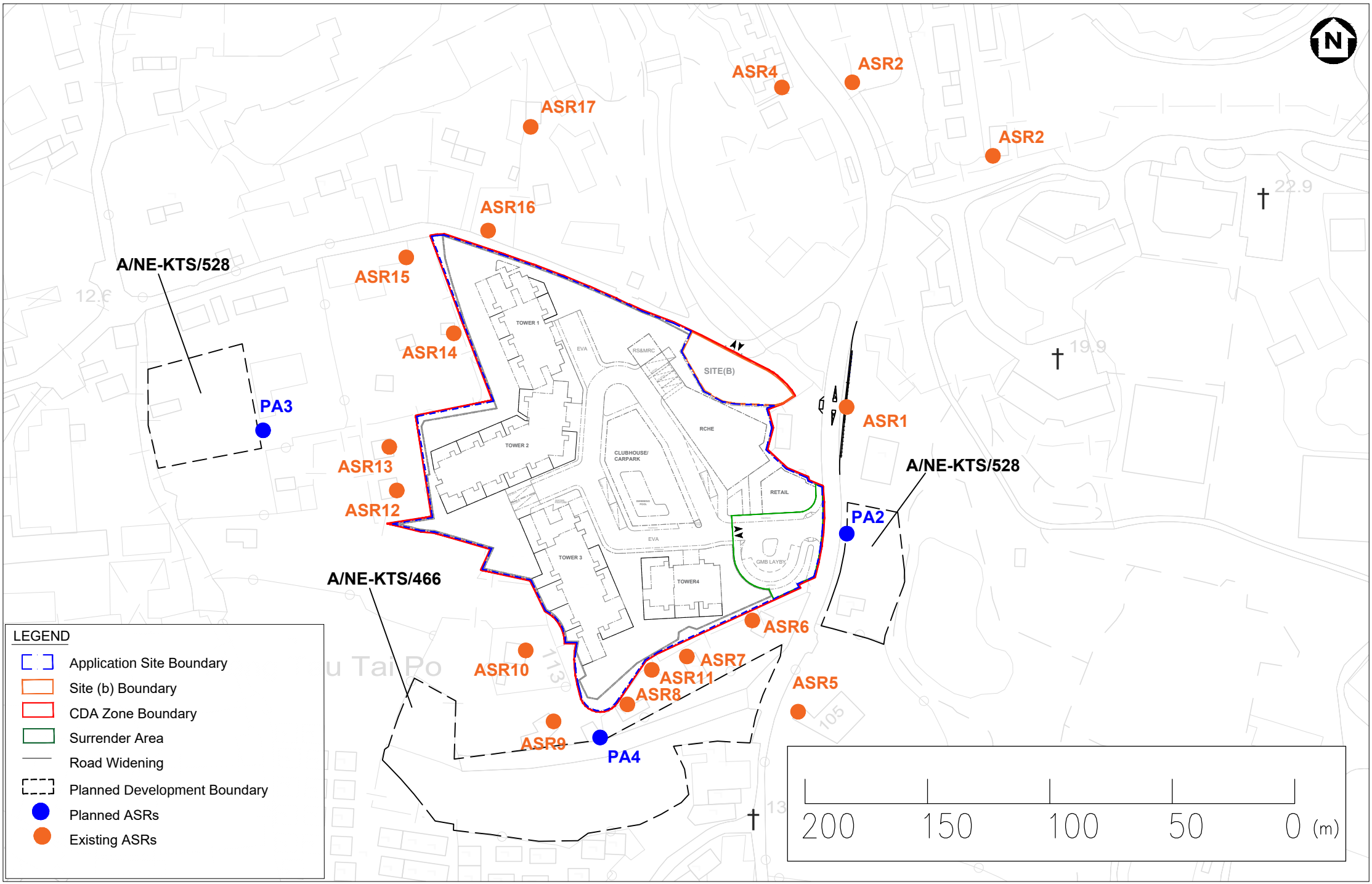



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500m Air Quality Assessment Area and the corresponding PATH Grids

Figure 3.1

Scale As Shown



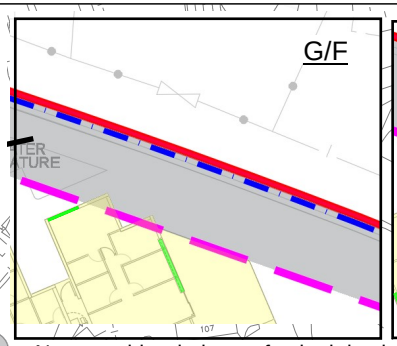

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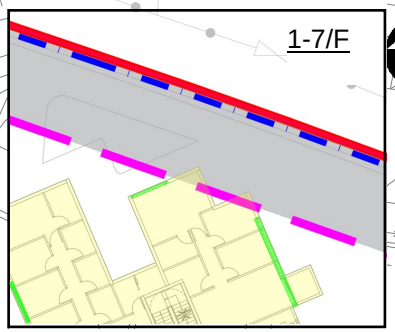
Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South
Locations of the Representative Air Sensitive Receivers

Figure 3.2

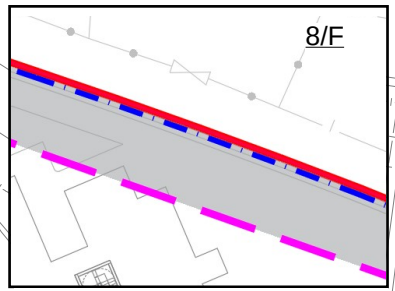
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Remark:
1. No openable window or fresh air intakes will be located within the 5m buffer zone.
2. No intended use or any facilities (e.g. benches) are proposed in the area outside Tower 1 G/F within 5m buffer zone that would attract the population stay the area.
3. No fresh air intakes and open space for recreational use will be located within the 5m buffer zone.




No openable window or fresh air intake are located within 5m buffer zone.
Openable window or fresh air intake for the Air Sensitive Uses at G/F & 1-7/F of Tower 1 are proposed to be positioned outside the 5m buffer zone fall into 5m buffer zone.




No Air Sensitive Uses at 8/F of Tower 1 fall into 5m buffer zone.

5m

LEGEND
- Openable window / fresh air intake
- Application Site Boundary
- Site (b) Boundary
- CDA Zone Boundary
- Surrender Area
- 5m Buffer Distance
- 5m Buffer Zone
- Air Sensitive Use
- Road Widening

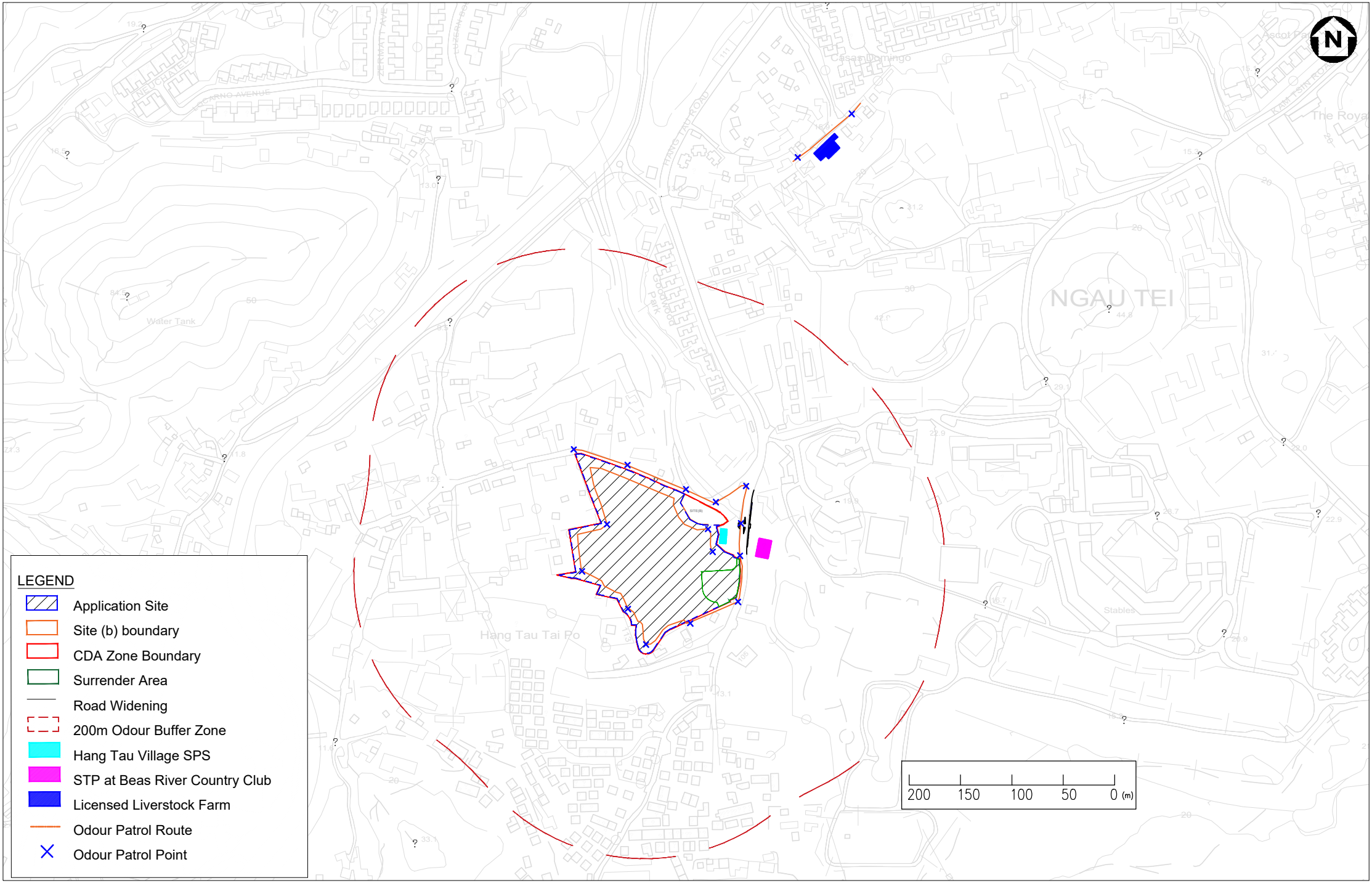
0 50 100m

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Required Buffer Distance from Surrounding Roads

Figure 3.3

Scale As Shown




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Odour Patrol Route

Figure 3.4

Scale As Shown

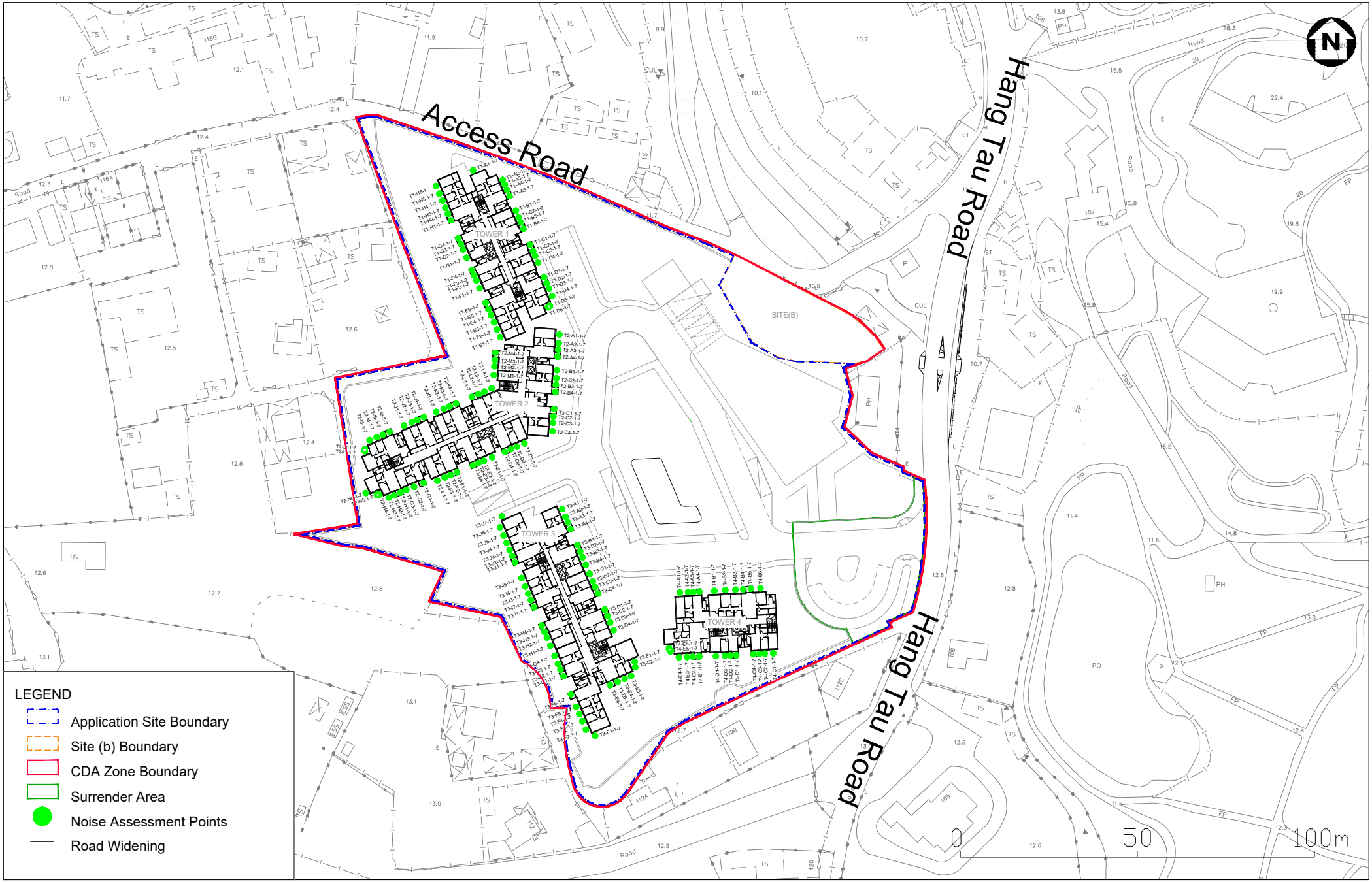



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Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (G/F)

Figure 4.1a

Scale As Shown



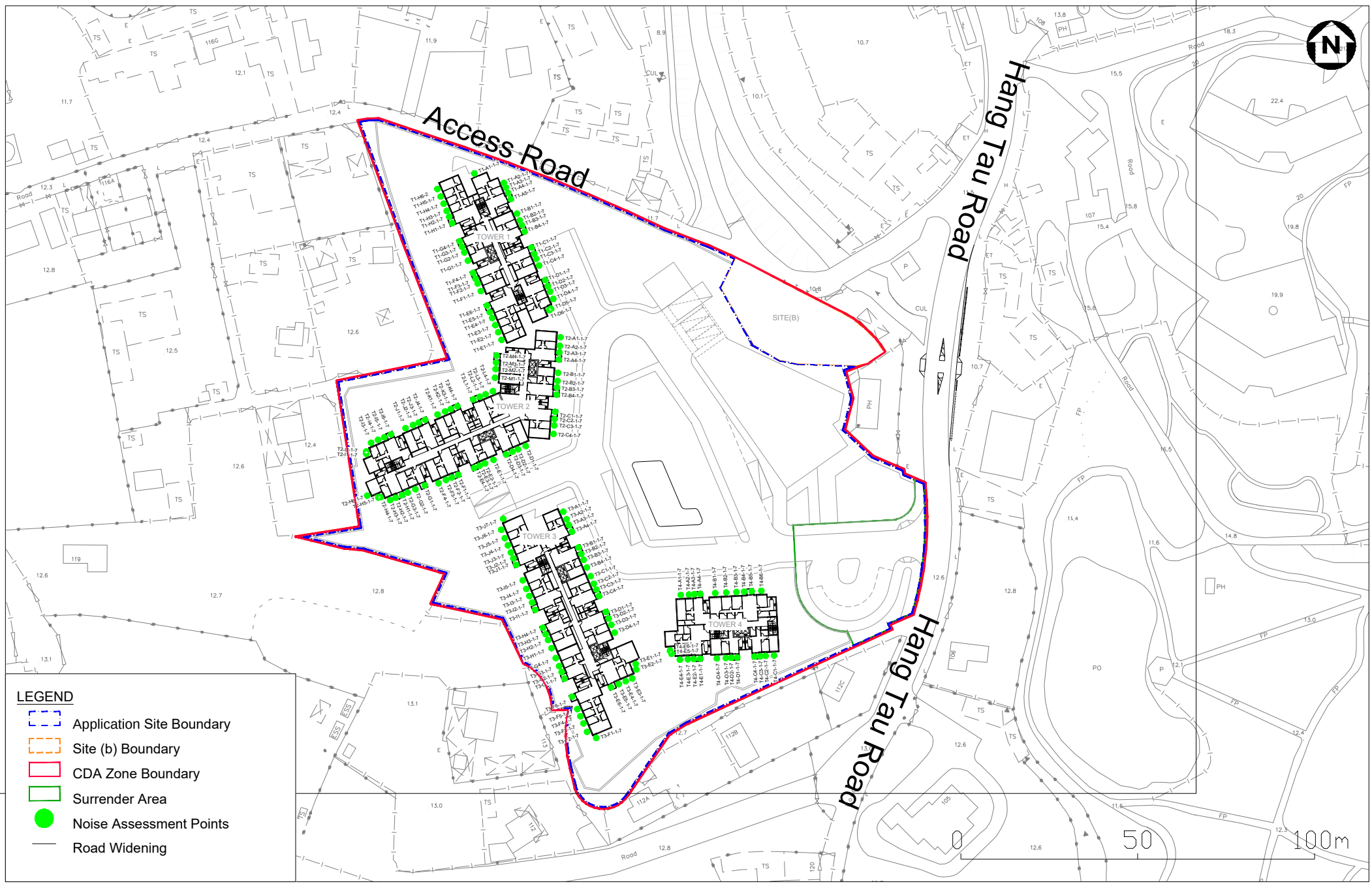

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Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (1/F )

Figure 4.1b

Scale As Shown



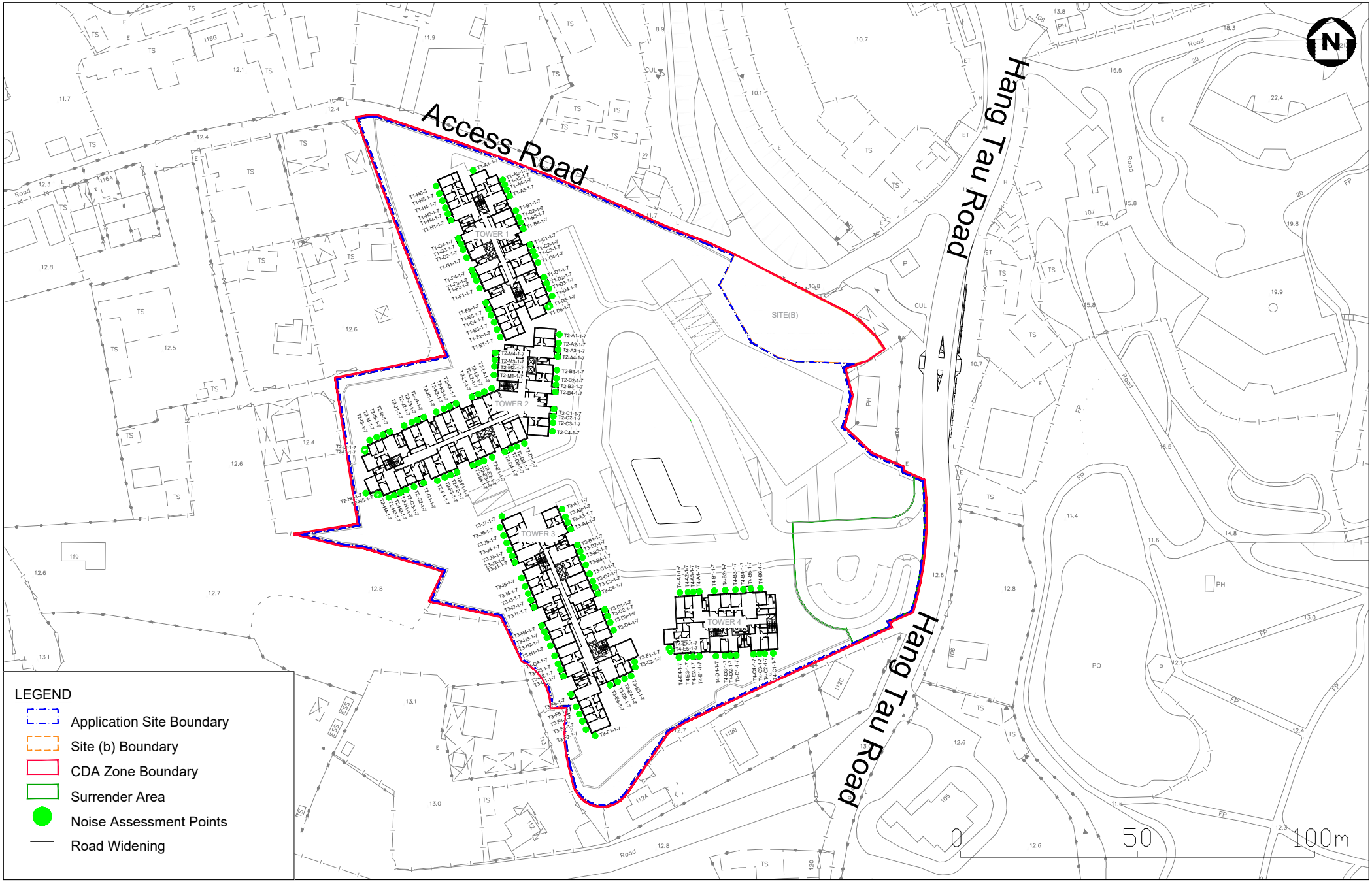

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Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (2/F )

Figure 4.1c

Scale As Shown



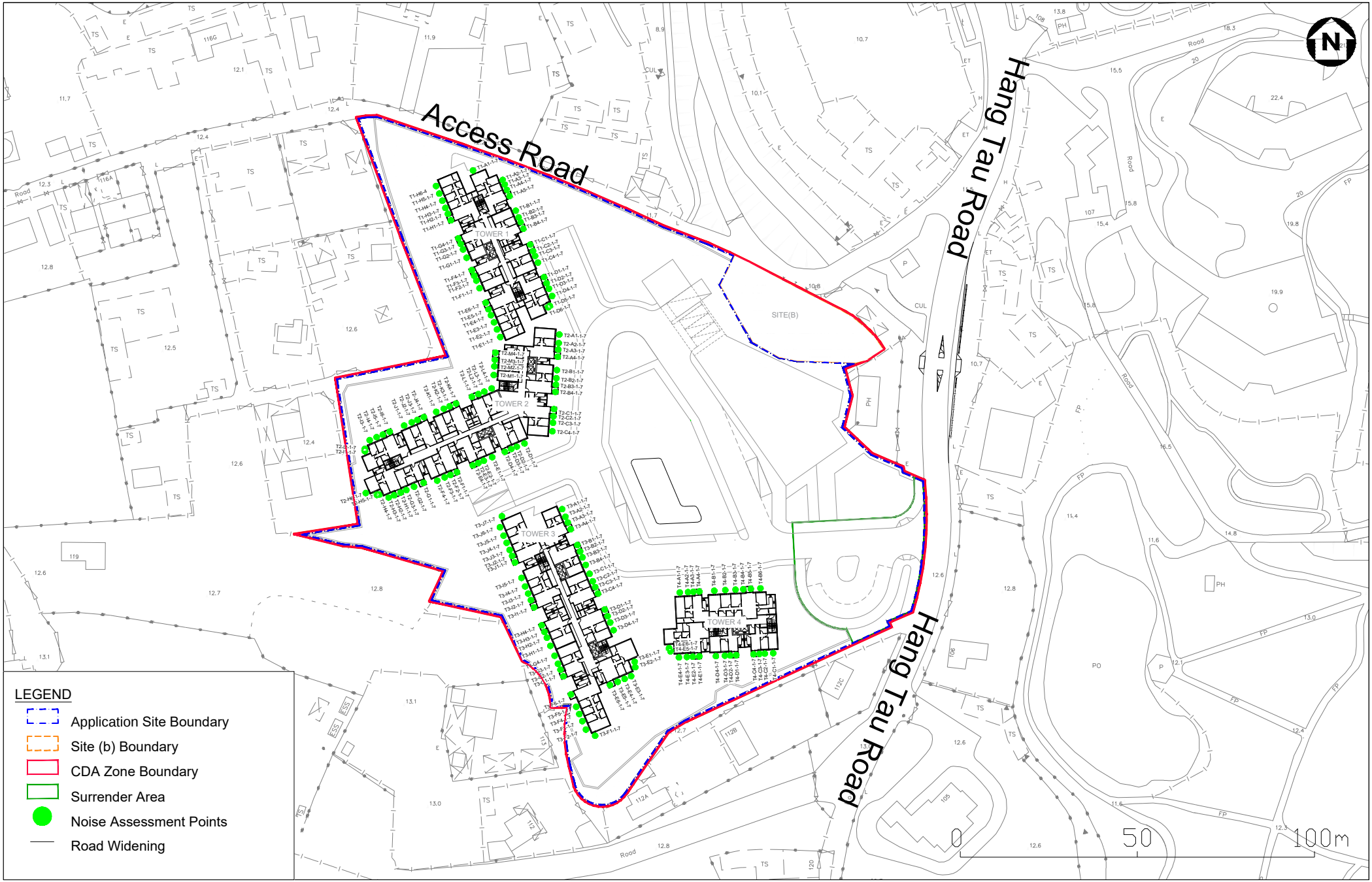

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Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (3/F)

Figure 4.1d

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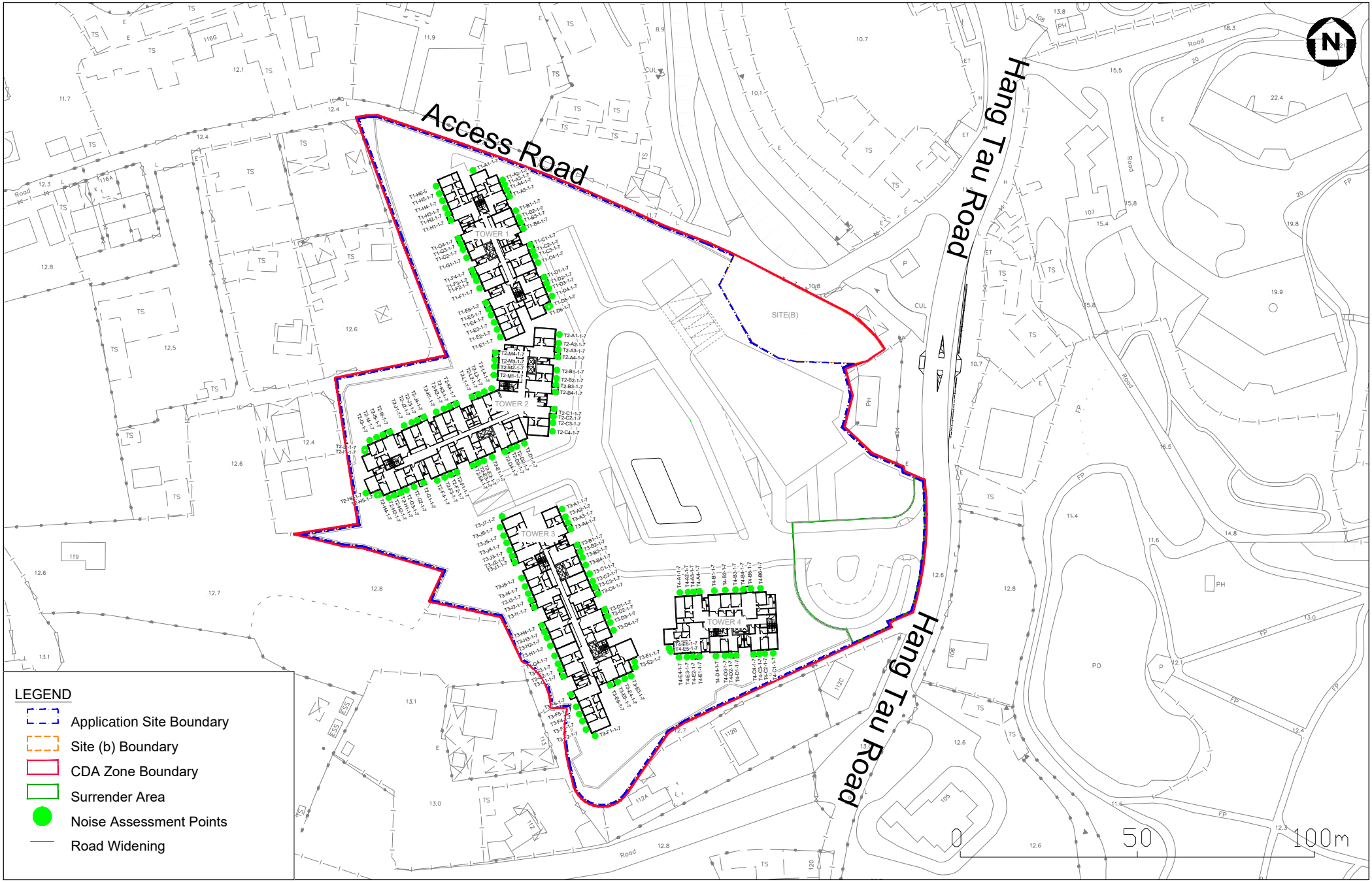

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Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (4/F)

Figure 4.1e

Scale As Shown



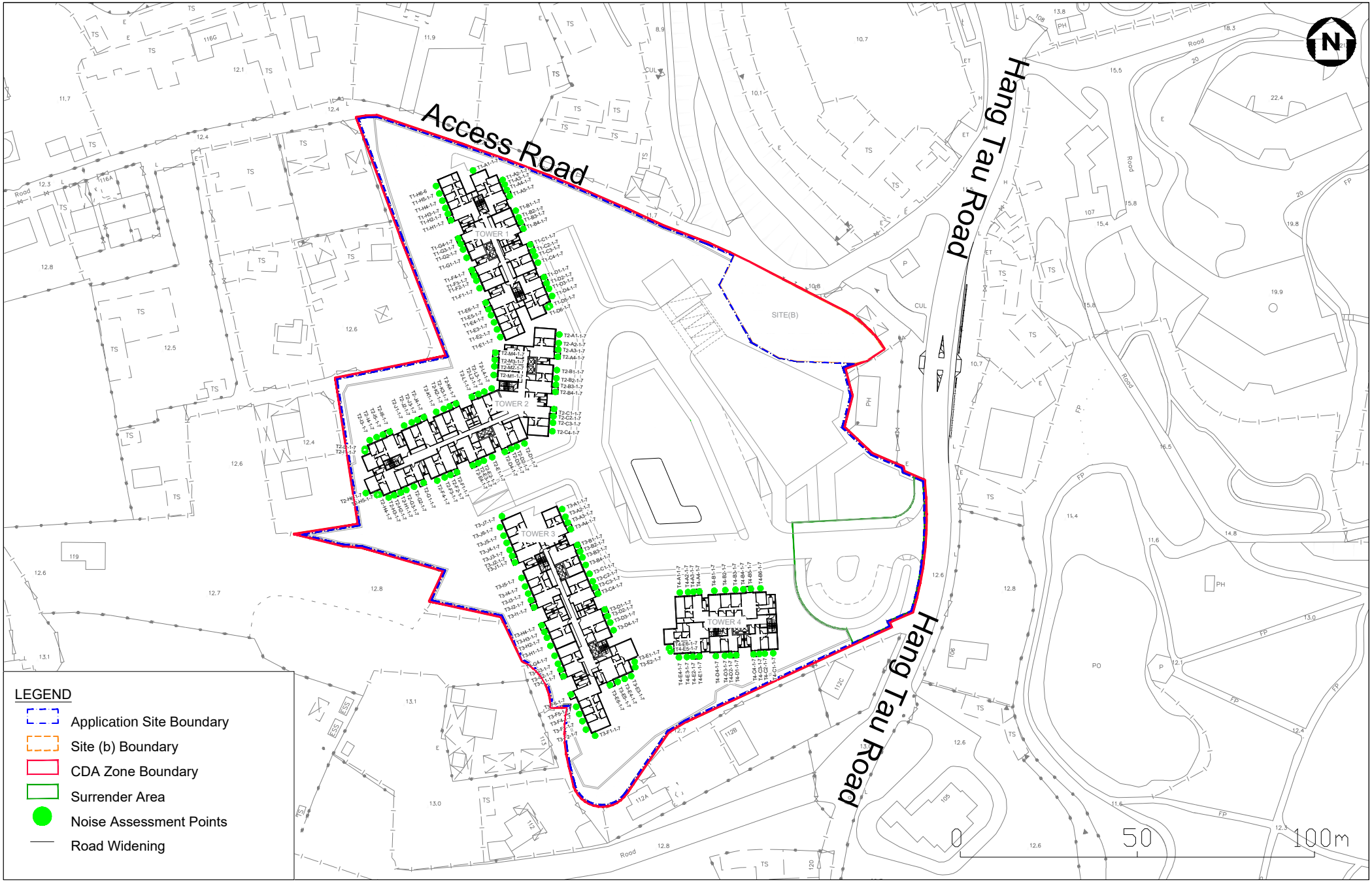

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Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (5/F)

Figure 4.1f

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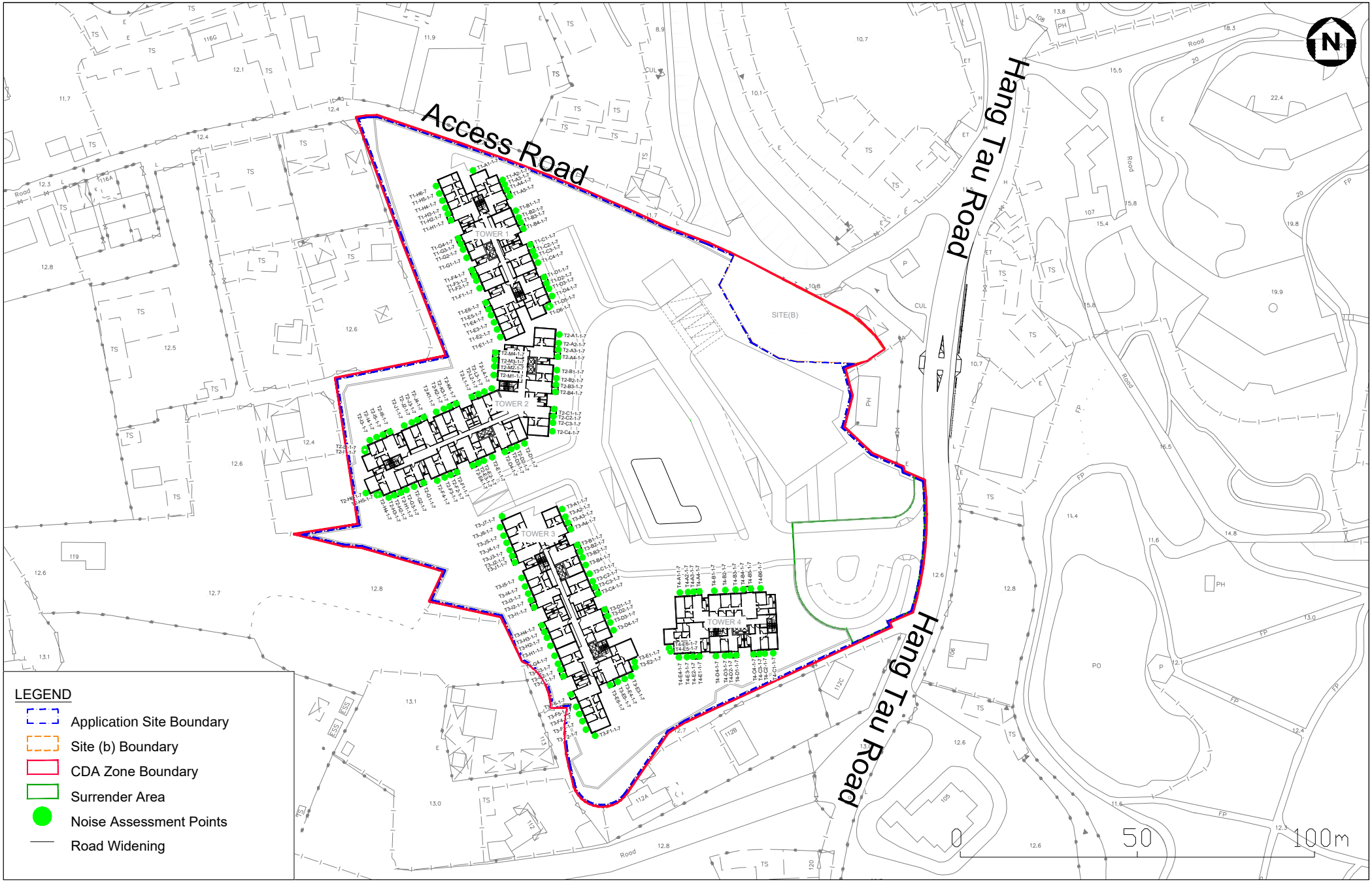

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Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South

Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (6/F)

Figure 4.1g

Scale As Shown



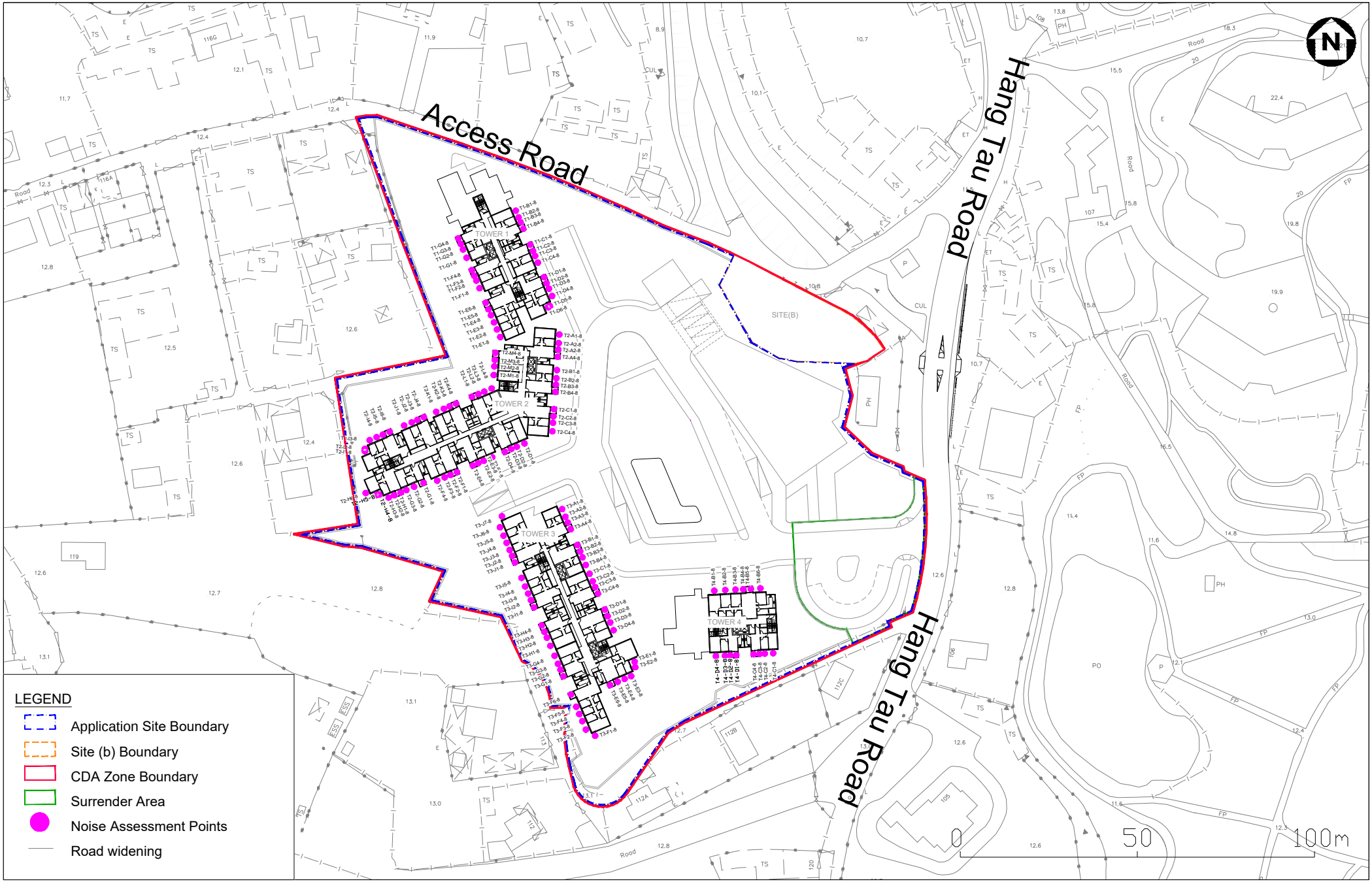

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Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (7/F)

Figure 4.1h

Scale As Shown



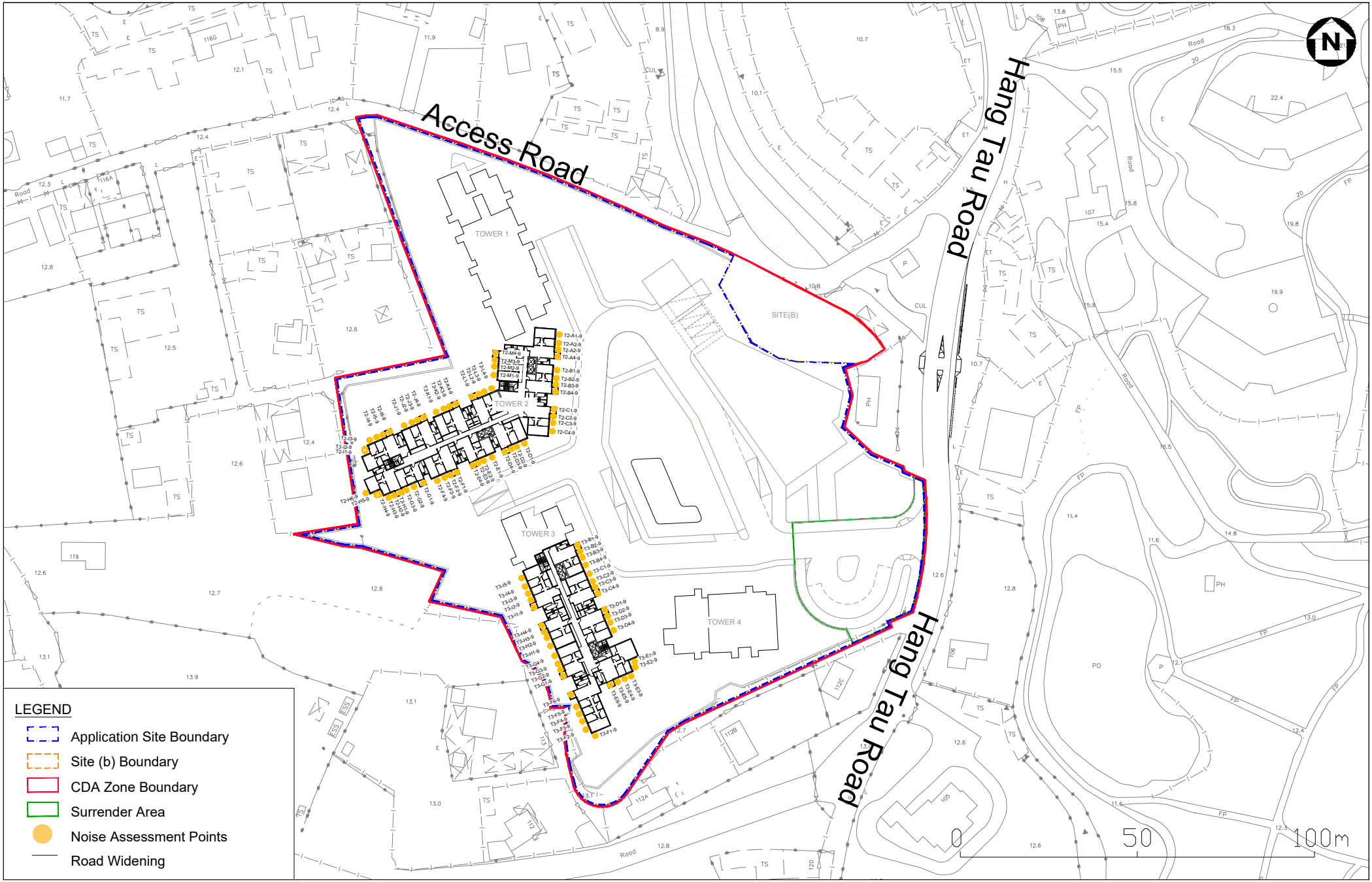

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Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South

Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (8/F)

Figure 4.1i

Scale As Shown



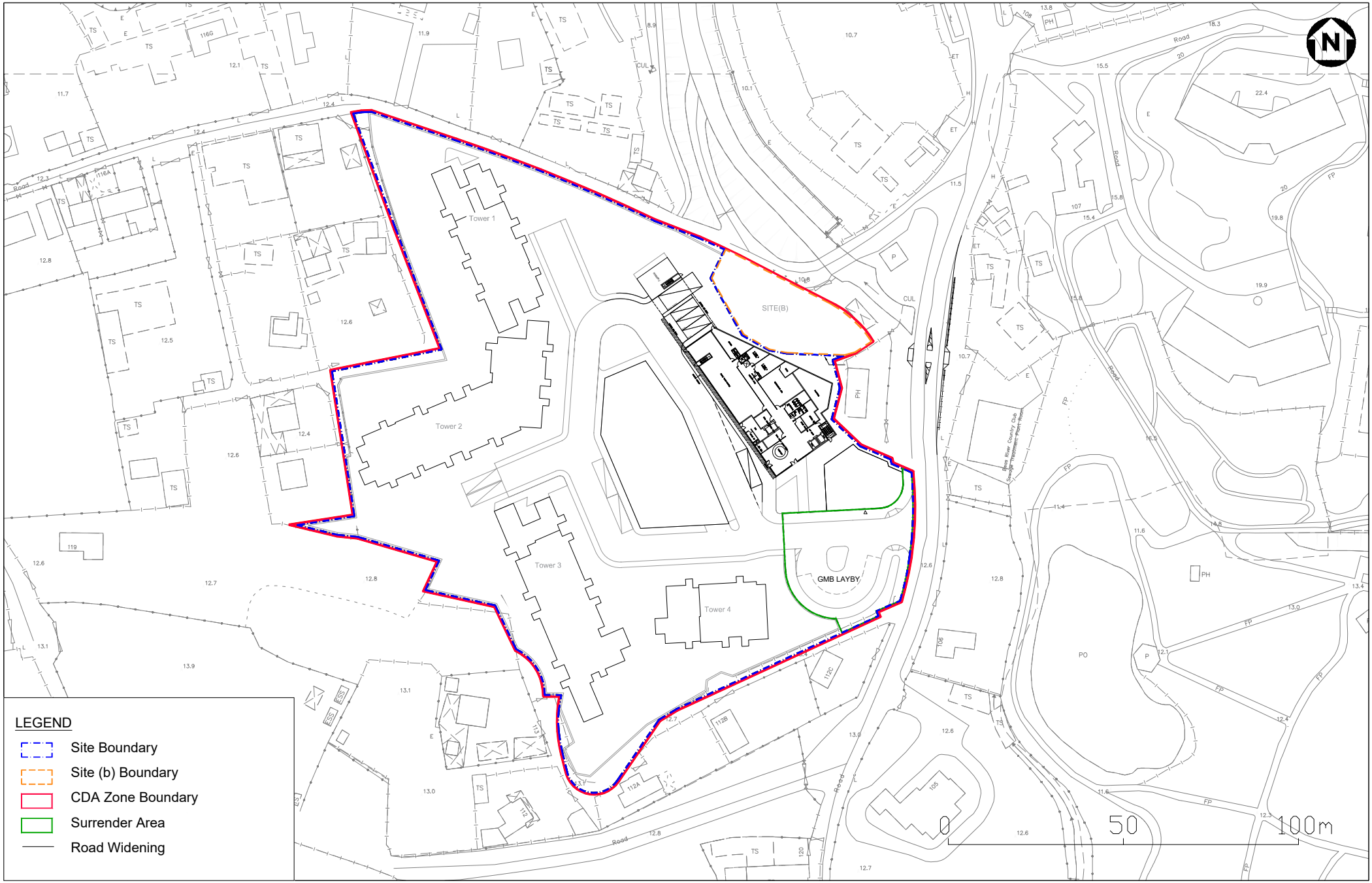

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Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South

Locations of Noise Assessment Points Selected for Road Traffic Noise Impact Assessment (9/F)

Figure 4.1j

Scale As Shown

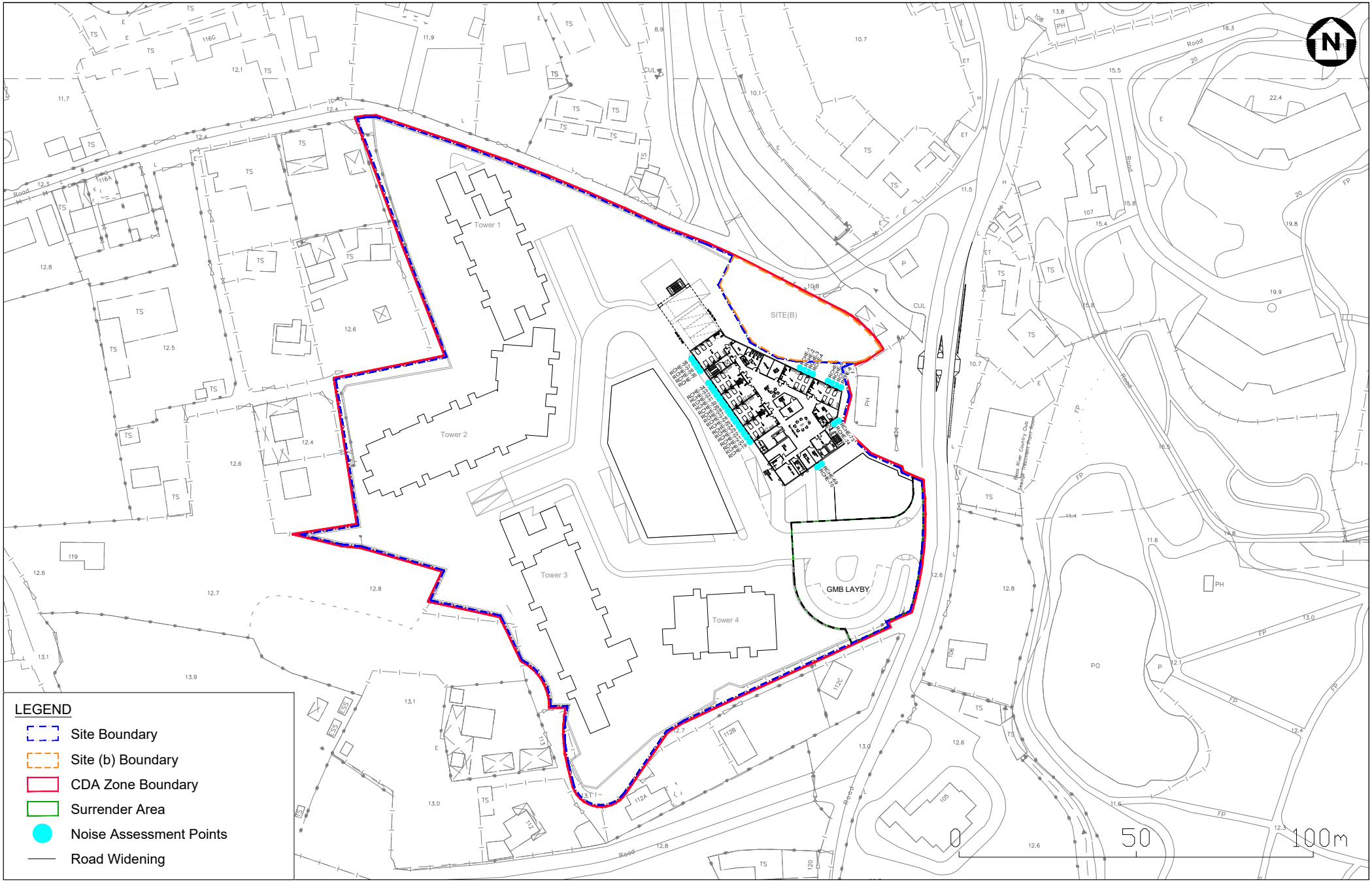



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Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South
Locations of Representative NSRs Selected for Road Traffic Noise Impact Assessment (RCHE - G/F)

Figure 4.1k

Scale As Shown




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Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South
Locations of Representative NSRs Selected for Road Traffic Noise Impact Assessment (RCHE - 1/F)

Figure 4.1I

Scale As Shown




Meinhardt Infrastructure and Environment Limited
美滿基建環保工程顧問有限公司

Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South
Locations of Representative NSRs Selected for Road Traffic Noise Impact Assessment (RCHE - 2/F)

Figure 4.1m

Scale As Shown




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Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South
Locations of Representative NSRs Selected for Road Traffic Noise Impact Assessment (RCHE - 3/F)

Figure 4.1n

Scale As Shown



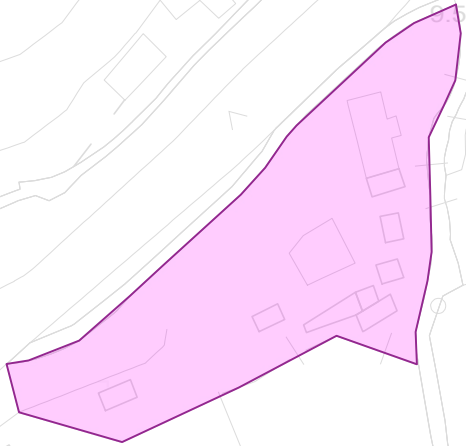
Photo record of on-site noise measurement at day time.

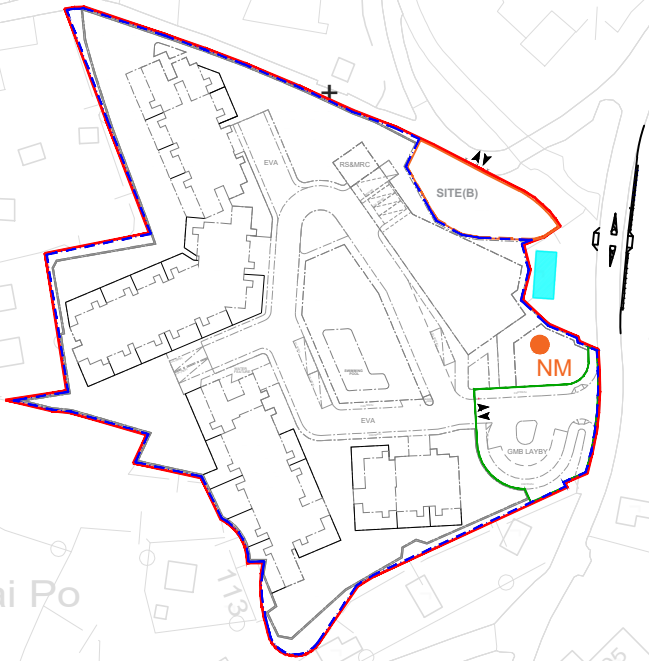


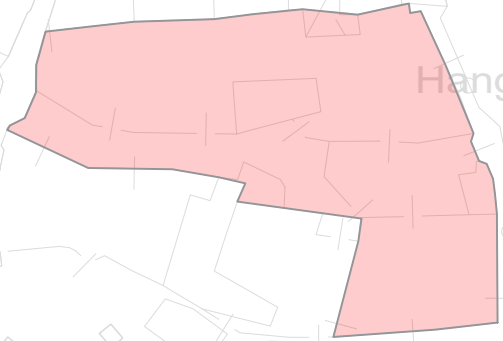
Photo record of on-site noise measurement at evening time.



Photo record of on-site noise measurement at night time.





Hang Tau Tai Po

LEGEND

- Application Site boundary
- Site (b) boundary
- CDA Zone Boundary
- Surrender Area
- Road Widening
- Hang Tau Village SPS
- Open Stoage of Construction Equiplment
- Open Storage of K& S Aluminum & Steel Works Limited
- Location of Noise Measurement

200 150 100 50 0 (m)

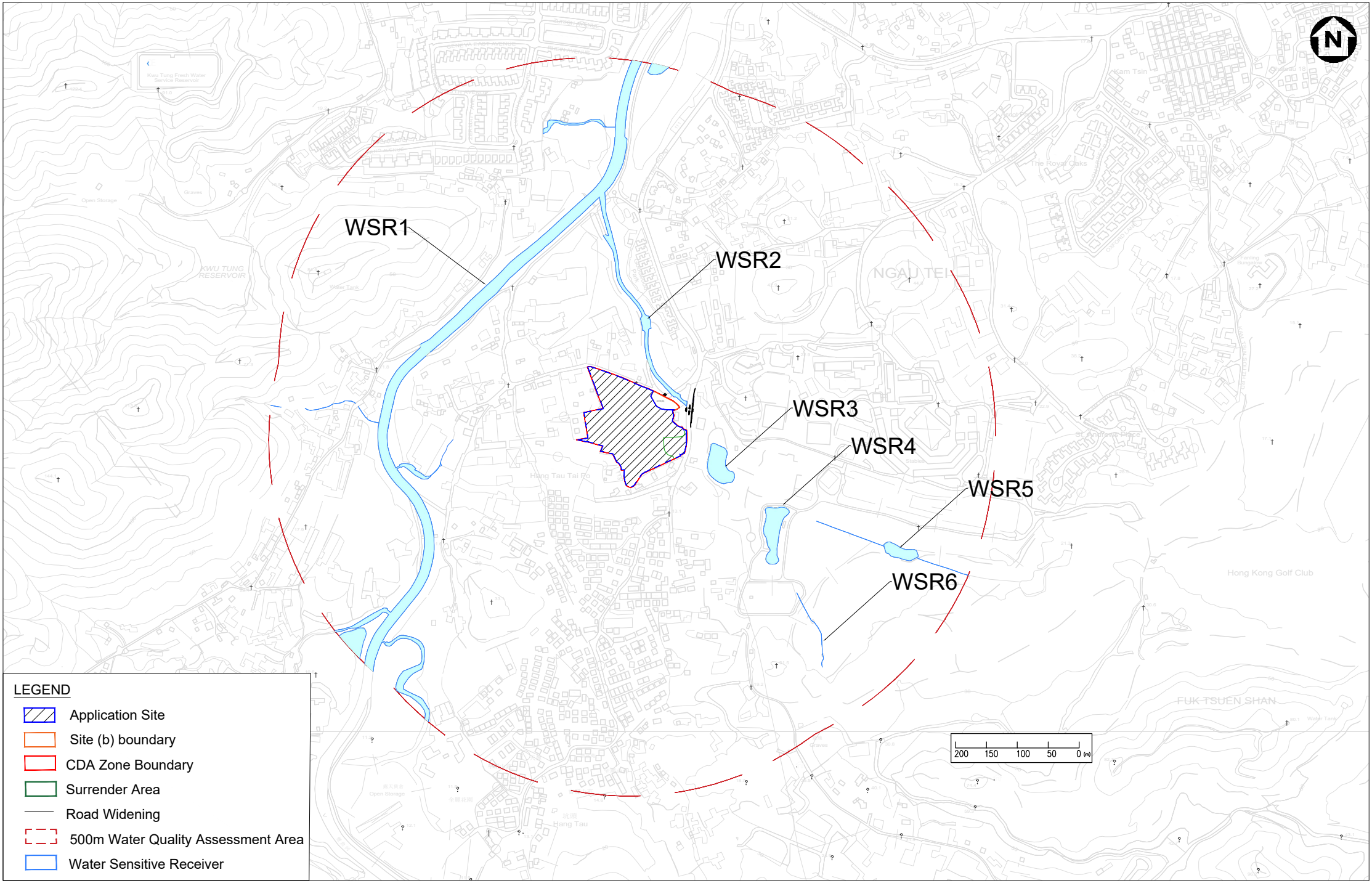
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Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South

Location of the On-site Noise Measurment and the Potential Fixed Noise Sources

Figure 4.2

Scale As Shown




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Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South
Water Sensitive Receivers and 500m Water Quality Assessment Area

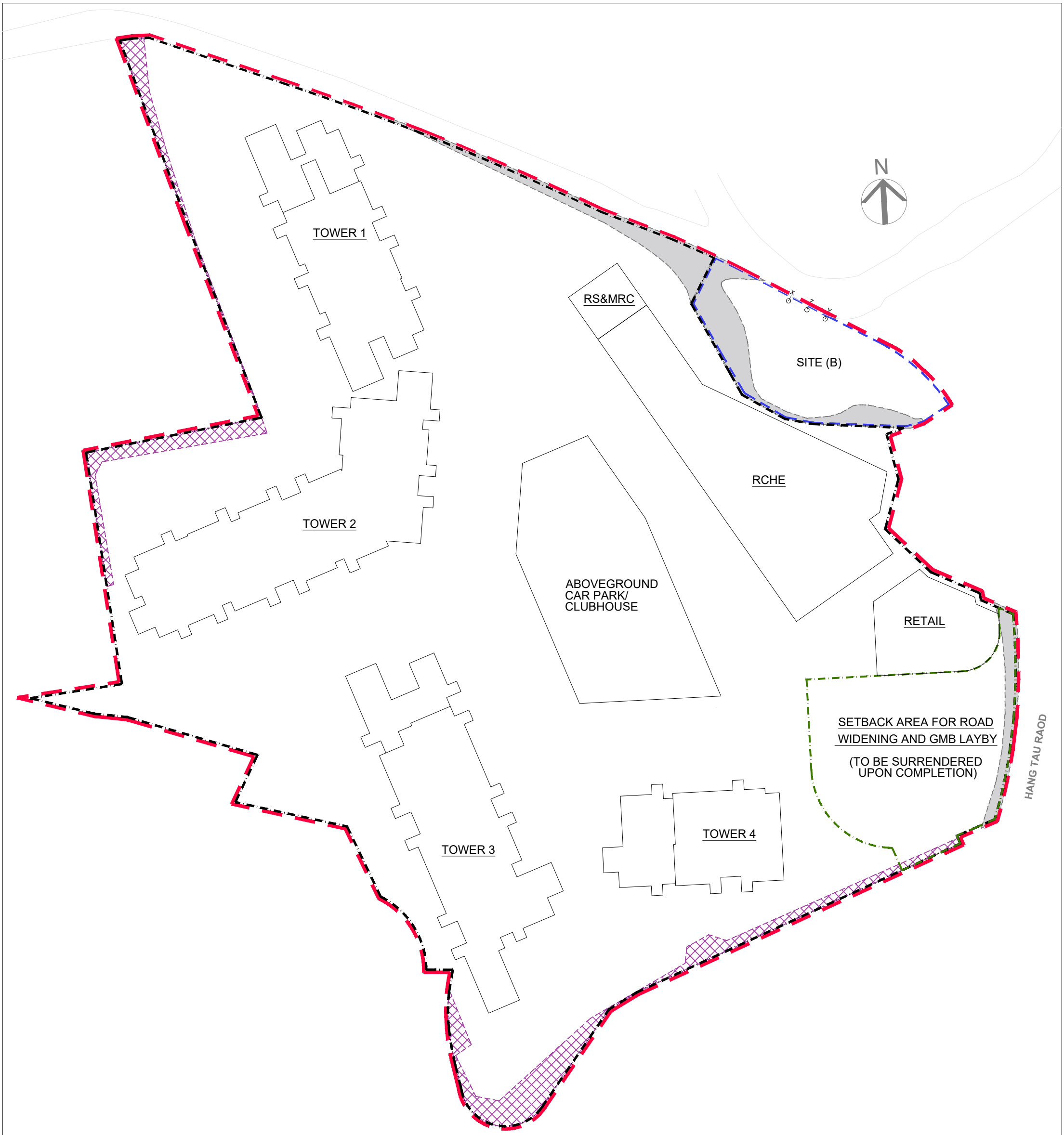
Figure 5.1

Scale As Shown

# APPENDICES

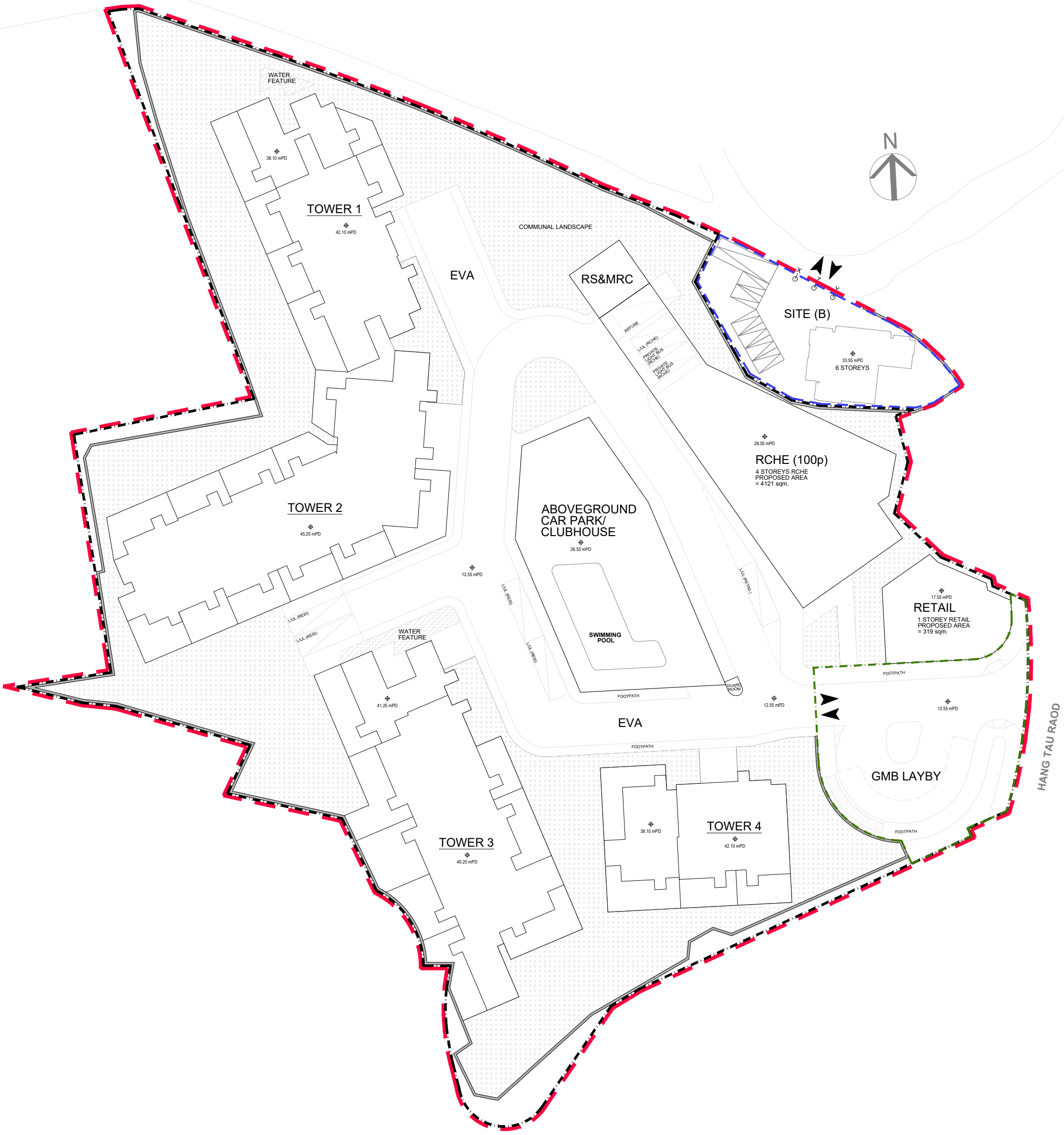
# APPENDIX A

## General Layout Plans of the Development




## LOT PLAN

Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

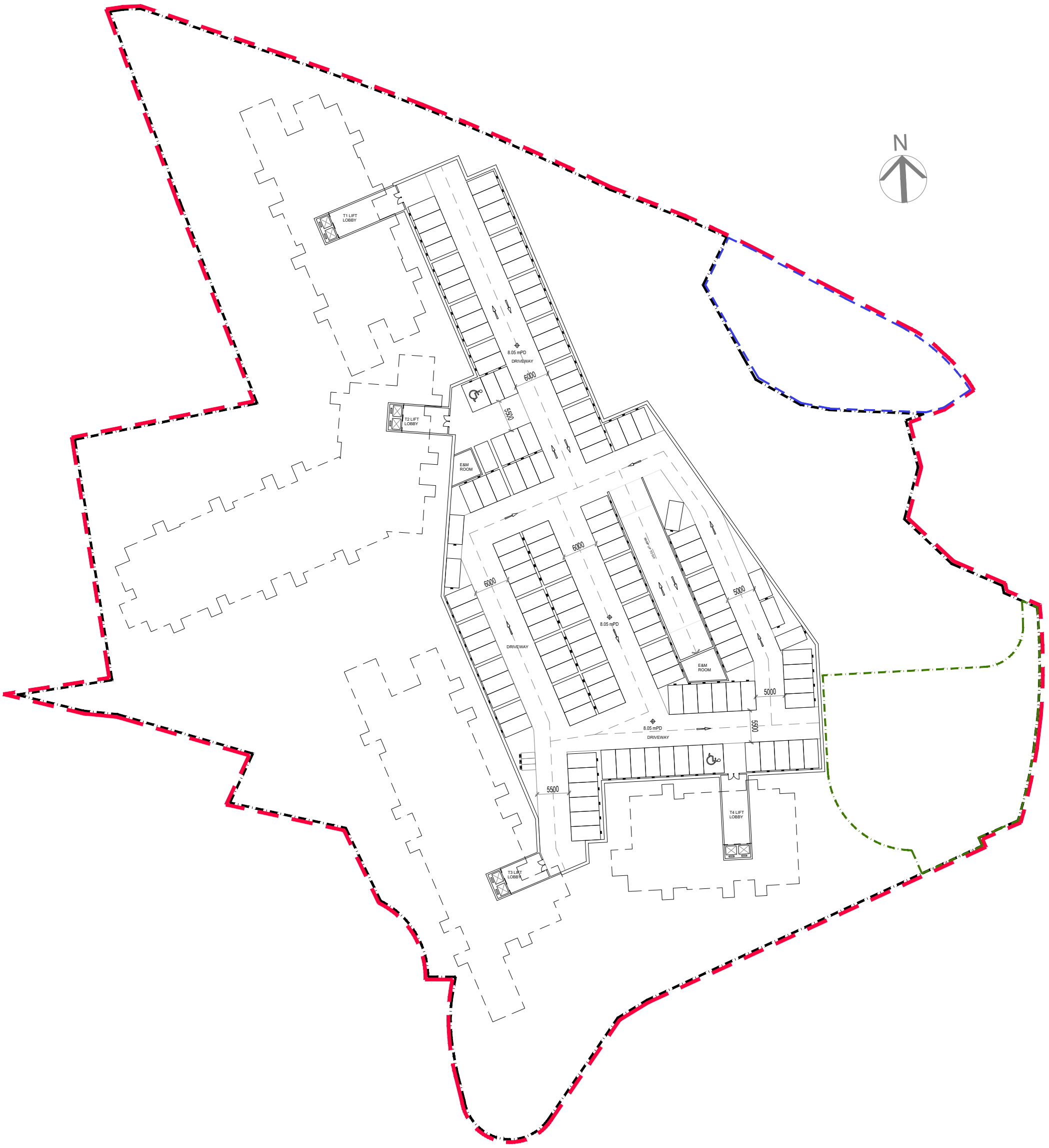



MASTER LAYOUT PLAN

LEGEND

- CDA Zone Boundary
- Application Site Boundary
- Site (B) Boundary
- Surrender Area

Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories




# B1/F FLOOR PLAN

LEGEND

- CDA Zone Boundary
- Application Site Boundary
- Site (B) Boundary
- Surrender Area

Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

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## FIRST FLOOR PART PLAN

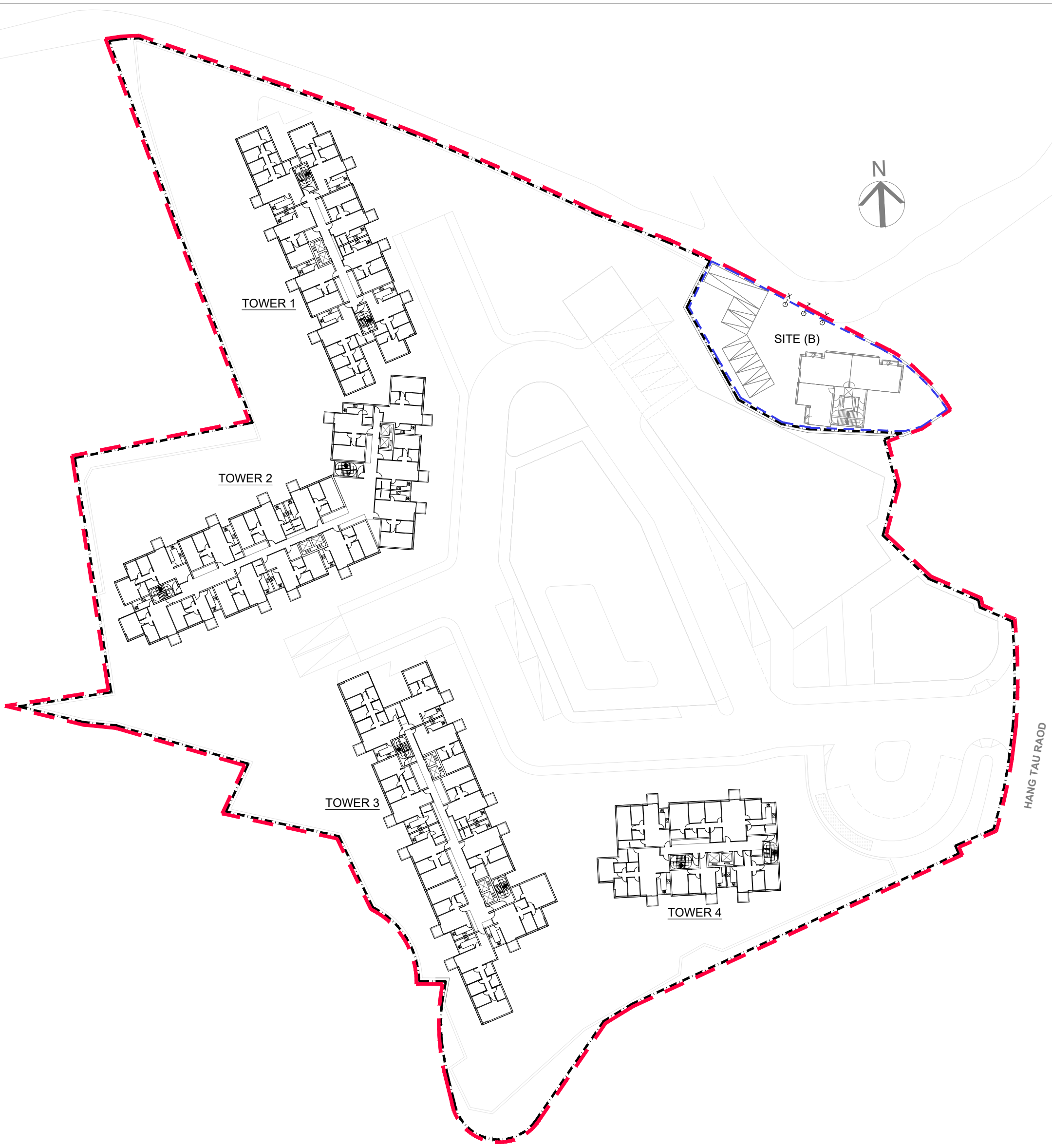
## GROUND FLOOR PLAN

LEGEND

- CDA Zone Boundary
- Application Site Boundary
- Site (B) Boundary
- Surrender Area

Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

LWK + PARTNERS



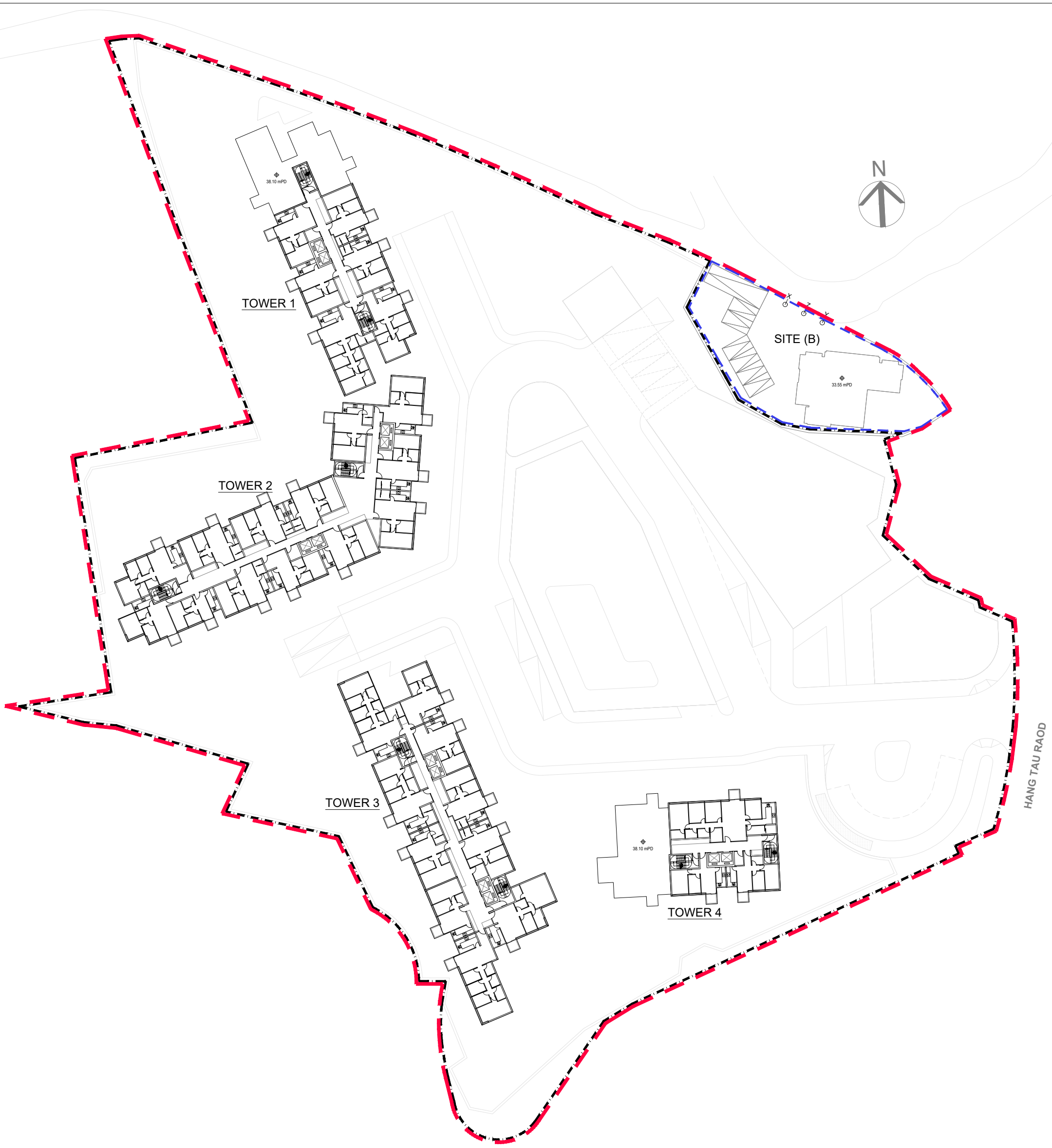

TYPICAL FLOOR PLAN (1/F to 7/F)

LEGEND

- CDA Zone Boundary
- Application Site Boundary
- Site (B) Boundary

Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

LWK + PARTNERS



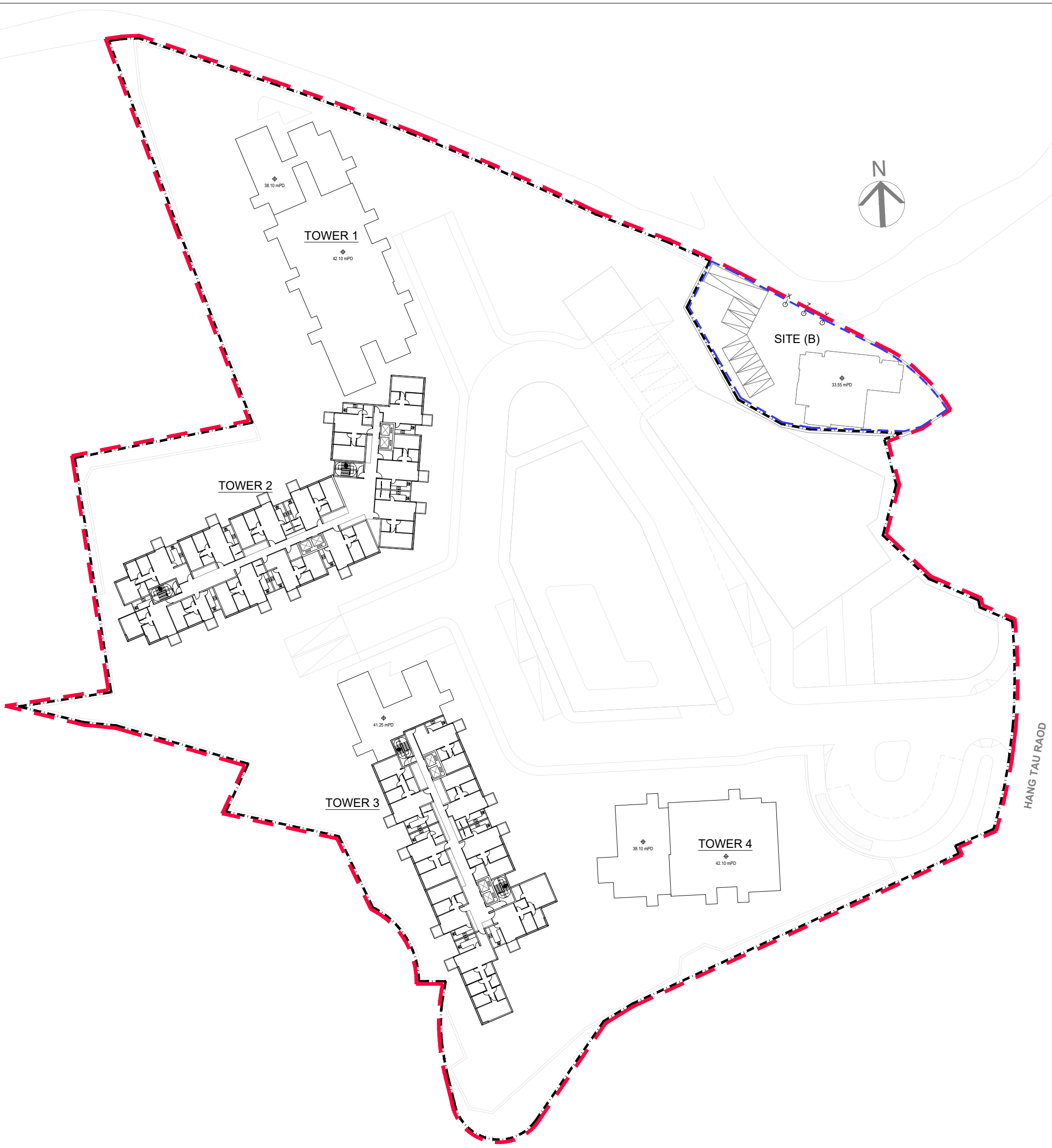

8/F FLOOR PLAN

LEGEND

- CDA Zone Boundary
- Application Site Boundary
- Site (B) Boundary

Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

LWK + PARTNERS



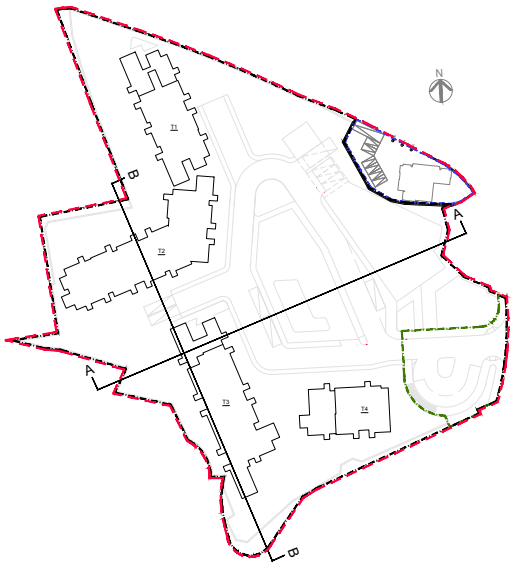

9/F FLOOR PLAN

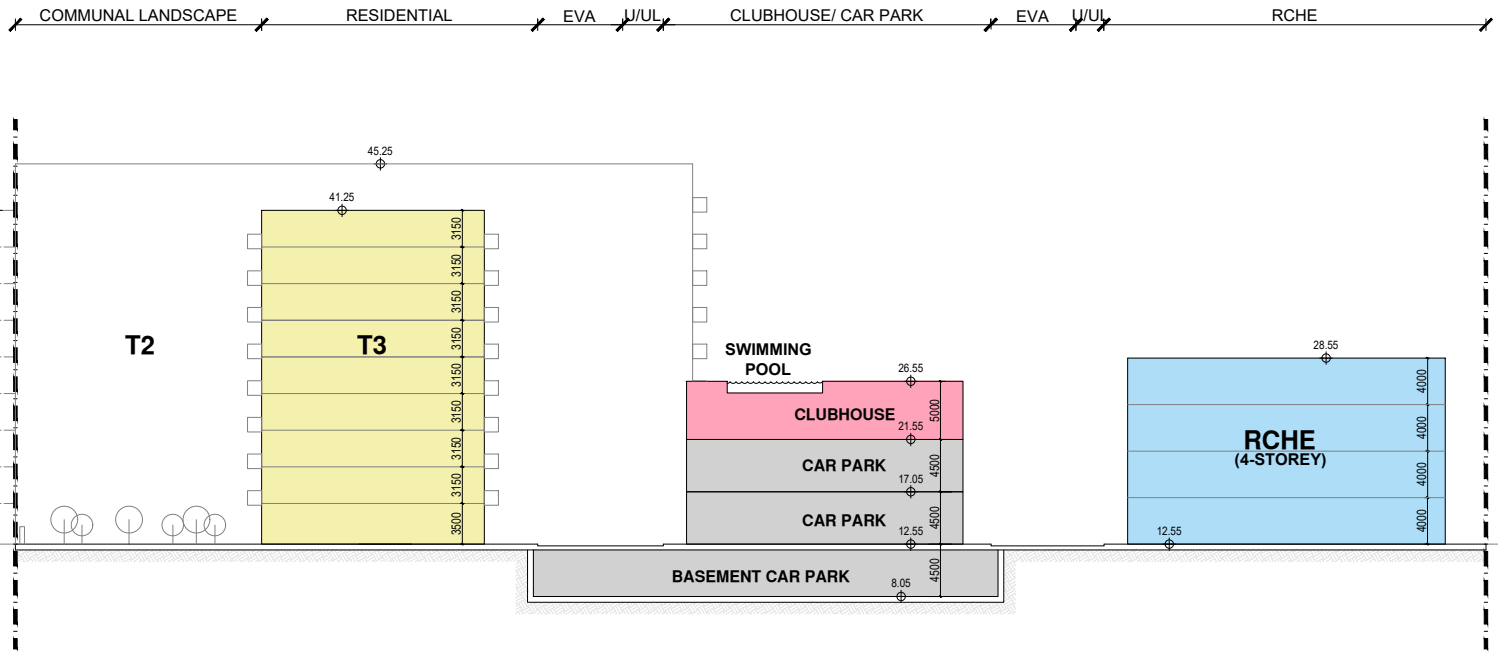
LEGEND

- CDA Zone Boundary
- Application Site Boundary
- Site (B) Boundary

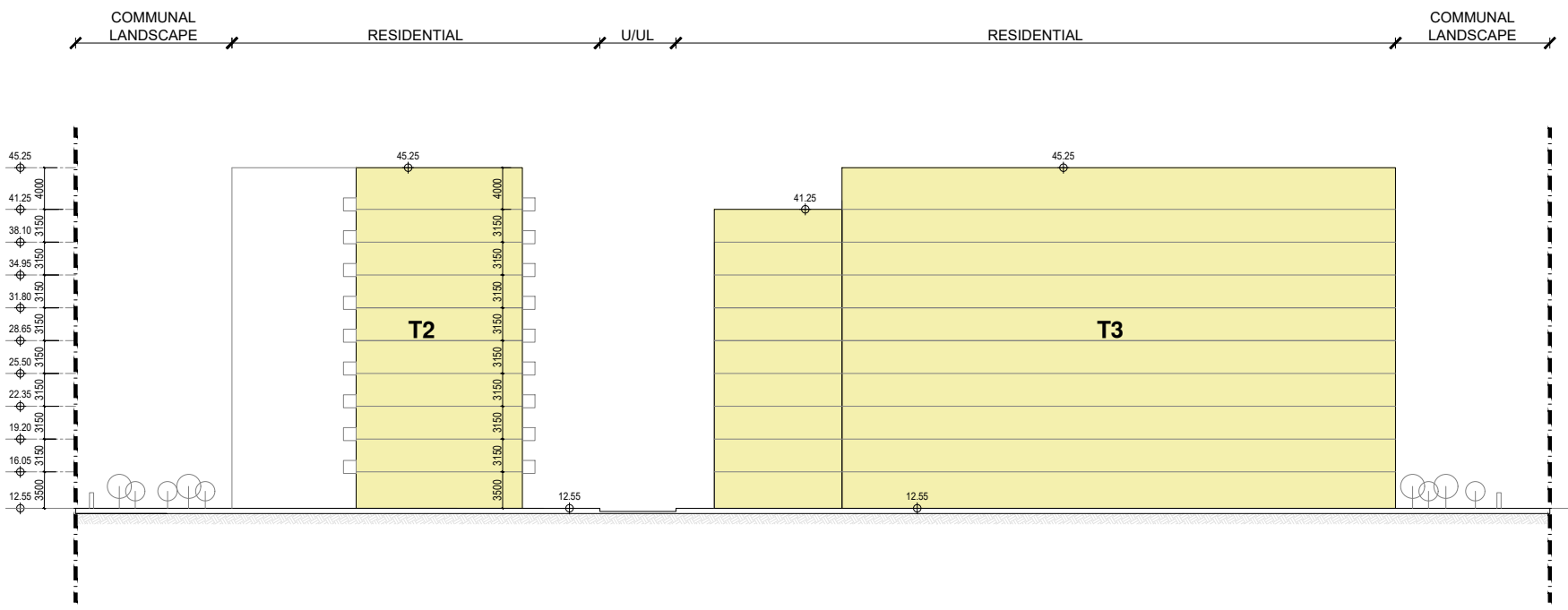
Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

LWK + PARTNERS




## SCHEMATIC SECTION A




## SCHEMATIC SECTION B

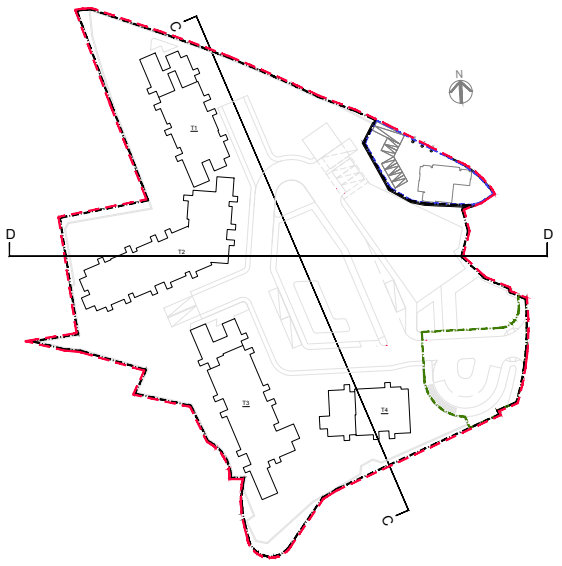
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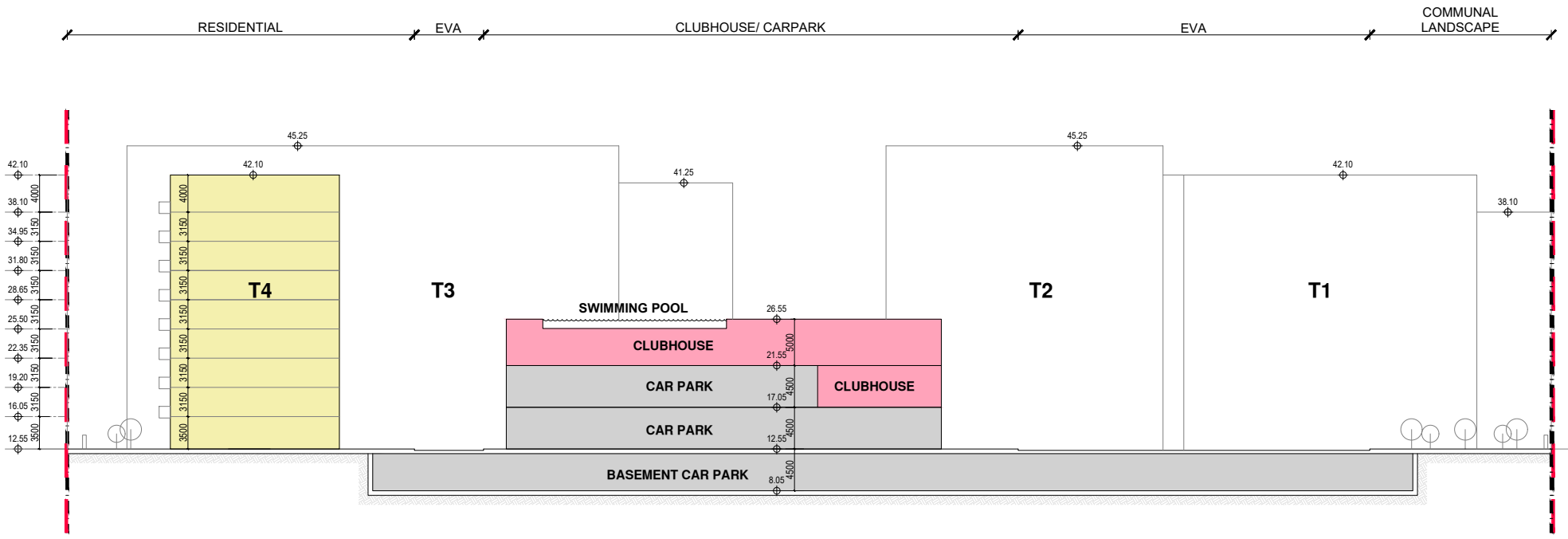
CDA Zone Boundary

Application Site Boundary

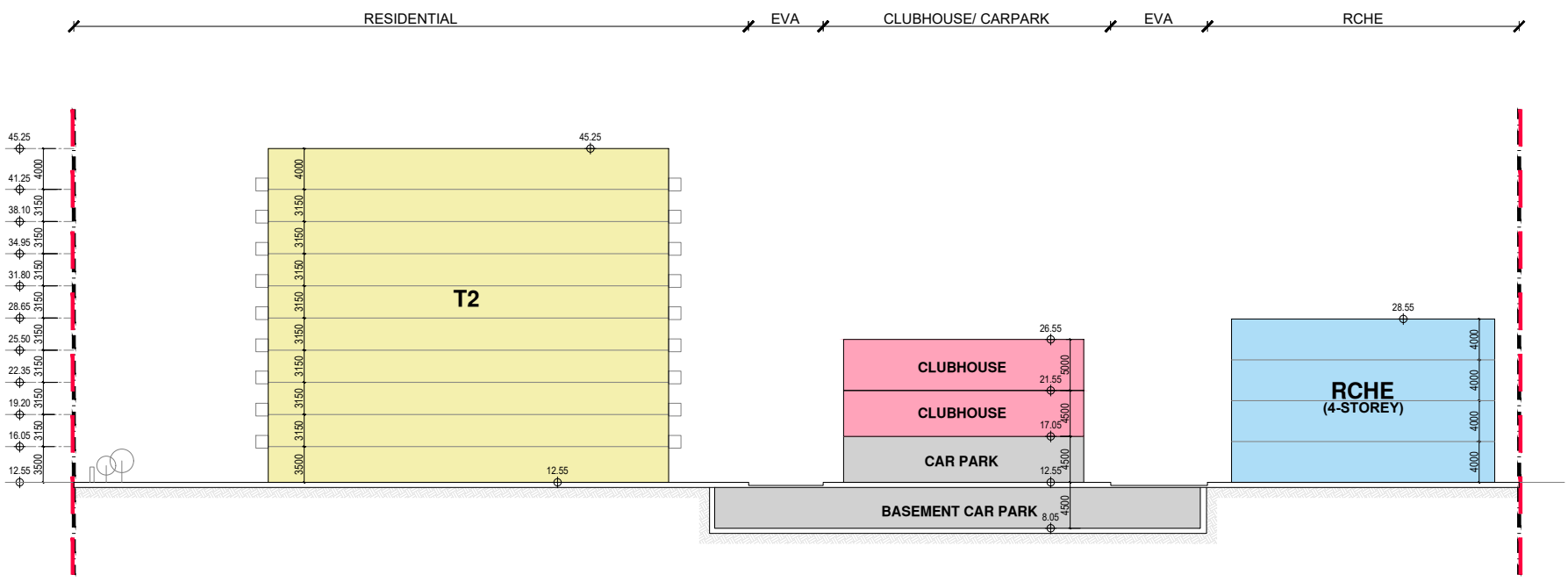
Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

LWK + PARTNERS




## SCHEMATIC SECTION C



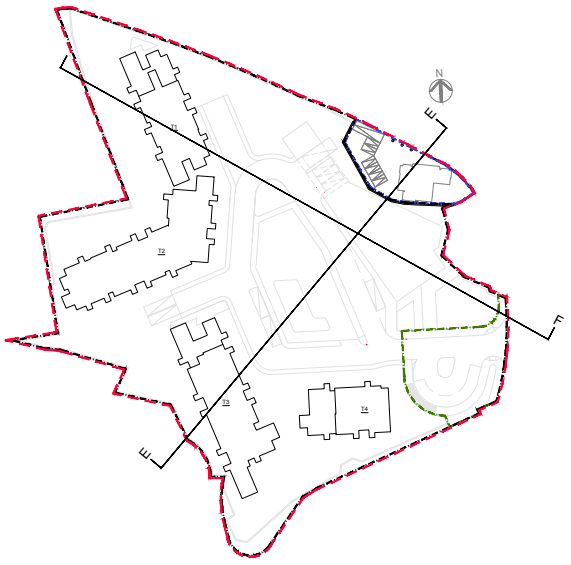

## SCHEMATIC SECTION D

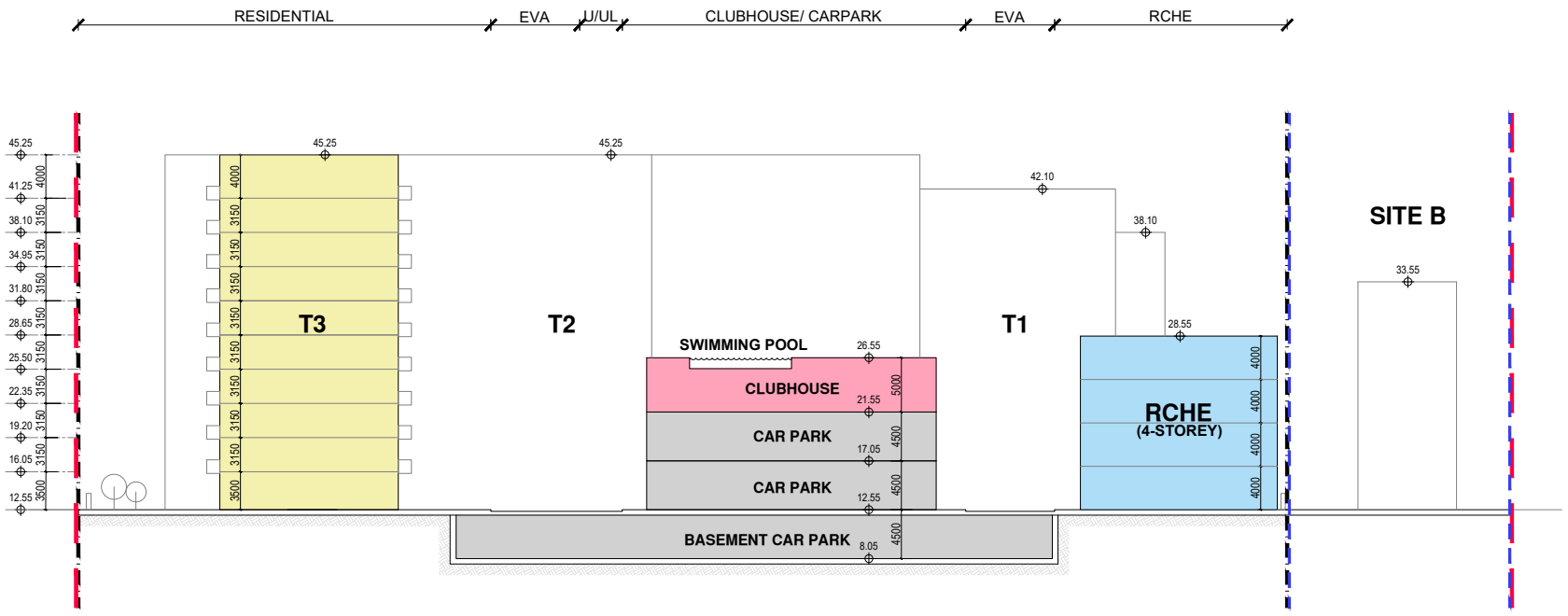
LEGEND

- CDA Zone Boundary
- Application Site Boundary

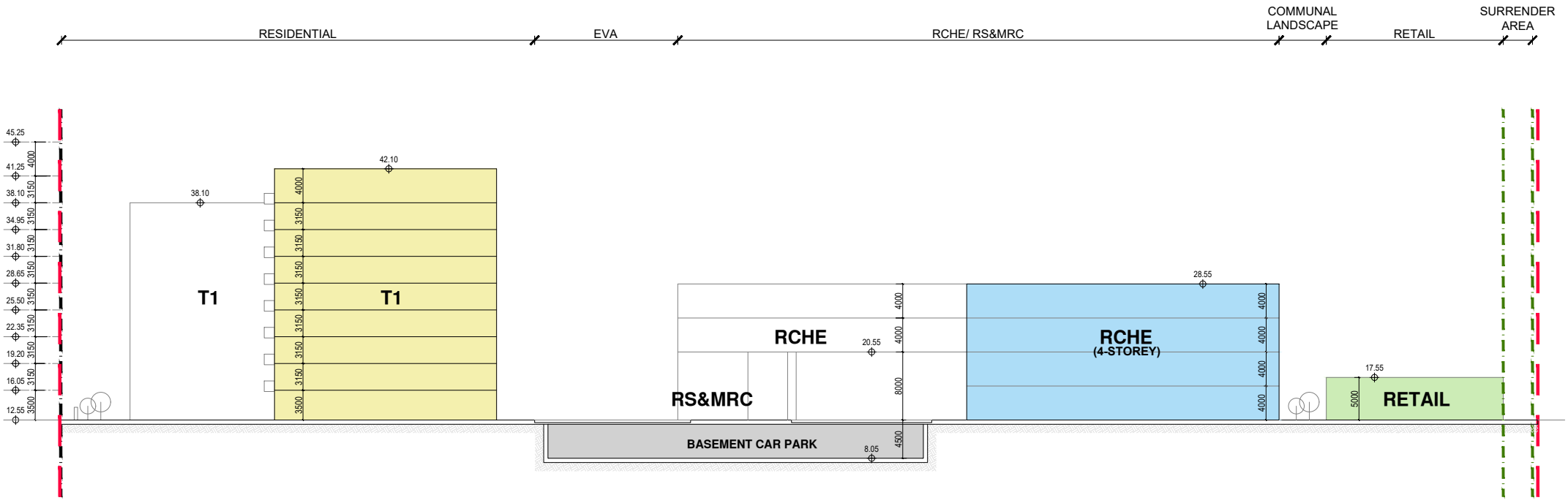
Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

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## SCHEMATIC SECTION E



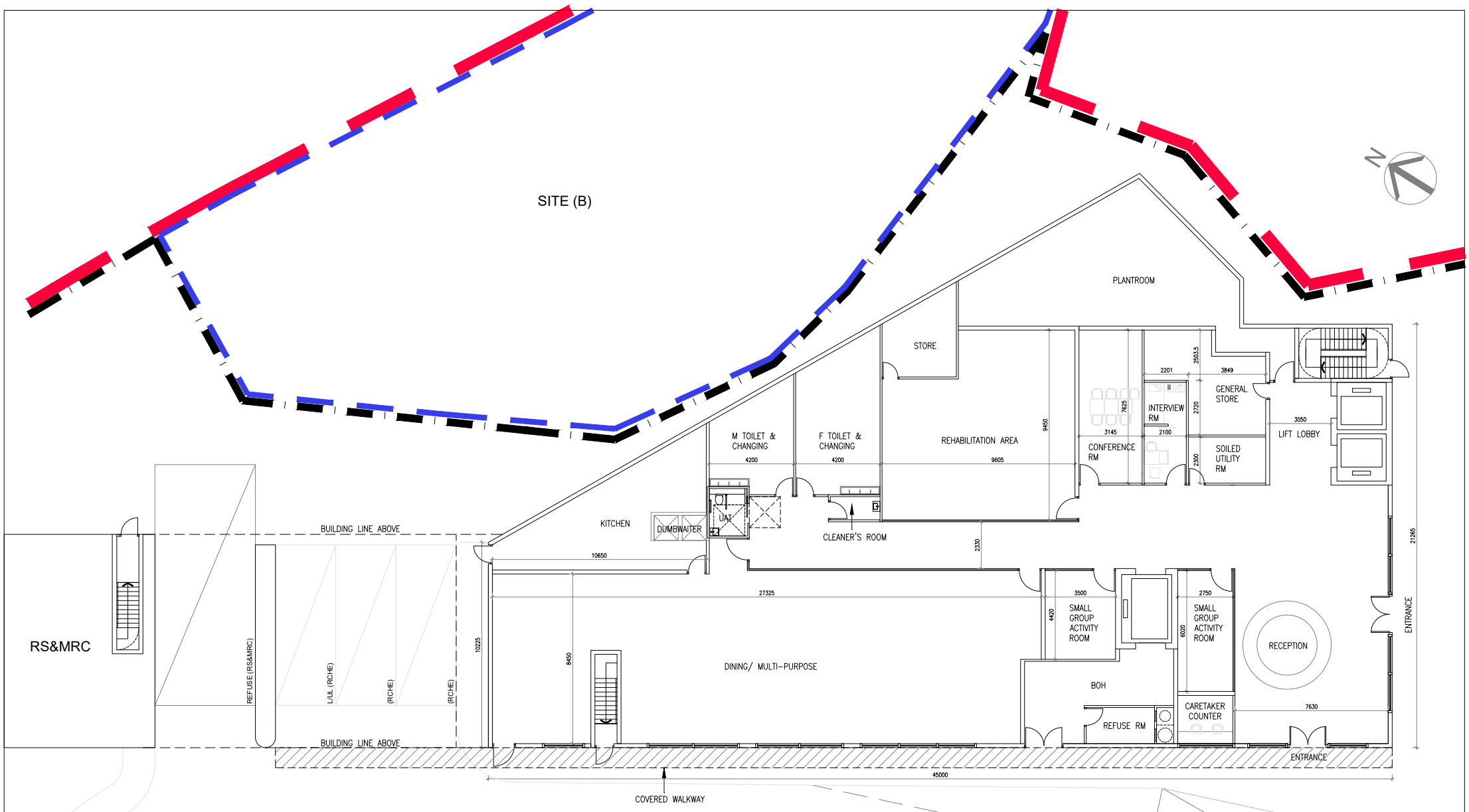

## SCHEMATIC SECTION F

LEGEND

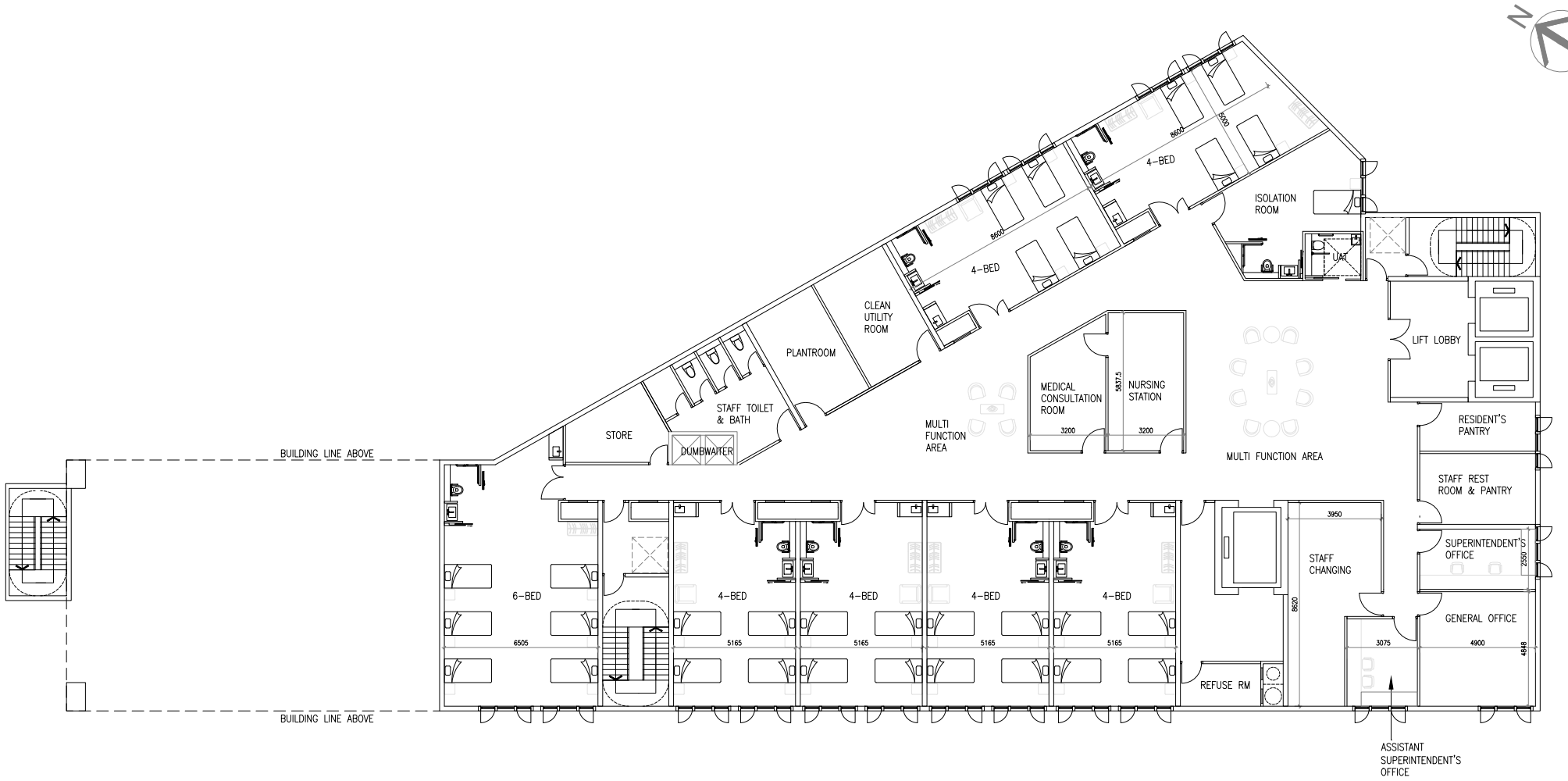
- CDA Zone Boundary
- Application Site Boundary
- Site (B) Boundary
- Surrender Area

Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

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# RCHE GROUND FLOOR PLAN



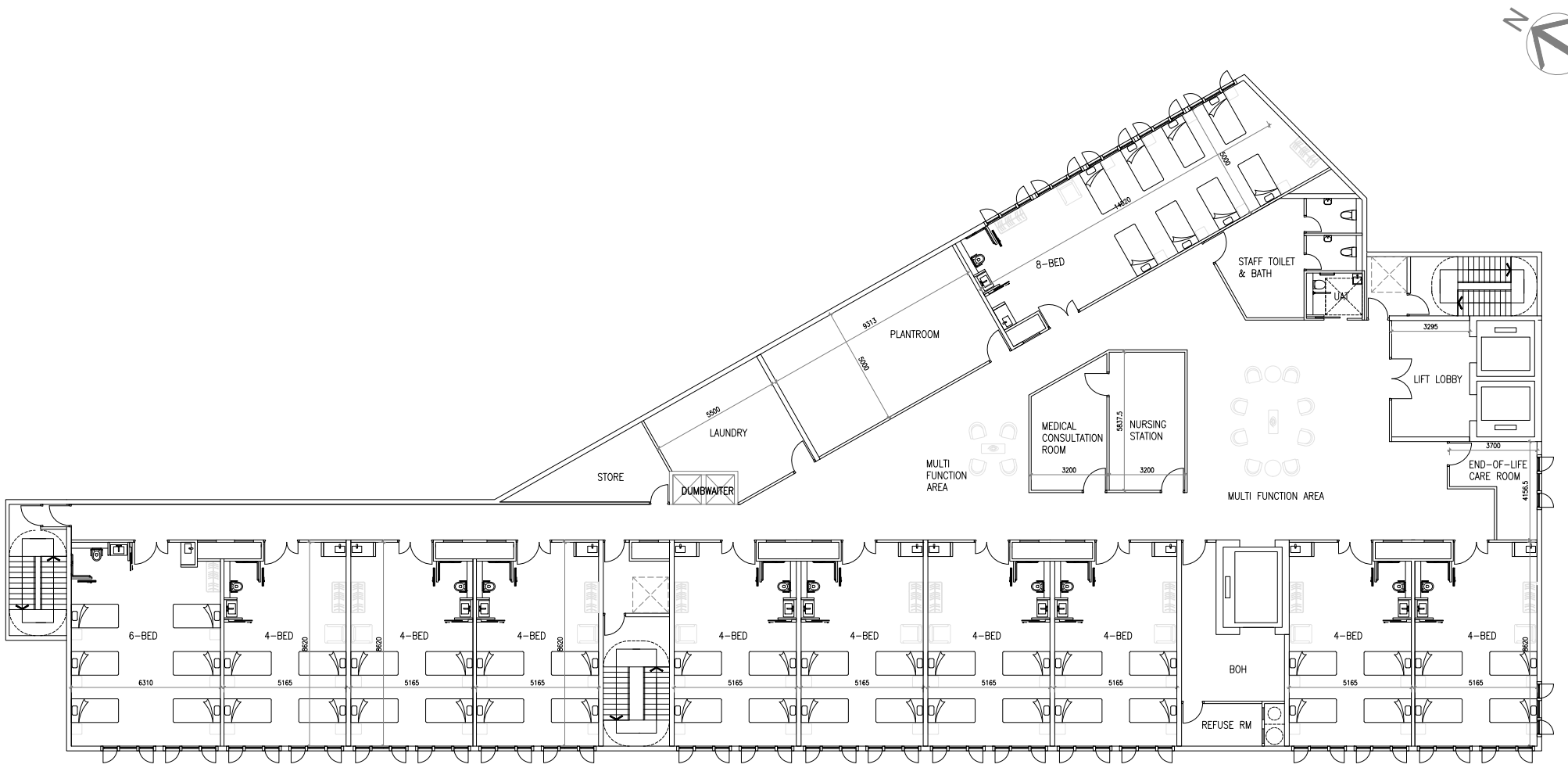

# RCHE FIRST FLOOR PLAN

NUMBER OF BEDS: 30

REMARK: THE LAYOUT IS FOR INDICATION ONLY AND IS SUBJECT TO DETAILED DESIGN.

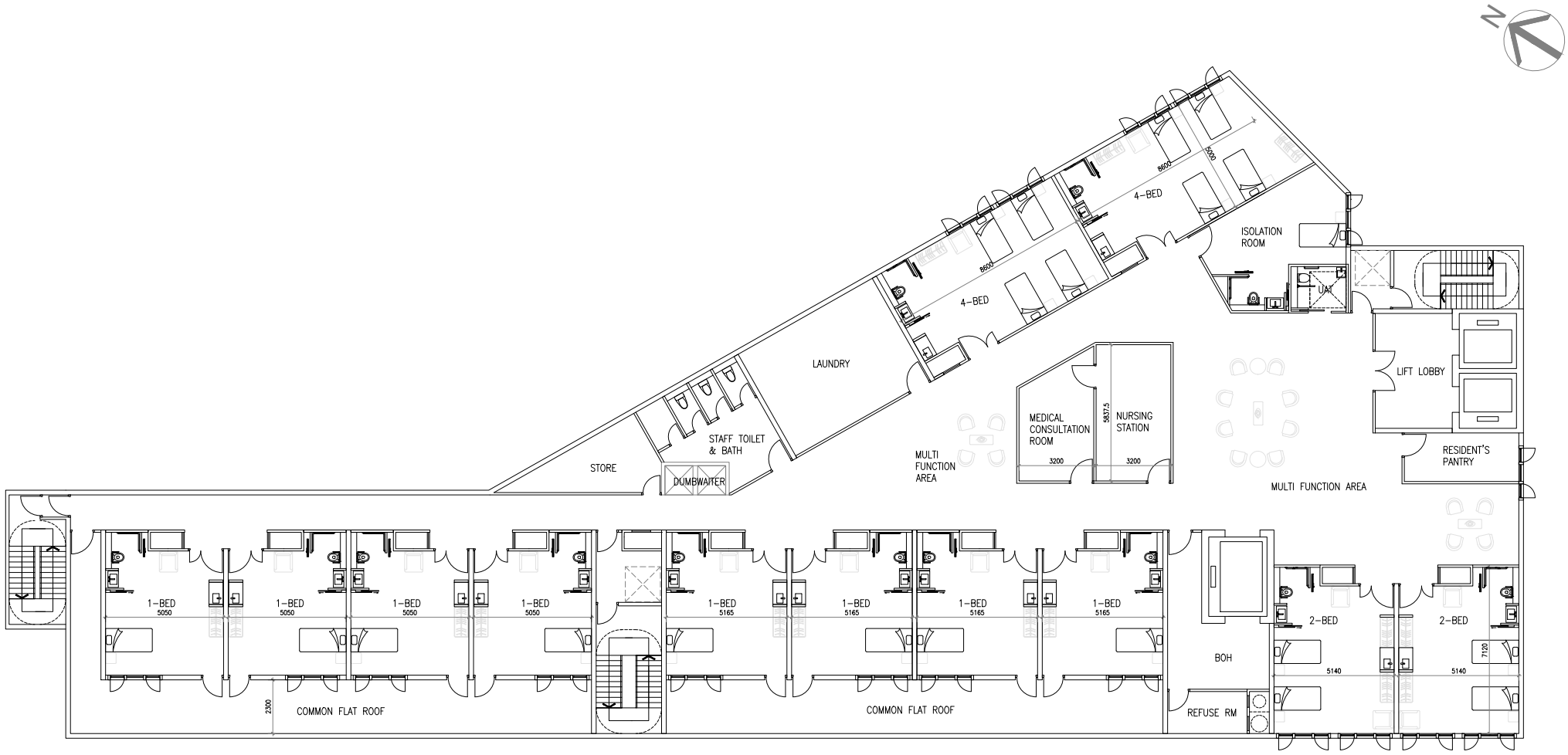
Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

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NUMBER OF BEDS: 50

## RCHE SECOND FLOOR PLAN




NUMBER OF BEDS: 20

## RCHE THIRD FLOOR PLAN

REMARK: THE LAYOUT IS FOR INDICATION ONLY AND IS SUBJECT TO DETAILED DESIGN.

Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

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**APPENDIX B**

**Traffic Forecast**

25/06/2026

Reference number CHK50808310/CHC/L2601018/sys

# SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

## TRAFFIC IMPACT ASSESSMENT

## Final Report

SYSTRA MVA

| IDENTIFICATION TABLE | |
|---|---|
| **Project** | Section 16 Planning Application for Proposed Minor Relaxation of Plot Ratio and Building Height Restriction for Comprehensive Development in Hang Tau Tai Po, Kwu Tung South |
| **Study** | Traffic Impact Assessment |
| **Type of document** | Final Report |
| **Date** | 25/06/2026 |
| **File name** | HTTP S16 Rev TIA Report (L2601018)_20260625.docx |
| **Reference number** | CHK50808310/CHC/L2601018/sys |

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# 1. INTRODUCTION

## 1.1 Background

1.1.1 The Application Site located at Hang Tau Road consists of various lots in D.D. 92 and D.D.94 and the adjoining government land at Hang Tau Tai Po, Kwu Tung South in Sheung Shui, with site area of about 17,990.9m$^2$. The site location is shown in **Drawing No. 1.1**.

1.1.2 A Section 12A (S12A application) planning application (application no. Y/NE-KTS/13) for dividing a "Comprehensive Development Area (CDA)" site into two areas and relaxing their plot ratio, building height and site coverage restrictions was approved by Town Planning Board (TPB) in December 2021. Such amendments to the CDA site have been reflected in the prevailing Kwu Tung South Outline Zoning Plan (OZP) as gazetted on 31 May 2024.

1.1.3 Under the proposed scheme (the previous scheme) in the approved S12A application in 2021, Area (a) of the CDA site consists of the Application Site was proposed to be redeveloped for 302 residential flats together with provisions of retail facilities and a residential care home for elderly (RCHE) with the plot ratio (PR) of 1.41 including domestic PR of 1.23 and non-domestic PR of 0.18. Whilst, Area (b) of the CDA site was proposed in the scheme for a potential residential tower with 18 residential units at the domestic PR of 1.23. The master layout plan of previous scheme under the approved S12A application is attached in **Appendix A** for reference.

1.1.4 To well utilize the development potential, the MLP for Area (a) of the CDA site, i.e. the Application Site, with proposed minor relaxation of PR from 1.41 to 1.692 (the Proposed MLP) is developed by the Applicant. To enable the Proposed MLP, a Section 16 planning application (S16 application) is required in order to obtain permission from TPB.

1.1.5 MVA Hong Kong Limited was commissioned by the Applicant as a traffic consultant to carry out a traffic impact assessment in support of the S16 application for the Proposed MLP with minor relaxation of PR.

1.1.6 The purpose of this study is to review the traffic conditions and assess the potential traffic impact on the adjacent local road network caused by the Proposed MLP in the design year.

## 1.2 Study Objectives

1.2.1 The main objectives of this study are:

- To present the details on the Proposed MLP such as the proposed development parameters, access arrangement, internal transport provision, the set back for road widening as per the requirement in OZP as well as the proposed public transport facilities;
- To determine the existing traffic conditions in the vicinity of the Application Site by undertaking manual classified count traffic surveys;
- To study and assess the existing travel patterns, road and junction capacities in the local area adjacent to the application site;
- To identify the traffic generation from the Application Site under the Proposed MLP and carry out distribution and assignment of the generated traffic;
- To estimate the future traffic flows for the design year on the surrounding local road network;

- To assess the traffic impact due to the Proposed MLP on the surrounding local road network and junctions for the design year;
- To recommend traffic improvement measures to alleviate the foreseeable traffic problems on the surrounding local road networks, if necessary;
- To derive long term traffic forecast for Noise Impact Assessment (NIA) study purpose.

## 1.3 Structure of the Report

1.3.1 Following this introductory chapter, there are six further chapters.

1.3.2 **Chapter 2** – *The Proposed Master Layout Plan*, which presents the development schedule for the Proposed MLP in the subject S16 application. The proposed vehicular access arrangements, car parking, loading/unloading and layby provisions, set back for road widening, and the road widening scheme for improvement of pedestrian crossing will also be discussed.

1.3.3 **Chapter 3** – *Existing Traffic Conditions*, which describes the existing road network and public transport facilities in the vicinity of the application site, presents the summary of traffic count survey and assesses the existing traffic conditions.

1.3.4 **Chapter 4** – *Traffic Forecast*, which discusses the design year and the future scenarios for assessment in this study, anticipates the potential traffic generation and attraction of the application site under the Proposed MLP, summarises the methodology for future traffic forecasts, and presents the traffic forecast for the design year.

1.3.5 **Chapter 5** – *Traffic Impact Assessment*, which presents the findings of the traffic impact assessment in the future design year and recommends improvement measures if necessary.

1.3.6 **Chapter 6** – *Long Term Traffic Forecast for Noise Impact Assessment (NIA)*, which describes the forecasting methodology and presents the results of long term traffic forecast for NIA.

1.3.7 **Chapter 7** – *Summary and Conclusion*, which summarises the findings of the study and presents the conclusions regarding the traffic issues associated with the Proposed MLP.

# 2. THE PROPOSED MASTER LAYOUT PLAN

## 2.1 Site Location

2.1.1 The Application Site is located at Hang Tau Road in Hang Tau Tai Po, and it is situated to the west of Hang Tau Road and surrounded by low-rise village-type houses and temporary structures.

2.1.2 The Application Site together with the adjoining private lot and government land were rezoned to a CDA site in year 2018. Subsequently, an 12A application for dividing the Application Site into an area (namely Area (a)) separated with the adjoining private lot and the government land (namely Area (b)) was approved by TPB in December 2021.

## 2.2 Proposed Development Schedule

2.2.1 Under the previous scheme in the approved S12A application, the Application Site was proposed to be redeveloped for 302 residential flats together with provisions of retail facilities and a RCHE with the PR of 1.41 including domestic PR of 1.23 and non-domestic PR of 0.18. The details of the previous scheme in the approved S12A application are summarized in **Table 2.1**.

2.2.2 To well utilize the development potential, a MLP for the development at the Application Site (the Proposed Development) with minor increase of PR by 20% from 1.41 to 1.692 is developed. The details of development schedule as proposed in this S16 application are presented in **Table 2.1**, and the Proposed MLP is presented in **Drawing No. 2.1**.

**Table 2.1 Development Schedules**

| **Development Schedule for Development at the Application Site** | | | **Previous Scheme (Approved S12A in 2021)** | **Proposed MLP** |
|---|---|---|---|---|
| Site Area | | | 17,990.9 $m^2$ | |
| GFA | Domestic | | 22,087 $m^2$ | 26,554 $m^2$ |
| | Non-domestic | Retail | 406 $m^2$ | 319 $m^2$ |
| | | RCHE | 2,777 $m^2$ (for 100 places in total) | 3,567 $m^2$ (for 100 places in total) |
| | | Total | 3,183 $m^2$ | 3,886 $m^2$ |
| | Overall | Overall | 25,270 $m^2$ | 30,440 $m^2$ |
| Plot Ratio | Domestic | Domestic | 1.23 | 1.476 |
| | Non-domestic | Non-domestic | 0.18 | 0.216 |
| | Overall | Overall | 1.4 | 1.692 |
| Total no. of Residential Blocks | | | 3 | 4 |
| Total no. of Flats | | | 302 | 334 |
| Average Unit Size ($m^2$) | | | 73.14 $m^2$ | 79.50 $m^2$ |

2.2.4 The Proposed Development at the Application Site is tentatively scheduled to be completed by year 2031.

## 2.3 Access Arrangement

2.3.1 The current access points to the Application Site are located at Hang Tau Road and the single track access road to the north (namely Access Road A). Taking into consideration of accessibility, the future vehicular access point for the Proposed Development is proposed at Hang Tau Road where is at the same similar location of access for the site as proposed in the previous scheme of the approved S12A application. While, the existing access point on Access Road A will be no longer provided for the Application Site. The proposed access arrangement for the Proposed Development at the Application Site is shown in **Drawing No. 2.1.**

2.3.2 The swept path analysis for the ingress and egress of the Proposed Development are demonstrated in **Appendix B**.

## 2.4 Internal Transport Provision

2.4.1 The provision of internal transport facilities, i.e. car parking spaces and loading/unloading bays, for the Proposed Development are reviewed and proposed with reference to the guidelines stipulated in the latest Hong Kong Planning Standards & Guidelines (HKPSG).

2.4.2 Since the provision requirements for RCHE are not specified in HKPSG, the provision of parking spaces for private light buses and loading/unloading area are proposed with following the Social Welfare Department (SWD)'s ancillary requirements for RCHE as adopted in the previous approved S12A application, while the provision of car parking spaces are proposed with reference to the parking ratios of several previously approved planning applications with similar social welfare developments as listed in **Table 2.2**.

**Table 2.2 Review on Car Parking Provision in the Similar Applications with RCHE**

| Application No. | Application Site Location | No. of Places / Beds | No. of Car Parking Spaces | Derived Parking Ratio |
|---|---|---|---|---|
| Y/NE-KTS/16 | Kam Hang Road, Kwu Tung South | 150 | 4 | 1 space per 38 places |
| A/FSS/288 | Tin Ping Road, Sheung Shui | 210 | 4 | 1 space per 53 places |
| A/YL-NSW/349 | Nam Sang Wai, Yuen Long | 240 | 11 | 1 space per 22 places |
| A/YL-TYST/870 | Tai Tao Tsuen, Yuen Long | 248 | 3 | 1 space per 83 places |
| A/YL/263 | Ex-Hang Heung Bakery Factory, Yuen Long | 380 | 8 | 1 space per 48 places |
| A/YL/276 | Ma Tin Pok, Shap Pat Heung Road, Yuen Long | 197 | 4 | 1 space per 49 places |
| A/YL/302 | Tai Tong Road, Yuen Long | 241 | 2 | 1 space per 121 places |
| A/YL-NSW/292 | Pun Uk, Yuen Long | 531 | 6 | 1 space per 89 places |
| A/SK-SKT/30 | 2 Hong Ting Road, Sai Kung | 160 | 3 | 1 space per 53 places |
| A/SK-SKT/31 | 6 Hong Ting Road, Sai Kung | 337 | 6 | 1 space per 56 places |
| A/SK-SKT/32 | 7 Hong Ting Road, Sai Kung | 205 | 4 | 1 space per 51 places |
| A/SK-TMT/74 | Tsam Chuk Wan, Sai Kung | 110 | 2 | 1 space per 55 places |

2.4.3 As shown in the **Table 2.2**, the ratios of car parking provision in the similar applications are ranged from 1 space per 22 places to 121 places, and therefore 5 nos. of car parking spaces for the proposed RCHE (i.e. a ratio of 1 space per 20 places) is considered reasonable. The proposed internal transport facilities are summarized in **Table 2.3**.

**Table 2.3 Provision of Internal Transport Facilities**

| Transport Facilities | | HKPSG Requirement | Flat Size in $m^2$ (FS) | Adjustment Factors | | | No. of Flat | Required Provision | Proposed Provision |
|---|---|---|---|---|---|---|---|---|---|
| | | | | R1 | R2 | R3 | | | |
| Residential | Residential Car Parking Spaces | Global Parking Standard of 1 space per 4-7 flats x Adjustment Factors (R1) x (R2) x (R3) | 40 < FS ≤ 70 | 1.2 | 1[(1)] | 1.1[(2)] | 228 | 43-75 | **160** |
| | | | 70 < FS ≤ 100 | 2.4 | | | 73 | 28-48 | |
| | | | 100 < FS ≤ 130 | 4.1 | | | 33 | 21-37 | |
| | | | **Total** | | | | **334** | **92-160** | |
| | Visitor Car Parking Spaces | 5 spaces per block | 4 Blocks | | | | | 20 | 20 |
| | Motorcycle Parking Spaces | 1 space per 100 – 150 flats | 334 flats | | | | | 2 - 3 | 3 |
| | Loading/ unloading bays | 1 bay per block | 4 Blocks | | | | | 4 | 4 |
| Retail Shops (319$m^2$ GFA) | Car Parking Spaces | 1 space per 150 – 300 $m^2$ GFA | | | | | | 1-2 | 2 |
| | Loading/ unloading bays | 1 loading/unloading bay for every 800 to 1200 $m^2$, or part thereof GFA | | | | | | 1 | 1 |
| RCHE (100-p in total) | Car Parking Spaces | (Not specified in HKPSG) | | | | | | - | 5[(6)] |
| | Parking Spaces for private light buses [(3)] | | | | | | | 2[(7)] | 2 |
| | Shared loading/ Unloading area [(4)(5)] | | | | | | | 1[(7)] | 1 |

Notes:
(1) R2 = 1 as the site is outside 500m-radius of rail station.
(2) R3 = 1.1 for the Proposed Development with plot ratio 1.692 (i.e. 1 < PR ≤ 2).
(3) Parking space measuring 8m x 3m with minimum headroom of 3.3m as per SWD's requirements in the previous approved S12A application (no. Y/NE-KTS/13)
(4) A shared loading / unloading area for private light buses and ambulance/other vehicles as per SWD's requirements in the previous approved S12A application (no. Y/NE-KTS/13).
(5) Loading/unloading area measuring 9m x 3m with minimum headroom of 4.7m as per SWD's requirements in the previous approved S12A application (no. Y/NE-KTS/13).
(6) Including 1 no. of accessible car parking space.
(7) Since no change in total places provided at the RCHE, the provisions as adopted in the previous approved S12A application (no. Y/NE-KTS/13) are followed.
(8) 3 nos. of accessible car parking spaces will be reserved for total number of parking spaces in the development ranged 151-250 nos. in accordance with Buildings Department's Design Manual: *Barrier Free Access 2008 (2024 Edition).*
(9) In addition to the proposed provisions in **Table 2.3**, one space for refuse collection will be provided in the Proposed Development.

## 2.5 Development Set Back and Road Widening Scheme at Hang Tau Road

### Road Widening Scheme in Approved S12A Application

2.5.1 In the Explanatory Statement in the OZP, it is remarked that the future development in the subject CDA zone should be set back to make allowance for future widening of Hang Tau Road, such as provision of standard footpaths and 7.3m wide single two-way carriageway in accordance with requirement of HKPSG.

2.5.2 For fulfilment of the set back requirement, development set back was taken into account in the previous scheme of the approved S12A application.

2.5.3 Besides, the previous road widening scheme, as exhibited in **Appendix A**, also included the provisions of a proper pedestrian crossing facility, an on-street layby for Green Mini-bus (GMB) and a vehicle turnaround facility in a form of mini-roundabout at Hang Tau Road for enhancement of pedestrian accessibility as well as the public transport facility.

**Revised Road Widening Scheme**

2.5.4 Having had further discussion with Transport Department subsequent to the approval of the previous S12A application, the road widening scheme is further reviewed and revised for further enhancement.

2.5.5 In the latest road widening scheme as proposed under this application, the intersection of the access to the development and existing Hang Tau Road is converted from a mini-roundabout into a priority T-junction. Besides, further set back of the site is also proposed for the relocation of the GMB layby and vehicle turnaround facility from Hang Tau Road, as shown in **Drawing No. 2.2**.

2.5.6 Notwithstanding the above changes, road widening of Hang Tau Road section abutting the Application Site for 7.3m carriageway with 3m footpath alongside remain in the revised scheme. Meanwhile, a pedestrian crossing facility at Hang Tau Road has also incorporated.

2.5.7 The revised road widening scheme will be implemented by this project, and managed and maintained by the relevant government departments upon completion of widening work.

**Enhancement of Public Transport Facility**

2.5.8 Given that the current public transport service for the Hang Tau Tai Po area is limited with one GMB route no. 50K only and there is absent of proper layby along Hang Tau Road, the proposed layby under the revised road widening scheme would serve future enhancement of public transport service (i.e. increase of GMB route) for the existing and future residents in the area. Meanwhile, the proposed vehicle turnaround facility in the scheme would facilitate a proper turnaround facility to allow GMB turns around without the need of passing through the narrow roads in Hang Tau Village.

2.5.9 Together with the proposed pedestrian crossing at Hang Tau Road, the proposed road widening scheme would offer a more accessible and safer public transport facility to serve the residents in the Hang Tau Tai Po area as demonstrated in **Drawing No. 2.3**.

2.5.10 According to the RNTPC Paper of the approved S12A application (paper no. Y/NE-KTS/13C), it is noted that the Commissioner for Transport (C for T) had a comment on the proposed GMB layby in the road improvement scheme that the GMB layby should be 26m long to accommodate 3 GMBs. In response to the previous comment on the GMB layby from C for T, the revised road widening scheme proposed in this S16 application has incorporated such requirement, as shown in **Drawing No. 2.2**.

2.5.11 With the proposed new public transport facilities (i.e. the 26m long GMB layby and vehicle turnaround facility), provision of short working departures of the GMB route no. 50K to/from MTR Sheung Shui station with the existing intermediate stops would be possible by utilizing the proposed GMB layby as the terminus of the route, as illustrated in **Drawing No. 2.4**.

2.5.12 Similar to the road widening scheme, the public transport facility will be implemented by this project, and managed and maintained by the government upon completion.

2.5.13 The swept path analysis for the proposed GMB layby are demonstrated in **Appendix B**.

# 3. EXISTING TRAFFIC CONDITIONS

## 3.1 Existing Road Network

3.1.1 The existing local road network is shown in **Drawing No. 3.1**.

3.1.2 The Application Site is mainly served by the local distributors Kwu Tung Road, Kam Hang Road and Hang Tau Road.

3.1.3 Kwu Tung Road is a single two-lane local distributor providing local connection between Kwu Tung and San Tin areas. Its eastern end connects with Castle Peak Road – Kwu Tung, while its western end connects with Castle Peak Road – San Tin.

3.1.4 Kam Hang Road is a single two-lane local distributor branch off from Kwu Tung Road. It provides local access for residents at Casas Domingo and Ascot Park, and it connects Kam Tsin Road at the eastern end.

3.1.5 Hang Tau Road is a single two-lane local distributor widened from a single track access road. It connects Kam Hang Road at the northern end and provides the vehicular access to and from the Application Site and the Kwu Tung South area. The local access roads branched-off from Hang Tau Road in the south are currently serving the accesses of the scattered low-rise village housing in the Hang Tau Tai Po area.

## 3.2 Existing Public Transport Services

3.2.1 The Application Site is located in rural area remote from railway station, and the travel distance between the application site and the MTR Sheung Shui Station is about 4km. The area in the vicinity of the Application Site is only served by one Green Minibus (GMB) service i.e. route no. 50K, providing service along Hang Tau Road.

3.2.2 Other than the GMB route no. 50K, there are also a GMB service route no. 50A (Kwu Tung South - MTR Sheung Shui Station) and a franchised bus route no. 76K (Sheung Shui Ching Ho Estate Bus Terminus – Yuen Long Long Ping Estate) providing services for Kwu Tung area. However, the walking distance from the Application Site to the nearest GMB stop and bus stop is about 1 km.

3.2.3 The details of the abovementioned public transport services are listed in **Table 3.1** and indicated in **Drawing No. 3.2**.

Table 3.1 Existing Public Transport Services

| Route No. | Origin – Destination | Bound | Operation Hours | Headway (minutes) [1] | Average Occupancy Rates[1] |
|---|---|---|---|---|---|
| ***GMB Route*** | | | | | |
| 50A | Kwu Tung South – MTR Sheung Shui Station | Kwu Tung South | 05:40-23:00 | 10 – 15 [10 – 15] | 90%[2] [80%] |
| | | Sheung Shui Station | 05:40-23:00 | 10 – 12 [10 – 15] | 95%[3] [60%] |
| 50K | Hang Tau – MTR Sheung Shui Station | Hang Tau | 04:45-00:30 | 3 – 12 [5 – 25] | 95%[2] [65%] |
| | | Sheung Shui Station | 04:55-00:45 | 3 – 12 [5 – 25] | 95%[3] [35%] |
| ***Franchised Bus Route (KMB)*** | | | | | |
| 76K | Ching Ho Estate Bus Terminus – Long Ping Estate | Ching Ho Estate | 05:45-23:20 | 25 – 30 [20 – 30] | 50%[2] [15%] |
| | | Long Ping Estate | 06:00-23:30 | 20 – 30 [20 – 30] | 50%[3] [40%] |

Notes : (1) Numbers in bracket [ ] refer to non-peak hours (time periods from 9:30 to 17:00)
(2) Critical peak period was observed in PM during the period of 17:00 – 19:00
(3) Critical peak period was observed in AM during the period of 7:30 – 9:30

3.2.4 Although the GMB route no. 50A and the franchised bus route no. 76K are providing services for the Kwu Tung area, their stops' locations are relatively remote from the Application Site and its adjacent village housing at Hang Tau Tai Po as shown in **Drawing No. 3.2**. In contrast, the GMB route no. 50K provides stops along Hang Tau Road with terminus at Hang Tau Village which is considered the main public transport service (except for taxi) for the local residents in the Hang Tau and Hang Tau Tai Po areas.

3.2.5 From site observations, it is noted that the existing passenger outbound demand at the terminus of GMB route no. 50K in Hang Tau Village has already occupied over 90% capacity of the GMB route. To allow future enhancement of GMB services for the Proposed Development as well as the other local residents in the Hang Tau Tai Po area, a provision of GMB layby has been included in the proposed road widening scheme, as discussed in the previous **Section 2.5**.

## 3.3 Identified Junctions for Assessment

3.3.1 Traffic count surveys were carried out to examine 4 junctions along the ingress and egress traffic routes of the Application Site. The surveys were undertaken between the hours of 7:30am to 9:30am and 5:00pm to 7:00pm on a typical weekday in May 2024. The locations of these junctions are identified in **Drawing No. 3.1** and **Table 3.2** below.

Table 3.2 Surveyed Key Junctions for Assessment

| Junction No. | Junction | Method of Control | Drawing No. |
|---|---|---|---|
| J1 | Kwu Tung Road / Kam Hang Road | Priority | 3.3 |
| J2 | Kam Hang Road / Hang Tau Road | Priority | |
| J3 | Hang Tau Road / Local Track to Sheung Yue River /Access of Jockey Club River Beas Lodge | Priority | 3.4 |
| J4 | Hang Tau Road / Access Road A | Priority | 3.5 |

3.3.2 Observed traffic data indicates that the AM peak hour and PM peak hour are from 7:45am to 8:45am and 5:15pm to 6:15pm respectively and the surveyed traffic flows are shown in **Drawing No. 3.6**. The existing layouts of the junctions to be assessed are shown in **Drawing Nos. 3.3 to 3.5**.

3.3.3 To evaluate the existing traffic condition in the vicinity of the Application Site, the operational performance of the identified junctions were assessed based on the observed traffic flows and their existing junction layouts and control method. The results are summarised in **Table 3.3**.

**Table 3.3 Existing Junction Performance**

| Junction No. | Junction | Method of Control | 2024 DFC(1) | |
|---|---|---|---|---|
| | | | AM Peak | PM Peak |
| J1 | Kwu Tung Road / Kam Hang Road | Priority | 0.59 | 0.39 |
| J2 | Kam Hang Road / Hang Tau Road | Priority | 0.30 | 0.24 |
| J3 | Hang Tau Road / Local Track to Sheung Yue River /Access of Jockey Club River Beas Lodge | Priority | 0.08 | 0.09 |
| J4 | Hang Tau Road / Access Road A | Priority | 0.06 | 0.08 |

Note: (1) DFC = Design flow / capacity ratio for a priority junction

3.3.4 The results presented in **Table 3.3** indicate that all assessed junctions are currently operating with adequate capacities during the both morning peak and evening peak. The details of junction assessments are attached in **Appendix C**.

# 4. TRAFFIC FORECAST

## 4.1 Design Year and Future Scenarios to be Assessed

### Design Year

4.1.1 It is anticipated that the Proposed Development would be completed by year 2031. In order to assess the impact of the Proposed Development related traffic on the local road network, year 2034 (i.e. anticipated completion year 2031 + 3 years) is adopted as the design year for traffic impact assessment study.

### Future Scenario to be Assessed

4.1.2 To evaluate the effect to the surrounding road junctions due to the Proposed Development under the Proposed MLP with minor relaxation of PR, the below future scenarios will be assessed:

- **Reference Scenario in Year 2034** – Future scenario in year 2034 with the previous scheme for the Application Site in the approved S12A application (i.e. without the proposed relaxation of GFA); and
- **Design Scenario in Year 2034** – Future scenario in year 2034 with the Proposed MLP for the Application Site (i.e. with the proposed relaxation of GFA).

## 4.2 Traffic Forecasts for Reference Scenario

### Background Traffic Growth

4.2.1 To derive the year 2034 reference traffic flows, the background growth in traffic should be reviewed and identified for the area, which are made reference to the historical growth trend and the population and employment projections.

4.2.2 Castle Peak Road – Kwu Tung and Kwu Tung Road are the two nearest traffic count stations to the Application Site in Transport Department's latest Annual Traffic Census (ATC). The average annual daily traffic (A.A.D.T) data from year 2013 to 2024 as reported in the latest ATC are summarized in **Table 4.1**.

**Table 4.1 Average Annual Daily Traffic (A.A.D.T.) Data of ATC Station no. 6602 & 6606**

| ATC Stn. No. | Road | AADT (Vehicle/Day) | | | | | | | | | | | | Derived Growth Rate (% p.a.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2024/ 2013 |
| 6602 | Castle Peak Rd - Kwu Tung | 10,670 | 11,120 | 10,560 | 10,690 | 11,540 | 10,800 | 10,660 | 11,000 | 11,000 | 10,480 | 10,060 | 9,900 | -0.68% |
| 6606 | Kwu Tung Rd | 2,980 | 3,290 | 3,670 | 4,070 | 4,450 | 4,630 | 4,610 | 4,050 | 4,290 | 4,280 | 4,480 | 4,060 | 2.85% |
| Total | | **13,650** | **14,410** | **14,230** | **14,760** | **15,990** | **15,430** | **15,270** | **15,050** | **15,290** | **14,760** | **14,540** | **13,960** | **+0.20%** |

Source: The Annual Traffic Census 2013 – 2024 as available on TD's website

4.2.3 The A.A.D.T. flows in **Table 4.1** show that the overall average traffic growth on the road sections in the vicinity of the Application Site decreased at the rate of +0.2% per annum for year 2013 to 2024.

4.2.4 Other than the historical trend, the population and employment estimates from Territorial Population and Employment Data Matrix (TPEDM) as available on Planning Department's website are also reviewed. The population and employment estimates for North District in year 2021, 2026 and 2031 are presented in **Table 4.2**.

**Table 4.2 Population and Employment Estimates from TPEDM**

| North District | Estimates from TPEDM | | | Growth Rate (% p.a.) | |
|---|---|---|---|---|---|
| | 2021 | 2026 | 2031 | 2026/2021 | 2031/2026 |
| Population | 309,650 | 352,000 | 435,550 | +2.6% | +4.4% |
| Employment | 84,150 | 104,050 | 144,850 | +4.3% | +6.8% |
| **Total** | **393,800** | **456,050** | **580,400** | **+3.0%** | **+4.9%** |

Source: 2021 - based Territorial Population and Employment Data Matrix as available on Planning Department's website

4.2.5 As presented in **Table 4.2**, the growth rates as derived from the TPEDM estimates for North District from year 2021 to 2031 are ranged from +3% to +4.9% p.a.

4.2.6 By considering the extensive coverage by North District in TPEDM, it can be seen that the increment in population and employment between 2021-2031 have been accounted by the intake of Kwu Tung North New Development Area (KTN NDA) and Fanling North New Development Area (FLN NDA).

4.2.7 Whilst the application site is situated near the southern fringe of Kwu Tung South, the major access routes and road network for the application site would be substantially different from those by the development traffic of KTN NDA and FLN NDA.

4.2.8 Therefore, the TPEDM growth rate may not be representative to reflect the background traffic growth for the local road network in the vicinity of the Kwu Tung South area.

4.2.9 In view of the above, a traffic growth rate of +1% per annum as referred to the rounded growth rate from ATC is adopted for this study to reflect the background traffic growth in the area from year 2024 to 2034.

**Development Traffic of the Application Site in Reference Scenario**

4.2.10 In the reference scenario, it is assumed that the Application Site would be developed in accordance with the previous scheme in the approved S12A application, i.e. the development schedule without the proposed minor relaxation of GFA as presented in **Table 2.1**. The estimated potential traffic generation and attraction of the Application Site in Reference Scenario are summarized in **Table 4.3**.

**Table 4.3 Estimated Traffic Generation and Attraction of the Application Site in Reference Scenario of 2034**

| Development at Application Site In Reference Scenario (Approved S12A in 2021) | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|
| | Generation | Attraction | Generation | Attraction |
| ***Residential - 302 flats*** | | | | |
| Adopted Trip Rates(1) (pcu/hr/flat) | 0.0888 | 0.0515 | 0.0356 | 0.0480 |
| Estimated Trips (pcu/hr) | 27 | 16 | 11 | 14 |
| ***Retail - 406 m² GFA*** | | | | |
| Adopted Trip Rates(2) (pcu/hr/100m² GFA) | 0.2296 | 0.2434 | 0.3100 | 0.3563 |
| Estimated Trips (pcu/hr) | 1 | 1 | 1 | 1 |
| ***RCHE – 100 places in total*** | | | | |
| Adopted Trip Rates(3) (pcu/hr/place) | 0.0385 | 0.0346 | 0.0308 | 0.0308 |
| Estimated Trips (pcu/hr) | 4 | 3 | 3 | 3 |
| **Total Trips (pcu/hr)** | **32** | **20** | **15** | **18** |

Notes: (1) TPDM mean trip rates for Private Housing: High-Density /R(A) with Ave. Flat Size of 70m²
(2) TPDM mean trip rates for retail / Shopping Complex

(3) Consultant's in-house trip rate as surveyed at Caritas Li Ka Shing C&A Home adopted.

4.2.11 Apart from the development traffic of the Application Site, the potential increases in GMB traffic due to the proposed provision of GMB layby under the approved S12A application are also taken into account.

4.2.12 Taking into account there is only one GMB route no.50K currently serving the areas, it was anticipated in the approved S12A application that a GMB route in addition to the existing service would be provided upon availability of the proposed GMB layby at Hang Tau Road. With the assumption on an additional GMB route will be operated in 3mins headway during the peak hours which is similar to the peak headway of the existing route No.50K, it was anticipated that additional GMB traffic of about 30 pcu/hr (i.e. [60mins/3mins headway] x 1.5 pcu factor) would be generated on Hang Tau Road.

**Other Planned/Potential Future Developments**

Planned/Potential Future Developments in the Vicinity

4.2.13 It is noted that there are future residential developments planned in the vicinity of the Application Site including the adjoining Area (b) of the same CDA site. The locations of these future residential developments are indicated in **Drawing No. 4.1,** and the adjacent future developments of the Application Site are also indicated in **Drawing No. 4.2.** Their details are summarised in **Table 4.4**.

**Table 4.4 Planned / Potential Future Developments in the Vicinity**

| Site | Planned / Potential Future Developments in the Vicinity (1) | Details(2) |
|---|---|---|
| **A** | Private Residential Development at Area (b) of the CDA site in D.D.92 and D.D 94 and Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South (Y/NE-KTS/13) | • Domestic plot ratio 1.23<br>• A total GFA of about 900m$^2$ with 18 Flats |
| **B** | Private Residential Development at Various Lots in D.D. 94, Hang Tau Tai Po, Kwu Tung South (A/NE-KTS/525) | • Plot ratio not more than 0.48<br>• A total GFA of 5,808m$^2$ with 42 Flats |
| **C** | Private Residential Houses at No. 106 Hang Tau Road, Kwu Tung South (A/NE-KTS/528) | • Plot ratio not more than 0.4<br>• A total GFA of not more than 518.32m$^2$ with 2 Houses |
| **D** | Private Residential Development at Various Lots in D.D. 94 and adjoining Government Land, Hang Tau Tai Po, Kwu Tung South (Y/NE-KTS/466) | • Plot ratio 0.48<br>• A total GFA of about 2,700m$^2$ with 19 Flats |
| **E** | Residential Care Home for the Elderly at Lot No. 953 RP (Part) in D.D. 92 and adjoining Government Land, Kam Hang Road, Kwu Tung South (Y/NE-KTS/16) | • Plot ratio about 2.94<br>• A total GFA of about 5,025m$^2$ |
| **F** | Private Residential Development at Various Lots in D.D. 92 and adjoining Government Land, Kam Hang Road, Kwu Tung South (Y/NE-KTS/17) | • Plot ratio about 2.4<br>• A total GFA of about 23,732m$^2$ with 360 Flats |
| **G** | Private Residential Development at Various Lots in D.D. 92 and Adjoining Government Land, Kam Hang Road, Kwu Tung South (Y/NE-KTS/14) – Partially Approved Site A | • Plot ratio not more than 3<br>• A total GFA of about 62,529m$^2$ with 971 Flats |
| **H** | Private Residential Development at Various Lots in D.D. 92 and adjoining Government Land, Kwu Tung South (A/NE-KTS/565) | • Plot ratio about 2.012<br>• Domestic GFA about 39,400m$^2$ with 1,062 Flats |
| **I** | Comprehensive Residential Development with Commercial and Social Welfare Facilities at Lot 2579 in D.D. 92, Kwu Tung South (A/NE-KTS/506) | • Plot ratio about 3<br>• Domestic GFA not more than 112,680m$^2$ with 2,589 Flats |

Notes: (1) Locations are indicated in **Drawing Nos. 4.1** and **4.2.**
(2) Refer to information as available from the Statutory Planning Portal 3 by Town Planning Board.

4.2.14 According to the available information from TPB's website, it is noted that the planned/potential future residential developments as listed in **Table 4.4** would be completed in or before year 2032, and therefore the traffic induced by these planned future developments will be taken into account in the traffic forecast.

4.2.15 To evaluate the potential traffic induced by the planned future residential developments in in the vicinity, the traffic trip rates for the residential development as stipulated in Transport Planning & Design Manual (TPDM) and the consultant's in-house trip rates are referred. The adopted trip rates and the estimated potential traffic generation and attraction of these planned future development are presented and summarized in **Table 4.5**.

**Table 4.5 Adopted Trip Rates and Estimated Trips for the Planned / Potential Future Developments in the Vicinity**

| | | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | **Generation** | **Attraction** | **Generation** | **Attraction** |
| ***Site A – 18 Flats at avg. size of 50m²*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(1) | | 0.0718 | 0.0425 | 0.0286 | 0.0370 |
| **Estimated Trips (pcu/hr)** | | **1** | **1** | **1** | **1** |
| ***Site B – 42 Houses at avg. size of 138.3m²*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(2) | | 0.3021 | 0.2234 | 0.2258 | 0.2226 |
| **Estimated Trips (pcu/hr)** | | **13** | **9** | **9** | **9** |
| ***Site C – 2 Houses at avg. size of 259.2m²*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(3) | | 0.3524 | 0.2837 | 0.2842 | 0.3948 |
| **Estimated Trips (pcu/hr)** | | **1** | **1** | **1** | **1** |
| ***Site D – 19 House at avg. size of 142.1m²*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(2) | | 0.3021 | 0.2234 | 0.2258 | 0.2226 |
| **Estimated Trips (pcu/hr)** | | **6** | **4** | **4** | **4** |
| ***Site E – Proposed Residential Care Home for the Elderly with 150 beds*** | | | | | |
| Elderly Home 150 places | Adopted Trip Rates (pcu/hr/place)(4) | 0.0385 | 0.0346 | 0.0308 | 0.0308 |
| | Estimated Trips (pcu/hr) | 6 | 5 | 5 | 5 |
| ***Site F – 360 Flats at avg. size of 65.9m²*** | | | | | |
| Residential Portion 360 Flats | Adopted Trip Rates (pcu/hr/flat)(5) | 0.0888 | 0.0515 | 0.0356 | 0.0480 |
| | Estimated Trips (pcu/hr) | 32 | 19 | 13 | 17 |
| ***Site G - 971 Flats at avg. size of 64.4m²*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(5) | | 0.0888 | 0.0515 | 0.0356 | 0.0480 |
| **Estimated Trips (pcu/hr)** | | **86** | **50** | **35** | **47** |
| ***Site H – 1,062 Flats at avg. size of 37.1m²*** | | | | | |
| Estimated Trips (pcu/hr)(6) | | 65 | 45 | 30 | 40 |
| ***Site I – 2,589 Flats at avg. size of 43.5m²*** | | | | | |
| Residential Portion 2,589 Flats | Adopted Trip Rates (pcu/hr/flat)(1) | 0.0718 | 0.0425 | 0.0286 | 0.0370 |
| | Estimated Trips (pcu/hr) | 186 | 110 | 74 | 96 |
| ***Enhancement of Public Transport Services for Sites E, F, H and I*** | | | | | |
| *Public Transport Service for Site E & F* | Adopted Trip Rates | - | - | - | - |
| | Estimated Trips (pcu/hr)(7) | 39 | 39 | 39 | 39 |
| *Public Transport Service for Site I & H* | Adopted Trip Rates | - | - | - | - |
| | Estimated Trips (pcu/hr)(8) | 39 | 39 | 39 | 39 |

Notes:
(1) TPDM mean trip rates for private housing with average flat size of 60m² adopted for house development
(2) TPDM upper trip rates for private housing with average flat size of 140m² adopted for house development
(3) TPDM upper trip rates for private housing with average flat size of 240m² adopted for house development
(4) Consultant's in-house trip rate as surveyed at Caritas Li Ka Shing C&A Home adopted
(5) TPDM mean trip rates for private housing with average flat size of 70m² adopted for medium rise residential development
(6) Refer to the development trips adopted in the TIA of the latest approved application no. A/NE-KTS/565 from the Town Planning Board
(7) Refer to information on the approved application no. Y/NE-KTS/16 and Y/NE-KTS/17 as inspected from the Town Planning Board
(8) Refer to information on the approved application no. Y/NE-KTS/15 and A/NE-KTS/506 as inspected from the Town Planning Board

Other Planned/Potential Future Developments in North District

4.2.16 Other than the planned/potential developments in the vicinity of the Application Site as listed in the above **Table 4.4**, it is also noted that there are also various planned/potential future developments in the North District including the developments at Queen's Hill, FLN NDA and KTN NDA.

4.2.17 As mentioned in **paragraph 3.1.2 in Section 3.1**, the Application Site is mainly served by the local distributors Kwu Tung Road, Kam Hang Road and Hang Tau Road, which the major access routes would be substantially different from the development traffic of the other planned/potential future developments in North District. Thus, the future traffic of these other planned/potential future developments on the local distributors in the vicinity of the Application Site should be insignificant.

4.2.18 Nevertheless, traffic flows of the other planned/potential future developments in North District have also been revised and taken into consideration into the Reference Scenario for a conservative approach. The details and the estimated traffic of the other planned/potential future developments in North District are presented in **Tables 4.6** and **4.7** respectively.

**Table 4.6 Other Planned / Potential Future Developments in North District**

| Site | Planned Future Developments in North District [1] | Details |
|---|---|---|
| **Planned/Potential Private Developments** | | |
| **J** | Private Residential Development at Lots 684 RP, 705 RP, 706 RP, 709 RP (Part), 711 RP (Part), 712, 713 RP, 714 RP, 715, 716, 717 RP (Part), 718 RP (Part), 719, 721 RP (Part) and 2158 RP (Part) in D.D. 92 and adjoining Government Land, Kwu Tung North (Y/KTN/2) | Southern Portion<br>• Domestic plot ratio 3<br>• Domestic GFA of 20,271 $m^2$ with 478 Flats[2]<br>Northern Portion<br>• Domestic plot ratio 1.1<br>• Domestic GFA of 9,517.2 $m^2$ with 49 Houses[2] |
| **K** | Private Residential Development at Lot No. 4076 RP in DD91, 663 Fan Kam Road, Fanling | 765 Flats[3] |
| **L** | Private Residential Development at Sheung Shui Lot 2 RP and adjoining Government land, New Territories (Y/FSS/19) | • Domestic plot ratio of about 4.3<br>• Domestic GFA of 128,401.87 $m^2$ with 969 Flats and 100 beds in RCHE[2] |
| **M** | Private Residential Development at Fanling Area 40 (Y/FSS/13) | • Domestic plot ratio 5.46<br>• Domestic GFA of 19,750 $m^2$ with 300 Flats[2] |
| **N** | Private Residential Development at Various Lots in D.D. 51 and Adjoining Government Land, Fanling, New Territories (Y/FSS/18) | • Domestic plot ratio of not more than 5<br>• Domestic GFA of about 66,155 $m^2$ with 1,638 Flats and 120 beds in RCHE[2] |
| **O** | Private Residential Development at Fanling Area 17 (Fan Garden) Sites B1 & B2 | • Domestic plot ratio of not more than 6<br>• 1,600 Flats[4] |
| **Other Planned Public Housing Developments** | | |
| **P1 & P2** | Kwu Tung North New Development Area & Fanling Nort New Development Area | • Public Housing: 57,500 Flats<br>• Private Housing: 28,700 Flats<br>• Commercial GFA of 554,000 $m^2$[5] |
| **P3** | Planned Public Housing at Po Shek Wu Road, Sheung Shui, FSS Area 4 | • 1,850 Flats<br>• Commercial GFA of 3,000 $m^2$[6] |

**Table 4.6 Other Planned / Potential Future Developments in North District (Cont'd)**

| Site | Planned Future Developments in North District[1] | Details |
|---|---|---|
| **P4** | Planned Public Housing Development in Sheung Shui Areas 4 and 30 (Site 1 & 2) | Site 1<br>• 2,088 Flats<br>• Retail GFA of 400 $m^2$[7]<br>Site 2<br>• 1,556 Flats<br>• Retail GFA of 700 $m^2$[7] |
| **P5** | Planned Public Housing Development at Fanling Area 36 Phase 4 (Ching Ho Extension) | • 772 Flats<br>• Retail GFA of 2,600 $m^2$[8] |
| **P6** | Planned Public Housing Development at Ching Hiu Road, Sheung Shui (Site B in OZP no. S/FSS/25) | 620 Flats[9] |
| **P7** | Planned Public Housing Development at Tai Tau Leng, Sheung Hui (Site C1 in OZP no. S/FSS/25) | 3,100 Flats[10] |
| **P8** | Planned Public Housing Development at Choi Whun Street, Sheung Shui (Site D1 & 2 in OZP no. S/FSS/25) | 2,330 Flat[11] |
| **P9** | Planned Public Housing Development near Queen's Hill | 4,030 Flats[12] |
| **P10** | Planned Subsidised Housing Site at Jockey Club Road, FSS Area 11 | 640 Flats[13] |
| **P11** | Planned Public Housing Development at Fanling Area 17 (Fan Garden) Site A | 8,300 Flat[14] |
| **P12** | Planned Public Housing Development at Fanling Area 48 | 4,200 Flat[15] |
| **P13** | Planned Public Housing Development at San Wan Road, Fanling | 450 Flats[16] |

Notes:
(1) Locations are indicated in **Drawing No. 4.1**
(2) Refer to information as available from the Statutory Planning Portal 3 by Town Planning Board.
(3) Refer to information on Particulars of Applications for Presale Consent and Consent To Assign Pending Approval as at 30/04/2024 by Lands Department.
(4) Refer to information on Discussion Papers No. 45/2021 as available on North District Council of HKSAR's website
(5) Refer to information on LC Paper No. CB(1)341/2024(03) as discussed by the Panel on Development of Legislative Council on 26 March 2024.
(6) Refer to information on Planning Brief (May 2019) from Hong Kong Housing Authority
(7) Refer to information on Addendum to the Approved Planning Brief (July 2021) from Hong Kong Housing Authority
(8) Refer to information on Addendum to the Approved Planning Brief (November 2019) from Hong Kong Housing Authority
(9) Refer to information on Discussion Paper No. 5/2023 of Committee on Land Development, Housing and Works as available on North District Council of HKSAR's website
(10) Refer to information on Discussion Paper No. 9/2023 of Committee on Land Development, Housing and Works as available on North District Council of HKSAR's website
(11) Refer to information on Planning Brief (December 2022) from Hong Kong Housing Authority
(12) Refer to information on Planning Brief (May 2023) from Hong Kong Housing Authority
(13) Refer to information on Discussion Paper No. 19/2021 of Committee on Land Development, Housing and Works as available on North District Council of HKSAR's website
(14) Refer to information on Discussion Paper No. 2/2023 of Committee on Land Development, Housing and Works as available on North District Council of HKSAR's website
(15) Refer to information on Discussion Paper No. 3/2023 of Committee on Land Development, Housing and Works as available on North District Council of HKSAR's website
(16) Refer to information on Planning Brief (January 2022) from Hong Kong Housing Authority

**Table 4.7 Adopted Trip Rates and Estimated Trips for Other Planned / Potential Future Developments in North District**

| | | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | Generation | Attraction | Generation | Attraction |
| **Planned/Potential Private Developments** | | | | | |
| ***Site J - 478 Flats at avg. size of 42.4m2 and 49 Houses at avg. size of 194.2m²*** | | | | | |
| Southern Portion 478 Flats | Adopted Trip Rates (pcu/hr/flat)(2) | 0.0718 | 0.0425 | 0.0286 | 0.0370 |
| | Estimated Trips (pcu/hr) | 34 | 20 | 14 | 18 |
| Northern Portion 49 Houses | Adopted Trip Rates (pcu/hr/flat)(5) | 0.3524 | 0.2837 | 0.2842 | 0.3948 |
| | Estimated Trips (pcu/hr) | 17 | 14 | 14 | 19 |
| **Estimated Total Trips (pcu/hr)** | | **51** | **34** | **28** | **37** |
| ***Site K – 765 Flats at avg. size of 34.5m²*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(2) | | 0.0718 | 0.0425 | 0.0286 | 0.0370 |
| **Estimated Trips (pcu/hr)** | | **55** | **33** | **22** | **28** |
| ***Site L – 969 Flats at avg. size of 132.5m²*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(6) | | 0.3021 | 0.2234 | 0.2258 | 0.2226 |
| **Estimated Trips (pcu/hr)** | | **293** | **216** | **219** | **216** |
| ***Site M – 300 Flats at avg. size of 65.8m²*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(2) | | 0.0718 | 0.0425 | 0.0286 | 0.0370 |
| **Estimated Trips (pcu/hr)** | | **22** | **13** | **9** | **11** |
| ***Site N – 1,638 Flats at avg. size of 40.4m²*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(2) | | 0.0718 | 0.0425 | 0.0286 | 0.0370 |
| **Estimated Trips (pcu/hr)** | | **118** | **70** | **47** | **61** |
| ***Site O – 1,600 Flats*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(2) | | 0.0718 | 0.0425 | 0.0286 | 0.0370 |
| **Estimated Trips (pcu/hr)** | | **115** | **68** | **46** | **59** |
| **Other Planned Public Housing Developments** | | | | | |
| ***Sites P1 & P2 – 86,200 Flats and Commercial Facilities*** | | | | | |
| Public Housing 57,500 Flats | Adopted Trip Rates (pcu/hr/flat)(9) | 0.0432 | 0.0326 | 0.0237 | 0.0301 |
| | Estimated Trips (pcu/hr) | 2,484 | 1,875 | 1,363 | 1,731 |
| Private Residential Portion 287,00 Flats | Adopted Trip Rates (pcu/hr/flat)(9) | 0.0718 | 0.0425 | 0.0286 | 0.0370 |
| | Estimated Trips (pcu/hr) | 2,061 | 1,220 | 821 | 1,062 |
| Commercial 554,000m² | Adopted Trip Rates (pcu/hr/100m²)(10) | 0.2296 | 0.2434 | 0.3100 | 0.3563 |
| | Estimated Trips (pcu/hr) | 1,272 | 1,348 | 1,717 | 1,974 |
| **Estimated Total Trips (pcu/hr)** | | **5,817** | **4,443** | **3,901** | **4,767** |
| ***Site P3 – 1,850 Flats, Retail and Kindergarten*** | | | | | |
| Residential Portion 1,850 Flats | Adopted Trip Rates (pcu/hr/flat)(11) | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| | Estimated Trips (pcu/hr) | 115 | 79 | 55 | 74 |
| Retail Portion 3,000m² | Adopted Trip Rates (pcu/hr/100m²)(10) | 0.2296 | 0.2434 | 0.3100 | 0.3563 |
| | Estimated Trips (pcu/hr) | 7 | 7 | 9 | 11 |
| Kindergarten 6 classrooms | Adopted Trip Rates (pcu/hr/classroom)(12) | 2.4444 | 2.6667 | 1.1111 | 1.3333 |
| | Estimated Trips (pcu/hr) | 15 | 16 | 7 | 8 |
| **Estimated Total Trips (pcu/hr)** | | **137** | **102** | **71** | **93** |

**Table 4.7 Adopted Trip Rates and Estimated Trips for Other Planned / Potential Future Developments in North District (Cont'd)**

| | | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | **Generation** | **Attraction** | **Generation** | **Attraction** |
| ***Site P4 – 3,644 Flats, Retail and Kindergarten*** | | | | | |
| Site 1 – Residential Portion 2,088 Flats | Adopted Trip Rates (pcu/hr/flat)(11) | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| | Estimated Trips (pcu/hr) | 130 | 89 | 62 | 84 |
| Site 1 – Retail Portion 400m$^2$ | Adopted Trip Rates (pcu/hr/100m$^2$)(10) | 0.2296 | 0.2434 | 0.3100 | 0.3563 |
| | Estimated Trips (pcu/hr) | 1 | 1 | 1 | 1 |
| Site 1 – Kindergarten 6 classrooms | Adopted Trip Rates (pcu/hr/classroom)(12) | 2.4444 | 2.6667 | 1.1111 | 1.3333 |
| | Estimated Trips (pcu/hr) | 15 | 16 | 7 | 8 |
| Site 2 – Residential Portion 1,556 Flats | Adopted Trip Rates (pcu/hr/flat)(11) | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| | Estimated Trips (pcu/hr) | 97 | 66 | 46 | 62 |
| Site 2 – Retail Portion 700m$^2$ | Adopted Trip Rates (pcu/hr/100m$^2$)(10) | 0.2296 | 0.2434 | 0.3100 | 0.3563 |
| | Estimated Trips (pcu/hr) | 2 | 2 | 2 | 2 |
| **Estimated Total Trips (pcu/hr)** | | **245** | **174** | **118** | **157** |
| ***Site P5 – 772 Flats with Retail*** | | | | | |
| Residential Portion 772 Flats | Adopted Trip Rates (pcu/hr/flat) (9) | 0.0432 | 0.0326 | 0.0237 | 0.0301 |
| | Estimated Trips (pcu/hr) | 33 | 25 | 18 | 23 |
| Retail Portion 2,600m$^2$ | Adopted Trip Rates (pcu/hr/100m$^2$)(10) | 0.2296 | 0.2434 | 0.3100 | 0.3563 |
| | Estimated Trips (pcu/hr) | 6 | 6 | 8 | 9 |
| **Estimated Total Trips (pcu/hr)** | | **39** | **31** | **26** | **32** |
| ***Site P6 – 620 Flats*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(11) | | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| **Estimated Trips (pcu/hr)** | | **39** | **26** | **18** | **25** |
| ***Site P7 – 3,100 Flats*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(11) | | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| **Estimated Trips (pcu/hr)** | | **193** | **132** | **92** | **124** |
| ***Site P8 – 2,330 Flats with Public Vehicle Park*** | | | | | |
| Residential Portion 2,330 Flats | Adopted Trip Rates (pcu/hr/flat)(11) | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| | Estimated Trips (pcu/hr) | 145 | 99 | 69 | 93 |
| Public Vehicle Park 70 spaces | Adopted Trip Rates (pcu/hr/space) (13) | 0.0929 | 0.5897 | 0.4619 | 0.1500 |
| | Estimated Trips (pcu/hr) | 7 | 41 | 32 | 11 |
| **Estimated Total Trips (pcu/hr)** | | **152** | **140** | **101** | **104** |
| ***Site P9 – 4,030 Flats*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(9) | | 0.0432 | 0.0326 | 0.0237 | 0.0301 |
| **Estimated Trips (pcu/hr)** | | **174** | **131** | **96** | **121** |
| ***Site P10 – 640 Flats*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(11) | | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| **Estimated Trips (pcu/hr)** | | **40** | **27** | **19** | **26** |
| ***Site P11 – 8,300 Flats*** | | | | | |
| Adopted Trip Rates (pcu/hr/flat)(11) | | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| **Estimated Trips (pcu/hr)** | | **516** | **354** | **247** | **333** |

**Table 4.7 Adopted Trip Rates and Estimated Trips for Other Planned / Potential Future Developments in North District (Cont'd)**

| | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|
| | **Generation** | **Attraction** | **Generation** | **Attraction** |
| ***Site P12 – 4,200 Flats*** | | | | |
| Adopted Trip Rates (pcu/hr/flat)(11) | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| **Estimated Trips (pcu/hr)** | **261** | **179** | **125** | **168** |
| ***Site P13 – 450 Flats*** | | | | |
| Adopted Trip Rates (pcu/hr/flat)(11) | 0.0622 | 0.0426 | 0.0297 | 0.0401 |
| **Estimated Trips (pcu/hr)** | **28** | **19** | **13** | **18** |

Notes:
(1) Consultant's in-house trip rate as surveyed at Caritas Li Ka Shing C&A Home are adopted
(2) TPDM mean trip rates for private housing with average flat size of 60m$^2$ adopted for medium rise residential development
(3) TPDM mean trip rates for private housing with average flat size of 70m$^2$ adopted for medium rise residential development
(4) TPDM mean trip rates for Retail / Shopping Complex
(5) TPDM upper trip rates for private housing with average flat size of 240m$^2$ adopted for house development
(6) TPDM upper trip rates for private housing with average flat size of 140m$^2$ adopted for house development
(7) Proposed public transport services under Planning Applications Y/NE-KTS/15 and A/NE KTS-506
(8) Proposed public transport services under Planning Applications Y/NE-KTS/16 and A/NE KTS-17
(9) TPDM mean trip rates for public housing with average flat size of 40m$^2$ adopted for subsidised housing: public rental
(10) TPDM mean trip rates for Retail / Shopping Complex
(11) TPDM mean trip rates for public housing with average flat size of 50m$^2$ adopted for subsidised housing: HOS/PSPS
(12) Consultant's in-house trip rate as surveyed at Precious Blood Kindergarten are adopted
(13) Trip rates derived from the consultant's surveyed trip rates from ex-Murray Road Multi-storey Car Park

### Year 2034 Reference Traffic Flows

4.2.19 The 2034 reference traffic flows are derived by:

(i) Applying a growth rate of 1% p.a. on the 2024 observed flows upto the design year 2034; and

(ii) Superimposing the potential traffic as induced by the Application Site in accordance with the previous scheme of the approved S12A in **Table 4.3** and the additional GMB traffic as discussed in **Paragraph 4.1.11** onto the traffic flows in (i).

(iii) Superimposing the potential traffic as induced by the planned/potential future developments in the vicinity of the Application Site (**Table 4.5**) and other planned/potential future developments in North District (**Table 4.7**) onto the traffic flows in (ii);

4.2.20 The year 2034 reference traffic flows are presented in **Drawing No. 4.3**.

## 4.3 Traffic Forecasts for Design Scenario

### Development Traffic of the Application Site in Design Scenario of Year 2034

4.3.1 In the design scenario of year 2034, it is adopted that the Application Site will be developed in accordance with the latest development schedule of the Proposed MLP with minor relaxation of PR as listed in **Table 2.1**.

4.3.2 The estimated potential traffic generation and attraction of the Application Site in the Design Scenario of 2034 are shown in **Table 4.8**.

**Table 4.8 Estimated Traffic Generation and Attraction of the Application Site in Design Scenario of 2034**

| Development at Application Site In Design Scenario (Proposed MLP with Minor Relaxation of Plot Ratio) | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|
| | Generation | Attraction | Generation | Attraction |
| ***Residential - 334 flats*** | | | | |
| Adopted Trip Rates(1) (pcu/hr/flat) | 0.1058 | 0.0605 | 0.0426 | 0.0590 |
| Estimated Trips (pcu/hr) | 35 | 20 | 14 | 20 |
| ***Retail - 319 m² GFA*** | | | | |
| Adopted Trip Rates(2) (pcu/hr/100m² GFA) | 0.2296 | 0.2434 | 0.3100 | 0.3563 |
| Estimated Trips (pcu/hr) | 1 | 1 | 1 | 1 |
| ***RCHE – 100 places in total*** | | | | |
| Adopted Trip Rates(3) (pcu/hr/place) | 0.0385 | 0.0346 | 0.0308 | 0.0308 |
| Estimated Trips (pcu/hr) | 4 | 3 | 3 | 3 |
| **Total Trips (pcu/hr)** | **40** | **24** | **18** | **24** |

Notes: (1) TPDM mean trip rates for Private Housing: High-Density /R(A) with Ave. Flat Size of 80m²
(2) TPDM mean trip rates for retail / Shopping Complex
(3) Consultant's in-house trip rate as surveyed at Caritas Li Ka Shing C&A Home adopted.

4.3.3 As compared with the previous scheme in the approved S12A, the Proposed MLP with minor relaxation of PR would only induce minimal additional 2-way traffic of 12 pcu/hr in the morning peak hour and 9 pcu/hr in the evening peak hour. The comparison of development traffic of the Application Site in Reference and Design Scenarios are shown in **Table 4.9**.

**Table 4.9 Comparison of Development Traffic in Reference and Design Scenarios**

| Future Scenario | Total Development Traffic of the Application Site (pcu/hr) | | | |
|---|---|---|---|---|
| | AM Peak Hour | | PM Peak Hour | |
| | Generation | Attraction | Generation | Attraction |
| **Reference Scenario** – Previous Scheme in Approved S12A | 32 | 20 | 15 | 18 |
| **Design Scenario** – Proposed MLP with Minor Relaxation of Plot Ratio | 40 | 24 | 18 | 24 |
| **Net Increase** | **+8** | **+4** | **+3** | **+6** |

### Year 2034 Design Traffic Flows

4.3.4 The year 2034 design flows are derived by superimposing the net increases in development traffic of the Application Site due to the Proposed MLP with minor relaxation of PR as presented in **Table 4.9** onto the year 2034 reference traffic flows (**Drawing No. 4.3**).

4.3.5 The year 2034 design traffic flows are presented in **Drawing No. 4.4**.

# 5. TRAFFIC IMPACT ASSESSMENT

## 5.1 Junction Assessments for Year 2034 Reference and Design Scenarios

5.1.1 The operational performances of the junctions identified in **Section 3.3** are assessed with the derived 2034 reference and design traffic flows under the existing layouts and method of control. Apart from the existing junctions, the junction of Hang Tau Road and the access of the Proposed Development (i.e. Junction J5) is also assessed.

5.1.2 The assessment results for reference and design year of 2034 are summarised in **Table 5.1**, and the details of junction assessments are attached in **Appendix C**.

**Table 5.1 Year 2034 Operational Performance of the Identified Key Junctions**

| Junction No. | Location | Method of Control | Year 2034 DFC(1) | | | |
|---|---|---|---|---|---|---|
| | | | Reference Scenario | | Design Scenario | |
| | | | AM | PM | AM | PM |
| J1 | Kwu Tung Road / Kam Hang Road | Priority | **1.99** | **1.19** | **2.01** | **1.20** |
| J2 | Kam Hang Road / Hang Tau Road | Priority | 0.74 | 0.52 | 0.75 | 0.52 |
| J3 | Hang Tau Road / Local Track to Sheung Yue River /Access of Jockey Club River Beas Lodge | Priority | 0.12 | 0.13 | 0.12 | 0.14 |
| J4 | Hang Tau Road / Access Road A | Priority | 0.10 | 0.12 | 0.10 | 0.12 |
| J5 | Hang Tau Road / Proposed Development Access | Roundabout | 0.21 | 0.15 | N/A | |
| | | Priority | N/A | | 0.11 | 0.09 |

Note: (1) DFC = Design flow / capacity ratio for a priority junction and roundabout

5.1.3 The assessment results in **Table 5.1** show that the Proposed MLP with minor relaxation of PR will have inapparent effect on the junction performance, and all identified junctions will still be operating within their capacities during both morning and evening peak hours in the Design Scenario of year 2034 except for Junction J1. It is assessed that Junction J1 will be overloaded during both the morning and evening peak hours in the future year 2034 even though the application site to be developed in accordance with the scheme in the approved S12A without the proposed minor relaxation in the Reference Scenario.

## 5.2 Road Improvement Scheme for Kam Hang Road as Proposed in Application Nos. Y/NE-KTS/12 and Y/NE-KTS/14

5.2.1 Rezoning applications for the CDA(1) site (Application No. Y/NE-KTS/12) and the CDA(2) site (Application No. Y/NE-KTS/14) at Kam Hang Road with the proposed increase of plot ratio to 3.0 (i.e. Sites I and G as in listed in **Table 4.4** of **Section 4.2** respectively) were approved and partially approved by TPB in September 2019 and December 2020 respectively. The rezoning of these CDA (1) and CDA(2) sites have been amended in the prevailing OZP, and they have been taken into account in deriving the traffic forecast for this study as discussed in **Section 4.2**.

5.2.2 In accordance with the available information on the rezoning applications as inspected from TPB, it is noted that a road improvement scheme for Kam Hang Road (the Kam Hang Road improvement scheme) was proposed in the approved Application Nos. Y/NE-KTS/12 for improving the road capacity along Kam Hang Road including the junction of Kwu Tung Road / Kam Hang Road (J1) in order to serve for the rezoning proposal. Subsequently, further junction modification works at Junction J1 were proposed under the approved Application No. Y/NE-KTS/14 as shown in **Drawing No. 5.1**.

5.2.3 With the future implementation of the Kam Hang Road improvement scheme proposed in Application Nos. Y/NE-KTS/12 and Y/NE-KTS/14, it is assessed that Junction J1 will be able to cater for the future traffic in the Design Scenario of year 2034 with ample capacity, as shown in **Table 5.2**. The details of the junction assessments are included in **Appendix C**.

**Table 5.2 Year 2034 Operational Performance of Junction J1 under Kam Hang Road Improvement Scheme**

| Junction No. | Location | Layout & Method of Control | Year 2034 DFC(1) | | | |
|---|---|---|---|---|---|---|
| | | | Reference Scenario | | Design Scenario | |
| | | | AM | PM | AM | PM |
| J1 | Kwu Tung Road / Kam Hang Road | Priority – with junction modification proposed under Application Nos. Y/NE-KTS/12 & Y/NE-KTS/14 | 0.83 | 0.44 | 0.84 | 0.45 |

Note: (1) DFC = Design flow/ capacity ratio for a priority junction

## 5.3 Road Link Assessments for Year 2034 Reference and Design Scenarios

5.3.1 To review the potential impact on the road link capacity due to the Proposed MLP with minor relaxation of PR, road link capacity assessments are also conducted to assess the flow/capacity ratio (i.e. V/C ratio) of the key road links in the vicinity of the Application Site in design year 2034. The assessment results are summarized in **Table 5.3**.

**Table 5.3 Design Year 2034 V/C ratio of Key Road Links**

| Road Link(1) | Direction | Link Capacity(4) (pcu/hr) | Year 2034 Reference Scenario | | | | Year 2034 Design Scenario | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Peak Hour Flows(5) (pcu/hr) | | Flow/Capacity Ratio (V/C Ratio) | | Peak Hour Flows(6) (pcu/hr) | | Flow/Capacity Ratio (V/C Ratio) | |
| | | | AM | PM | AM | PM | AM | PM | AM | PM |
| Link L1 - Kwu Tung Road (North of Kam Hang Road) | Northbound | 980 | 410 | 305 | 0.42 | 0.31 | 415 | 305 | 0.42 | 0.31 |
| | Southbound | 980 | 480 | 480 | 0.49 | 0.49 | 485 | 485 | 0.49 | 0.49 |
| Link L2 - Kwu Tung Road (South of Kam Hang Road) | Northbound | 980 | 270 | 295 | 0.28 | 0.30 | 270 | 295 | 0.28 | 0.30 |
| | Southbound | 980 | 605 | 365 | 0.62 | 0.37 | 610 | 370 | 0.62 | 0.38 |
| Link L3 - Kam Hang Road(2) (West of Hang Tau Road) | Eastbound | 1,140 | 605 | 595 | 0.53 | 0.52 | 610 | 600 | 0.54 | 0.53 |
| | Westbound | 2,300 | 870 | 490 | 0.38 | 0.21 | 880 | 495 | 0.38 | 0.22 |
| Link L4 - Kam Hang Road (East of Hang Tau Road) | Eastbound | 715 | 300 | 275 | 0.42 | 0.38 | 300 | 275 | 0.42 | 0.38 |
| | Westbound | 715 | 425 | 235 | 0.59 | 0.33 | 425 | 235 | 0.59 | 0.33 |
| Link L5 - Hang Tau Road (South of Kam Hang Road) | Northbound | 740 | 460 | 280 | 0.62 | 0.38 | 470 | 285 | 0.64 | 0.39 |
| | Southbound | 740 | 320 | 345 | 0.43 | 0.47 | 325 | 350 | 0.44 | 0.47 |
| Link L6 - Hang Tau Road (North of Access Road A) | Northbound | 740 | 325 | 190 | 0.44 | 0.26 | 330 | 195 | 0.45 | 0.26 |
| | Southbound | 740 | 215 | 240 | 0.29 | 0.32 | 215 | 245 | 0.29 | 0.33 |
| Link L7 - Hang Tau Road(3) (South of Access Road A) | Northbound | 980 | 275 | 165 | 0.28 | 0.17 | 285 | 170 | 0.29 | 0.17 |
| | Southbound | 980 | 165 | 210 | 0.17 | 0.21 | 170 | 215 | 0.17 | 0.22 |

Notes:
(1) Refer to **Drawing No. 3.1**.
(2) With junction modification works proposed under the approved Application Nos. Y/NE-KTS/12 and Y/NE-KTS/14 as shown in **Drawing No. 5.1**.
(3) With proposed road widening scheme at Hang Tau Road as shown in **Drawing No. 2.3**.

(4) The road link capacities are derived with reference to Table 2.4.1.1 in TPDM Volume 2 Chapter 2 by applying an observed average pcu factor of 1.15 and taking into account the narrowest widths of the road sections.
(5) Refer to the year 2034 reference traffic flows in **Drawing No. 4.3**.
(6) Refer to the year 2034 design traffic flows in **Drawing No. 4.4**.

5.3.2 The assessment results in **Table 5.3** show that the Proposed MLP with minor relaxation of PR will have inapparent effect on the road link capacities, and all assessed road links will operate with adequate capacities during peak hours in both Reference and Design Scenario of year 2034.

## 5.4 Review on Public Transport

5.4.1 Apart from the junction operational performance and road link capacity, the future public transport demand with the Proposed Development at the Application Site is also reviewed.

5.4.2 To review the future public transport demand at the Hang Tau Tai Po area, the potential public transport demands induced by the Application Site as well as the adjacent planned/potential future developments in the area are estimated as shown in **Table 5.4**.

**Table 5.4 Derivation of Future Public Transport Demand of the Proposed Development**

| Parameters | Formula | Adjacent Planned/Potential Future Developments in Hang Tau Tai Po Area[(1)(2)] (Application Nos. Y/NE-KTS/13, A/NE-KTS/525, A/NE-KTS/460 and Y/NE-KTS/466) | Application Site in Design Scenario with Proposed MLP[(3)] |
|---|---|---|---|
| Residential Units | - | 18 + 42 + 2 + 19 = 81 | 334 |
| Estimated Population[(4)] | (a) | 227 | 936 |
| Average daily mechanised trips per person[(5)] | (b) | 1.83 | |
| Peak hour factor (AM/PM) to daily total[(6)] | (c) | 12% | |
| Estimated mechanised trips per hour (AM/PM Peak) per person | (d) = (b) x (c) x 0.9[(7)] | 0.1976 | |
| Estimated mechanised trips per hour (AM/PM Peak) | (e) = (a) x (d) | 45 | 185 |
| Mode share of public transport (excluding private cars and taxi)[(8)] | (f) | 70% | |
| Estimated public transport demand per hour (AM/PM peak) | (g) = (e) x (f) | 32 | 130 |
| | **Total** | **162** | |

Notes: (1) Details refer to Sites A, B, C and D as listed in **Table 4.4**.
(2) Site locations refer to **Drawing Nos. 4.1** and **4.2.**
(3) Details refer to **Table 2.1**
(4) The average domestic household size of 2.8 adopted.
(5) The average daily mechanised trips per person as derived by the information from Travel Characteristics Survey 2011 as available on TD's website.
(6) The peak hour factor as derived by the information from Travel Characteristics Survey 2011 as available on TD's website.

(7) It is assumed that 90% of mechanised trips are the outbound trips during the AM Peak or the inbound trips during the PM Peak.
(8) Since the Application Site is located at a considerable distance from the railway station, and there is no franchised bus service available in the Hang Tau Tai Po area, it is anticipated that the GMB service will be the only available mode of public transport. Therefore, the mode share of 70% for public transport for the area is adopted with reference to the distributions of boardings by rail 30%, by franchised bus 27% and by public light bus 13% for all purposes as detailed in Table 3.6 of the Travel Characteristics Survey 2011.

5.4.3 As shown in **Table 5.4**, it is estimated that the total public transport demand induced by the Application Site as well as the adjacent planned/potential future developments in Hang Tau Tai Po area would be about 162 passengers during the peak hour.

5.4.4 Given that there is only one GMB route (no. 50K) currently serving the area, and the existing passenger outbound demand at the terminus of the route in Hang Tau Village has already occupied over 90% capacity of the current service, an off-street GMB layby together with a vehicle turnaround facility have been proposed at the Proposed Development to allow future enhancement of GMB services as discussed in **Section 2.5**.

5.4.5 Subject to the detailed review in later design stage, the proposed route would serve as a special short working route of GMB No. 50K travelling between the subject Development and Sheung Shui Station with the existing intermediate stops.

5.4.6 With the assumption of a new short working GMB route of 50K to be operated at 3 mins headway which is similar to its existing scheduled headway, an additional capacity of up to about 380 passengers per hour (i.e. [60mins/3mins headway] x 19 passengers per GMB) can be provided. Since the future additional demand of 162 passengers per hour will only take approximately 43% of the capacity, it is considered the proposal would be well sufficient to cater for the future demand in the Hand Tau Tai Po area.

5.4.7 Since the alighting passengers will leave the GMB layby immediately, the queuing area will be reviewed with the boarding passengers only, and the assessment is summarized in **Table 5.5**.

**Table 5.5 Estimated Passenger Queue Length at the Proposed GMB Layby**

| Peak Estimated Passenger Demand | | Headway of GMB Services (min) | Estimated Passenger Queue | |
|---|---|---|---|---|
| Persons / hour | Persons / minute | | In person | In length (1) |
| 162 | 3 | 3 | 9 | 5.4m |

Note: (1) Assumed each passenger will occupy a length of 0.6m

5.4.8 As presented in **Table 5.5**, the estimated passenger queue will be about 5.4m in length. Since the proposed footpath adjacent to the proposed 26m GMB layby is about 36m in length and 3m in width as shown in **Drawing No. 5.2**, it is sufficient to serve the passenger queue and to provide a passenger shelter as per TPDM's requirement.

## 5.5 Review on Construction Traffic Impact

5.5.1 Taking into account of the site area of the Application Site as well as the development scale, it is preliminarily estimated by the project team that the peak hourly construction traffic demand related to the Application Site would be 5 vehicles/hour for both ingress and egress directions, i.e. about 10 pcu/hour for both directions.

5.5.2 As compared the construction traffic with the estimated future traffic generation and attraction of the Proposed Development in the previous scheme in the approved S12A (Reference Scenario) and the Proposed MLP (Design Scenario), **Table 5.6** shows that the construction traffic would not be more that the future operation traffic in both Reference and

Design Scenarios. Therefore, it will cause no adverse traffic impact to the surrounding road junctions and road links based on the results as revealed in **Sections 5.1 to 5.3**.

**Table 5.6 Comparison of Anticipated Construction Traffic and Estimated Traffic in Reference and Design Scenarios**

| | Estimated Traffic Flows (pcu/hr) | | | |
|---|---|---|---|---|
| | AM Peak Hour | | PM Peak Hour | |
| | Generation | Attraction | Generation | Attraction |
| Reference Scenario | 32 | 20 | 15 | 18 |
| **2-way Traffic Flows** | **52** | | **33** | |
| Design Scenario | 40 | 24 | 18 | 24 |
| **2-way Traffic Flows** | **64** | | **42** | |
| Construction Traffic of the Application Site | 10 | 10 | 10 | 10 |
| **2-way Traffic Flows** | **20** | | **20** | |

Note: (1) Refer to **Table 4.9**.

5.5.3 The details of construction time periods and necessary temporary traffic management scheme would be further reviewed and submitted for the relevant authorities' approval at the detailed design stage prior to the commencement of construction works.

# 6. LONG TERM TRAFFIC FORECAST FOR NOISE IMPACT ASSESSMENT (NIA)

## 6.1 Design Year for NIA Study

6.1.1 Taking into consideration that the Proposed Development are tentatively scheduled to be completed by year 2031, design year of 2046 (completion year of the Proposed Development + 15 years) have been adopted for NIA study. The year 2046 peak hour traffic forecasts (solely used for NIA study of this project) together with the vehicle composition breakdown are summarized in **Drawing No. 6.1**.

## 6.2 Methodology of Traffic Forecast for NIA Study

6.2.1 To derive the year 2046 long term traffic forecast data for the NIA study, a set of year 2034 design peak hour traffic flows is firstly derived by the observed traffic flows of the road network with adopting the same traffic forecast methodology and the same estimated trip generation of the planned/committed future developments as discussed in **Chapter 4**.

6.2.2 For the long-term traffic growth from year 2034 to 2046, reference was made to (i) the population projections from "Hong Kong Population Projections 2022 – 2046" as published by Census and Statistics Department; and (ii) the rounded growth rate of 1% p.a. as derived from ATC in **Table 4.1** of **Section 4.2**.

6.2.3 Based on the population projections as presented in **Table 6.1**, it is derived that the annual growth rate of population from year 2034 to 2046 is +0.25% p.a.

**Table 6.1 Population Projections from "Hong Kong Population Projections 2022 – 2046"**

| Projected Population (thousand persons) | | Growth Rate (% p.a.) |
|---|---|---|
| **2034** | **2046** | **2034/2046** |
| 7,945.1 | 8190.4 | 0.25% |

6.2.4 Since the growth rate of 0.25% p.a. as derived from population projections is much lower than the growth rate of 1% p.a. as from ATC, the latter is adopted for background traffic growth from year 2034 to 2046 for conservative assessment.

6.2.5 The 2046 long term traffic forecasted flows are derived by applying a growth rate of 1% p.a. onto the year 2034 design traffic flows upto the design year 2046.

## 6.3 Vehicle Class

6.3.1 The types of vehicles in the traffic forecast were firstly sectored into 12-class according to surveyed vehicle distribution.

6.3.2 For NIA purpose, it is understood that vehicles with an unladen weight of 1,525kg should be categorized as heavy vehicles (HV). Therefore, HV percentage including the category of goods vehicle (GV) (comprise with light goods vehicle (LGV), medium/heavy goods vehicle (MGV/HGV) and container trucks) and the category of public transport (PT) (comprise with public light bus (PLB), non-franchised buses (SPB) and franchised buses (FB)) are adopted in accordance with the traffic noise impact assessment requirement.

# 7. SUMMARY AND CONCLUSION

## 7.1 Summary

7.1.1 The Application Site located at Hang Tau Road consists of various lots in D.D. 92 and D.D.94 and the adjoining government land at Hang Tau Tai Po, Kwu Tung South in Sheung Shui, with site area of about 17,990.9m$^2$.

7.1.2 A S12A application (application no. Y/NE-KTS/13) for dividing a CDA site into two areas and relaxing their plot ratio, building height and site coverage restrictions was approved by TPB in December 2021. Such amendments to the CDA site have been reflected in the prevailing OZP as gazetted on 31 May 2024.

7.1.3 Under the previous scheme in the approved S12A application in 2021, Area (a) of the CDA site consists of the Application Site was proposed to be redeveloped for 302 residential flats together with provisions of retail facilities and a RCHE with the PR of 1.41 including domestic PR of 1.23 and non-domestic PR of 0.18. Whilst, Area (b) of the CDA site was proposed in the scheme for a potential residential tower with 18 residential units at the domestic PR of 1.23.

7.1.4 To well utilize the development potential, the MLP for Area (a) of the CDA site, i.e. the Application Site, with proposed minor relaxation of PR from 1.41 to 1.692 was developed by the Applicant. To enable the Proposed MLP, a S16 application is required in order to obtain permission from TPB.

7.1.5 MVA Hong Kong Limited was commissioned by the Applicant as a traffic consultant to carry out a traffic impact assessment in support of the S16 application for the Proposed MLP with minor relaxation of PR.

7.1.6 Taking into consideration of accessibility, the future vehicular access point for the Proposed Development was proposed at Hang Tau Road where is at the same similar location of access for the site as proposed in the previous scheme of the approved S12A application.

7.1.7 For further enhancement of the road widening scheme, the intersection of the access to the development and existing Hang Tau Road is converted from a mini-roundabout into a priority T-junction. Besides, further set back of the Proposed Development is proposed for provision of an off-street GMB layby together with a vehicle turnaround facility.

7.1.8 To fulfil the set back requirement as remarked in OZP, the future road widening of Hang Tau Road with 7.3m wide carriageway and 3m footpath has also been taken into account in the revised road widening scheme.

7.1.9 For the sake of enhancing pedestrian accessibility and improving pedestrian safety, a scheme of provision of a proper pedestrian crossing at Hang Tau Road was proposed.

7.1.10 The provisions of internal transport facilities for the Proposed Development under the development schedule of the Proposed MLP were reviewed and proposed with reference to HKPSG and by following the SWD's ancillary requirements for RCHE as adopted in the approved S12A application.

7.1.11 To review the existing traffic condition, traffic count surveys have been carried out at the identified key access junctions on a typical weekday in May 2024. Based on the observed traffic flows, the junction operational assessment results revealed that all identified junctions are currently operating with reserve capacities.

7.1.12 Taking into consideration the Proposed Development at the Application Site was targeted to be completed by 2031, year 2034 was adopted as the design year for assessment in this study.

7.1.13 Traffic forecasts for Design Scenario, i.e. the future scenario with the Proposed MLP and minor relaxation of PR for the Application Site in the design year 2034, are formulated by taking into consideration (i) the background traffic growth as derived from AADT; (ii) the future traffic induced by the planned/potential developments in the vicinity of the Application Site and the other planned/potential future developments in North District; (iii) the potential increases in GMB traffic due to the proposed provision of GMB layby at Proposed Development; and (iv) the net increase of traffic generation and attraction due to the Proposed MLP with minor relaxation of PR for the Application Site.

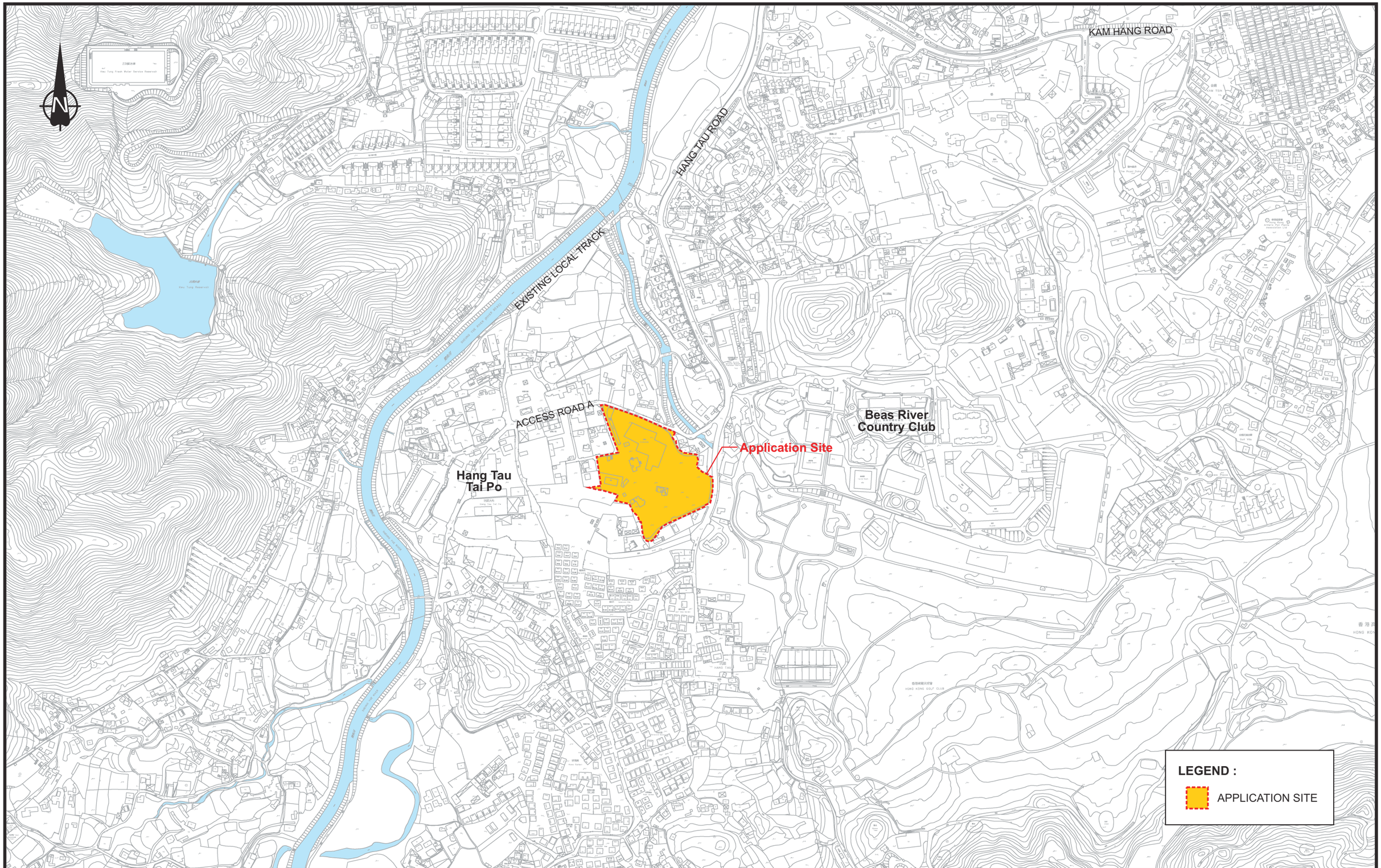
7.1.14 Operational performance of the identified junctions and key road links are assessed with the derived future traffic flows in the design year 2034. The results of junction operational assessment indicated that all assessed junctions will be operated with adequate capacities in the Design Scenario of year 2034 by taking into account the Kam Hang Road improvement scheme as proposed in the approved rezoning application Nos. Y/NE-KTS/12 and Y/NE-KTS/14. The results of road link capacity assessment also showed that all assessed key road links in the vicinity will be still operated with adequate capacities in the Design Scenarios of year 2034.

## 7.2 Conclusion

7.2.1 The traffic impact assessment has demonstrated that the future traffic induced by developments in the application site under the Proposed MLP with the proposed minor relaxation of PR as well as the planned future developments in the vicinity can all be absorbed by the surrounding road network with the road improvement scheme which was already proposed by others.

7.2.2 The arrangements of vehicular access, as well as provisions of internal transport facilities and public transport facility are justified for the Proposed Development, while the revised road widening scheme by further set back of the Proposed Development as enabled by the Proposed MLP are also considered beneficial to the general public.

7.2.3 In conclusion, the subject S16 application for the Proposed MLP with the proposed minor relaxation of PR is supported from a traffic engineering viewpoint.




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**Project Title**

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

**Drawing Title**

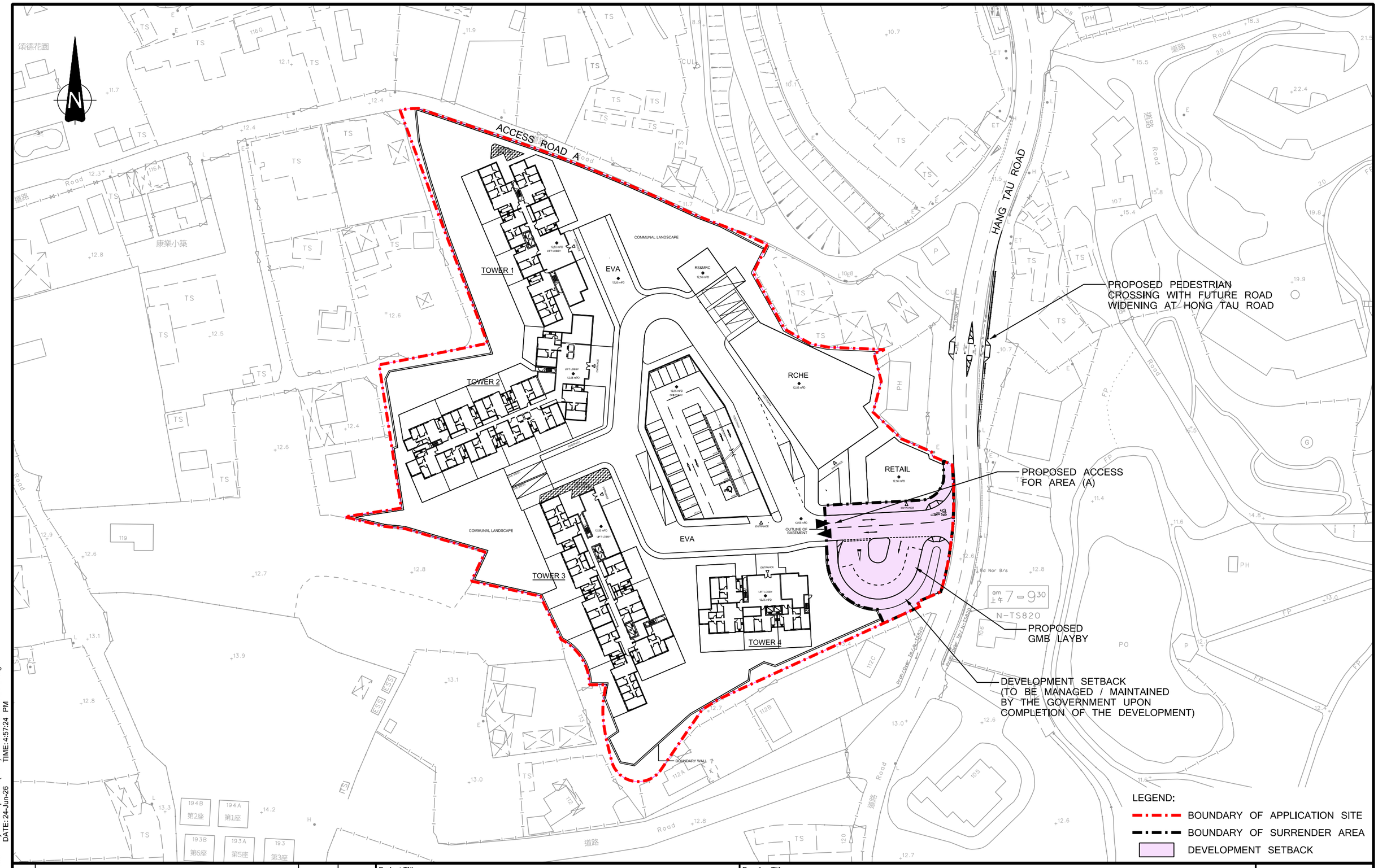
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

# PROPOSED MASTER LAYOUT PLAN AND ACCESS ARRANGEMENT

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26m

MINIBUS

3m FOOTPATH (2mTHOUGH ZONE + 0.5m DEAD WIDTH ON BOTH SIDES)

3m FOOTPATH (2mTHOUGH ZONE + 0.5m DEAD WIDTH ON BOTH SIDES)

70m VISIBILITY SPLAY

7.3m

8.8m

3.8m

3.5m

5.4m

5.8m

PROPOSED PEDESTRIAN CROSSING

A

ACCESS ROAD A

HANG TAU ROAD

70m VISIBILITY SPLAY

TS322

TS102

TS115

TS101

TS109

TS460

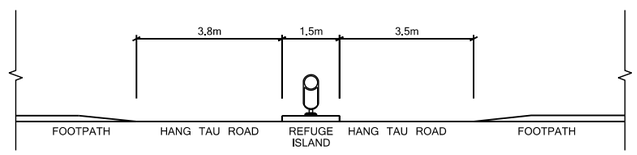
GIVE WAY

STOP

LEGEND:

- BOUNDARY OF APPLICATION SITE
- BOUNDARY OF SURRENDER AREA
- DEVELOPMENT SETBACK
- PROPOSED KERBLINE
- PROPOSED RAILING
- PROPOSED TYPE II RAILING AT JUNCTION
- PROPOSED TRAFFIC SIGN
- RETRO-REFLECTIVE BOLLARD
- PROPOSED ROAD MARKING

NOTE:
THE LAYOUT IS SUBJECT TO DETAIL DESIGN.




SECTION A
SCALE: 1:250

| Rev. | Description | Checked | Date |
|---|---|---|---|
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

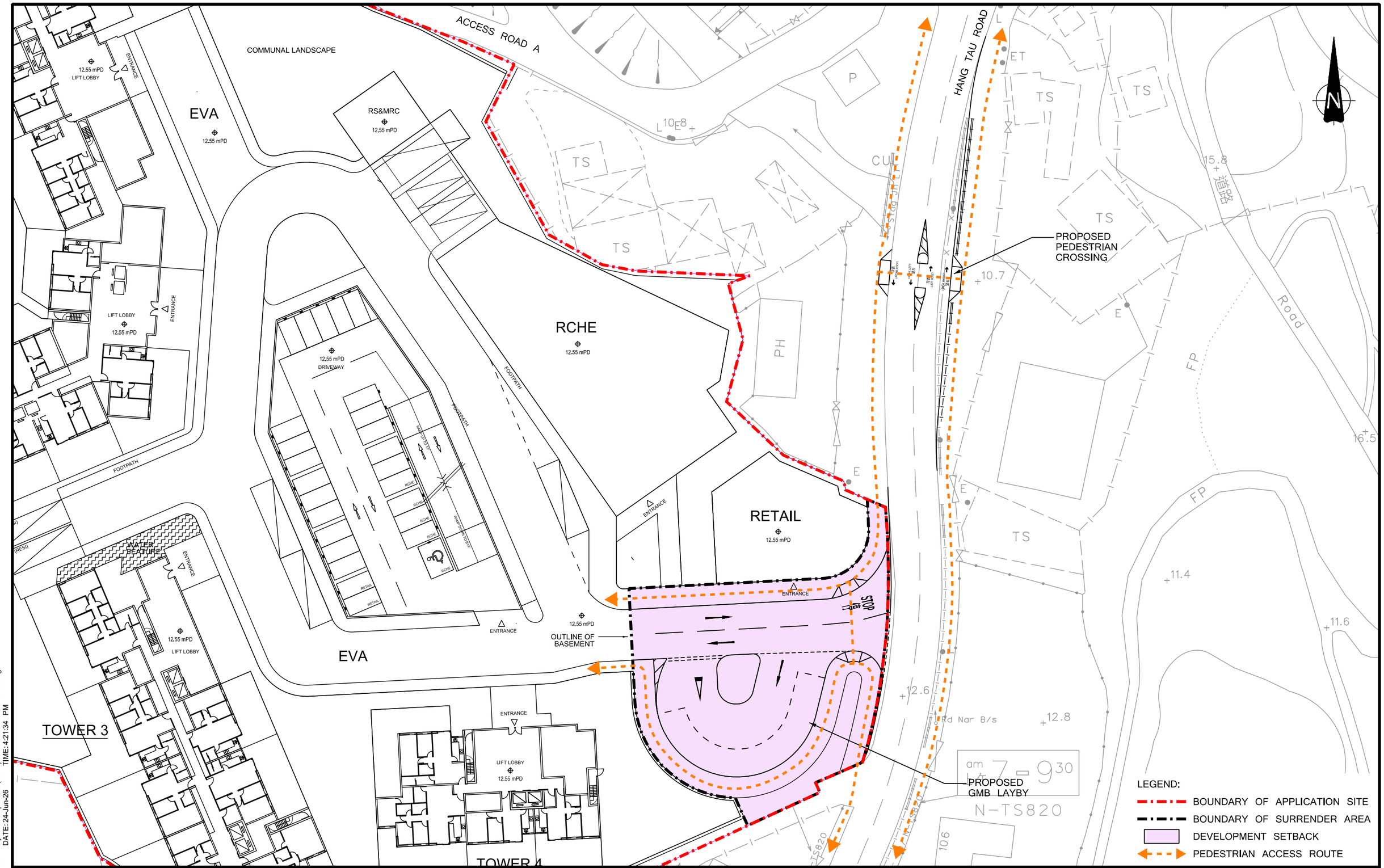
# PROPOSED ROAD WIDENING SCHEME AT HANG TAU ROAD

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:500(A3) | JUN 2026 | 2.2 | - |

SYSTRA MVA

FILENAME: D:\OneDrive - SystraGroup\JOBS(NEW)\CHK50808310\TIA2\F22.dgn
PRINTED BY: cchan
DATE: 24-Jun-26
TIME: 4:21:14 PM

Original Size : A3




| Rev. | Description | Checked | Date |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

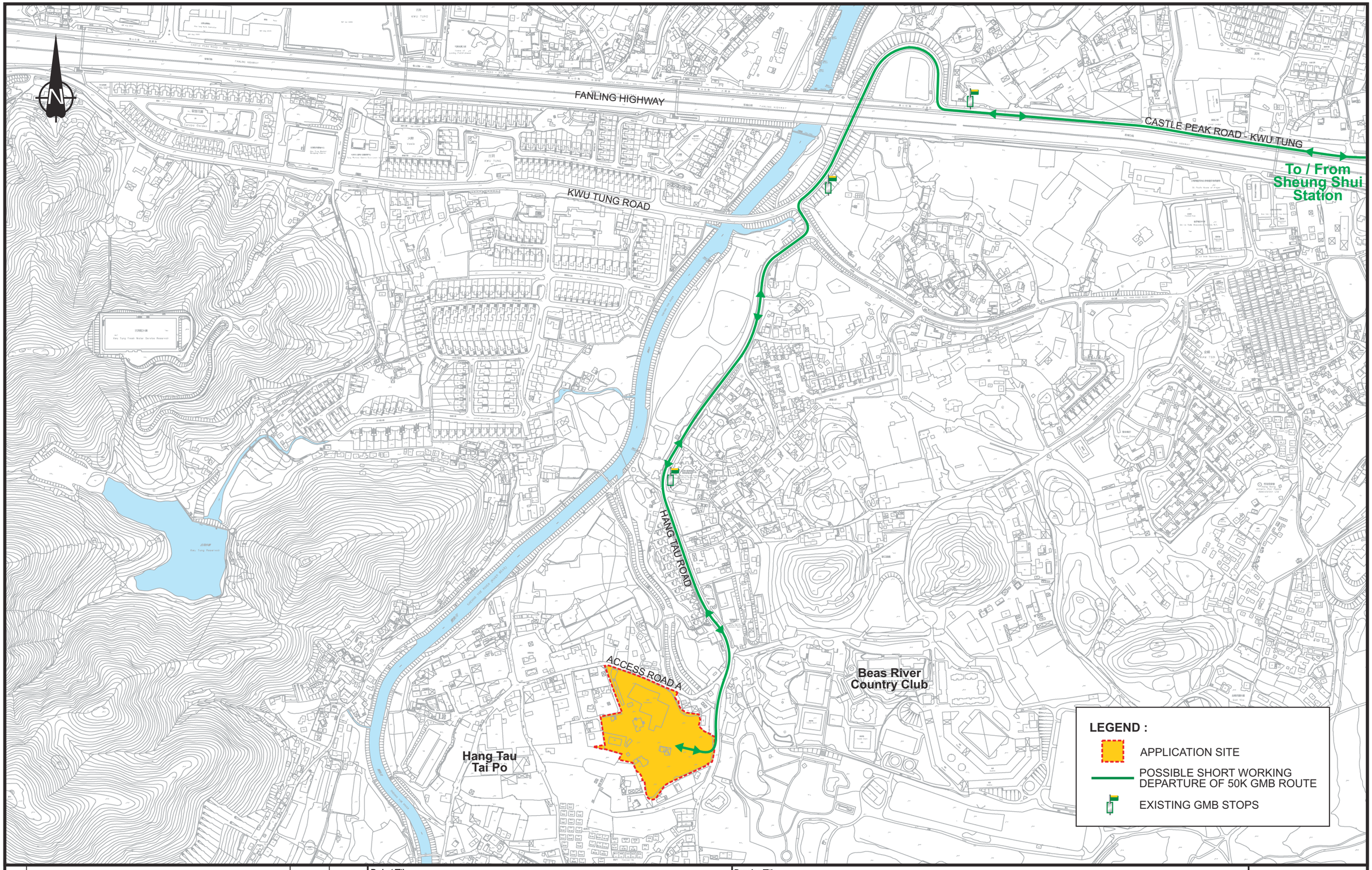
# PROPOSED TRAFFIC AND PEDESTRIAN ARRANGEMENT

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:500(A3) | JUN 2026 | 2.3 | - |

SYSTRA MVA

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Project Title

SECTION 16 PLANNING APPLICATION FOR
PROPOSED MINOR RELAXATION OF PLOT RATIO
AND BUILDING HEIGHT RESTRICTION FOR
COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO,
KWU TUNG SOUTH

Drawing Title

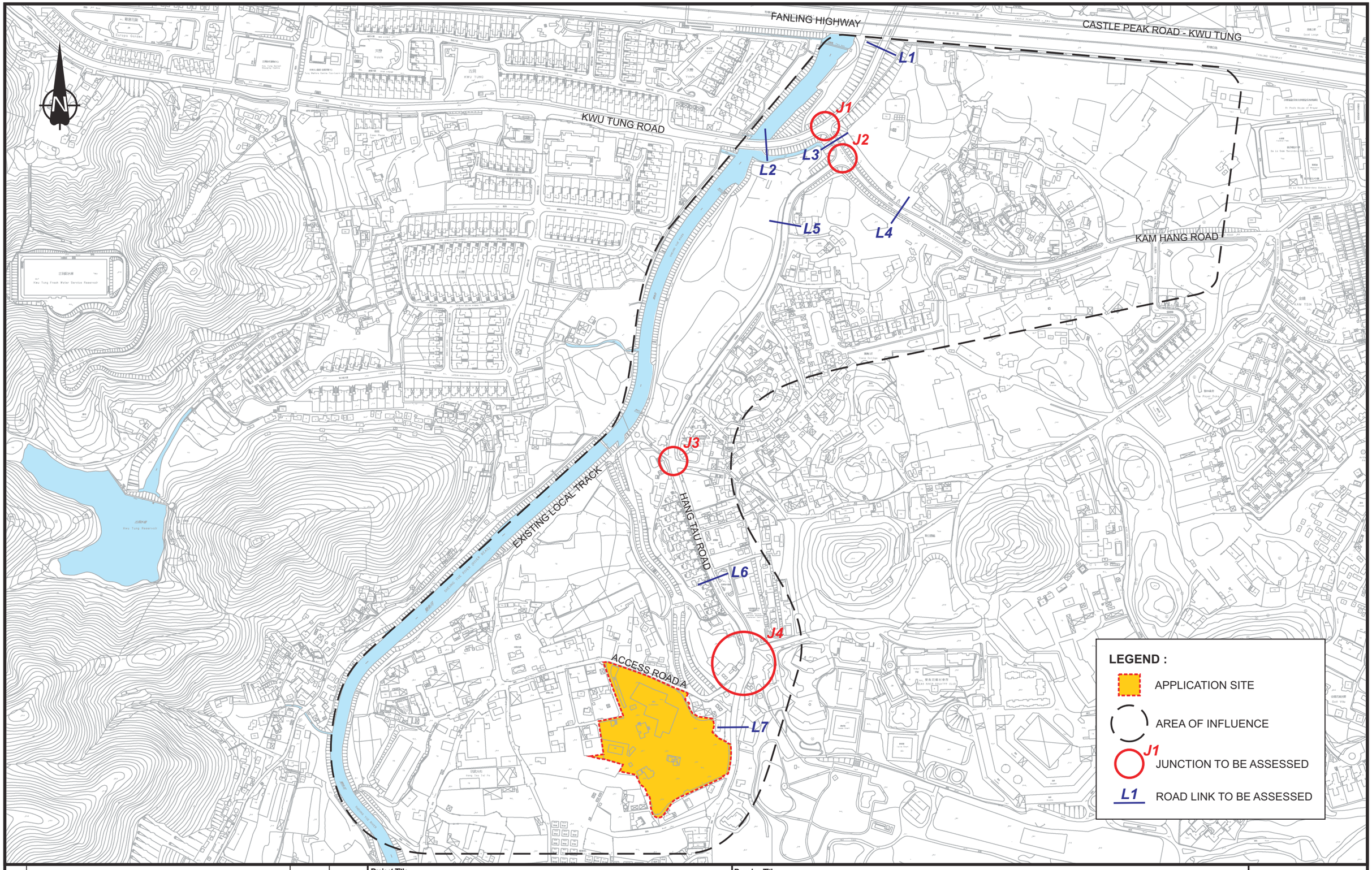
# POSSIBLE GMB SERVICE ENHANCEMENT

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| TCW | CHC | NTS | JUN 2026 | 2.4 | - |

SYSTRA MVA

CHK50808310/TIA2/F24.CDR/LLH/25JUN26

Original Size : A3




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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

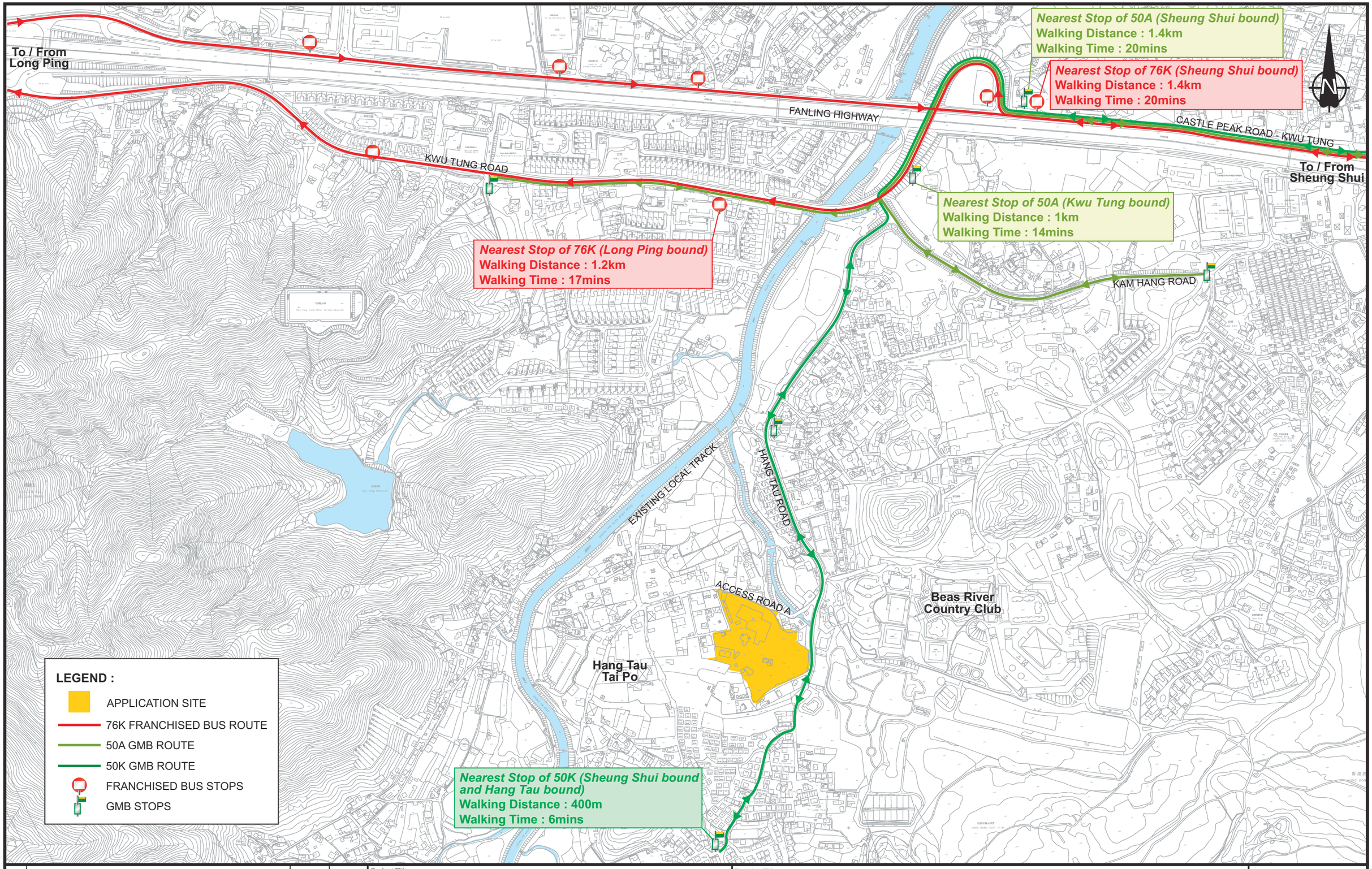
**EXISTING ROAD NETWORK AND JUNCTIONS TO BE ASSESSED**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | NTS | MAR 2026 | 3.1 | - |

SYSTRA MVA

CHK50808310/TIA1/F31.CDR/LLH/16MAR26

Original Size : A3




| Rev. | Description | Checked | Date |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

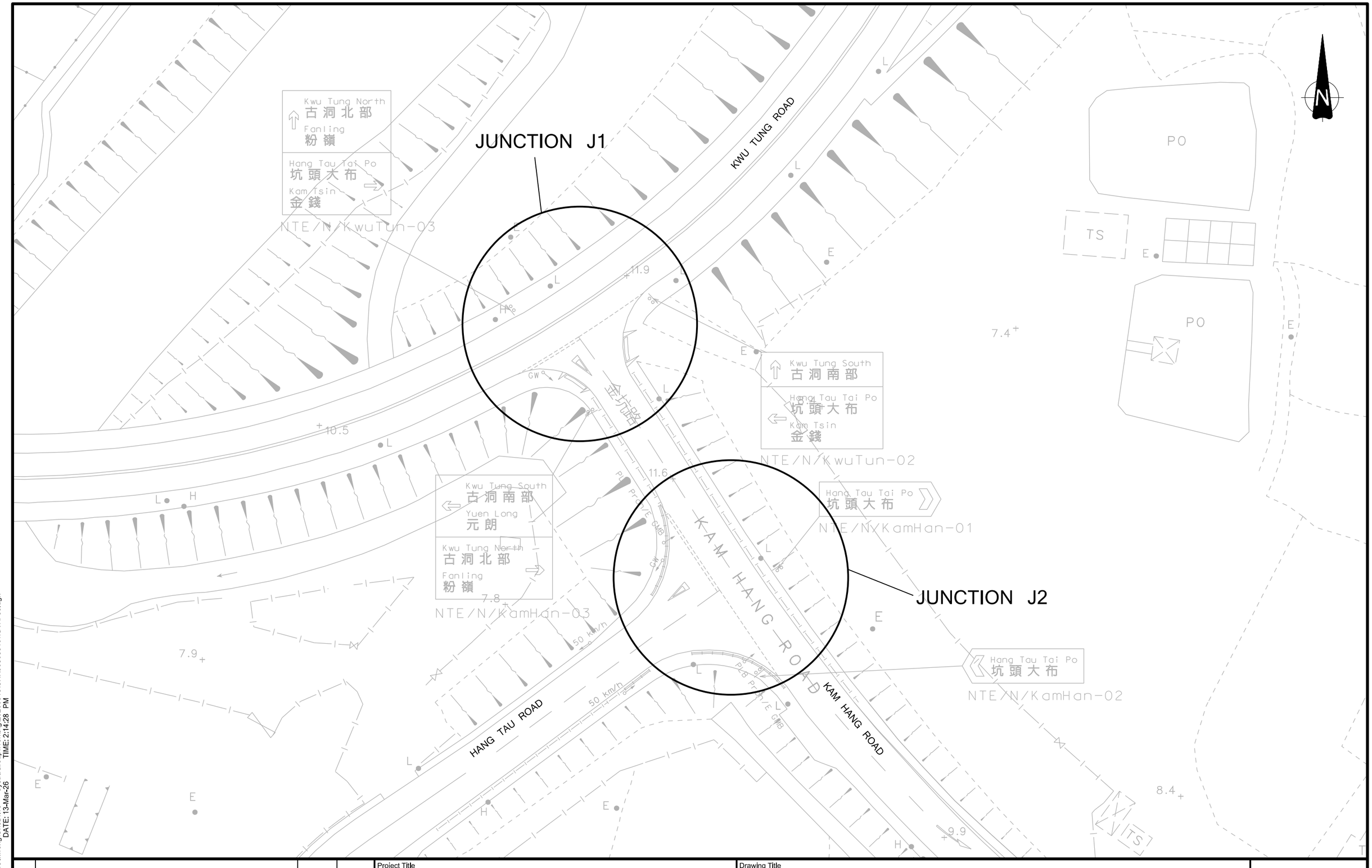
# EXISTING PUBLIC TRANSPORT SERVICES

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | NTS | MAR 2026 | 3.2 | - |

SYSTRA MVA

CHK50808310/TIA1/F32.CDR/LLH/11MAR26

Original Size : A3




| Rev. | Description | Checked | Date |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

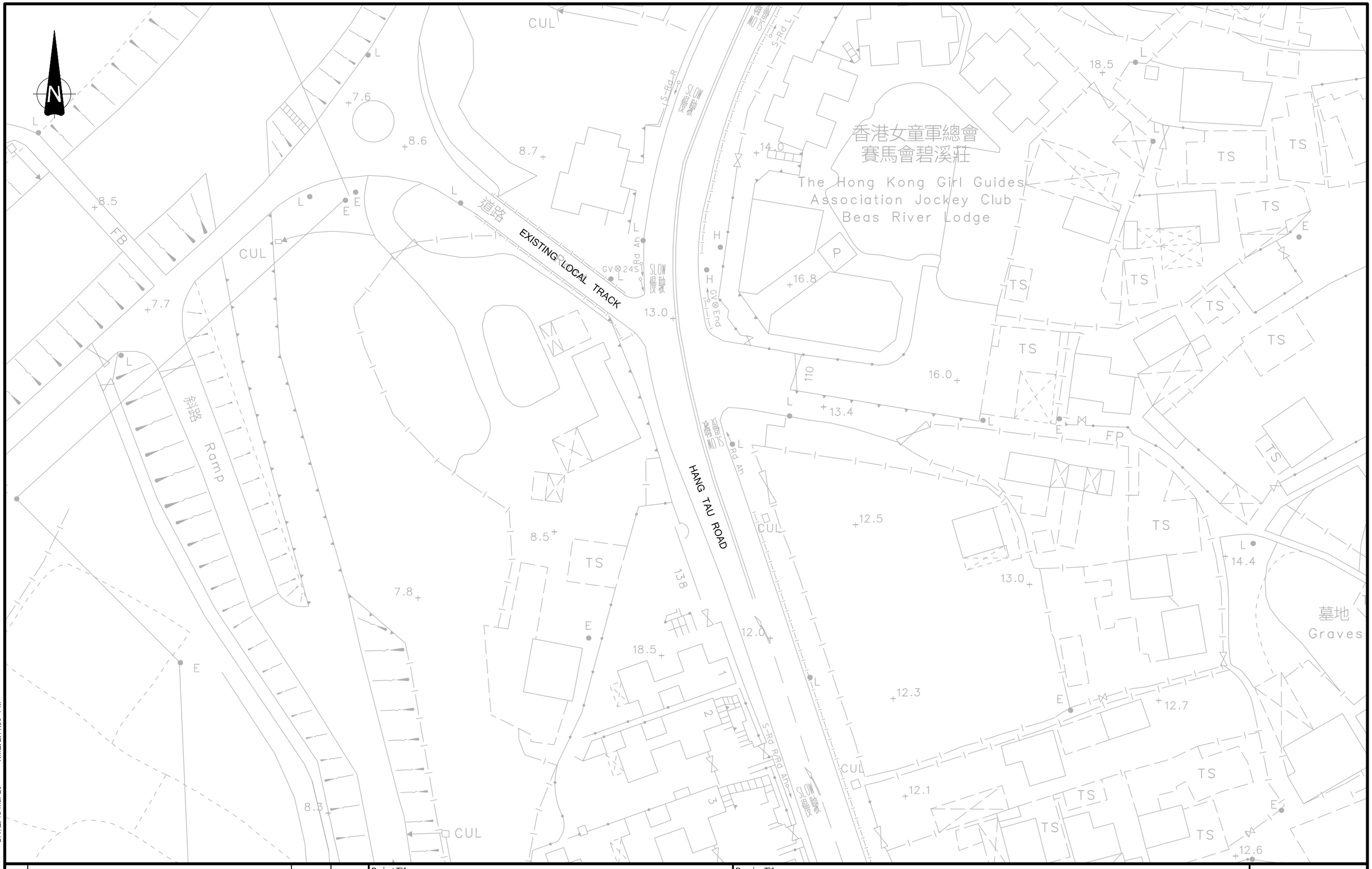
**EXISTING JUNCTION LAYOUT OF KWU TUNG ROAD / KAM HANG ROAD (J1) AND KAM HANG ROAD / HANG TAU ROAD (J2)**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:500(A3) | MAR 2026 | **3.3** | - |

SYSTRA MVA

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PRINTED BY: lkwong DATE: 13-Mar-26 TIME: 2:14:28 PM

Original Size : A3




| Rev. | Description | Checked | Date |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED
MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT
RESTRICTION FOR COMPREHENSIVE DEVELOPMENT
IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

# EXISTING JUNCTION LAYOUT OF HANG TAU ROAD / LOCAL TRACK TO SHEUNG YUE RIVER / ACCESS OF JOCKEY CLUB RIVER BEAS LODGE (J3)

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:500(A3) | MAR 2026 | 3.4 | - |

SYSTRA MVA

Original Size : A3

FILENAME: C:\Users\lkwong\OneDrive - SystraGroup\Working\20260313\CHK50808310\TIA1\F34.dgn
PRINTED BY: lkwong DATE: 13-Mar-26 TIME: 2:14:30 PM




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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

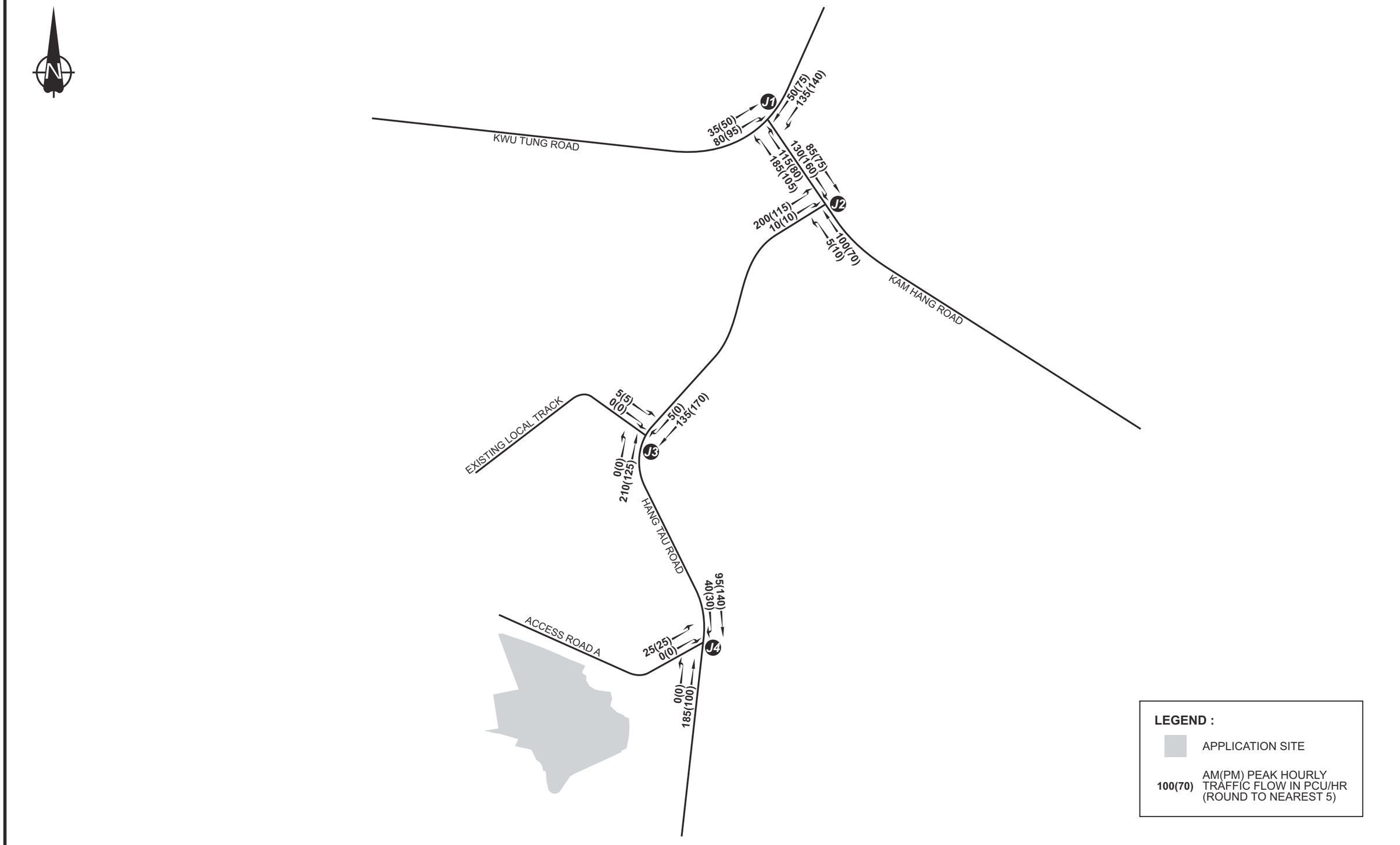
# EXISTING JUNCTION LAYOUT OF HANG TAU ROAD / ACCESS ROAD A (J4)

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:500(A3) | MAR 2026 | 3.5 | - |

SYSTRA MVA

Original Size : A3

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PRINTED BY: lkwong
DATE: 13-Mar-26
TIME: 2:14:31 PM




**LEGEND :**

APPLICATION SITE

**100(70)** AM(PM) PEAK HOURLY TRAFFIC FLOW IN PCU/HR (ROUND TO NEAREST 5)

| Rev. | Description | Checked | Date |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

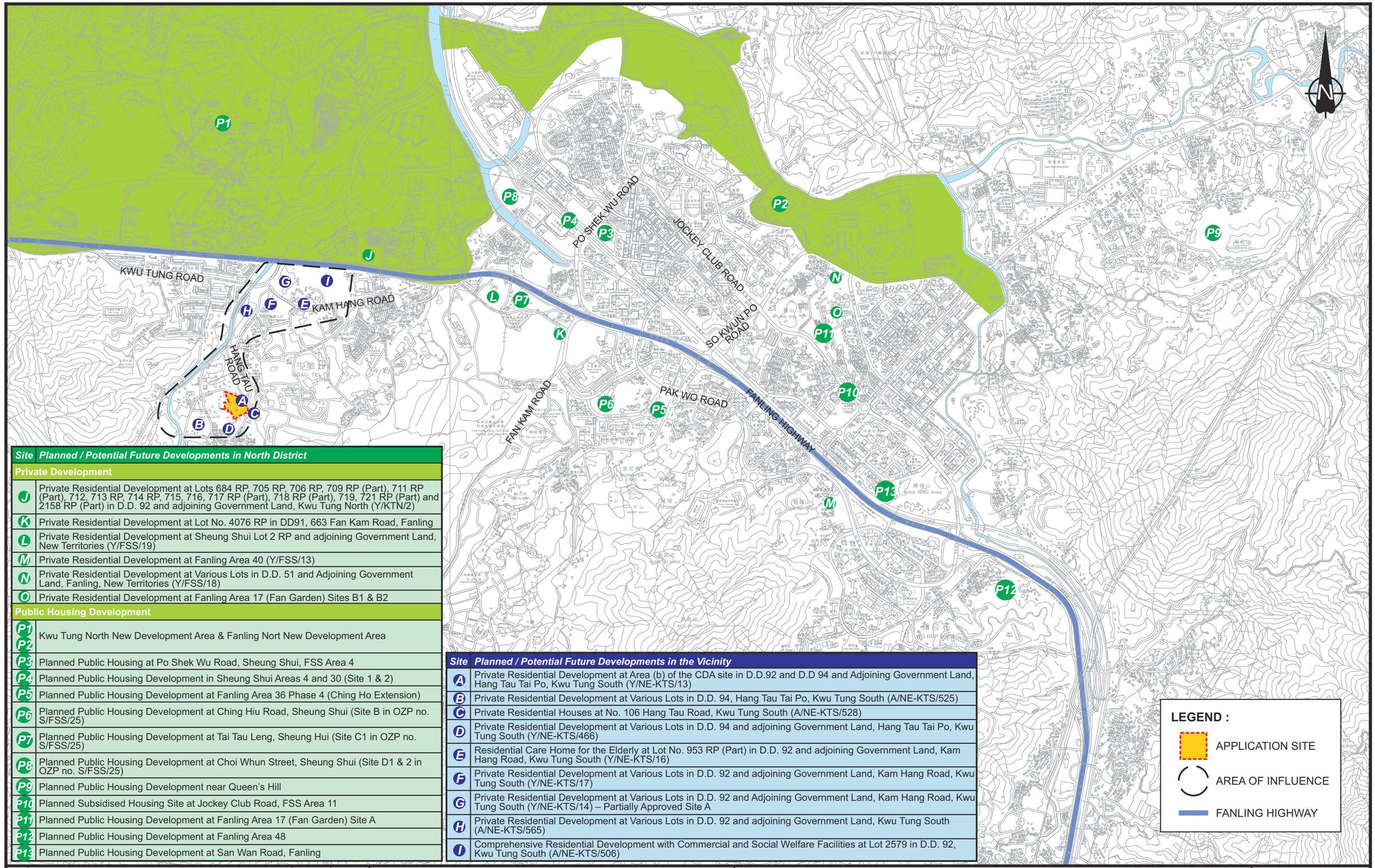
# YEAR 2024 OBSERVED TRAFFIC FLOWS

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | NTS | MAR 2026 | 3.6 | - |

SYSTRA MVA

CHK50808310/TIA1/F36.CDR/LLH/13MAR26

Original Size : A3




| Site | Planned / Potential Future Developments in North District |
|---|---|
| **Private Development** | |
| J | Private Residential Development at Lots 684 RP, 705 RP, 706 RP, 709 RP (Part), 711 RP (Part), 712, 713 RP, 714 RP, 715, 716, 717 RP (Part), 718 RP (Part), 719, 721 RP (Part) and 2158 RP (Part) in D.D. 92 and adjoining Government Land, Kwu Tung North (Y/KTN/2) |
| K | Private Residential Development at Lot No. 4076 RP in DD91, 663 Fan Kam Road, Fanling |
| L | Private Residential Development at Sheung Shui Lot 2 RP and adjoining Government Land, New Territories (Y/FSS/19) |
| M | Private Residential Development at Fanling Area 40 (Y/FSS/13) |
| N | Private Residential Development at Various Lots in D.D. 51 and Adjoining Government Land, Fanling, New Territories (Y/FSS/18) |
| O | Private Residential Development at Fanling Area 17 (Fan Garden) Sites B1 & B2 |
| **Public Housing Development** | |
| P1<br>P2 | Kwu Tung North New Development Area & Fanling Nort New Development Area |
| P3 | Planned Public Housing at Po Shek Wu Road, Sheung Shui, FSS Area 4 |
| P4 | Planned Public Housing Development in Sheung Shui Areas 4 and 30 (Site 1 & 2) |
| P5 | Planned Public Housing Development at Fanling Area 36 Phase 4 (Ching Ho Extension) |
| P6 | Planned Public Housing Development at Ching Hiu Road, Sheung Shui (Site B in OZP no. S/FSS/25) |
| P7 | Planned Public Housing Development at Tai Tau Leng, Sheung Hui (Site C1 in OZP no. S/FSS/25) |
| P8 | Planned Public Housing Development at Choi Whun Street, Sheung Shui (Site D1 & 2 in OZP no. S/FSS/25) |
| P9 | Planned Public Housing Development near Queen's Hill |
| P10 | Planned Subsidised Housing Site at Jockey Club Road, FSS Area 11 |
| P11 | Planned Public Housing Development at Fanling Area 17 (Fan Garden) Site A |
| P12 | Planned Public Housing Development at Fanling Area 48 |
| P13 | Planned Public Housing Development at San Wan Road, Fanling |

| Site | Planned / Potential Future Developments in the Vicinity |
|---|---|
| A | Private Residential Development at Area (b) of the CDA site in D.D.92 and D.D 94 and Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South (Y/NE-KTS/13) |
| B | Private Residential Development at Various Lots in D.D. 94, Hang Tau Tai Po, Kwu Tung South (A/NE-KTS/525) |
| C | Private Residential Houses at No. 106 Hang Tau Road, Kwu Tung South (A/NE-KTS/528) |
| D | Private Residential Development at Various Lots in D.D. 94 and adjoining Government Land, Hang Tau Tai Po, Kwu Tung South (Y/NE-KTS/466) |
| E | Residential Care Home for the Elderly at Lot No. 953 RP (Part) in D.D. 92 and adjoining Government Land, Kam Hang Road, Kwu Tung South (Y/NE-KTS/16) |
| F | Private Residential Development at Various Lots in D.D. 92 and adjoining Government Land, Kam Hang Road, Kwu Tung South (Y/NE-KTS/17) |
| G | Private Residential Development at Various Lots in D.D. 92 and Adjoining Government Land, Kam Hang Road, Kwu Tung South (Y/NE-KTS/14) – Partially Approved Site A |
| H | Private Residential Development at Various Lots in D.D. 92 and adjoining Government Land, Kwu Tung South (A/NE-KTS/565) |
| I | Comprehensive Residential Development with Commercial and Social Welfare Facilities at Lot 2579 in D.D. 92, Kwu Tung South (A/NE-KTS/506) |

| Rev. | Description | Checked | Date |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

# PLANNED / POTENTIAL FUTURE KEY DEVELOPMENTS IN THE VICINITY AND NORTH DISTRICT (1 OF 2)

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | NTS | MAR 2026 | 4.1 | - |

SYSTRA MVA

CHK50808310/TIA1/F41.CDR/LLH/16MAR26

Original Size : A3

| Site | Planned / Potential Future Developments in the Hang Tau Area | Estimated Population Intake |
|---|---|---|
| | Application Site | 936 |
| A | Private Residential Development at Area (b) of the CDA site in D.D.92 and D.D 94 and Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South (Y/NE-KTS/13) | 50 |
| B | Private Residential Development at Various Lots in D.D. 94, Hang Tau Tai Po, Kwu Tung South (A/NE-KTS/525) | 118 |
| C | Private Residential Houses at No. 106 Hang Tau Road, Kwu Tung South (A/NE-KTS/528) | 6 |
| D | Private Residential Development at Various Lots in D.D. 94 and adjoining Government Land, Hang Tau Tai Po, Kwu Tung South (Y/NE-KTS/466) | 53 |

N

EXISTING LOCAL TRACK

SHEUNG YUE RIVER (RIVER BEAS)

ACCESS ROAD A

HANG TAU ROAD

Beas River Country Club

Hang Tau Tai Po

SHEUNG YUE RIVER

A

B

C

D

**LEGEND :**

APPLICATION SITE

| Rev. | Description | Checked | Date |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

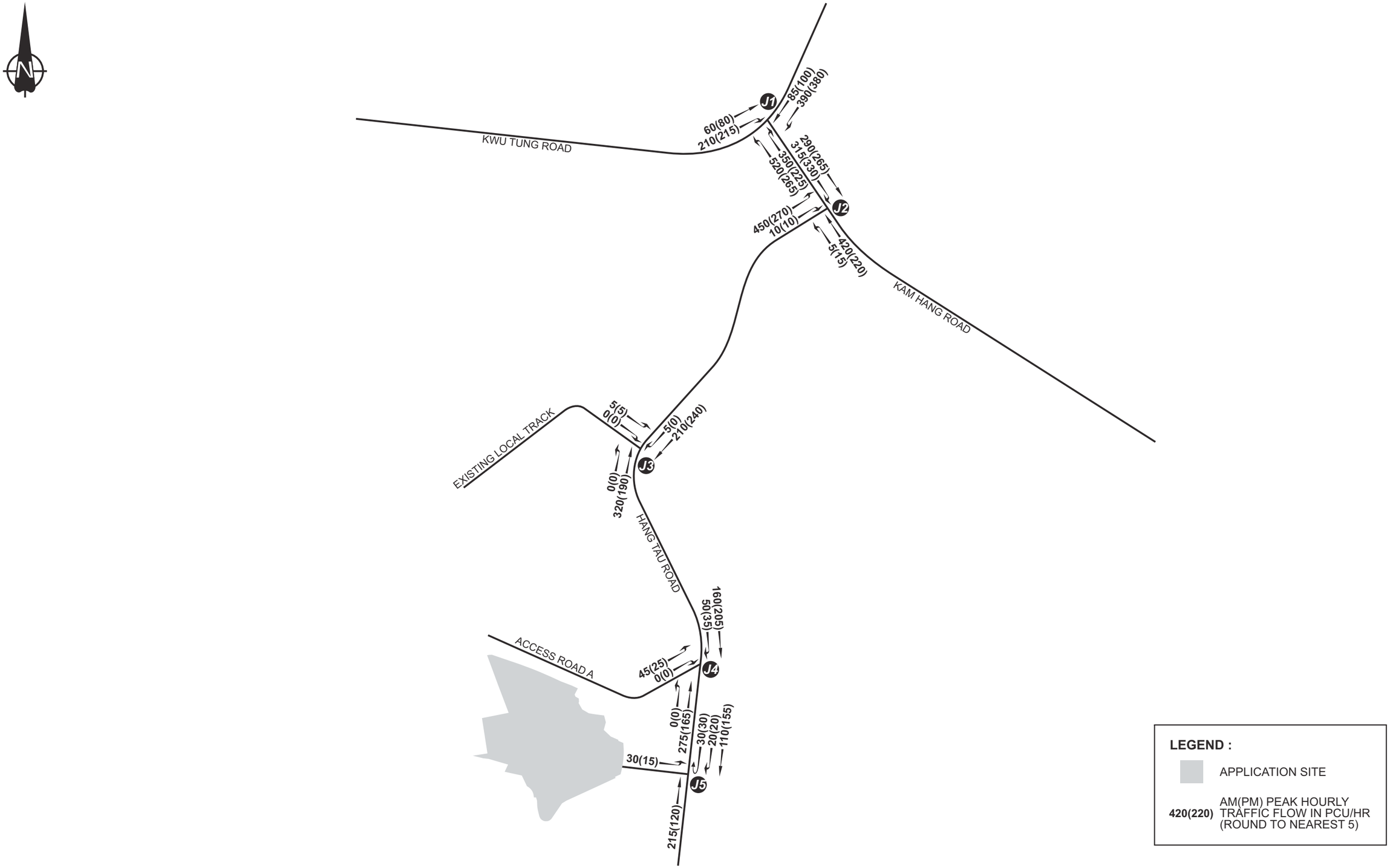
**PLANNED / POTENTIAL FUTURE KEY DEVELOPMENTS IN THE VICINITY AND NORTH DISTRICT (2 OF 2)**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | NTS | MAR 2026 | 4.2 | - |

SYSTRA MVA

CHK50808310/TIA1/F42.CDR/LLH/16MAR26

Original Size : A3




**LEGEND :**

APPLICATION SITE

**420(220)** AM(PM) PEAK HOURLY TRAFFIC FLOW IN PCU/HR (ROUND TO NEAREST 5)

| Rev. | Description | Checked | Date |
|---|---|---|---|
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

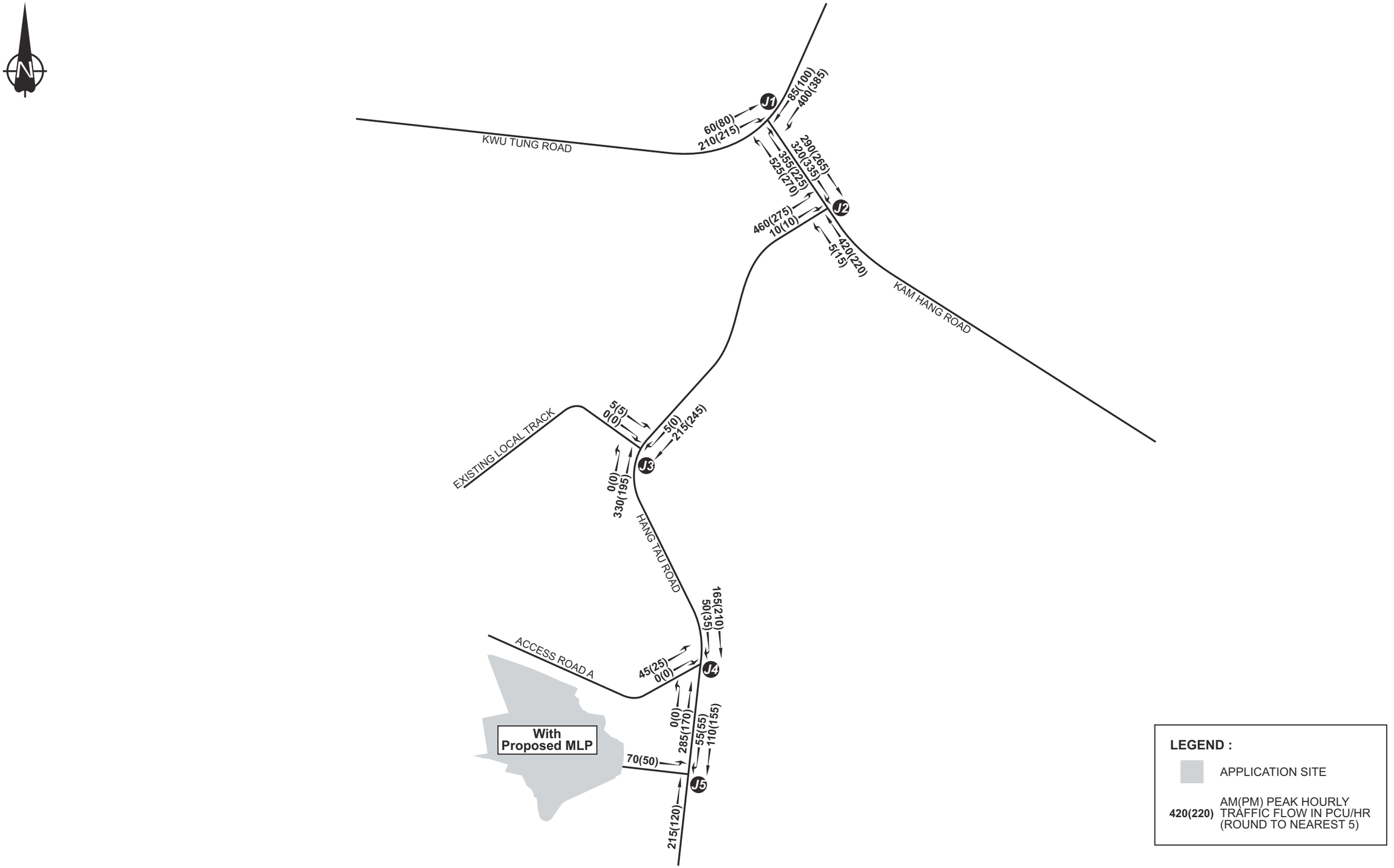
# YEAR 2034 REFERENCE TRAFFIC FLOWS

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | NTS | MAR 2026 | 4.3 | - |

SYSTRA MVA

CHK50808310/TIA1/F43.CDR/LLH/13MAR26

Original Size : A3




**LEGEND :**

APPLICATION SITE

**420(220)** AM(PM) PEAK HOURLY TRAFFIC FLOW IN PCU/HR (ROUND TO NEAREST 5)

| Rev. | Description | Checked | Date |
|---|---|---|---|
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

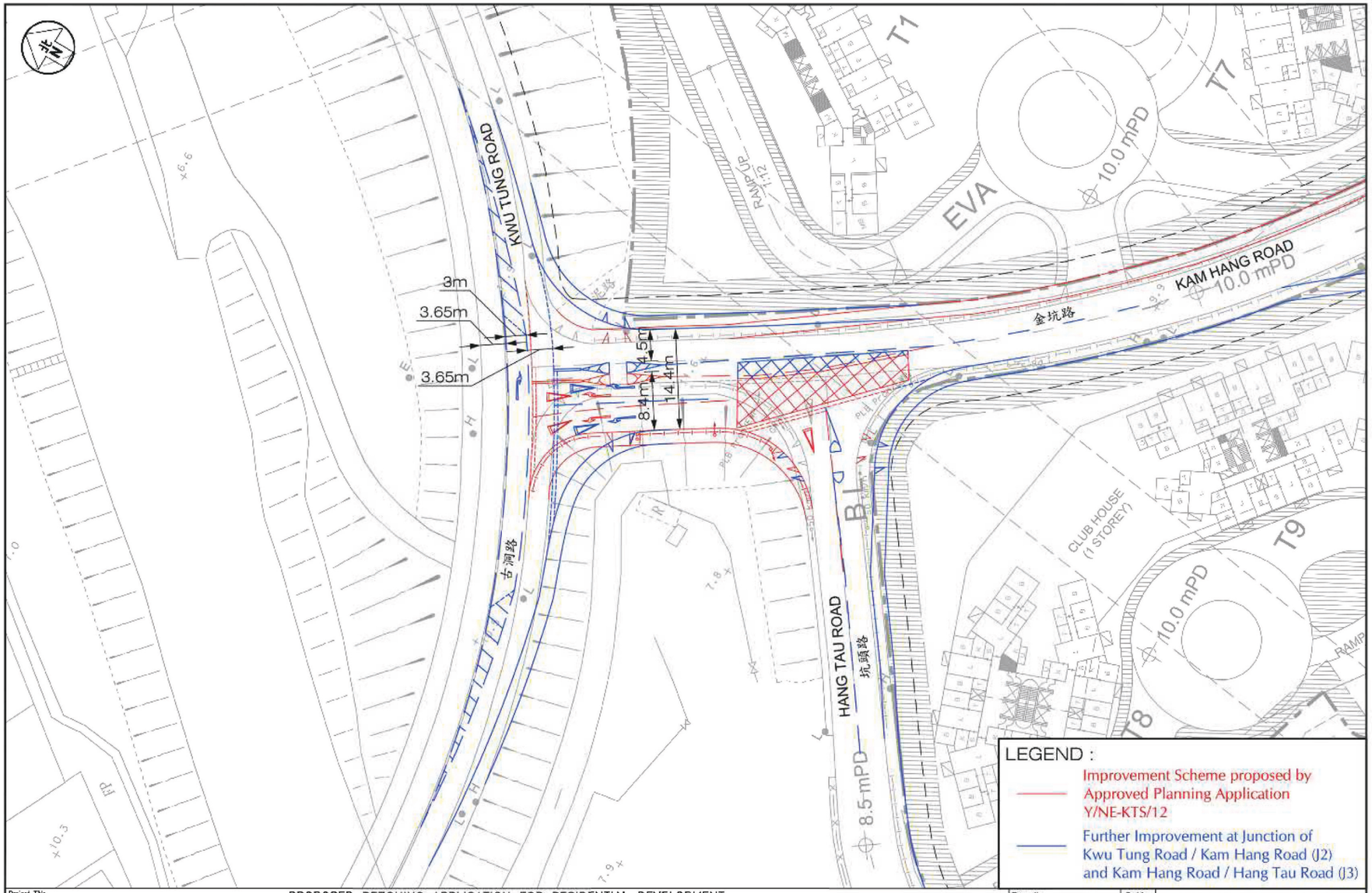
# YEAR 2034 DESIGN TRAFFIC FLOWS

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | NTS | MAR 2026 | 4.4 | - |

SYSTRA MVA

CHK50808310/TIA1/F44.CDR/LLH/13MAR26

Original Size : A3




Project Title: PROPOSED REZONING APPLICATION FOR RESIDENTIAL DEVELOPMENT AT KAM HANG ROAD AND HANG TAU ROAD, KWU TUNG SOUTH — J6921

Figure Title: FURTHER IMPROVEMENT AT JUNCTION OF KWU TUNG ROAD / KAM HANG ROAD (J2) AND KAM HANG ROAD / HANG TAU ROAD (J3)

| Figure No. | Revision |
|---|---|
| 1 | A |

| Designed by | Drawn by | Checked by |
|---|---|---|
| L K W | W S W | K C |

Scale in A3: ~~1 : 500~~ — Date: 12 NOV 2020

CKM Asia Limited
Traffic and Transportation Planning Consultants
21st Floor, Methodist House, 36 Hennessy Road
Wan Chai, Hong Kong
Tel : (852) 2520 5990 Fax : (852) 2528 6343
Email : mail@ckmasia.com.hk

（資料來源：申請人於 16. 11. 2020 呈交的資料）
**(Source : Applicant's Submission of 16.11.2020)**

| 參考編號 REFERENCE No. | 繪圖 DRAWING |
|---|---|
| Y/NE-KTS/14 | Z-10 |

| Rev. | Description | Checked | Date |
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Project Title: SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

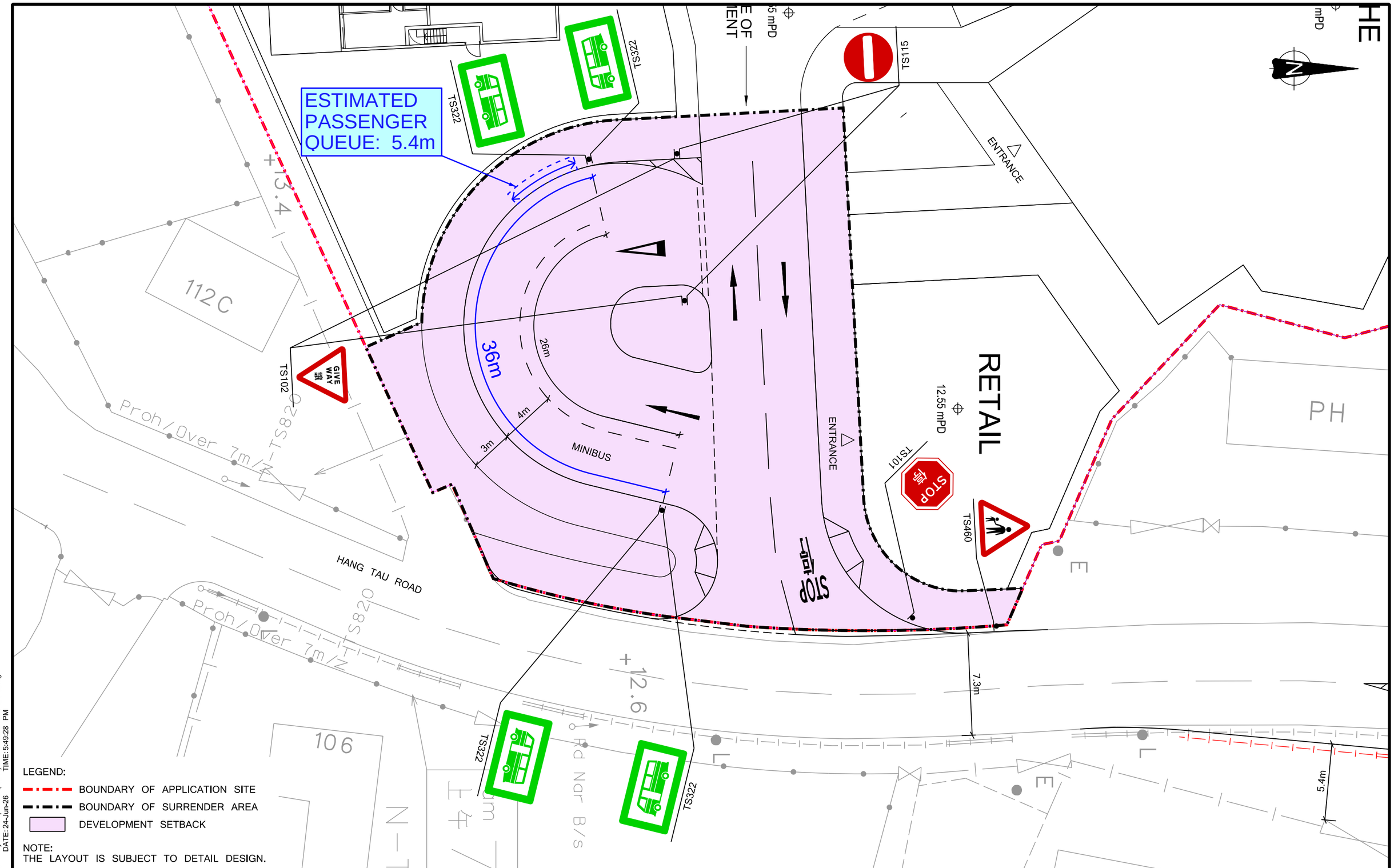
Drawing Title: **MODIFICATION OF JUNCTION J1 UNDER THE KAM HANG ROAD IMPROVEMENT SCHEME AS PROPOSED IN APPLICATION NO. Y/NE-KTS/12 AND Y/NE-KTS/14**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | NTS | MAR 2026 | 5.1 | - |

SYSTRA MVA

CHK50808310/TIA1/F51.CDR/LLH/134MAR26

Original Size : A3




| Rev. | Description | Checked | Date |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

**ESTIMATED MAXIMUM PASSENGER QUEUING AT PROPOSED GMB LAYBY**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:250(A3) | JUN 2026 | **5.2** | - |

SYSTRA MVA

Original Size : A3

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PRINTED BY: cchan DATE: 24-Jun-26 TIME: 5:49:28 PM

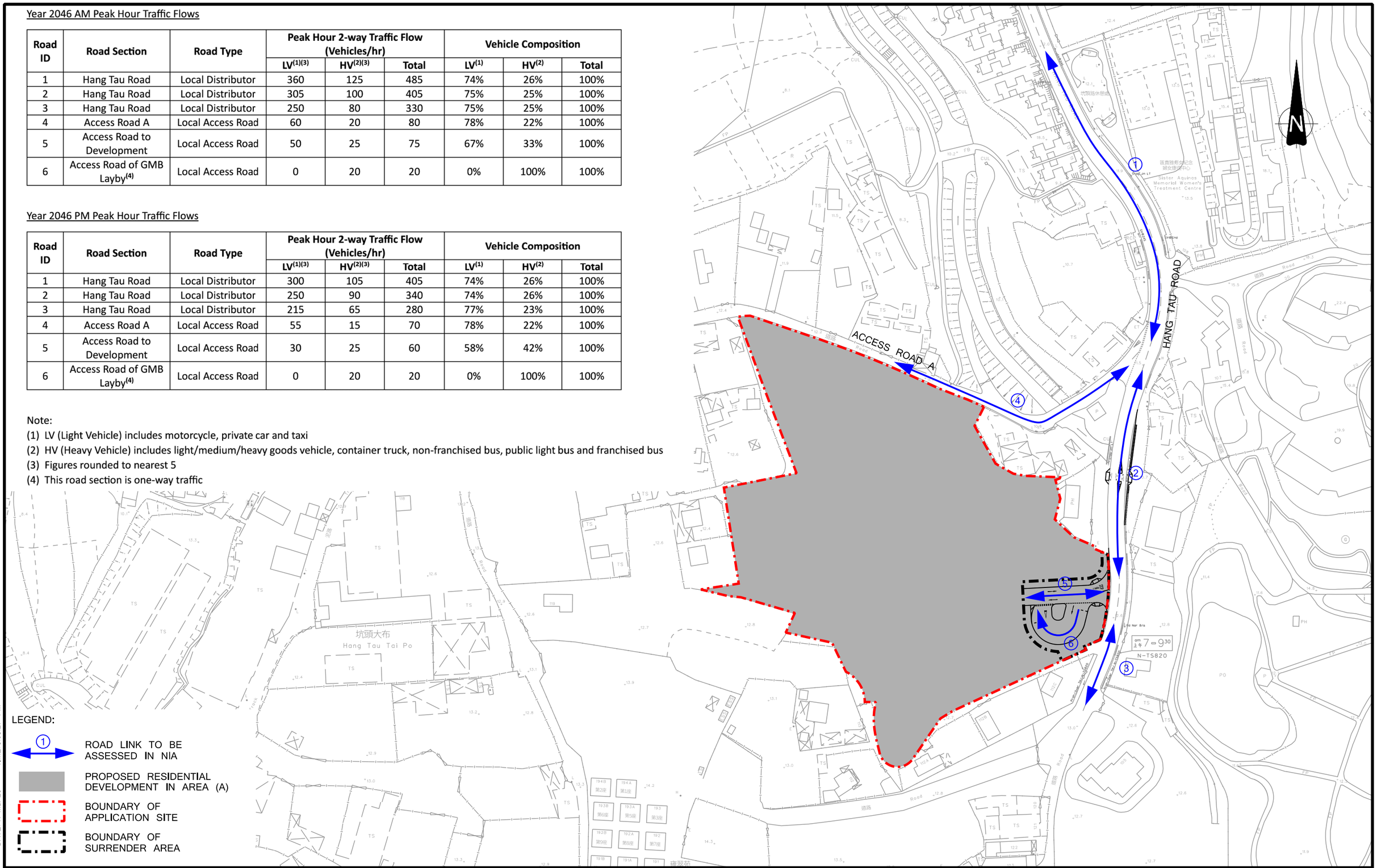
Year 2046 AM Peak Hour Traffic Flows

| Road ID | Road Section | Road Type | Peak Hour 2-way Traffic Flow (Vehicles/hr) | | | Vehicle Composition | | |
|---|---|---|---|---|---|---|---|---|
| | | | LV[(1)(3)] | HV[(2)(3)] | Total | LV[(1)] | HV[(2)] | Total |
| 1 | Hang Tau Road | Local Distributor | 360 | 125 | 485 | 74% | 26% | 100% |
| 2 | Hang Tau Road | Local Distributor | 305 | 100 | 405 | 75% | 25% | 100% |
| 3 | Hang Tau Road | Local Distributor | 250 | 80 | 330 | 75% | 25% | 100% |
| 4 | Access Road A | Local Access Road | 60 | 20 | 80 | 78% | 22% | 100% |
| 5 | Access Road to Development | Local Access Road | 50 | 25 | 75 | 67% | 33% | 100% |
| 6 | Access Road of GMB Layby[(4)] | Local Access Road | 0 | 20 | 20 | 0% | 100% | 100% |

Year 2046 PM Peak Hour Traffic Flows

| Road ID | Road Section | Road Type | Peak Hour 2-way Traffic Flow (Vehicles/hr) | | | Vehicle Composition | | |
|---|---|---|---|---|---|---|---|---|
| | | | LV[(1)(3)] | HV[(2)(3)] | Total | LV[(1)] | HV[(2)] | Total |
| 1 | Hang Tau Road | Local Distributor | 300 | 105 | 405 | 74% | 26% | 100% |
| 2 | Hang Tau Road | Local Distributor | 250 | 90 | 340 | 74% | 26% | 100% |
| 3 | Hang Tau Road | Local Distributor | 215 | 65 | 280 | 77% | 23% | 100% |
| 4 | Access Road A | Local Access Road | 55 | 15 | 70 | 78% | 22% | 100% |
| 5 | Access Road to Development | Local Access Road | 30 | 25 | 60 | 58% | 42% | 100% |
| 6 | Access Road of GMB Layby[(4)] | Local Access Road | 0 | 20 | 20 | 0% | 100% | 100% |

Note:
(1) LV (Light Vehicle) includes motorcycle, private car and taxi
(2) HV (Heavy Vehicle) includes light/medium/heavy goods vehicle, container truck, non-franchised bus, public light bus and franchised bus
(3) Figures rounded to nearest 5
(4) This road section is one-way traffic




| Rev. | Description | Checked | Date |
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| - | - | - | - |
| - | - | - | - |

Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

**YEAR 2046 PEAK HOURS TRAFFIC FORECAST AND VEHICLE COMPOSITION**

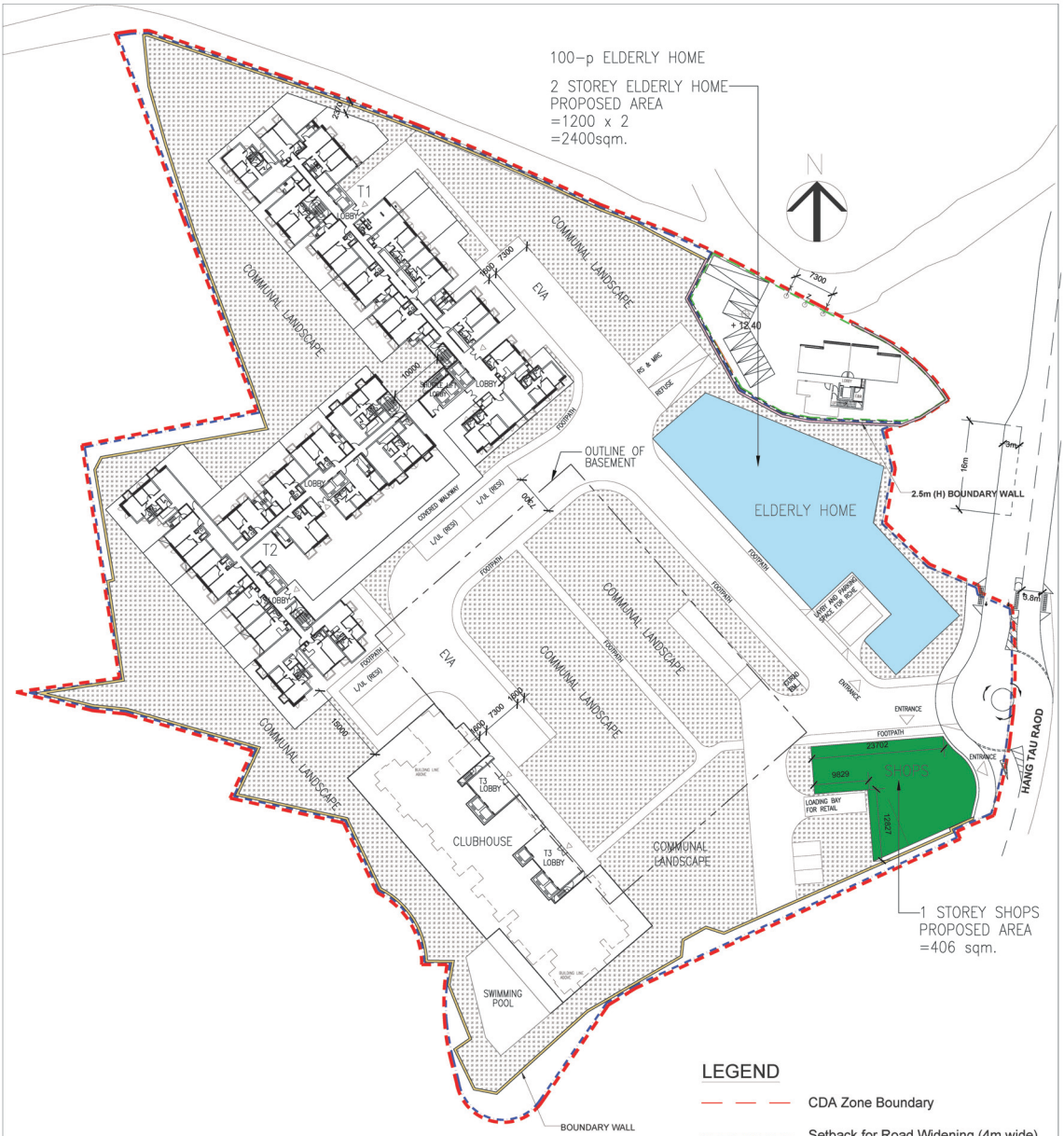
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SYSTRA MVA

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TIME: 5:03:27 PM

# APPENDIX A – MASTER LAYOUT PLAN UNDER PREVIOUS SCHEME OF THE APPROVED S12A APPLICATIONS




GROUND FLOOR PLAN
(Site A)

申請編號 Application No. : Y / NE-KTS / 13
此頁摘自申請人提交的文件。
This page is extracted from applicant's submitted documents.

Master Layout Plan for Residential Development at Various Lots
in D.D. 92 and D.D. 94 and Adjoining Government Land in "CDA" zone
Hang Tau Tai Po, Kwu Tung South, New Territories

lwk&partners architects

| Rev. | Description | Checked | Date | Rev. | Description | Checked | Date |
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Project Title: SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

# MASTER LAYOUT PLAN OF PREVIOUS SCHEME UNDER THE APPROVED S12A APPLICATION

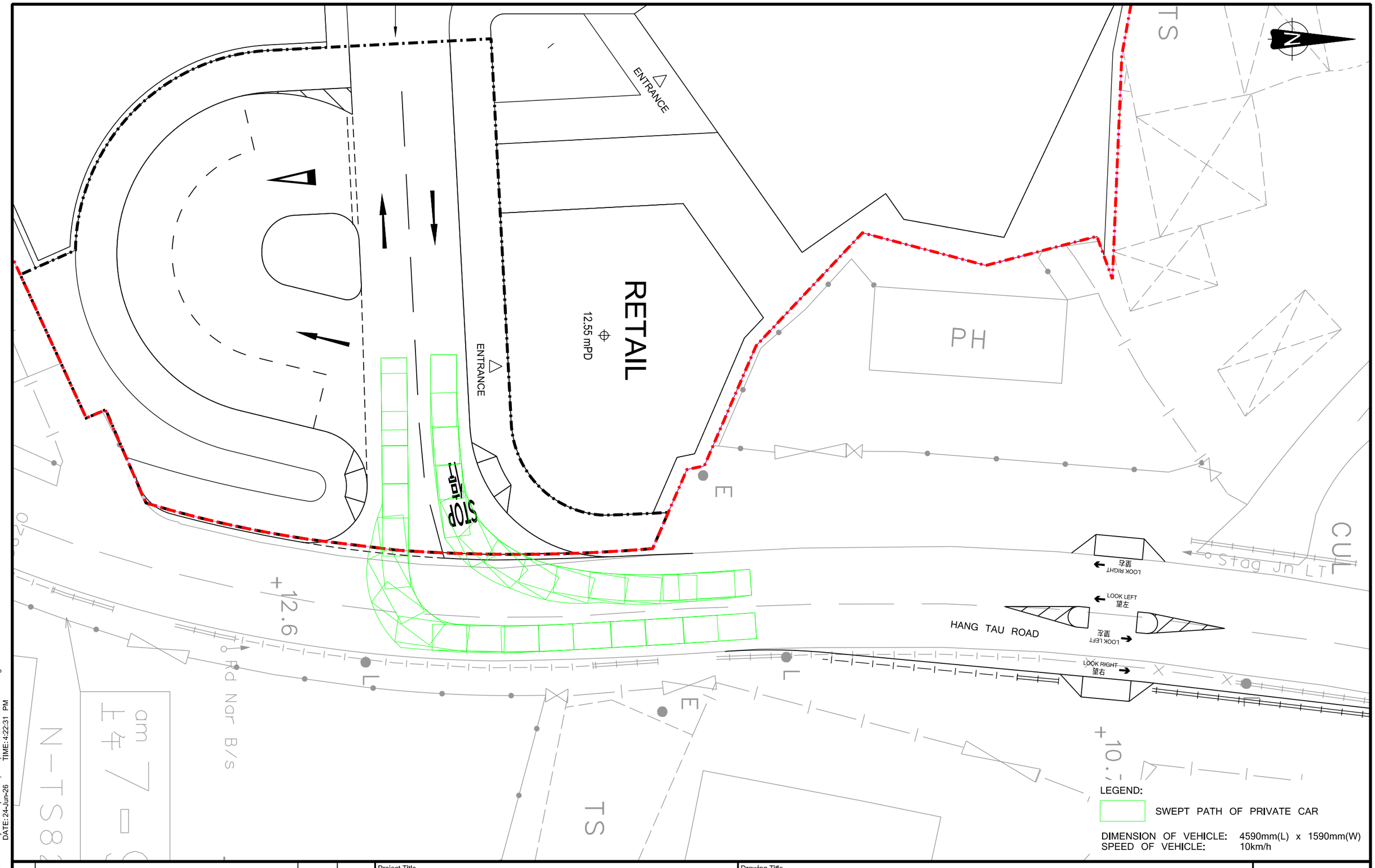
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SYSTRA MVA

CHK50808310/TIA1/A1.CDR/LLH/13MAR26

Original Size : A4

# APPENDIX B – SWEPT PATH ANALYSES




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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

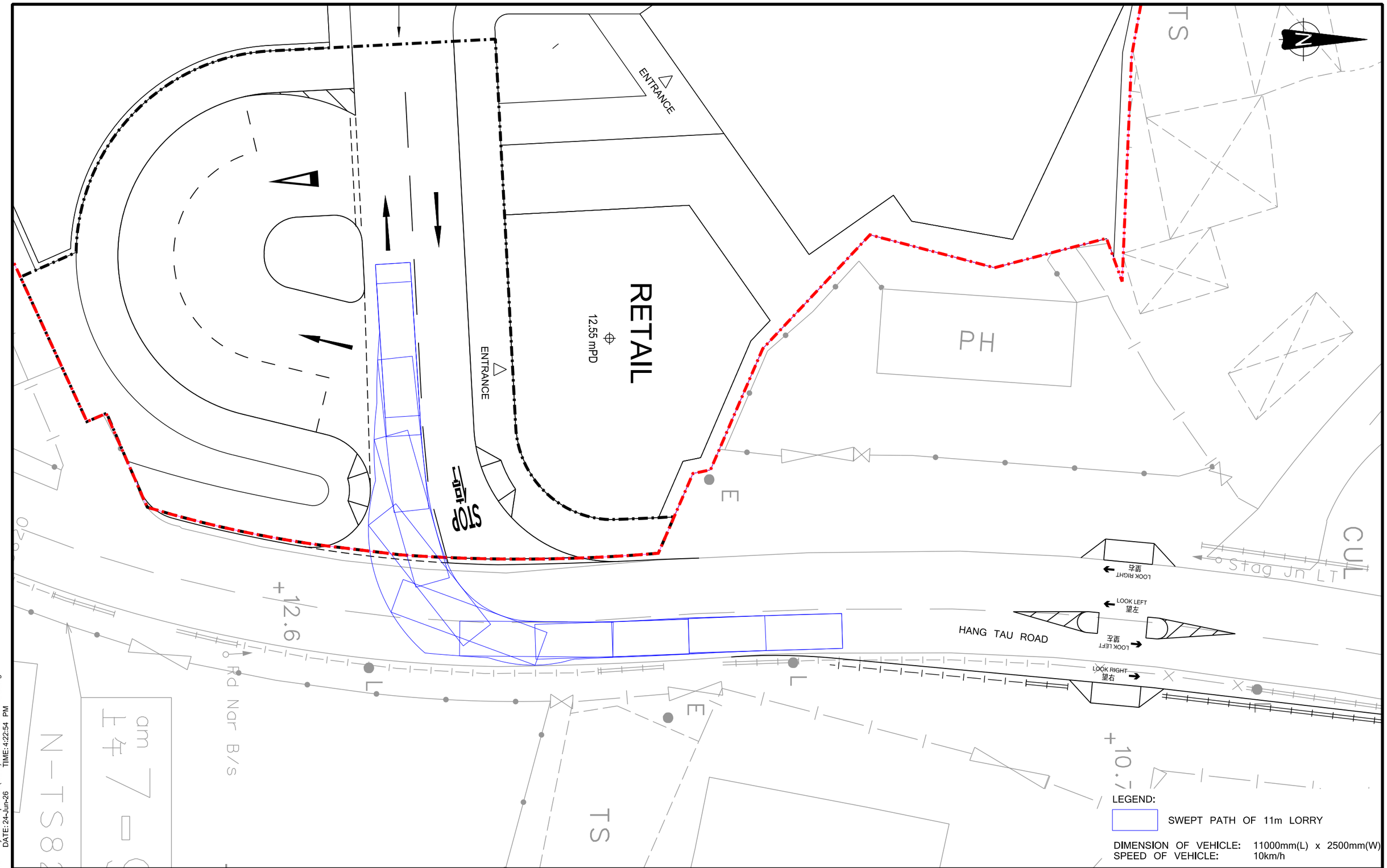
**SWEPT PATH OF PRIVATE CAR IN / OUT**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:250(A3) | JUN 2026 | **B1** | - |

SYSTRA MVA

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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

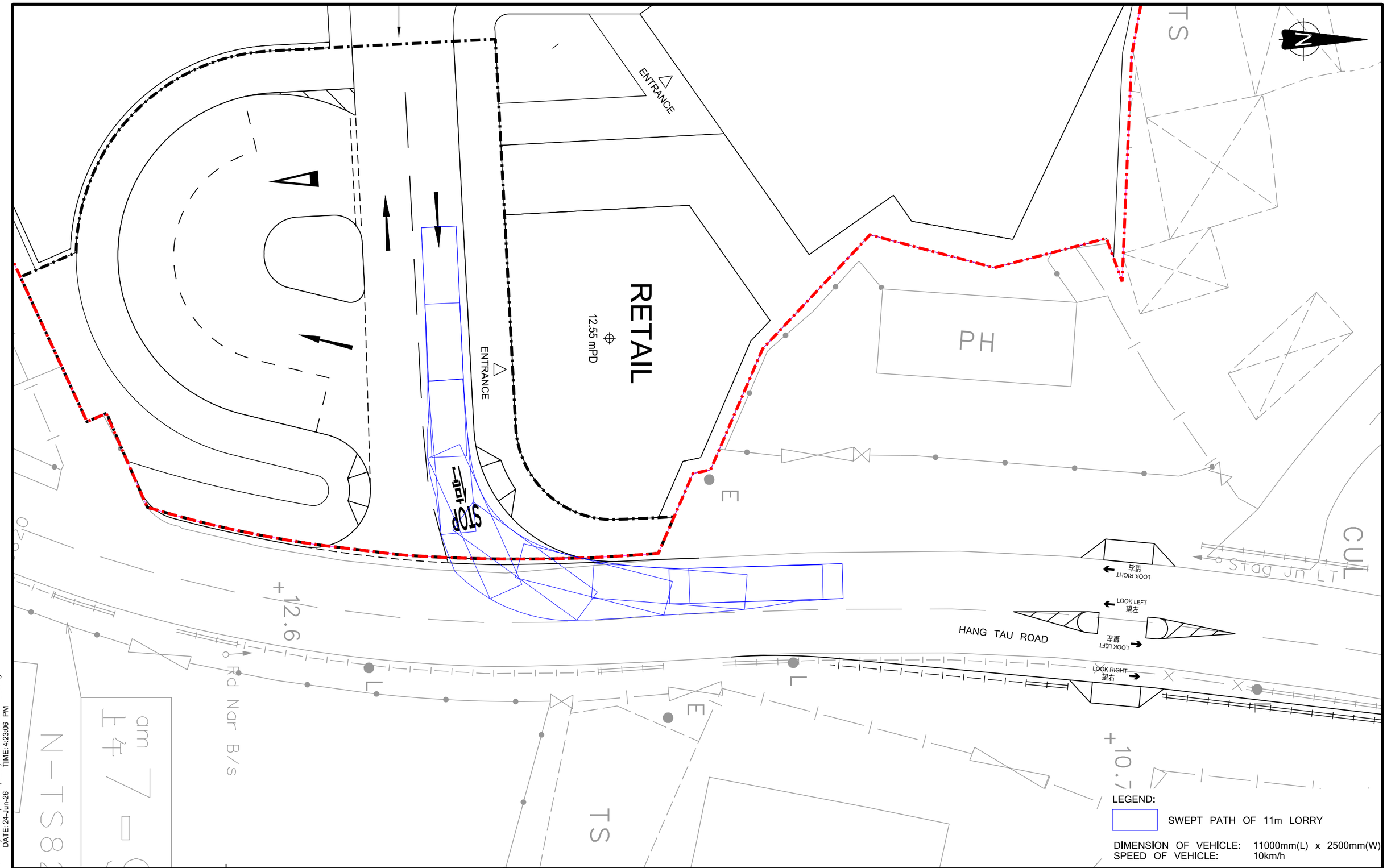
**SWEPT PATH OF 11m LORRY (INGRESS)**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:250(A3) | JUN 2026 | **B2** | - |

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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

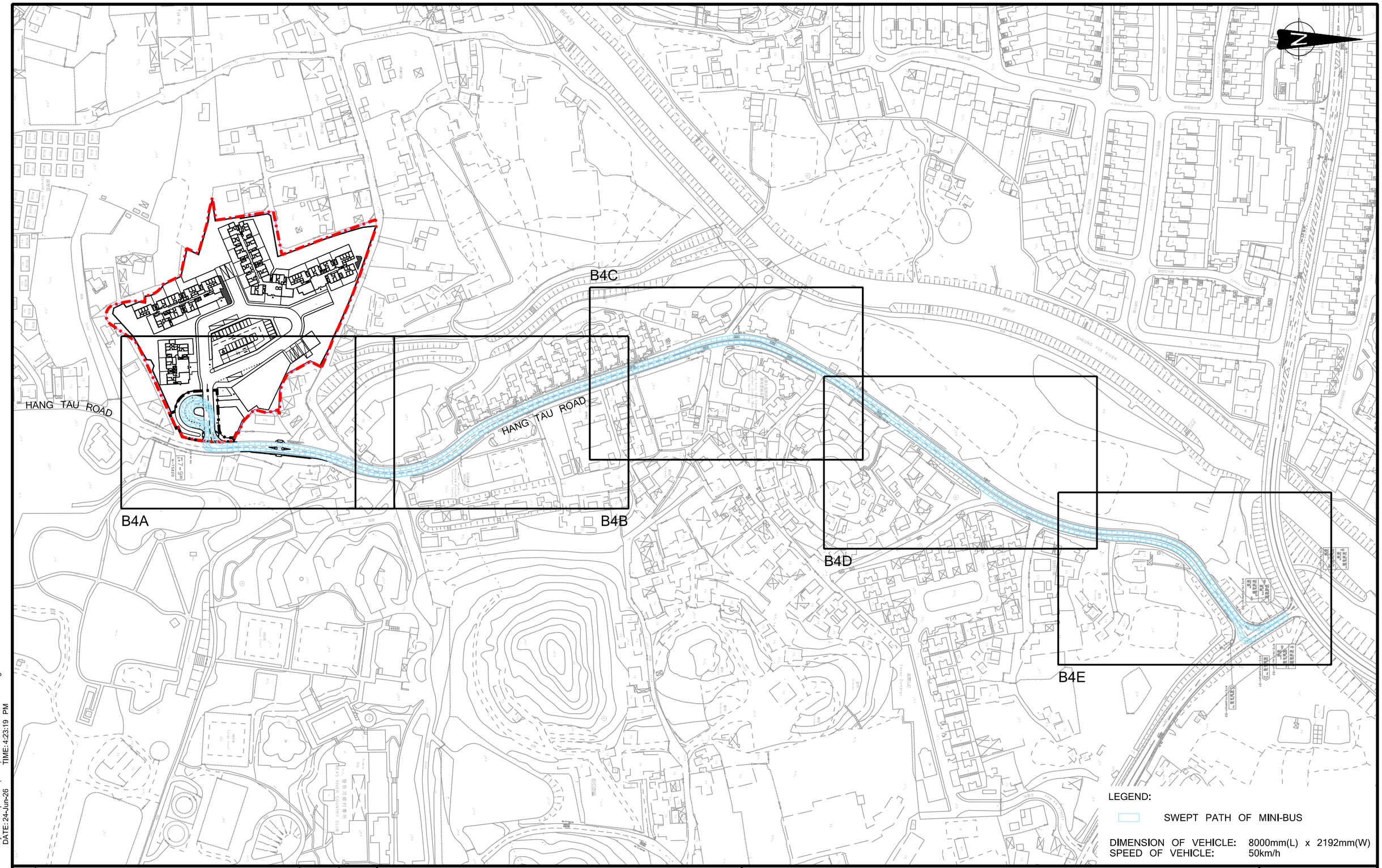
Drawing Title

**SWEPT PATH OF 11m LORRY (EGRESS)**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:250(A3) | JUN 2026 | **B3** | - |

SYSTRA MVA

Original Size : A3




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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

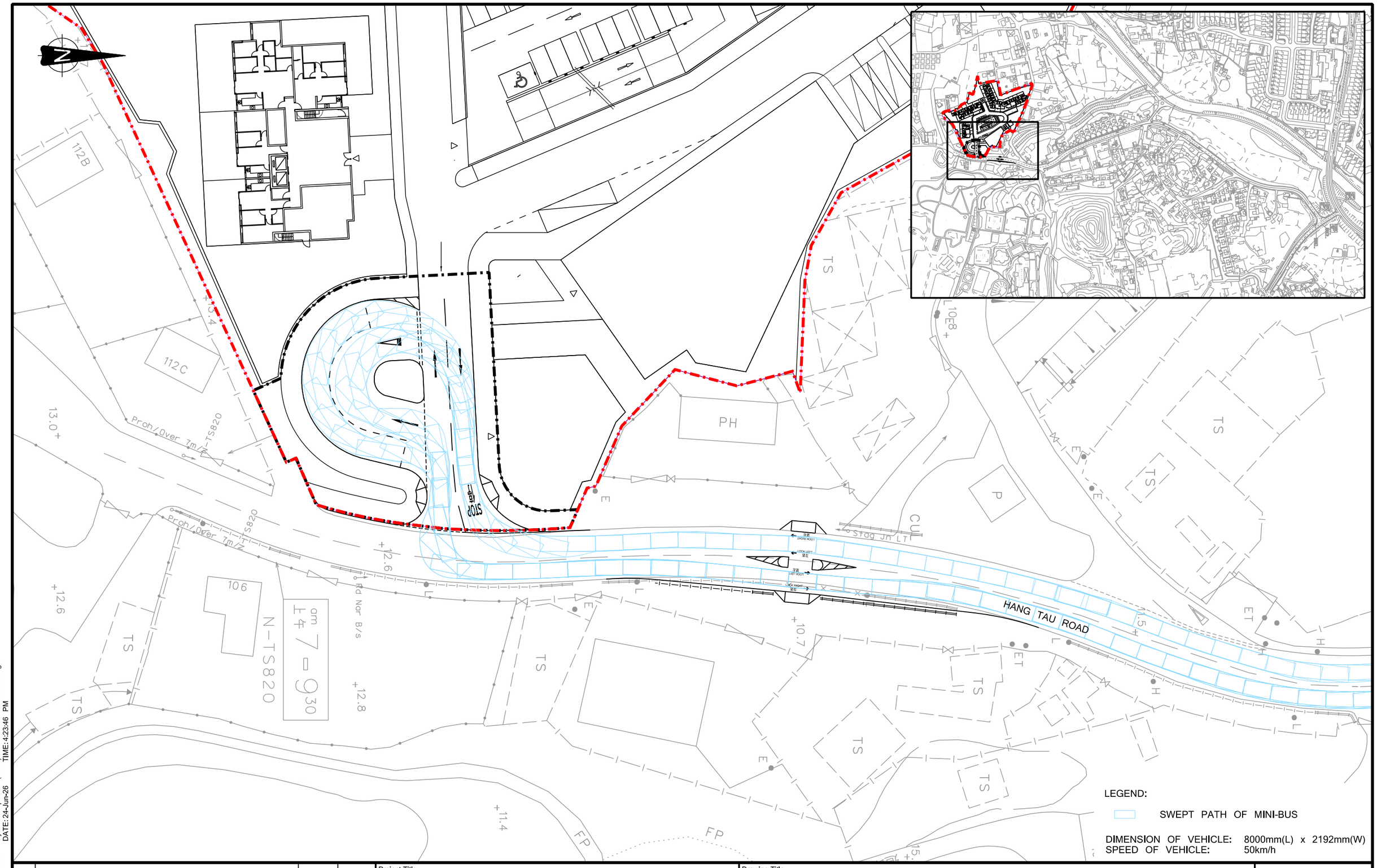
**SWEPT PATH OF MINI-BUS ALONG HANG TAU ROAD (KEYPLAN)**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:2500(A3) | JUN 2026 | **B4** | - |

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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

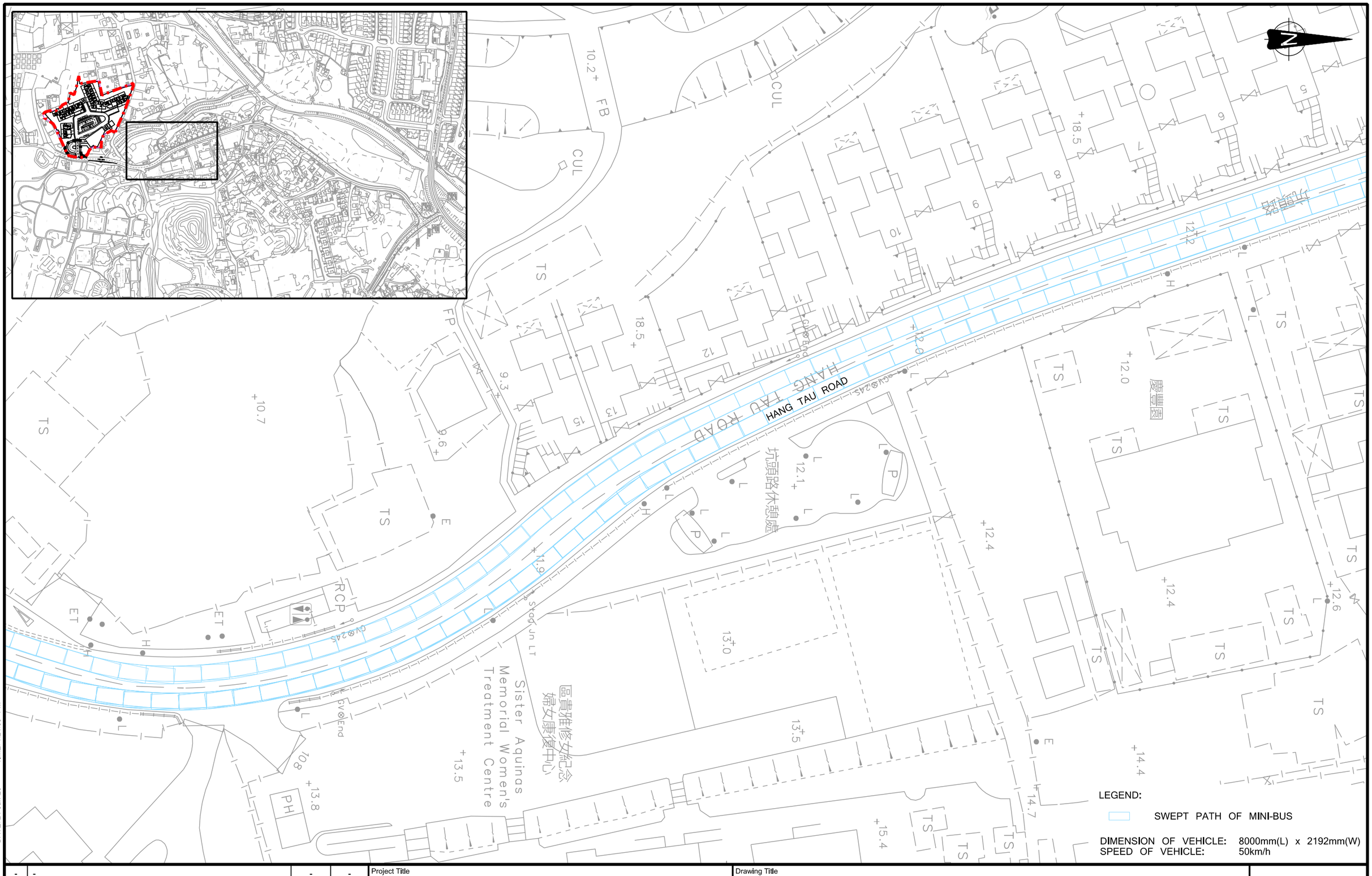
# SWEPT PATH OF MINI-BUS ALONG HANG TAU ROAD (SHEET 1 OF 5)

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

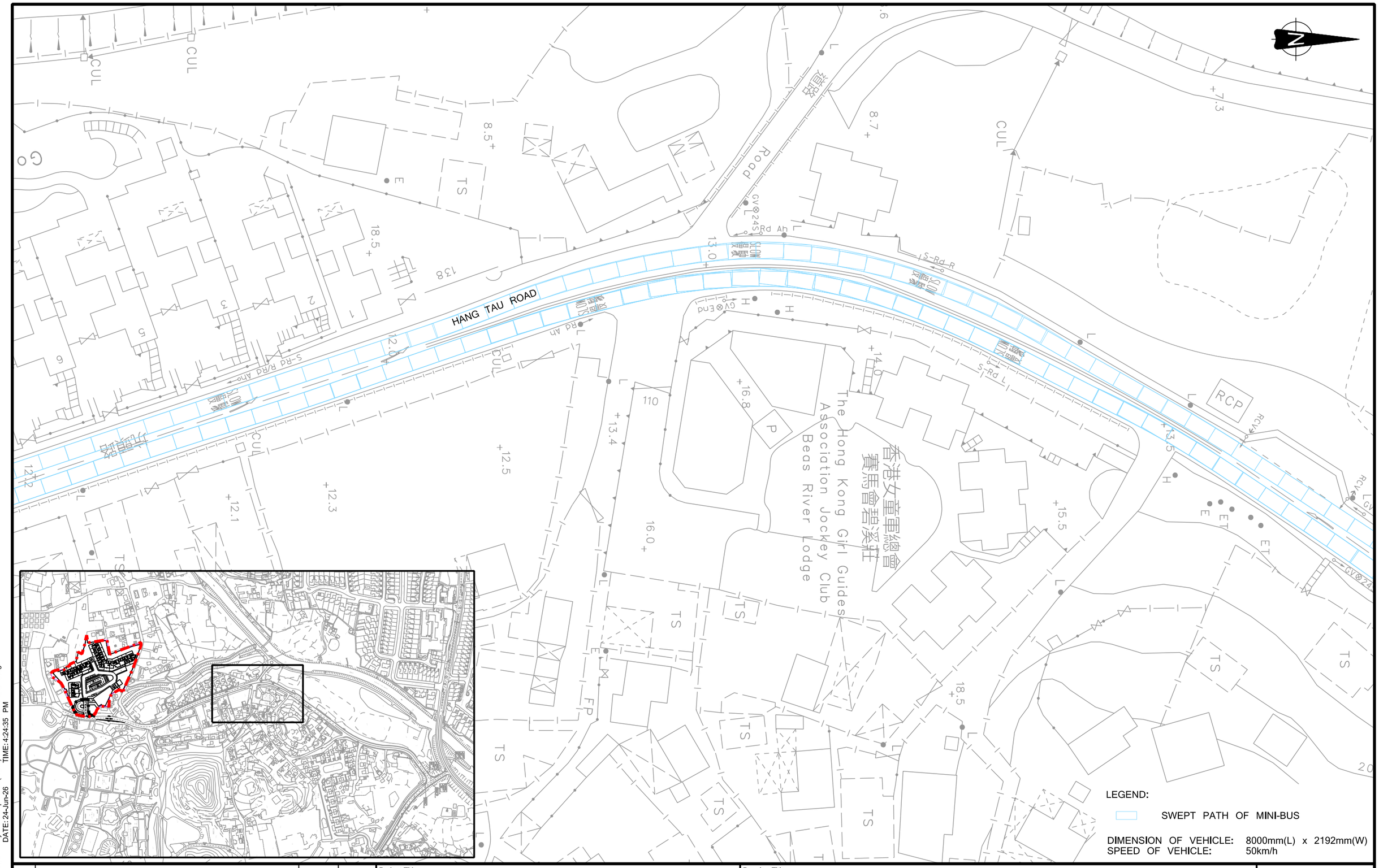
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

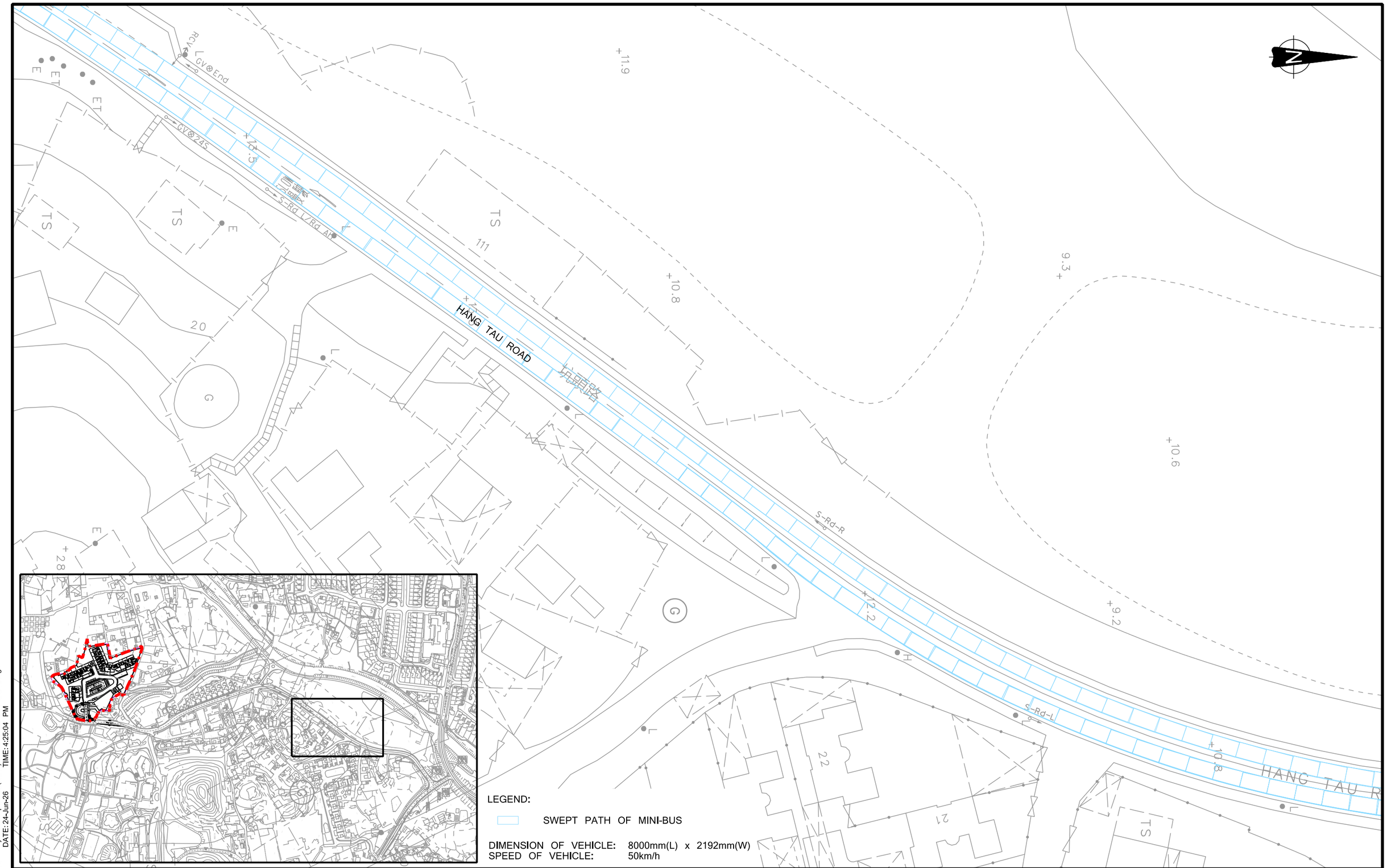
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| Designed | Checked | Scale | Date | Drawing No. | Rev. |
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SYSTRA MVA

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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

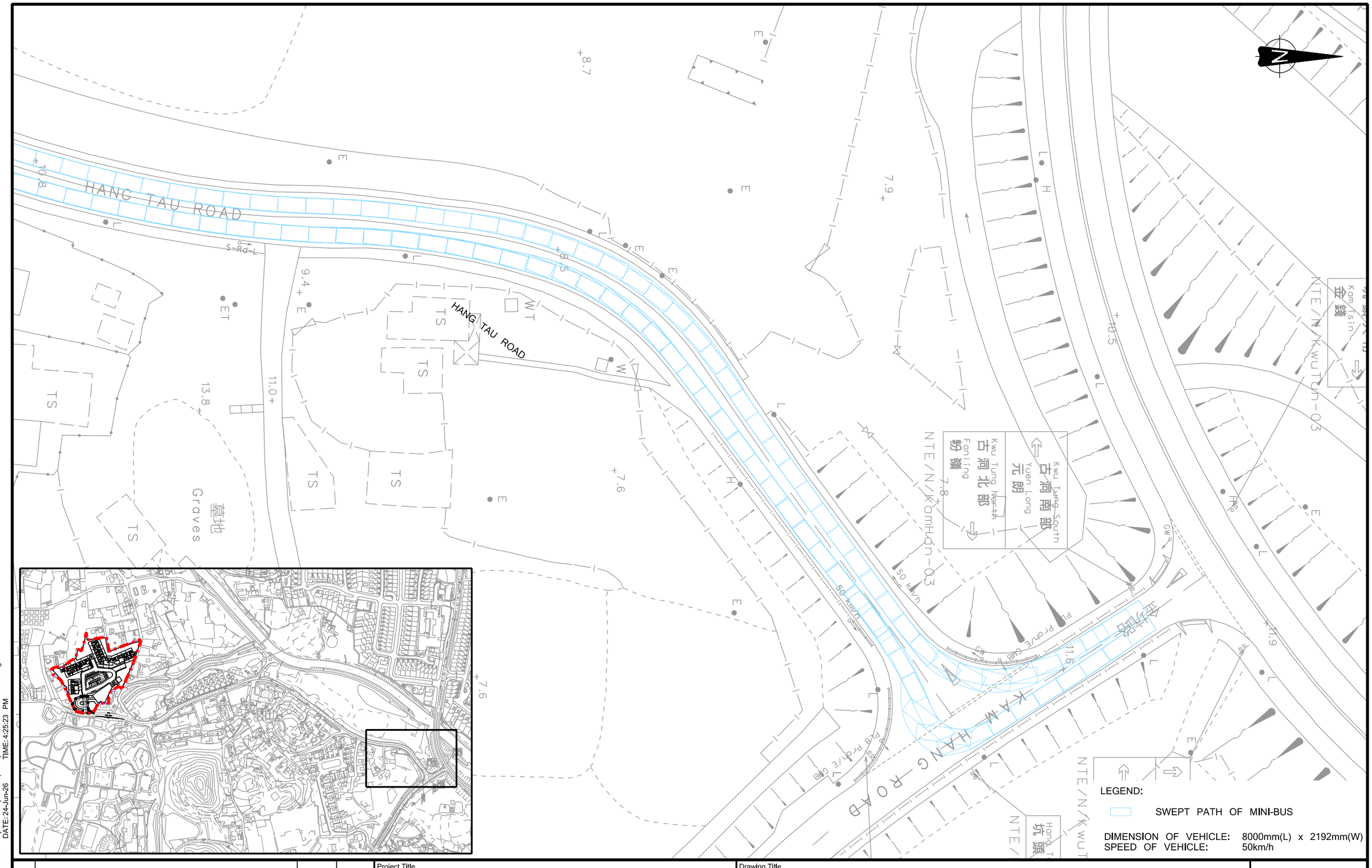
**SWEPT PATH OF MINI-BUS ALONG HANG TAU ROAD (SHEET 4 OF 5)**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

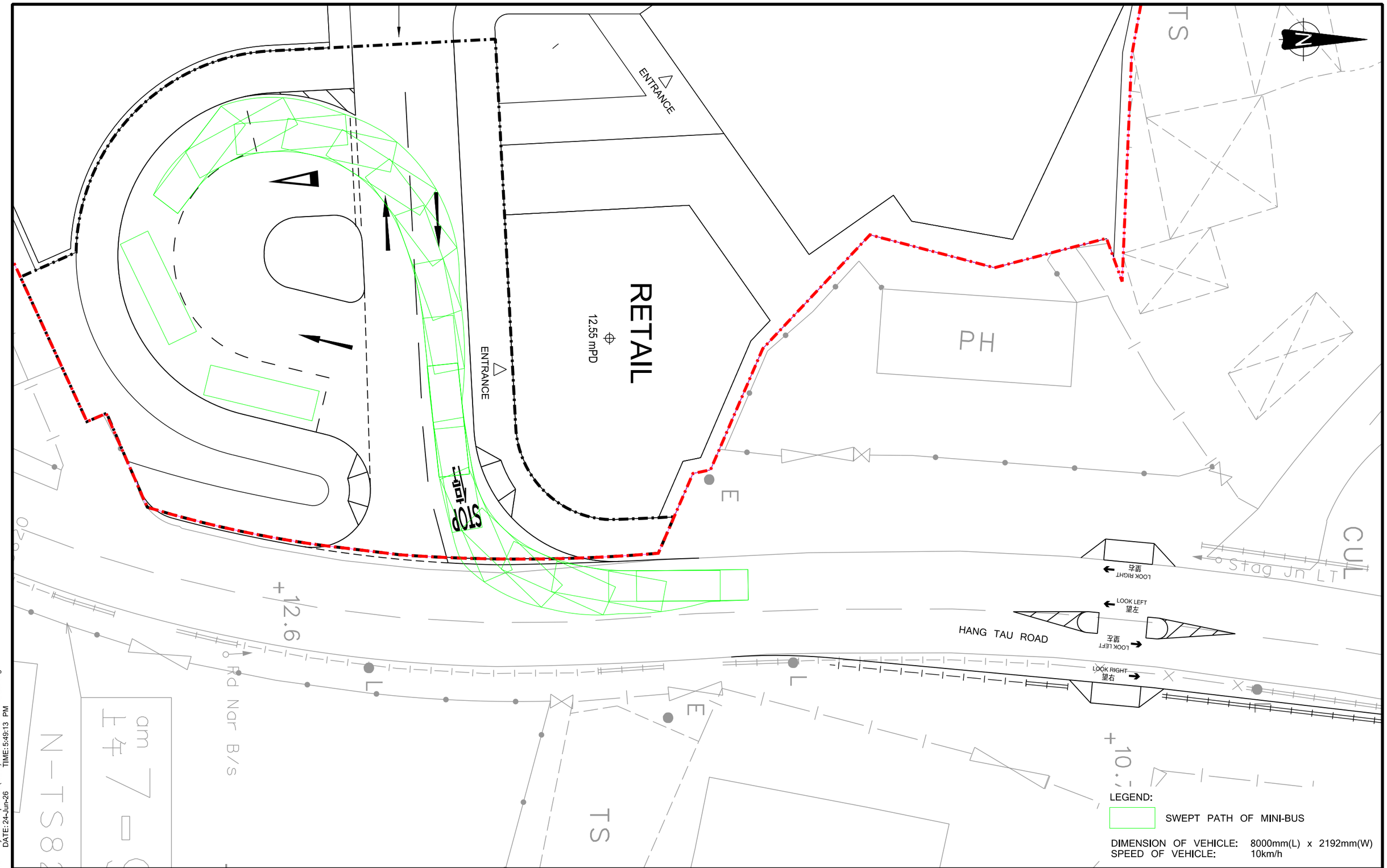
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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

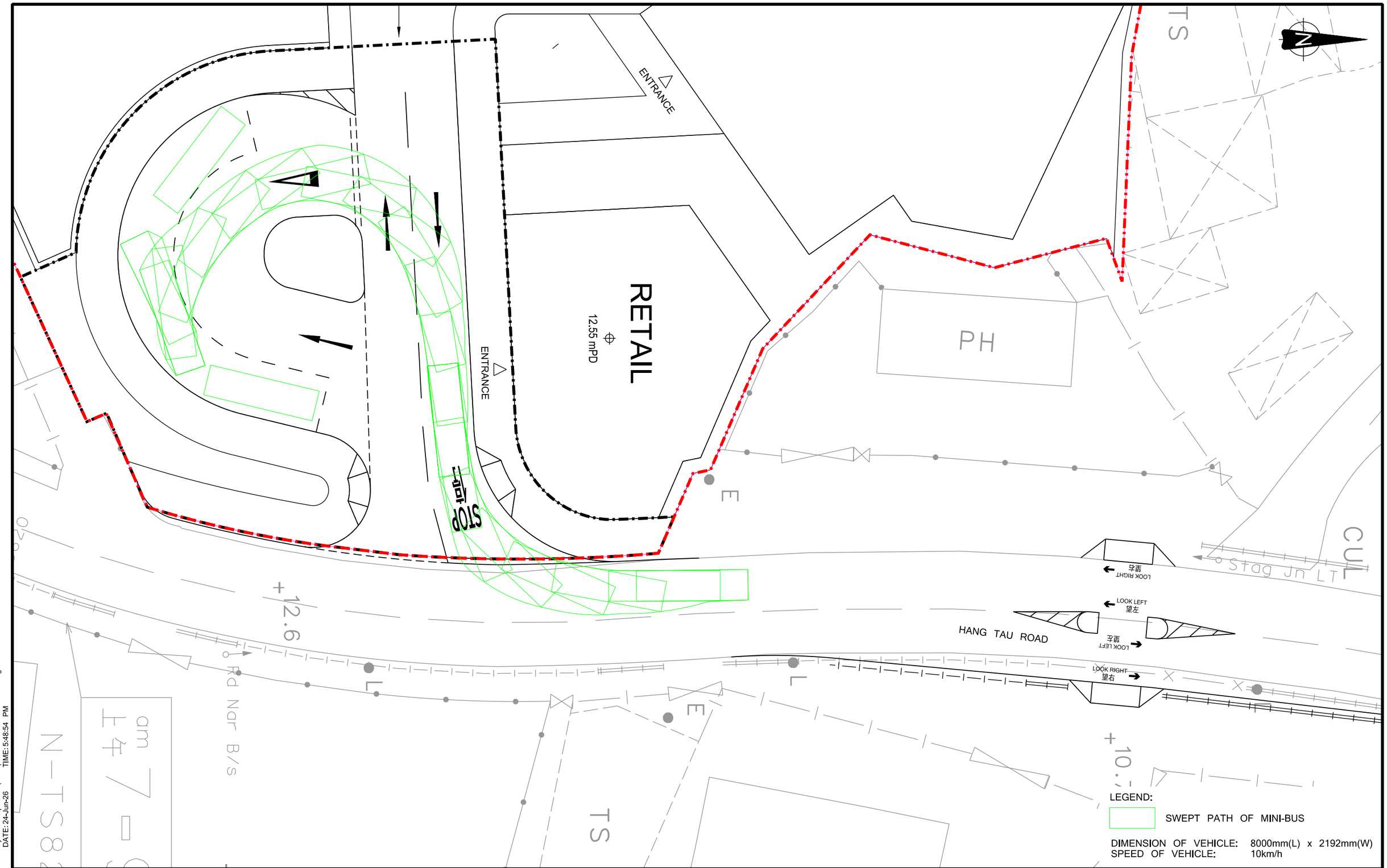
**SWEPT PATH OF MINI-BUS AT PROPOSED LAYBY (SHEET 1 OF 3)**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:250(A3) | JUN 2026 | **B5A** | - |

SYSTRA MVA

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Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

**SWEPT PATH OF MINI-BUS AT PROPOSED LAYBY (SHEET 2 OF 3)**

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
|---|---|---|---|---|---|
| CNM | CHC | 1:250(A3) | JUN 2026 | **B5B** | - |

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DATE: 24-Jun-26
TIME: 5:48:54 PM

Original Size : A3

ENTRANCE

ENTRANCE

RETAIL

12.55 mPD

PH

STOP 停

+12.6

Rd Nar B/s

HANG TAU ROAD

LOOK RIGHT 望右

LOOK LEFT 望左

LOOK LEFT 望左

LOOK RIGHT 望右

Stag Jn LT

LEGEND:

SWEPT PATH OF MINI-BUS

DIMENSION OF VEHICLE: 8000mm(L) x 2192mm(W)
SPEED OF VEHICLE: 10km/h

| Rev. | Description | Checked | Date |
|---|---|---|---|
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |

Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTION FOR COMPREHENSIVE DEVELOPMENT IN HANG TAU TAI PO, KWU TUNG SOUTH

Drawing Title

# SWEPT PATH OF MINI-BUS AT PROPOSED LAYBY (SHEET 3 OF 3)

| Designed | Checked | Scale | Date | Drawing No. | Rev. |
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| CNM | CHC | 1:250(A3) | JUN 2026 | B5C | - |

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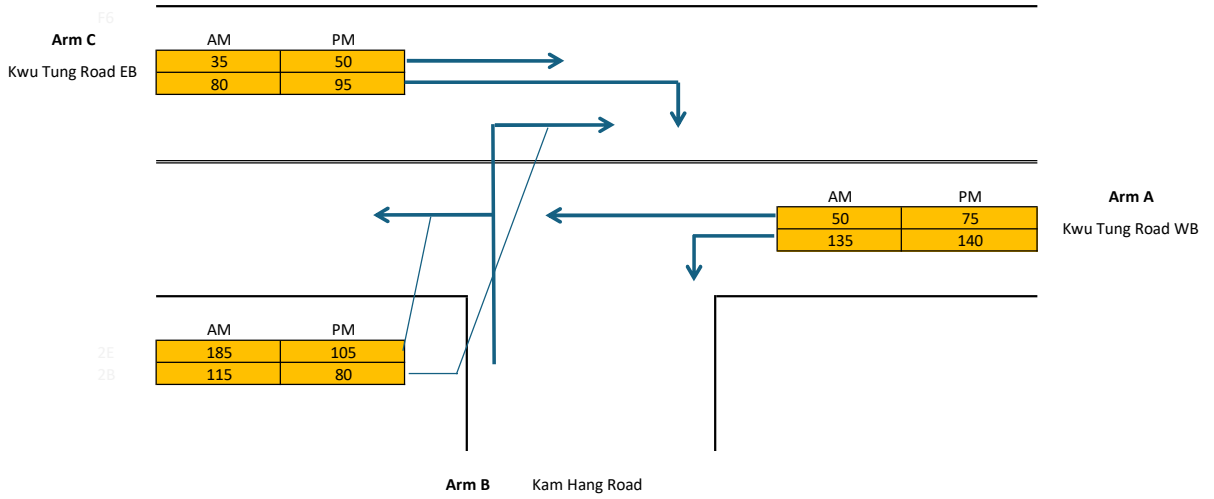
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# APPENDIX C – DETAILS OF JUNCTION ASSESSMENTS

# 2024 Observed

# Simplified Priority Junction Capacity Calculation

| | | | | | |
|---|---|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | | | |
| Junction: | (J1) Kwu Tung Road / Kam Hang Road | | | Designed by: | TCW |
| Scheme: | Existing | | | Checked by: | CHC |
| Design Year: | 2024 | Job No.: CHK50808310 | | Date: | Mar-26 |
| Arm A: | Kwu Tung Road WB | | | | |
| Arm B: | Kam Hang Road | | | | |
| Arm C: | Kwu Tung Road EB | | | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.30 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 3.75 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.60 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 100 | Calculated | D | 0.6141 |
| | Vl(b-a) | 70 | Parameters | E | 0.9912 |
| | Vr(b-c) | 100 | | F | 0.9505 |
| | Vr(c-b) | 70 | | Y | 0.7482 |

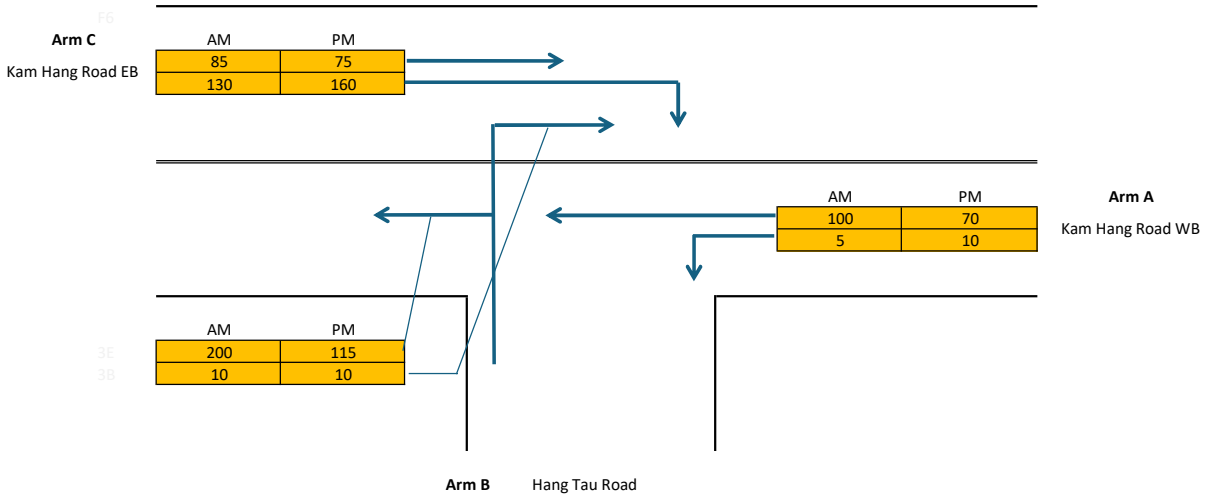
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 35 | 50 |
| | q(c-b) | 80 | 95 |
| | q(a-b) | 135 | 140 |
| | q(a-c) | 50 | 75 |
| | q(b-a) | 115 | 80 |
| | q(b-c) | 185 | 105 |
| | f | 0.62 | 0.57 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 505.277 | 476.92 |
| | Q(c-a) | 1581.9 | 1537.9 |
| | Q(c-b) | 660.244 | 652.48 |
| RFC's | c-a | 0.02 | 0.03 |
| | c-b | 0.12 | 0.15 |
| | b-ac | 0.59 | 0.39 |
| **RFC** | | **0.59** | **0.39** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | |
| Junction: | (J2) Kam Hang Road / Hang Tau Road | Designed by: | TCW |
| Scheme: | Observed | Checked by: | CHC |
| Design Year: | 2024 | Job No.: CHK50808310 | Date: Mar-26 |
| Arm A: | Kam Hang Road WB | | |
| Arm B: | Hang Tau Road | | |
| Arm C: | Kam Hang Road EB | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 6.60 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 4.25 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.30 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 100 | Calculated | D | 0.6044 |
| | Vl(b-a) | 45 | Parameters | E | 1.0469 |
| | Vr(b-c) | 110 | | F | 0.941 |
| | Vr(c-b) | 90 | | Y | 0.7723 |

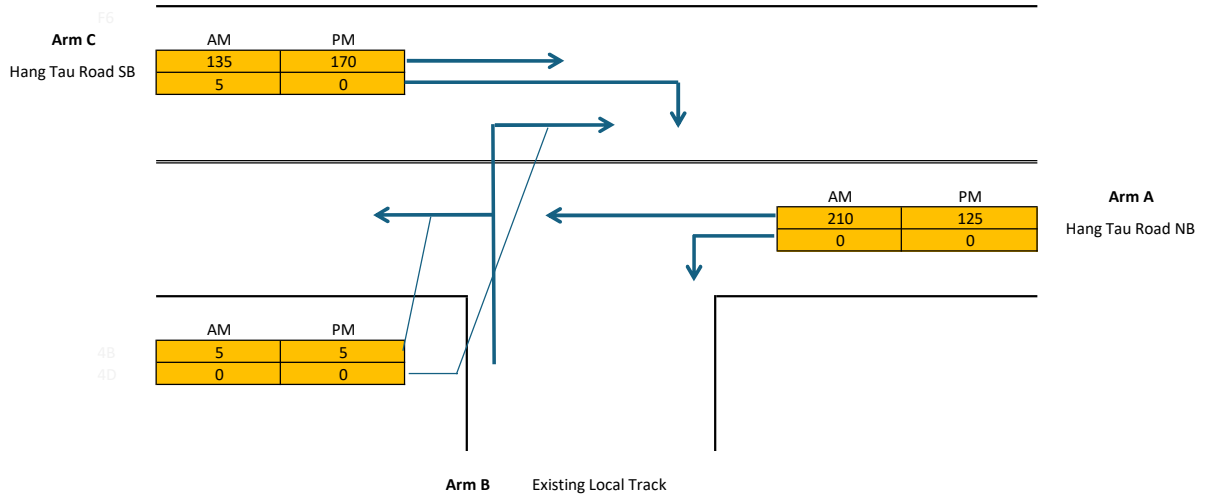
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 85 | 75 |
| | q(c-b) | 130 | 160 |
| | q(a-b) | 5 | 10 |
| | q(a-c) | 100 | 70 |
| | q(b-a) | 10 | 10 |
| | q(b-c) | 200 | 115 |
| | f | 0.95 | 0.92 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 705.063 | 683.16 |
| | Q(c-a) | 1452.44 | 1376.4 |
| | Q(c-b) | 673.261 | 679.87 |
| RFC's | c-a | 0.06 | 0.05 |
| | c-b | 0.19 | 0.24 |
| | b-ac | 0.30 | 0.18 |
| **RFC** | | **0.30** | **0.24** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | | | |
|---|---|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | | | |
| Junction: | (J3) Hang Tau Road / Local Track to Sheung Yue River / Access of Jockey Club River Beas Lodge | | | Designed by: | TCW |
| Scheme: | Observed | | | Checked by: | CHC |
| Design Year: | 2024 | Job No.: CHK50808310 | | Date: | Mar-26 |
| Arm A: | Hang Tau Road NB | | | | |
| Arm B: | Existing Local Track | | | | |
| Arm C: | Hang Tau Road SB | | | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.80 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 3.50 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.90 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 100 | Calculated | D | 0.6257 |
| | Vl(b-a) | 100 | Parameters | E | 0.9682 |
| | Vr(b-c) | 100 | | F | 0.9867 |
| | Vr(c-b) | 80 | | Y | 0.7309 |

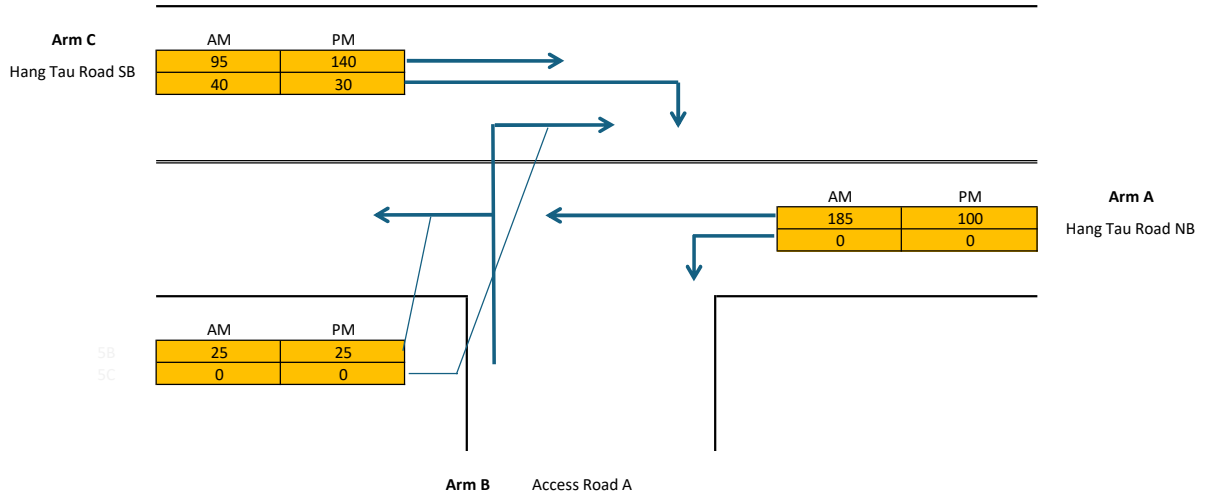
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 135 | 170 |
| | q(c-b) | 5 | 0 |
| | q(a-b) | 0 | 0 |
| | q(a-c) | 210 | 125 |
| | q(b-a) | 0 | 0 |
| | q(b-c) | 5 | 5 |
| | f | 1.00 | 1.00 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 667.184 | 689.08 |
| | Q(c-a) | 1786.76 | 1800 |
| | Q(c-b) | 679.933 | 702.25 |
| RFC's | c-a | 0.08 | 0.09 |
| | c-b | 0.01 | 0.00 |
| | b-ac | 0.01 | 0.01 |
| **RFC** | | **0.08** | **0.09** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | |
| Junction: | (J4) Hang Tau Road / Access Road A | Designed by: | TCW |
| Scheme: | Observed | Checked by: | CHC |
| Design Year: | 2024 | Job No.: CHK50808310 | Date: Mar-26 |
| Arm A: | Hang Tau Road NB | | |
| Arm B: | Access Road A | | |
| Arm C: | Hang Tau Road SB | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.00 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 4.50 | | w(b-c) | 3.30 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.30 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 30 | Calculated Parameters | D | 0.5573 |
| | Vl(b-a) | 22 | | E | 0.8888 |
| | Vr(b-c) | 30 | | F | 0.8888 |
| | Vr(c-b) | 30 | | Y | 0.7585 |

| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 95 | 140 |
| | q(c-b) | 40 | 30 |
| | q(a-b) | 0 | 0 |
| | q(a-c) | 185 | 100 |
| | q(b-a) | 0 | 0 |
| | q(b-c) | 25 | 25 |
| | f | 1.00 | 1.00 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 616.734 | 637.59 |
| | Q(c-a) | 1683.26 | 1715.3 |
| | Q(c-b) | 616.734 | 637.59 |
| RFC's | c-a | 0.06 | 0.08 |
| | c-b | 0.06 | 0.05 |
| | b-ac | 0.04 | 0.04 |
| **RFC** | | **0.06** | **0.08** |

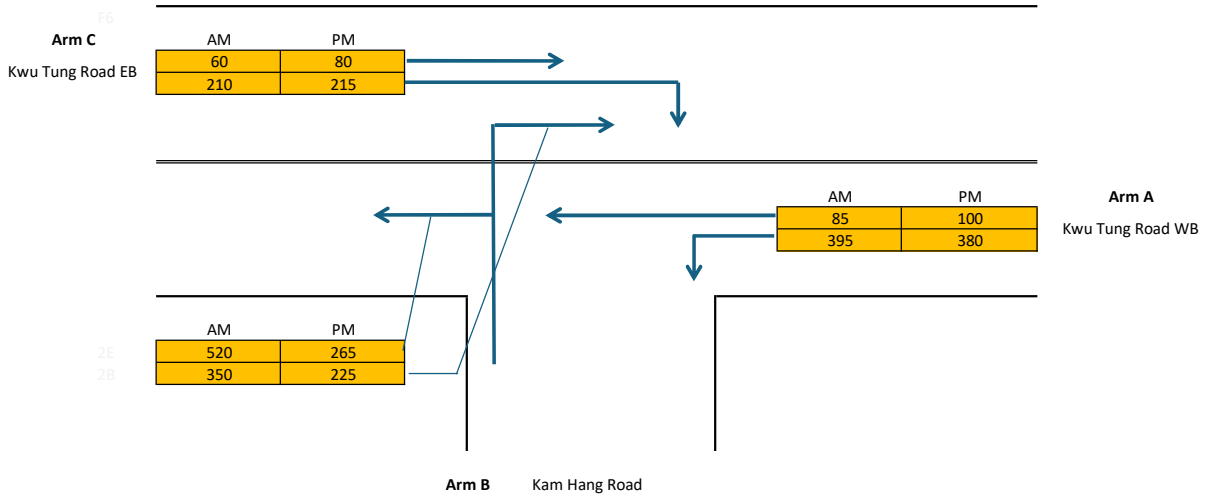
Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# 2034 Reference

# Simplified Priority Junction Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | |
| Junction: | (J1) Kwu Tung Road / Kam Hang Road | Designed by: | TCW |
| Scheme: | Reference | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | Date: Mar-26 |
| Arm A: | Kwu Tung Road WB | | |
| Arm B: | Kam Hang Road | | |
| Arm C: | Kwu Tung Road EB | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.30 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 3.75 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.60 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 100 | Calculated | D | 0.6141 |
| | Vl(b-a) | 70 | Parameters | E | 0.9912 |
| | Vr(b-c) | 100 | | F | 0.9505 |
| | Vr(c-b) | 70 | | Y | 0.7482 |

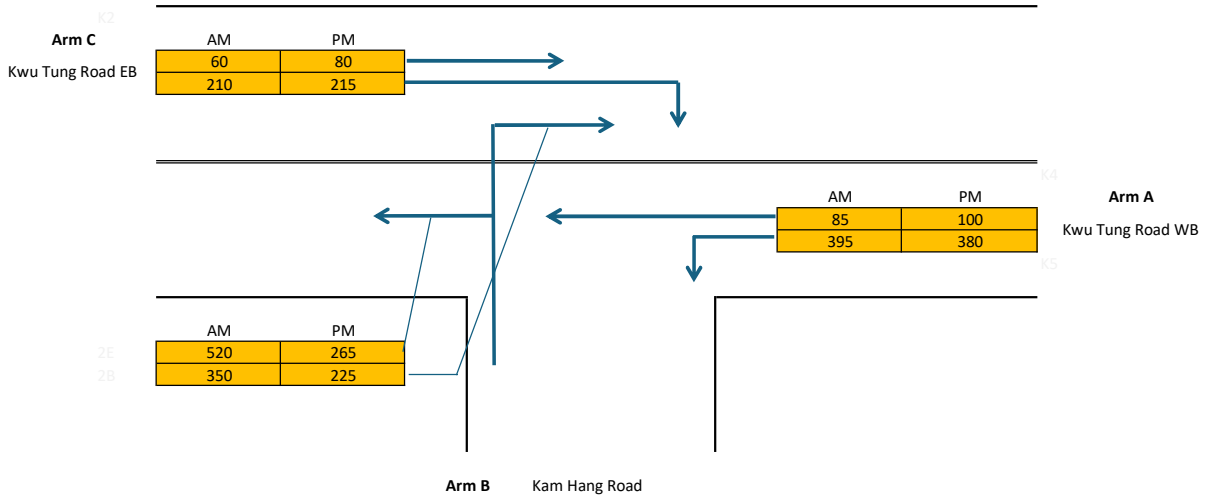
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 60 | 80 |
| | q(c-b) | 210 | 215 |
| | q(a-b) | 395 | 380 |
| | q(a-c) | 85 | 100 |
| | q(b-a) | 350 | 225 |
| | q(b-c) | 520 | 265 |
| | f | 0.60 | 0.54 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 437.925 | 412.14 |
| | Q(c-a) | 1152.61 | 1137.2 |
| | Q(c-b) | 583.883 | 583.88 |
| RFC's | c-a | 0.05 | 0.07 |
| | c-b | 0.36 | 0.37 |
| | b-ac | 1.99 | 1.19 |
| **RFC** | | **1.99** | **1.19** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | | | |
|---|---|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | | | |
| Junction: | (J1) Kwu Tung Road / Kam Hang Road | | | Designed by: | TCW |
| Scheme: | Reference (with Improvement scheme under Y/NE-KTS/14) | | | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | | Date: | Mar-26 |
| Arm A: | Kwu Tung Road WB | | | | |
| Arm B: | Kam Hang Road | | | | |
| Arm C: | Kwu Tung Road EB | | | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.30 | Lane widths (m) | w(b-a) | 4.70 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 4.70 |
| Blockage of major road right turn | Y/N? | N | | w(c-b) | 3.00 |
| Combined stream on minor arm | Y/N? | N | | | |
| Visibility Distances (m) | Vr(b-a) | 135 | Calculated | D | 1.0968 |
| | Vl(b-a) | 125 | Parameters | E | 1.1135 |
| | Vr(b-c) | 135 | | F | 0.922 |
| | Vr(c-b) | 100 | | Y | 0.7482 |

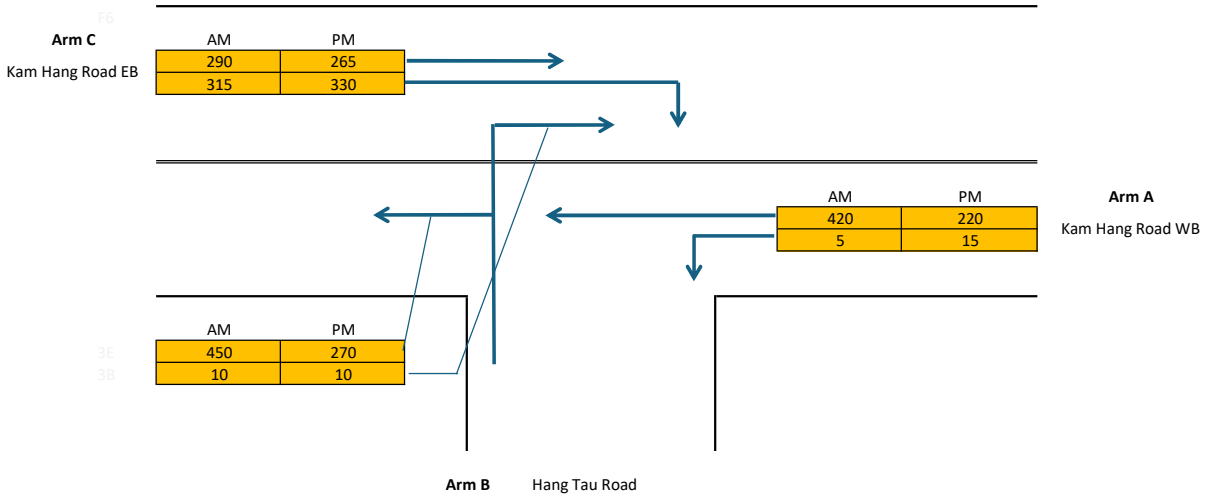
| **ANALYSIS** | | **AM PEAK** | | **PM PEAK** | |
|---|---|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 60 | | 80 | |
| | q(c-b) | 210 | | 215 | |
| | q(a-b) | 395 | | 380 | |
| | q(a-c) | 85 | | 100 | |
| | q(b-a) | 350 | | 225 | |
| | q(b-c) | 520 | | 265 | |
| | f | 0.60 | | 0.54 | |
| CAPACITIES (pcu/hr) | Q(b-a) | 514.764 | | 506.16 | |
| | Q(b-c) | 756.42 | | 753.67 | |
| | Q(b-c)(0) | 627.843 | | 669.92 | |
| | Q(c-b) | 566.369 | | 566.37 | |
| RFC's | c-b | 0.37 | | 0.38 | |
| | b-a | 0.68 | | 0.44 | |
| | b-c b-c(0) | 0.69 | 0.83 | 0.35 | 0.40 |
| **RFC** | | **0.83** | | **0.44** | |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | |
| Junction: | (J2) Kam Hang Road / Hang Tau Road | Designed by: | TCW |
| Scheme: | Reference | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | Date: Mar-26 |
| Arm A: | Kam Hang Road WB | | |
| Arm B: | Hang Tau Road | | |
| Arm C: | Kam Hang Road EB | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 6.60 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 4.25 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.30 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 100 | Calculated | D | 0.6044 |
| | Vl(b-a) | 45 | Parameters | E | 1.0469 |
| | Vr(b-c) | 110 | | F | 0.941 |
| | Vr(c-b) | 90 | | Y | 0.7723 |

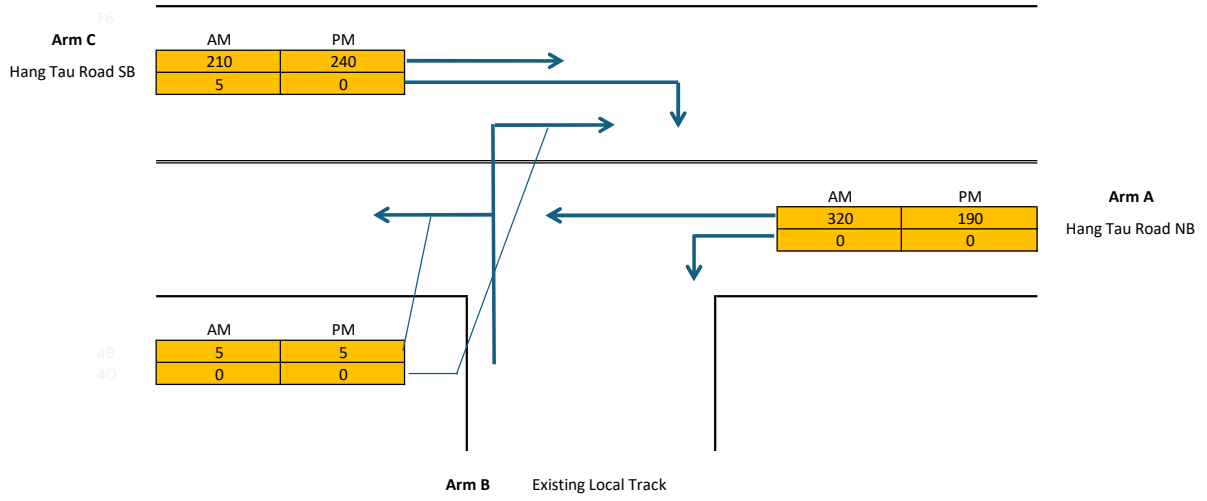
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 290 | 265 |
| | q(c-b) | 315 | 330 |
| | q(a-b) | 5 | 15 |
| | q(a-c) | 420 | 220 |
| | q(b-a) | 10 | 10 |
| | q(b-c) | 450 | 270 |
| | f | 0.98 | 0.96 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 624.757 | 664.26 |
| | Q(c-a) | 836.717 | 870.24 |
| | Q(c-b) | 588.612 | 638.87 |
| RFC's | c-a | 0.35 | 0.30 |
| | c-b | 0.54 | 0.52 |
| | b-ac | 0.74 | 0.42 |
| **RFC** | | **0.74** | **0.52** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | | |
|---|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | | |
| Junction: | (J3) Hang Tau Road / Local Track to Sheung Yue River / Access of Jockey Club River Beas Lodge | | Designed by: | TCW |
| Scheme: | Reference | | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | Date: | Mar-26 |
| Arm A: | Hang Tau Road NB | | | |
| Arm B: | Existing Local Track | | | |
| Arm C: | Hang Tau Road SB | | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.80 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 3.50 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.90 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 100 | Calculated | D | 0.6257 |
| | Vl(b-a) | 100 | Parameters | E | 0.9682 |
| | Vr(b-c) | 100 | | F | 0.9867 |
| | Vr(c-b) | 80 | | Y | 0.7309 |

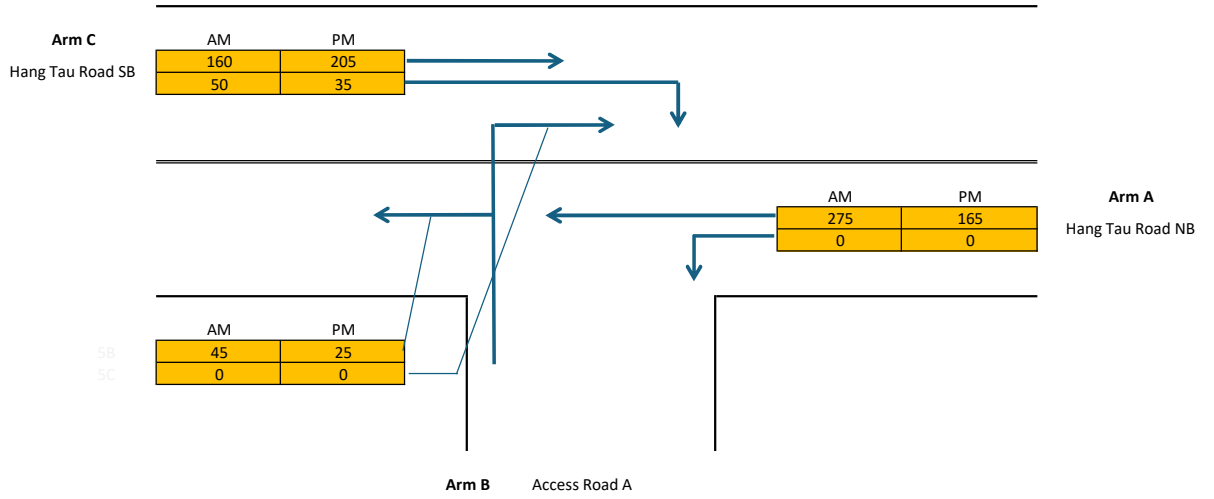
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 210 | 240 |
| | q(c-b) | 5 | 0 |
| | q(a-b) | 0 | 0 |
| | q(a-c) | 320 | 190 |
| | q(b-a) | 0 | 0 |
| | q(b-c) | 5 | 5 |
| | f | 1.00 | 1.00 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 638.851 | 672.34 |
| | Q(c-a) | 1786.18 | 1800 |
| | Q(c-b) | 651.058 | 685.18 |
| RFC's | c-a | 0.12 | 0.13 |
| | c-b | 0.01 | 0.00 |
| | b-ac | 0.01 | 0.01 |
| **RFC** | | **0.12** | **0.13** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | |
| Junction: | (J4) Hang Tau Road / Access Road A | Designed by: | TCW |
| Scheme: | Reference | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | Date: Mar-26 |
| Arm A: | Hang Tau Road NB | | |
| Arm B: | Access Road A | | |
| Arm C: | Hang Tau Road SB | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.00 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 4.50 | | w(b-c) | 3.30 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.30 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 30 | Calculated Parameters | D | 0.5573 |
| | Vl(b-a) | 22 | | E | 0.8888 |
| | Vr(b-c) | 30 | | F | 0.8888 |
| | Vr(c-b) | 30 | | Y | 0.7585 |

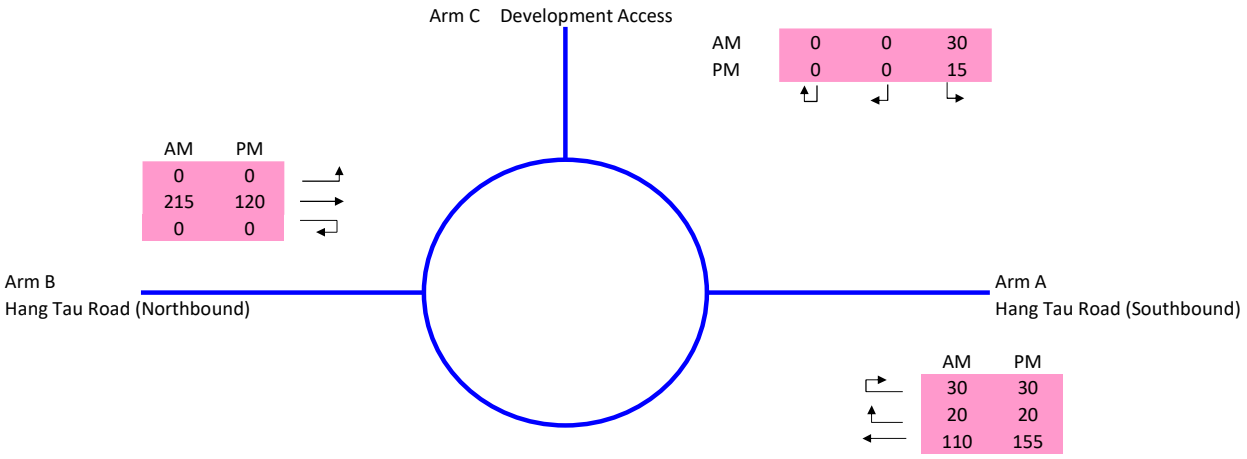
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 160 | 205 |
| | q(c-b) | 50 | 35 |
| | q(a-b) | 0 | 0 |
| | q(a-c) | 275 | 165 |
| | q(b-a) | 0 | 0 |
| | q(b-c) | 45 | 25 |
| | f | 1.00 | 1.00 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 594.65 | 621.64 |
| | Q(c-a) | 1648.65 | 1698.7 |
| | Q(c-b) | 594.65 | 621.64 |
| RFC's | c-a | 0.10 | 0.12 |
| | c-b | 0.08 | 0.06 |
| | b-ac | 0.08 | 0.04 |
| **RFC** | | **0.10** | **0.12** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Roundabout Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang | | |
| Junction: | (J5) Hang Tau Road / Proposed Development Access | Designed by: | TCW |
| Scheme: | Reference | Checked by: | CHC |
| Design Year: | 2034 Job No.: CHK50808310 | Date: | MAR, 2026 |
| Arm A | Hang Tau Road (Southbound) | | |
| Arm B | Hang Tau Road (Northbound) | | |
| Arm C | Development Access | | |



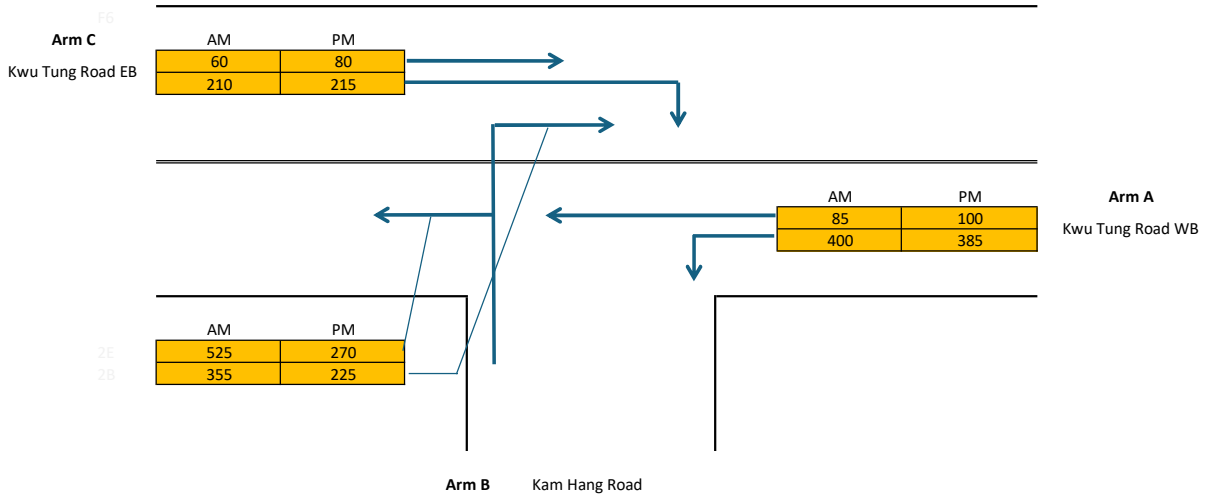

| | | | | ENTRY ARM | A | B | C | |
|---|---|---|---|---|---|---|---|---|
| INPUT PARAMETERS | | | | | | | | |
| V | Approach Half Width (m) | | | | 3.90 | 3.65 | 3.65 | |
| E | Entry Width (m) | | | | 4.50 | 4.50 | 4.00 | |
| L | Effective Length of Flare (m) | | | | 3.00 | 2.00 | 2.00 | |
| R | Entry Radius (m) | | | | 40.00 | 15.00 | 18.00 | |
| D | Inscribed Circle Diameter (m) | | | | 18.00 | 18.00 | 18.00 | |
| A | Entry Angle (degree) | | | | 25.00 | 60.00 | 35.00 | |
| OUTPUT PARAMETERS | | | | | | | | |
| S | = 1.6 (E - V) / L | Sharpness of flare | | | 0.32 | 0.68 | 0.28 | |
| K | = 1 - 0.00347 (A-30) - 0.978 (1/R - 0.05) | | | | 1.04 | 0.88 | 0.98 | |
| X2 | = V + ( (E-V) / (1+2S) ) | | | | 4.27 | 4.01 | 3.87 | |
| M | = EXP ( (D-60) /10) | | | | 0.01 | 0.01 | 0.01 | |
| F | = 303 * X2 | | | | 1293 | 1215 | 1174 | |
| Td | = 1 + ( 0.5 / (1+M) ) | | | | 1.49 | 1.49 | 1.49 | |
| Fc | = 0.21*Td (1 + 0.2*X2) | | | | 0.58 | 0.56 | 0.56 | |
| AM RESULT | | | | | | | | |
| Q | Entry Flow (pcu/hour) | | | | 160 | 215 | 30 | |
| Qc | Circulating Flow Across Entry (pcu/hour) | | | | 0 | 50 | 245 | |
| Qe | = K (F - Fc*Qc) | | | | 1347 | 1044 | 1014 | |
| **DFC** | = Q / Qe | Design Flow / Capacity | 0.21 | | 0.12 | **0.21** | 0.03 | |
| | | Total Entry Flows | 405 | | | | | |
| PM RESULT | | | | | | | | |
| Q | Entry Flow (pcu/hour) | | | | 205 | 120 | 15 | |
| Qc | Circulating Flow Across Entry (pcu/hour) | | | | 0 | 50 | 150 | |
| Qe | = K (F - Fc*Qc) | | | | 1347 | 1044 | 1066 | |
| **DFC** | = Q / Qe | Design Flow / Capacity | 0.15 | | **0.15** | 0.11 | 0.01 | |
| | | Total Entry Flows | 340 | | | | | |

***All the above formulas are in accordance to T.P.D.M. Vol.2 Chp.4 Sec 4.5.9***

# 2034 Design

# Simplified Priority Junction Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | |
| Junction: | (J1) Kwu Tung Road / Kam Hang Road | Designed by: | TCW |
| Scheme: | Design | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | Date: Mar-26 |
| Arm A: | Kwu Tung Road WB | | |
| Arm B: | Kam Hang Road | | |
| Arm C: | Kwu Tung Road EB | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.30 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 3.75 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.60 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 100 | Calculated Parameters | D | 0.6141 |
| | Vl(b-a) | 70 | | E | 0.9912 |
| | Vr(b-c) | 100 | | F | 0.9505 |
| | Vr(c-b) | 70 | | Y | 0.7482 |

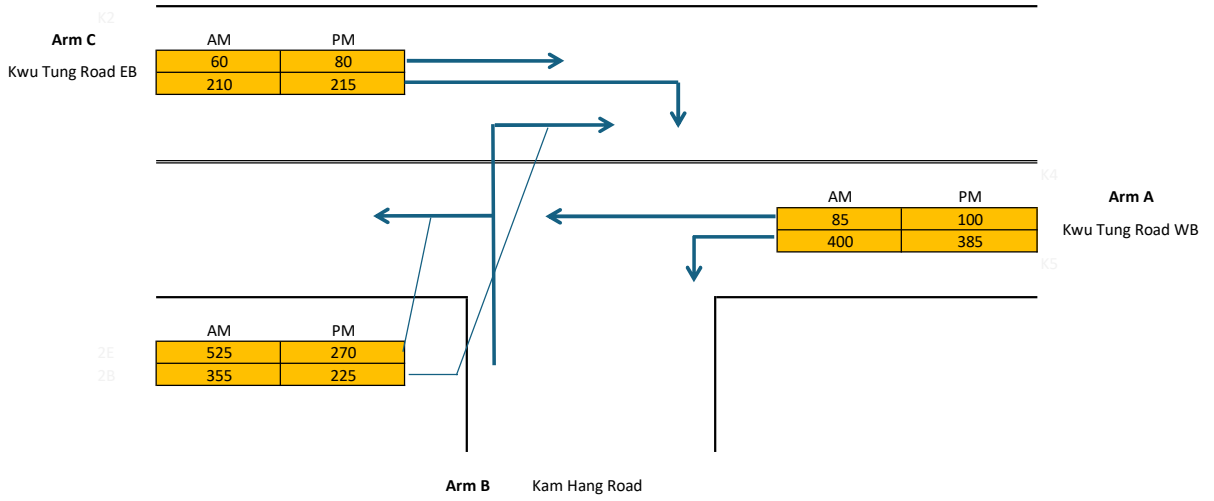
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 60 | 80 |
| | q(c-b) | 210 | 215 |
| | q(a-b) | 400 | 385 |
| | q(a-c) | 85 | 100 |
| | q(b-a) | 355 | 225 |
| | q(b-c) | 525 | 270 |
| | f | 0.60 | 0.55 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 437.061 | 413.32 |
| | Q(c-a) | 1151.17 | 1135.7 |
| | Q(c-b) | 582.589 | 582.59 |
| RFC's | c-a | 0.05 | 0.07 |
| | c-b | 0.36 | 0.37 |
| | b-ac | 2.01 | 1.20 |
| **RFC** | | **2.01** | **1.20** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | | | |
|---|---|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | | | |
| Junction: | (J1) Kwu Tung Road / Kam Hang Road | | | Designed by: | TCW |
| Scheme: | Design (with Improvement scheme under Y/NE-KTS/14) | | | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | | Date: | Mar-26 |
| Arm A: | Kwu Tung Road WB | | | | |
| Arm B: | Kam Hang Road | | | | |
| Arm C: | Kwu Tung Road EB | | | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.30 | Lane widths (m) | w(b-a) | 4.70 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 4.70 |
| Blockage of major road right turn | Y/N? | N | | w(c-b) | 3.00 |
| Combined stream on minor arm | Y/N? | N | | | |
| Visibility Distances (m) | Vr(b-a) | 135 | Calculated | D | 1.0968 |
| | Vl(b-a) | 125 | Parameters | E | 1.1135 |
| | Vr(b-c) | 135 | | F | 0.922 |
| | Vr(c-b) | 100 | | Y | 0.7482 |

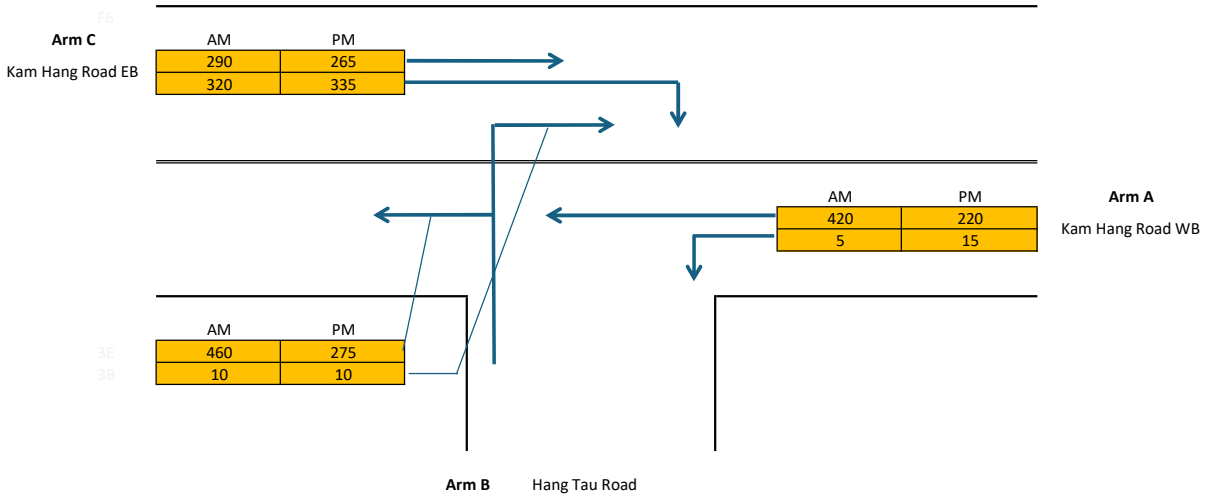
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 60 | 80 |
| | q(c-b) | 210 | 215 |
| | q(a-b) | 400 | 385 |
| | q(a-c) | 85 | 100 |
| | q(b-a) | 355 | 225 |
| | q(b-c) | 525 | 270 |
| | f | 0.60 | 0.55 |
| CAPACITIES (pcu/hr) | Q(b-a) | 514.173 | 505.57 |
| | Q(b-c) | 755.82 | 753.07 |
| | Q(b-c)(0) | 625.36 | 669.28 |
| | Q(c-b) | 565.114 | 565.11 |
| RFC's | c-b | 0.37 | 0.38 |
| | b-a | 0.69 | 0.45 |
| | b-c b-c(0) | 0.69 0.84 | 0.36 0.40 |
| **RFC** | | **0.84** | **0.45** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | |
| Junction: | (J2) Kam Hang Road / Hang Tau Road | Designed by: | TCW |
| Scheme: | Design | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | Date: Mar-26 |
| Arm A: | Kam Hang Road WB | | |
| Arm B: | Hang Tau Road | | |
| Arm C: | Kam Hang Road EB | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 6.60 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 4.25 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.30 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 100 | Calculated Parameters | D | 0.6044 |
| | Vl(b-a) | 45 | | E | 1.0469 |
| | Vr(b-c) | 110 | | F | 0.941 |
| | Vr(c-b) | 90 | | Y | 0.7723 |

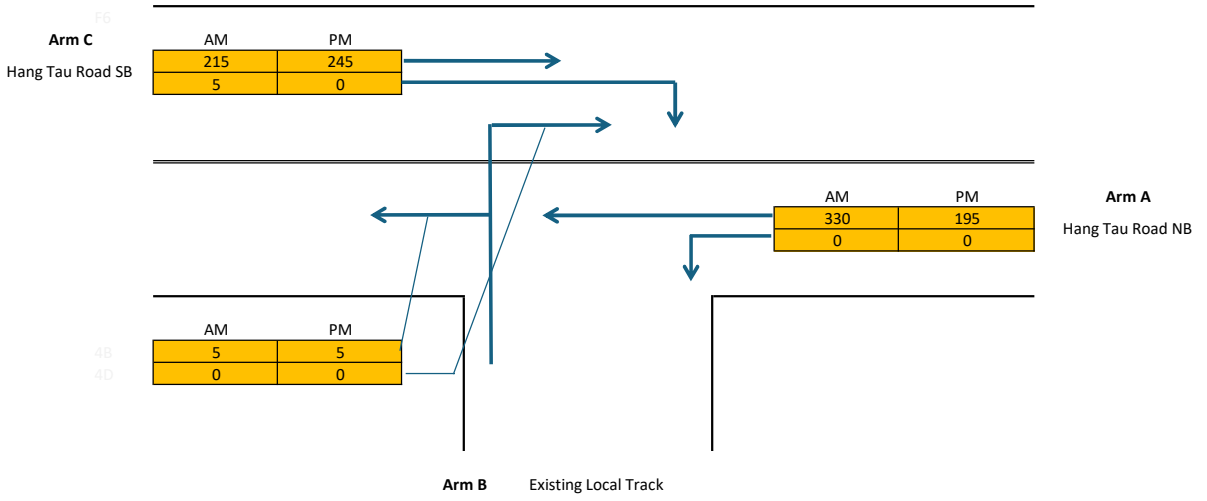
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 290 | 265 |
| | q(c-b) | 320 | 335 |
| | q(a-b) | 5 | 15 |
| | q(a-c) | 420 | 220 |
| | q(b-a) | 10 | 10 |
| | q(b-c) | 460 | 275 |
| | f | 0.98 | 0.96 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 625.131 | 664.71 |
| | Q(c-a) | 821.426 | 856.15 |
| | Q(c-b) | 588.612 | 638.87 |
| RFC's | c-a | 0.35 | 0.31 |
| | c-b | 0.54 | 0.52 |
| | b-ac | 0.75 | 0.43 |
| **RFC** | | **0.75** | **0.52** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | |
| Junction: | (J3) Hang Tau Road / Local Track to Sheung Yue River / Access of Jockey Club River Beas Lodge | Designed by: | TCW |
| Scheme: | Design | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | Date: Mar-26 |
| Arm A: | Hang Tau Road NB | | |
| Arm B: | Existing Local Track | | |
| Arm C: | Hang Tau Road SB | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.80 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 3.50 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.90 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 100 | Calculated | D | 0.6257 |
| | Vl(b-a) | 100 | Parameters | E | 0.9682 |
| | Vr(b-c) | 100 | | F | 0.9867 |
| | Vr(c-b) | 80 | | Y | 0.7309 |

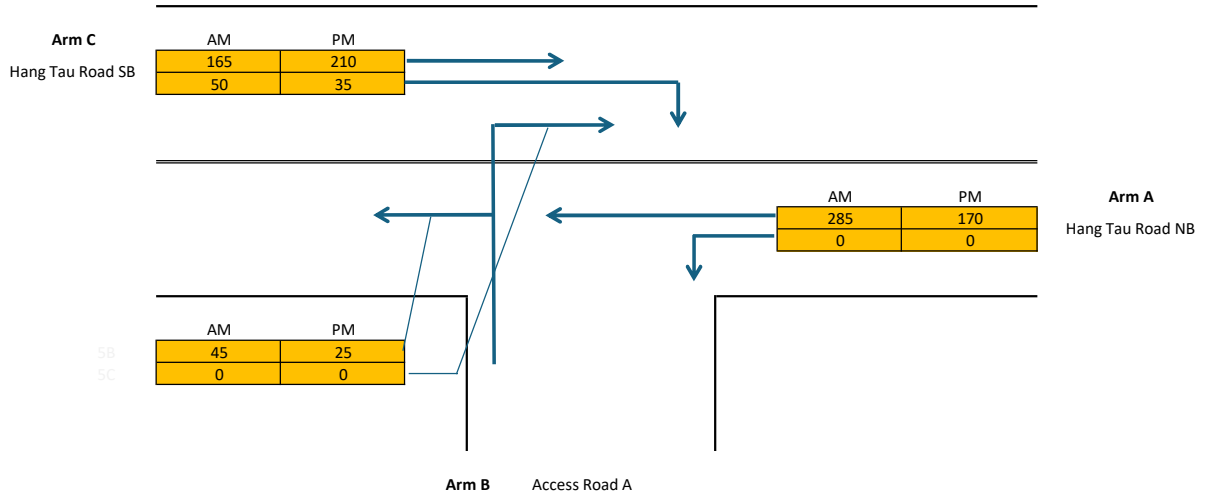
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 215 | 245 |
| | q(c-b) | 5 | 0 |
| | q(a-b) | 0 | 0 |
| | q(a-c) | 330 | 195 |
| | q(b-a) | 0 | 0 |
| | q(b-c) | 5 | 5 |
| | f | 1.00 | 1.00 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 636.275 | 671.05 |
| | Q(c-a) | 1786.12 | 1800 |
| | Q(c-b) | 648.433 | 683.87 |
| RFC's | c-a | 0.12 | 0.14 |
| | c-b | 0.01 | 0.00 |
| | b-ac | 0.01 | 0.01 |
| **RFC** | | **0.12** | **0.14** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | | |
|---|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | | |
| Junction: | (J4) Hang Tau Road / Access Road A | | Designed by: | TCW |
| Scheme: | Design | | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | Date: | Mar-26 |
| Arm A: | Hang Tau Road NB | | | |
| Arm B: | Access Road A | | | |
| Arm C: | Hang Tau Road SB | | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.00 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 3.30 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.30 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 30 | Calculated Parameters | D | 0.5573 |
| | Vl(b-a) | 22 | | E | 0.8888 |
| | Vr(b-c) | 30 | | F | 0.8888 |
| | Vr(c-b) | 30 | | Y | 0.7585 |

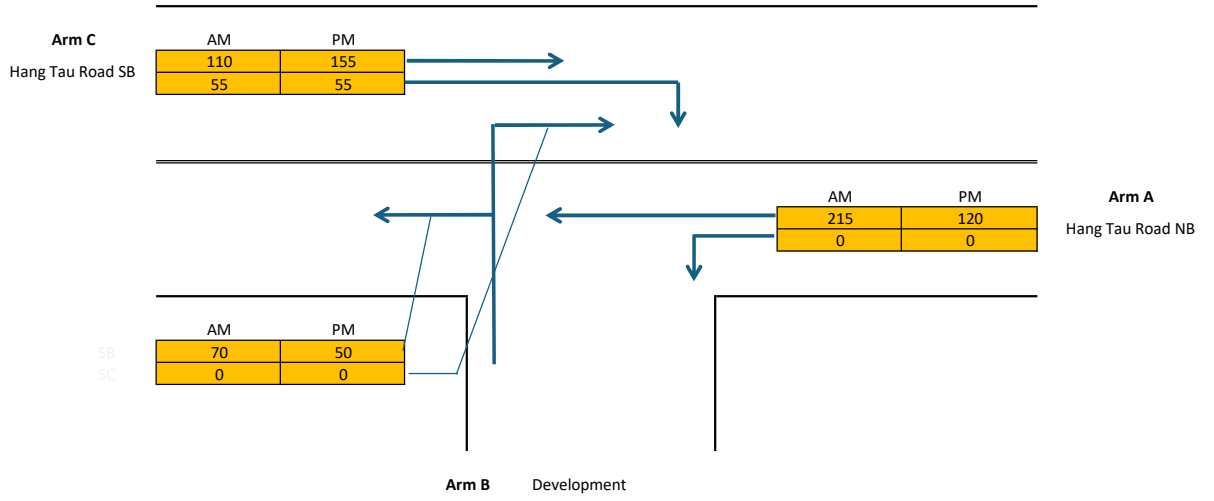
| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 165 | 210 |
| | q(c-b) | 50 | 35 |
| | q(a-b) | 0 | 0 |
| | q(a-c) | 285 | 170 |
| | q(b-a) | 0 | 0 |
| | q(b-c) | 45 | 25 |
| | f | 1.00 | 1.00 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 592.196 | 620.41 |
| | Q(c-a) | 1648.02 | 1698.5 |
| | Q(c-b) | 592.196 | 620.41 |
| RFC's | c-a | 0.10 | 0.12 |
| | c-b | 0.08 | 0.06 |
| | b-ac | 0.08 | 0.04 |
| **RFC** | | **0.10** | **0.12** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# Simplified Priority Junction Capacity Calculation

| | | | |
|---|---|---|---|
| Job Title: | Section 16 Planning Application For Proposed Minor Relaxation of Plot Ratio and Building Height Restriction For Comprehensive Development in Hang Tau Tai Po, Kwu Tung South | | |
| Junction: | (J4) Hang Tau Road / Access Road A | Designed by: | TCW |
| Scheme: | Design | Checked by: | CHC |
| Design Year: | 2034 | Job No.: CHK50808310 | Date: Mar-26 |
| Arm A: | Hang Tau Road NB | | |
| Arm B: | Development | | |
| Arm C: | Hang Tau Road SB | | |




**GEOMETRY**

| | | | | | |
|---|---|---|---|---|---|
| Major Road Width (m) | W | 7.30 | Lane widths (m) | w(b-a) | 0.00 |
| Central Reserve Width (m) | Wcr | 0.00 | | w(b-c) | 3.65 |
| Blockage of major road right turn | Y/N? | Y | | w(c-b) | 3.20 |
| Combined stream on minor arm | Y/N? | Y | | | |
| Visibility Distances (m) | Vr(b-a) | 55 | Calculated Parameters | D | 0.5999 |
| | Vl(b-a) | 100 | | E | 0.9415 |
| | Vr(b-c) | 55 | | F | 0.9318 |
| | Vr(c-b) | 90 | | Y | 0.7482 |

| **ANALYSIS** | | **AM PEAK** | **PM PEAK** |
|---|---|---|---|
| TRAFFIC FLOWS (pcu/hr) | q(c-a) | 110 | 155 |
| | q(c-b) | 55 | 55 |
| | q(a-b) | 0 | 0 |
| | q(a-c) | 215 | 120 |
| | q(b-a) | 0 | 0 |
| | q(b-c) | 70 | 50 |
| | f | 1.00 | 1.00 |
| CAPACITIES (pcu/hr) | Q(b-ac) | 646.292 | 670.65 |
| | Q(c-a) | 1645.23 | 1650.9 |
| | Q(c-b) | 639.663 | 663.77 |
| RFC's | c-a | 0.07 | 0.09 |
| | c-b | 0.09 | 0.08 |
| | b-ac | 0.11 | 0.07 |
| **RFC** | | **0.11** | **0.09** |

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(wc-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q(b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

***All the above formulas are in accordance to T.P.D.M. Volume 2 Chapter 4 Appendix 1***

# APPENDIX C

## Predicted Road Traffic Noise Levels

**AM Peak Hour - Predicted Road Traffic Noise Level, L10 (1hour)dB(A)**

| Project Site | NAP ID | Floor | NAP ID | Floor (n) | | | | | | | NAP ID | Floor | NAP ID | Floor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | G | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | | 9 |
| T1 | T1-A1-G | 66 | T1-A1-n | 66 | 66 | 65 | 65 | 64 | 64 | 64 | | | | |
| | T1-A2-G | 67 | T1-A2-n | 67 | 66 | 66 | 65 | 65 | 65 | 65 | | | | |
| | T1-A3-G | 66 | T1-A3-n | 66 | 66 | 66 | 65 | 65 | 65 | 65 | | | | |
| | T1-A4-G | 66 | T1-A4-n | 66 | 66 | 65 | 65 | 65 | 65 | 64 | | | | |
| | T1-A5-G | 66 | T1-A5-n | 66 | 65 | 65 | 65 | 65 | 64 | 64 | | | | |
| | T1-B1-G | 65 | T1-B1-n | 65 | 65 | 65 | 65 | 64 | 64 | 64 | T1-B1-8 | 64 | | |
| | T1-B2-G | 65 | T1-B2-n | 65 | 65 | 65 | 65 | 64 | 64 | 64 | T1-B2-8 | 64 | | |
| | T1-B3-G | 65 | T1-B3-n | 65 | 65 | 65 | 64 | 64 | 64 | 64 | T1-B3-8 | 64 | | |
| | T1-B4-G | 65 | T1-B4-n | 65 | 65 | 64 | 64 | 64 | 64 | 64 | T1-B4-8 | 64 | | |
| | | | T1-C1-n | 64 | 64 | 64 | 64 | 64 | 64 | 64 | T1-C1-8 | 64 | | |
| | | | T1-C2-n | 64 | 64 | 64 | 64 | 64 | 64 | 64 | T1-C2-8 | 64 | | |
| | | | T1-C3-n | 64 | 64 | 64 | 64 | 64 | 64 | 64 | T1-C3-8 | 64 | | |
| | | | T1-C4-n | 64 | 64 | 64 | 64 | 64 | 64 | 63 | T1-C4-8 | 63 | | |
| | | | T1-D1-n | 64 | 64 | 64 | 64 | 63 | 63 | 63 | T1-D1-8 | 63 | | |
| | | | T1-D2-n | 64 | 64 | 63 | 63 | 63 | 63 | 63 | T1-D2-8 | 63 | | |
| | | | T1-D3-n | 63 | 63 | 63 | 63 | 63 | 63 | 63 | T1-D3-8 | 63 | | |
| | | | T1-D4-n | 63 | 63 | 63 | 63 | 63 | 63 | 63 | T1-D4-8 | 63 | | |
| | | | T1-D5-n | 62 | 62 | 62 | 62 | 62 | 62 | 62 | T1-D5-8 | 62 | | |
| | | | T1-D6-n | 61 | 61 | 61 | 61 | 61 | 61 | 61 | T1-D6-8 | 62 | | |
| | T1-E1-G | 54 | T1-E1-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T1-E1-8 | 56 | | |
| | T1-E2-G | 54 | T1-E2-n | 54 | 54 | 54 | 54 | 54 | 54 | 55 | T1-E2-8 | 56 | | |
| | T1-E3-G | 55 | T1-E3-n | 55 | 55 | 55 | 55 | 54 | 55 | 55 | T1-E3-8 | 56 | | |
| | T1-E4-G | 55 | T1-E4-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T1-E4-8 | 56 | | |
| | T1-E5-G | 55 | T1-E5-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T1-E5-8 | 56 | | |
| | T1-E6-G | 55 | T1-E6-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T1-E6-8 | 56 | | |
| | T1-F1-G | 55 | T1-F1-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T1-F1-8 | 56 | | |
| | T1-F2-G | 56 | T1-F2-n | 56 | 56 | 56 | 55 | 55 | 55 | 56 | T1-F2-8 | 56 | | |
| | T1-F3-G | 56 | T1-F3-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T1-F3-8 | 56 | | |
| | T1-F4-G | 56 | T1-F4-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T1-F4-8 | 57 | | |
| | T1-G1-G | 56 | T1-G1-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T1-G1-8 | 57 | | |
| | T1-G2-G | 57 | T1-G2-n | 57 | 56 | 56 | 56 | 56 | 56 | 56 | T1-G2-8 | 57 | | |
| | T1-G3-G | 57 | T1-G3-n | 57 | 57 | 57 | 57 | 56 | 56 | 56 | T1-G3-8 | 57 | | |
| | T1-G4-G | 57 | T1-G4-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T1-G4-8 | 57 | | |
| | T1-H1-G | 58 | T1-H1-n | 58 | 58 | 57 | 57 | 57 | 57 | 57 | | | | |
| | T1-H2-G | 58 | T1-H2-n | 58 | 58 | 58 | 58 | 58 | 57 | 57 | | | | |
| | T1-H3-G | 58 | T1-H3-n | 58 | 58 | 58 | 58 | 58 | 58 | 58 | | | | |
| | T1-H4-G | 59 | T1-H4-n | 59 | 59 | 59 | 58 | 58 | 58 | 58 | | | | |
| | T1-H5-G | 60 | T1-H5-n | 59 | 59 | 59 | 59 | 59 | 59 | 59 | | | | |
| | T1-H6-G | 61 | T1-H6-n | 61 | 61 | 61 | 60 | 60 | 60 | 60 | | | | |
| T2 | | | T2-A1-n | 62 | 62 | 62 | 62 | 62 | 62 | 62 | T2-A1-8 | 62 | T2-A1-9 | 62 |
| | | | T2-A2-n | 62 | 62 | 62 | 62 | 62 | 62 | 62 | T2-A2-8 | 62 | T2-A2-9 | 62 |
| | | | T2-A3-n | 61 | 61 | 61 | 61 | 61 | 61 | 61 | T2-A3-8 | 62 | T2-A3-9 | 62 |
| | | | T2-A4-n | 61 | 61 | 61 | 61 | 61 | 61 | 61 | T2-A4-8 | 62 | T2-A4-9 | 62 |
| | | | T2-B1-n | 61 | 61 | 61 | 61 | 61 | 61 | 61 | T2-B1-8 | 61 | T2-B1-9 | 62 |
| | | | T2-B2-n | 61 | 61 | 61 | 61 | 61 | 61 | 61 | T2-B2-8 | 61 | T2-B2-9 | 62 |
| | | | T2-B3-n | 61 | 61 | 61 | 61 | 61 | 61 | 61 | T2-B3-8 | 61 | T2-B3-9 | 61 |
| | | | T2-B4-n | 60 | 60 | 60 | 60 | 60 | 60 | 61 | T2-B4-8 | 61 | T2-B4-9 | 61 |
| | T2-C1-G | 60 | T2-C1-n | 60 | 60 | 60 | 60 | 60 | 60 | 60 | T2-C1-8 | 61 | T2-C1-9 | 61 |
| | T2-C2-G | 60 | T2-C2-n | 60 | 60 | 60 | 60 | 60 | 60 | 60 | T2-C2-8 | 61 | T2-C2-9 | 61 |
| | T2-C3-G | 60 | T2-C3-n | 60 | 60 | 60 | 60 | 60 | 60 | 60 | T2-C3-8 | 60 | T2-C3-9 | 61 |
| | T2-C4-G | 60 | T2-C4-n | 60 | 60 | 60 | 60 | 60 | 60 | 60 | T2-C4-8 | 60 | T2-C4-9 | 61 |
| | T2-D1-G | 56 | T2-D1-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-D1-8 | 56 | T2-D1-9 | 56 |
| | T2-D2-G | 56 | T2-D2-n | 56 | 56 | 56 | 56 | 55 | 55 | 55 | T2-D2-8 | 55 | T2-D2-9 | 56 |
| | T2-D3-G | 55 | T2-D3-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T2-D3-8 | 55 | T2-D3-9 | 55 |
| | T2-D4-G | 55 | T2-D4-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T2-D4-8 | 55 | T2-D4-9 | 55 |
| | T2-E1-G | 56 | T2-E1-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-E1-8 | 56 | T2-E1-9 | 56 |
| | T2-E2-G | 57 | T2-E2-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T2-E2-8 | 57 | T2-E2-9 | 57 |
| | T2-E3-G | 57 | T2-E3-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T2-E3-8 | 57 | T2-E3-9 | 57 |
| | T2-E4-G | 57 | T2-E4-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T2-E4-8 | 57 | T2-E4-9 | 57 |
| | T2-F1-G | 57 | T2-F1-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T2-F1-8 | 57 | T2-F1-9 | 57 |
| | T2-F2-G | 57 | T2-F2-n | 57 | 57 | 57 | 57 | 57 | 56 | 56 | T2-F2-8 | 56 | T2-F2-9 | 57 |
| | T2-F3-G | 56 | T2-F3-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-F3-8 | 56 | T2-F3-9 | 56 |
| | T2-F4-G | 56 | T2-F4-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-F4-8 | 56 | T2-F4-9 | 56 |
| | T2-G1-G | 56 | T2-G1-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-G1-8 | 56 | T2-G1-9 | 56 |
| | T2-G2-G | 56 | T2-G2-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-G2-8 | 56 | T2-G2-9 | 56 |
| | T2-G3-G | 56 | T2-G3-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-G3-8 | 56 | T2-G3-9 | 56 |
| | T2-H1-G | 56 | T2-H1-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-H1-8 | 56 | T2-H1-9 | 56 |
| | T2-H2-G | 56 | T2-H2-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-H2-8 | 56 | T2-H2-9 | 56 |
| | T2-H3-G | 56 | T2-H3-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-H3-8 | 56 | T2-H3-9 | 56 |
| | T2-H4-G | 55 | T2-H4-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T2-H4-8 | 55 | T2-H4-9 | 55 |
| | T2-H5-G | 56 | T2-H5-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T2-H5-8 | 56 | T2-H5-9 | 56 |
| | T2-H6-G | 57 | T2-H6-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T2-H6-8 | 57 | T2-H6-9 | 57 |
| | T2-I1-G | 55 | T2-I1-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T2-I1-8 | 55 | T2-I1-9 | 55 |
| | T2-I2-G | 55 | T2-I2-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T2-I2-8 | 55 | T2-I2-9 | 55 |
| | T2-I3-G | 55 | T2-I3-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T2-I3-8 | 55 | T2-I3-9 | 55 |
| | T2-I4-G | 55 | T2-I4-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T2-I4-8 | 55 | T2-I4-9 | 55 |
| | T2-I5-G | 55 | T2-I5-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T2-I5-8 | 55 | T2-I5-9 | 55 |
| | T2-I6-G | 55 | T2-I6-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T2-I6-8 | 55 | T2-I6-9 | 55 |

| Project Site | NAP ID | Floor | NAP ID | Floor (n) | | | | | | | NAP ID | Floor | NAP ID | Floor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | G | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | | 9 |
| | T2-J1-G | 54 | T2-J1-n | 54 | 54 | 54 | 54 | 54 | 54 | 55 | T2-J1-8 | 55 | T2-J1-9 | 55 |
| | T2-J2-G | 54 | T2-J2-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-J2-8 | 55 | T2-J2-9 | 55 |
| | T2-J3-G | 54 | T2-J3-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-J3-8 | 55 | T2-J3-9 | 55 |
| | T2-J4-G | 54 | T2-J4-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-J4-8 | 54 | T2-J4-9 | 55 |
| | T2-K1-G | 54 | T2-K1-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-K1-8 | 54 | T2-K1-9 | 55 |
| | T2-K2-G | 54 | T2-K2-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-K2-8 | 54 | T2-K2-9 | 55 |
| | T2-K3-G | 54 | T2-K3-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-K3-8 | 54 | T2-K3-9 | 55 |
| | T2-K4-G | 54 | T2-K4-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-K4-8 | 54 | T2-K4-9 | 55 |
| | T2-L1-G | 54 | T2-L1-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-L1-8 | 54 | T2-L1-9 | 55 |
| | T2-L2-G | 54 | T2-L2-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-L2-8 | 54 | T2-L2-9 | 55 |
| | T2-L3-G | 54 | T2-L3-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-L3-8 | 54 | T2-L3-9 | 54 |
| | T2-L4-G | 54 | T2-L4-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-L4-8 | 54 | T2-L4-9 | 54 |
| | T2-M1-G | 54 | T2-M1-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-M1-8 | 54 | T2-M1-9 | 54 |
| | T2-M2-G | 54 | T2-M2-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-M2-8 | 54 | T2-M2-9 | 55 |
| | T2-M3-G | 54 | T2-M3-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-M3-8 | 54 | T2-M3-9 | 55 |
| | T2-M4-G | 54 | T2-M4-n | 54 | 54 | 54 | 54 | 54 | 54 | 54 | T2-M4-8 | 55 | T2-M4-9 | 57 |
| T3 | | | T3-A1-n | 59 | 59 | 59 | 59 | 59 | 59 | 60 | T3-A1-8 | 60 | | |
| | | | T3-A2-n | 59 | 59 | 59 | 59 | 59 | 59 | 59 | T3-A2-8 | 60 | | |
| | | | T3-A3-n | 59 | 59 | 59 | 59 | 59 | 59 | 59 | T3-A3-8 | 60 | | |
| | | | T3-A4-n | 59 | 59 | 59 | 59 | 59 | 59 | 59 | T3-A4-8 | 60 | | |
| | | | T3-B1-n | 59 | 59 | 59 | 59 | 59 | 59 | 60 | T3-B1-8 | 60 | T3-B1-9 | 60 |
| | | | T3-B2-n | 59 | 59 | 59 | 59 | 59 | 59 | 60 | T3-B2-8 | 60 | T3-B2-9 | 60 |
| | | | T3-B3-n | 59 | 59 | 59 | 59 | 59 | 60 | 60 | T3-B3-8 | 60 | T3-B3-9 | 60 |
| | | | T3-B4-n | 60 | 60 | 60 | 60 | 60 | 60 | 60 | T3-B4-8 | 60 | T3-B4-9 | 60 |
| | T3-C1-G | 60 | T3-C1-n | 60 | 60 | 60 | 60 | 60 | 60 | 60 | T3-C1-8 | 60 | T3-C1-9 | 60 |
| | T3-C2-G | 60 | T3-C2-n | 60 | 60 | 60 | 60 | 60 | 60 | 60 | T3-C2-8 | 60 | T3-C2-9 | 60 |
| | T3-C3-G | 60 | T3-C3-n | 60 | 60 | 60 | 59 | 60 | 60 | 60 | T3-C3-8 | 60 | T3-C3-9 | 60 |
| | T3-C4-G | 60 | T3-C4-n | 60 | 60 | 60 | 60 | 60 | 60 | 60 | T3-C4-8 | 60 | T3-C4-9 | 60 |
| | T3-D1-G | 59 | T3-D1-n | 59 | 59 | 59 | 59 | 59 | 59 | 59 | T3-D1-8 | 59 | T3-D1-9 | 60 |
| | T3-D2-G | 58 | T3-D2-n | 58 | 58 | 58 | 58 | 58 | 58 | 58 | T3-D2-8 | 59 | T3-D2-9 | 59 |
| | T3-D3-G | 57 | T3-D3-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T3-D3-8 | 58 | T3-D3-9 | 59 |
| | T3-D4-G | 55 | T3-D4-n | 55 | 55 | 55 | 55 | 55 | 55 | 56 | T3-D4-8 | 56 | T3-D4-9 | 57 |
| | T3-E1-G | 62 | T3-E1-n | 62 | 62 | 62 | 62 | 62 | 62 | 62 | T3-E1-8 | 62 | T3-E1-9 | 62 |
| | T3-E2-G | 62 | T3-E2-n | 62 | 62 | 62 | 62 | 62 | 62 | 62 | T3-E2-8 | 62 | T3-E2-9 | 62 |
| | T3-E3-G | 63 | T3-E3-n | 63 | 63 | 62 | 62 | 62 | 62 | 62 | T3-E3-8 | 62 | T3-E3-9 | 62 |
| | T3-E4-G | 62 | T3-E4-n | 62 | 62 | 62 | 62 | 62 | 62 | 62 | T3-E4-8 | 62 | T3-E4-9 | 62 |
| | T3-E5-G | 62 | T3-E5-n | 62 | 62 | 62 | 62 | 62 | 62 | 62 | T3-E5-8 | 62 | T3-E5-9 | 62 |
| | T3-E6-G | 62 | T3-E6-n | 62 | 62 | 62 | 62 | 62 | 62 | 62 | T3-E6-8 | 62 | T3-E6-9 | 62 |
| | T3-F1-G | 63 | T3-F1-n | 63 | 63 | 63 | 63 | 63 | 63 | 63 | T3-F1-8 | 63 | T3-F1-9 | 63 |
| | T3-F2-G | 60 | T3-F2-n | 60 | 60 | 60 | 60 | 60 | 60 | 60 | T3-F2-8 | 60 | T3-F2-9 | 60 |
| | T3-F3-G | 59 | T3-F3-n | 59 | 59 | 59 | 59 | 59 | 59 | 59 | T3-F3-8 | 59 | T3-F3-9 | 59 |
| | T3-F4-G | 58 | T3-F4-n | 58 | 58 | 58 | 58 | 58 | 58 | 58 | T3-F4-8 | 58 | T3-F4-9 | 58 |
| | T3-F5-G | 58 | T3-F5-n | 58 | 58 | 58 | 58 | 58 | 58 | 58 | T3-F5-8 | 58 | T3-F5-9 | 58 |
| | T3-F6-G | 58 | T3-F6-n | 58 | 58 | 58 | 58 | 58 | 58 | 58 | T3-F6-8 | 58 | T3-F6-9 | 58 |
| | T3-G1-G | 57 | T3-G1-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T3-G1-8 | 57 | T3-G1-9 | 57 |
| | T3-G2-G | 57 | T3-G2-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T3-G2-8 | 57 | T3-G2-9 | 57 |
| | T3-G3-G | 57 | T3-G3-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T3-G3-8 | 57 | T3-G3-9 | 57 |
| | T3-G4-G | 57 | T3-G4-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T3-G4-8 | 57 | T3-G4-9 | 57 |
| | T3-H1-G | 57 | T3-H1-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T3-H1-8 | 57 | T3-H1-9 | 57 |
| | T3-H2-G | 57 | T3-H2-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T3-H2-8 | 57 | T3-H2-9 | 57 |
| | T3-H3-G | 57 | T3-H3-n | 57 | 57 | 57 | 57 | 57 | 57 | 57 | T3-H3-8 | 57 | T3-H3-9 | 57 |
| | T3-H4-G | 57 | T3-H4-n | 57 | 57 | 57 | 57 | 57 | 57 | 56 | T3-H4-8 | 56 | T3-H4-9 | 57 |
| | T3-I1-G | 56 | T3-I1-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T3-I1-8 | 56 | T3-I1-9 | 56 |
| | T3-I2-G | 56 | T3-I2-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T3-I2-8 | 56 | T3-I2-9 | 56 |
| | T3-I3-G | 56 | T3-I3-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T3-I3-8 | 56 | T3-I3-9 | 56 |
| | T3-I4-G | 56 | T3-I4-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T3-I4-8 | 56 | T3-I4-9 | 56 |
| | T3-I5-G | 56 | T3-I5-n | 56 | 56 | 56 | 56 | 56 | 56 | 56 | T3-I5-8 | 56 | T3-I5-9 | 56 |
| | T3-J1-G | 56 | T3-J1-n | 56 | 56 | 55 | 55 | 55 | 55 | 55 | T3-J1-8 | 56 | | |
| | T3-J2-G | 55 | T3-J2-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T3-J2-8 | 55 | | |
| | T3-J3-G | 55 | T3-J3-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T3-J3-8 | 55 | | |
| | T3-J4-G | 55 | T3-J4-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T3-J4-8 | 55 | | |
| | T3-J5-G | 55 | T3-J5-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T3-J5-8 | 55 | | |
| | T3-J6-G | 55 | T3-J6-n | 55 | 55 | 55 | 55 | 55 | 55 | 55 | T3-J6-8 | 55 | | |
| | T3-J7-G | 51 | T3-J7-n | 51 | 51 | 51 | 51 | 51 | 51 | 52 | T3-J7-8 | 53 | | |
| T4 | T4-A1-G | 61 | T4-A1-n | 61 | 61 | 60 | 60 | 60 | 60 | 61 | | | | |
| | T4-A2-G | 61 | T4-A2-n | 61 | 61 | 61 | 61 | 61 | 61 | 61 | | | | |
| | T4-A3-G | 61 | T4-A3-n | 61 | 61 | 61 | 61 | 61 | 61 | 61 | | | | |
| | T4-A4-G | 61 | T4-A4-n | 61 | 61 | 61 | 61 | 61 | 61 | 61 | | | | |
| | | | T4-B1-n | 62 | 62 | 62 | 62 | 62 | 62 | 62 | T4-B1-8 | 62 | | |
| | | | T4-B2-n | 63 | 63 | 63 | 62 | 62 | 62 | 63 | T4-B2-8 | 63 | | |
| | | | T4-B3-n | 63 | 63 | 63 | 63 | 63 | 63 | 63 | T4-B3-8 | 63 | | |
| | | | T4-B4-n | 64 | 64 | 64 | 64 | 63 | 63 | 64 | T4-B4-8 | 64 | | |
| | | | T4-B5-n | 65 | 64 | 64 | 64 | 64 | 64 | 64 | T4-B5-8 | 64 | | |
| | | | T4-B6-n | 65 | 65 | 65 | 65 | 65 | 65 | 65 | T4-B6-8 | 65 | | |
| | T4-C1-G | 66 | T4-C1-n | 66 | 66 | 66 | 66 | 66 | 66 | 66 | T4-C1-8 | 66 | | |
| | T4-C2-G | 65 | T4-C2-n | 65 | 65 | 65 | 65 | 65 | 65 | 65 | T4-C2-8 | 65 | | |
| | T4-C3-G | 65 | T4-C3-n | 65 | 65 | 65 | 65 | 65 | 65 | 64 | T4-C3-8 | 64 | | |
| | T4-C4-G | 65 | T4-C4-n | 65 | 65 | 65 | 65 | 65 | 64 | 64 | T4-C4-8 | 64 | | |
| | T4-D1-G | 64 | T4-D1-n | 64 | 64 | 64 | 64 | 64 | 64 | 64 | T4-D1-8 | 64 | | |
| | T4-D2-G | 64 | T4-D2-n | 64 | 64 | 64 | 64 | 64 | 64 | 64 | T4-D2-8 | 63 | | |

| Project Site | NAP ID | Floor | NAP ID | Floor (n) | | | | | | | NAP ID | Floor | NAP ID | Floor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | G | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | | 9 |
| | T4-D3-G | 64 | T4-D3-n | 64 | 64 | 64 | 64 | 64 | 64 | 63 | T4-D3-8 | 63 | | |
| | T4-D4-G | 64 | T4-D4-n | 64 | 64 | 64 | 64 | 64 | 63 | 63 | T4-D4-8 | 63 | | |
| | T4-E1-G | 63 | T4-E1-n | 63 | 63 | 63 | 63 | 63 | 63 | 63 | | | | |
| | T4-E2-G | 63 | T4-E2-n | 63 | 63 | 63 | 63 | 63 | 63 | 63 | | | | |
| | T4-E3-G | 63 | T4-E3-n | 63 | 63 | 63 | 63 | 63 | 63 | 63 | | | | |
| | T4-E4-G | 63 | T4-E4-n | 63 | 63 | 63 | 63 | 63 | 63 | 63 | | | | |
| | T4-E5-G | 61 | T4-E5-n | 61 | 61 | 61 | 60 | 60 | 60 | 60 | | | | |
| | T4-E6-G | 60 | T4-E6-n | 60 | 60 | 60 | 59 | 59 | 59 | 59 | | | | |

**AM Peak Hour - Predicted Road Traffic Noise Level, L10 (1hour)dB(A)**

| Project Site | NAP ID | Floor | | | |
|---|---|---|---|---|---|
| | | G | 1 | 2 | 3 |
| RCHE | RCHE-1 | | 67 | 67 | 67 |
| | RCHE-2 | | 67 | 67 | 67 |
| | RCHE-3 | | 67 | 67 | 67 |
| | RCHE-4 | | 68 | 67 | 67 |
| | RCHE-5 | | 68 | 68 | 68 |
| | RCHE-6 | | 68 | 68 | 68 |
| | RCHE-7 | | 69 | 69 | 68 |
| | RCHE-8 | | 69 | 69 | 69 |
| | RCHE-9 | | | 67 | |
| | RCHE-10 | | | 67 | |
| | RCHE-11 | | | 65 | 65 |
| | RCHE-12 | | | 63 | 63 |
| | RCHE-13 | | | 62 | 62 |
| | RCHE-14 | | | 62 | 62 |
| | RCHE-15 | | | 61 | 61 |
| | RCHE-16 | | | 61 | 61 |
| | RCHE-17 | | | 61 | 61 |
| | RCHE-18 | | | 61 | 60 |
| | RCHE-19 | | 60 | 60 | |
| | RCHE-20 | | 59 | 59 | |
| | RCHE-21 | | 59 | 59 | |
| | RCHE-22 | | 59 | 59 | |
| | RCHE-23 | | 59 | 58 | |
| | RCHE-24 | | 58 | 58 | |
| | RCHE-25 | | 58 | 58 | |
| | RCHE-26 | | 58 | 58 | |
| | RCHE-27 | | 58 | 58 | |
| | RCHE-28 | | 58 | 58 | |
| | RCHE-29 | | 57 | 57 | |
| | RCHE-30 | | 57 | 57 | |
| | RCHE-31 | | 57 | 57 | |
| | RCHE-32 | | 57 | 57 | |
| | RCHE-33 | | 57 | 57 | |
| | RCHE-34 | | 57 | 57 | |
| | RCHE-35 | | 57 | 57 | |
| | RCHE-36 | | 57 | 57 | |
| | RCHE-37 | | 57 | 57 | |
| | RCHE-38 | | 57 | 57 | |
| | RCHE-39 | | | 56 | |
| | RCHE-40 | | | 56 | |
| | RCHE-41 | | | 56 | |
| | RCHE-42 | | | 56 | |
| | RCHE-43 | | | 56 | |
| | RCHE-44 | | | 57 | |
| | RCHE-45 | | | 57 | |
| | RCHE-46 | | | 57 | |

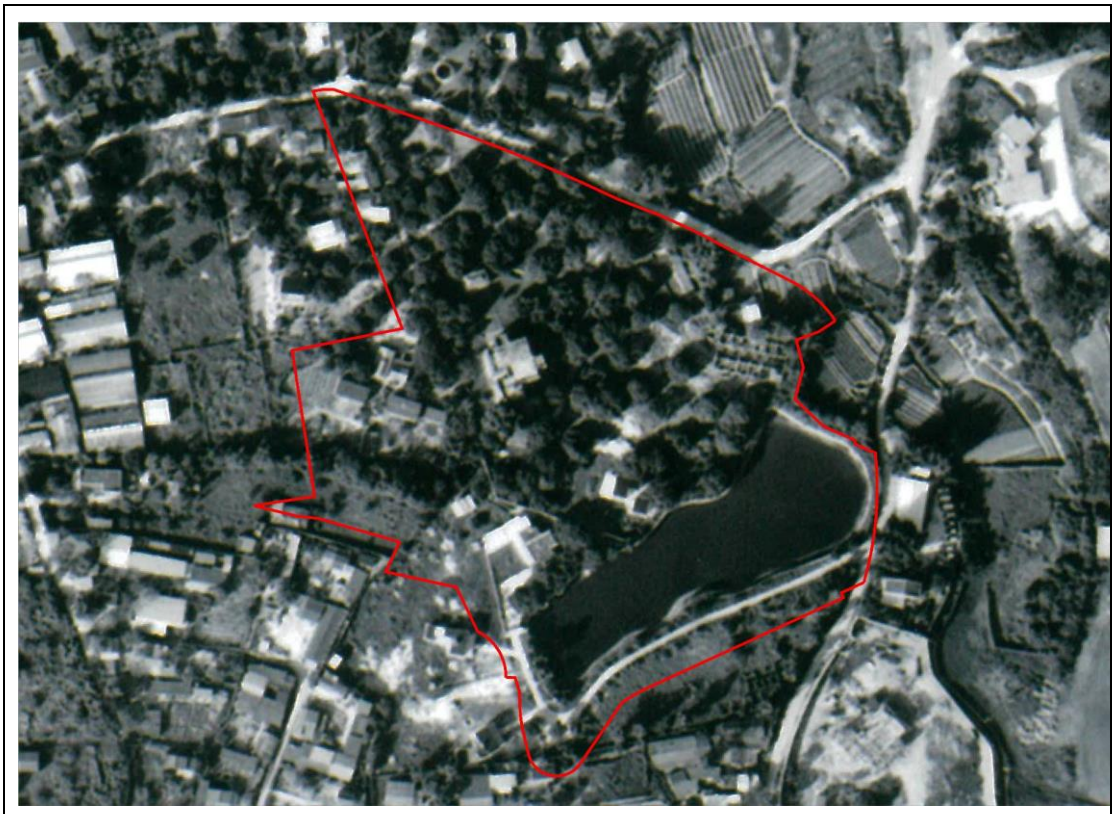
| Project Site | NAP ID | Floor | | | |
|---|---|---|---|---|---|
| | | G | 1 | 2 | 3 |
| RCHE | RCHE-47 | | | 57 | |
| | RCHE-48 | | | 57 | |
| | RCHE-49 | | | 57 | |
| | RCHE-50 | | | 58 | |
| | RCHE-51 | | | | 49 |
| | RCHE-52 | | | | 49 |
| | RCHE-53 | | | | 49 |
| | RCHE-54 | | | | 49 |
| | RCHE-55 | | | | 49 |
| | RCHE-56 | | | | 49 |
| | RCHE-57 | | | | 49 |
| | RCHE-58 | | | | 49 |
| | RCHE-59 | | | | 49 |
| | RCHE-60 | | | | 49 |
| | RCHE-61 | | | | 49 |
| | RCHE-62 | | | | 49 |
| | RCHE-63 | | | | 49 |
| | RCHE-64 | | | | 49 |
| | RCHE-65 | | | | 49 |
| | RCHE-66 | | | | 49 |
| | RCHE-67 | | | | 69 |
| | RCHE-68 | | | | 68 |
| | RCHE-69 | | 68 | | |
| | RCHE-70 | | 68 | | |
| | RCHE-71 | | | 68 | |
| | RCHE-72 | | | 68 | |
| | RCHE-73 | | | 69 | |
| | RCHE-74 | | | 68 | |

# APPENDIX D

## Historical Aerial Photographs



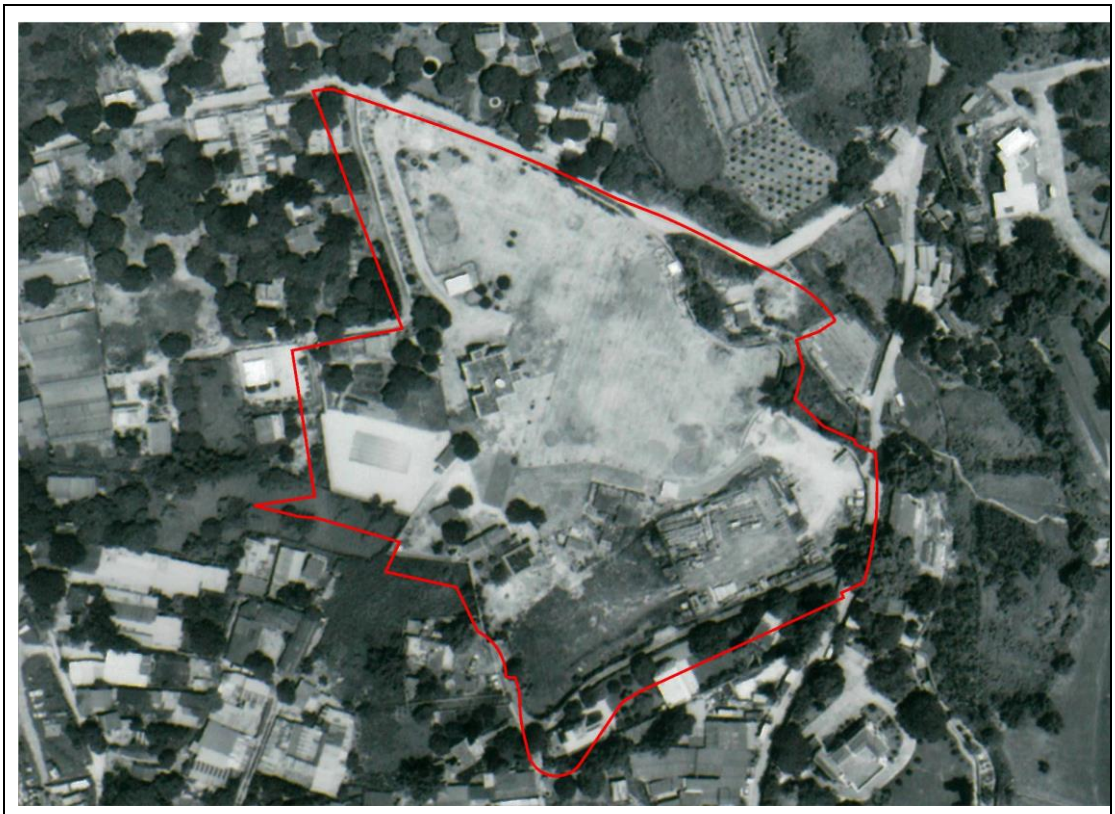
| Year | Ref. No. | Observation |
|---|---|---|
| 1963 | 1963-0137 | The Site was mainly occupied by vegetation. A pond was observed on the south of the Site. Some scattered building structures were also found inside the Site. |



| Year | Ref. No. | Observation |
|---|---|---|
| 1972 | 02645 | The land use of the Site was the same as in 1963. |



| Year | Ref. No. | Observation |
|---|---|---|
| 1990 | A21881 | A swimming pool was found on the west of the Site. In addition, the pond was reclaimed for storage of construction materials. The land use of other parts of the Site was the same as in 1972. |



| Year | Ref. No. | Observation |
|---|---|---|
| 1991 | A26190 | Majority of the vegetation in the north portion of the Site was eliminated. The remaining part of land use of the Site was the same as in 1990. |




| Year | Ref. No. | Observation |
|---|---|---|
| 2017 | E016363C | Farmland was observed in the north portion of the Site, while the remaining part of land use of the Site was the same as 1991. |

**APPENDIX E**

**Correspondence Letter with FSD**

## Dorothy Tse, Uen Yung

**From:** [redacted]
**Sent:** 2025年3月26日星期三 15:22
**To:** Dorothy Tse, Uen Yung
**Cc:** OE8 CS/FSD; SSO LEA CS/FSD
**Subject:** Re: Fw: Enquiry on Information about Dangerous Goods Store and Incidents Records - S16 Planning application for Section 16 Planning Application for Proposed Minor Relaxation of

*Our reference: (120) in FSD GR 6-5/4 R Pt. 57*
*Your reference: CL/DT/66052/91994/mw*

Dear Ms. TSE,

**Section 16 Planning Application for Proposed Minor Relaxation of Plot Ration and Building Height Restrictions for Comprehensive Development in Hang Tau Tai Po, Kwu Tung Souths**
**Request for Information of Dangerous Goods & Incident Records**

I refer to your email of 4.3.2025 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,

CHOW Yin-hei
Assistant Divisional Officer (Legal Affairs)
Corporate Services Division
Fire Services Department
[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 SD LAD [redacted]

**Sent:** Monday, March 10, 2025 11:25
**To:** [redacted]
**Cc:** SSO SD LAD/FSD; OE8 CS/FSD
**Subject:** Fw: Enquiry on Information about Dangerous Goods Store and Incidents Records - S16 Planning application for Section 16 Planning Application for Proposed Minor Relaxation of

*Our reference: (66) in FSD GR 6-5/4 R Pt. 57*

*Your reference: CL/DT/66052/91994/mw*

Dear Ms. TSE,

**Section 16 Planning Application for Proposed Minor Relaxation of Plot Ration and Building Height Restrictions for Comprehensive Development in Hang Tau Tai Po, Kwu Tung South**

**Request for Information of Dangerous Goods & Incident Records**

I refer to your email of 4.3.2025 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.

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

Best regards,

CHOW Yin-hei
Assistant Divisional Officer (Legal Affairs and Discipline) Special Duty
Corporate Services Division
Fire Services Department

[redacted]

----- Forwarded by AccessIO/FSD/HKSARG on 04/03/2025 15:59 -----

From: "Dorothy Tse, Uen Yung" [redacted]
To: [redacted]
Date: 04/03/2025 15:58
Subject: Enquiry on Information about Dangerous Goods Store and Incidents Records - S16 Planning application for Section 16 Planning Application for Proposed Minor Relaxation of

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Dear Sir/ Madam,

We are the environmental consultants representing our client, Fonnie Holdings Limited, to conduct an environmental assessment related to land contamination for the captioned project. A letter requesting the following records was issued on February 3, 2025 (please see the attached letter). We would like to follow up on the status of this request.

1) Issued Dangerous Goods Licenses, if any;

2) Other information related to the use and/or storage of dangerous goods, if any, and;

3) Past and present incident, spillage and fire records, if any.

We would be much appreciated if you could provide the requested information by this week (4 March 2025).

Thank you.

**Dorothy Tse**

**Environmental Consultant**

[IMAGE]

www.meinhardt-china.com

www.meinhardtgroup.com

[IMAGE]

[redacted]

[redacted]

[IMAGE] [IMAGE] 

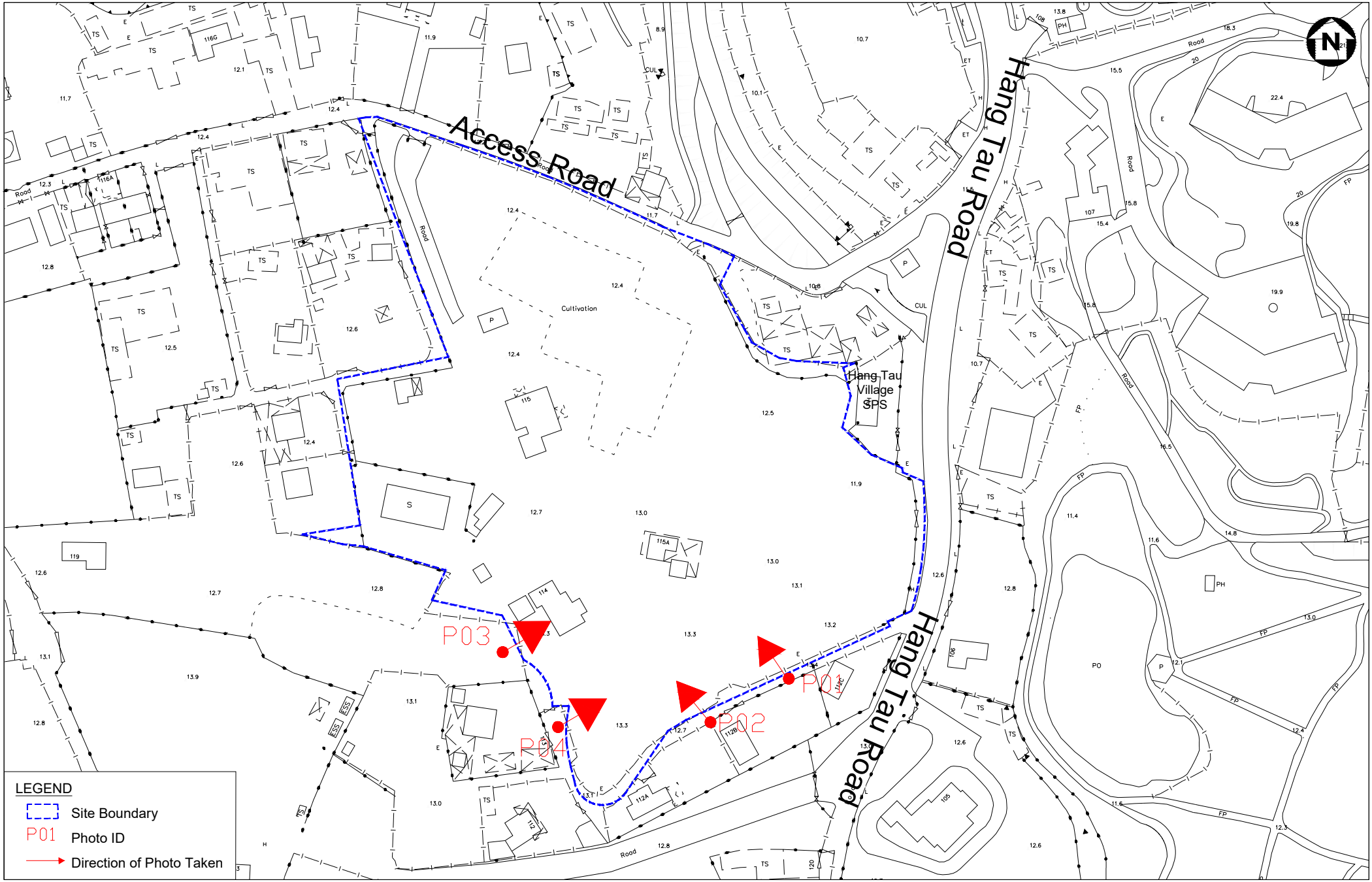
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[attachment "CL.DT.66052.91994 (Enquiry to FSD).pdf" deleted by yin_hei CHOW/FSD/HKSARG] [attachment "ATT00001.png" deleted by yin_hei CHOW/FSD/HKSARG] [attachment "ATT00002.png" deleted by yin_hei CHOW/FSD/HKSARG] [attachment "ATT00003.png" deleted by yin_hei CHOW/FSD/HKSARG] [attachment "ATT00004.png" deleted by yin_hei CHOW/FSD/HKSARG]

**APPENDIX F**

**Photo Records of the site visit**




Meinhardt Infrastructure and Environment Limited
美道基建環保工程顧問有限公司

Section 16 Planning Application for Proposed Comprehensive Development ('Flat', 'Social Welfare Facility (Residential Care Home for the Elderly)' and 'Shop and Services' Uses) with Minor Relaxation of Plot Ratio and Building Height Restrictions at Various Lots in D.D. 92 and 94 and the Adjoining Government Land, Hang Tau Tai Po, Kwu Tung South

PHOTO INDEX PLAN

Scale As Shown

| | |
|---|---|
|  |  |
| Photo ID: P01<br>Site observation:<br>Land surface was covered by vegetation. Vacant houses and storage of construction materials were observed. | Photo ID: P02<br>Site observation:<br>Land surface was covered by vegetation. Vacant houses were observed. |
|  |  |
| Photo ID: P03<br>Site observation:<br>Land surface was covered by vegetation and paved by concrete. Vacant houses were observed. | Photo ID: P04<br>Site observation:<br>Land surface was paved by covered by vegetation. Storage of construction materials were observed. |

**APPENDIX G**

**Correspondence Reply from EPD**

## Dorothy Tse, Uen Yung

**From:** Fion WH WONG/EPD [redacted]
**Sent:** 2026年7月7日星期二 15:05
**To:** Dorothy Tse, Uen Yung
**Cc:** EPD_Enquiry/EPD; Kelvin WK YEUNG/EPD
**Subject:** Re: *Restricted: E(26/5683) Request for Odour Complaint Records – Hang Tau Village SPS and Beas River Country Club STP

To: Ms. TSE, Environmental Consultant, Meinhardt Consulting Engineers

Dear Ms. TSE,

**Re: Request for Odour Complaint Records – Hang Tau Village SPS and Beas River Country Club STP**

I refer to your captioned enquiry in your preceding email dated 7 Jul 2026. Please be advised that no odour complaint has been received by this Office related to (1) Hang Tau Village Sewage Pumping Station (SPS); and (2) Sewage Treatment Plant at Beas River Country Club in the past 3 years.

Should you have any enquiry, please contact our Senior Environmental Protection Inspector, Mr. Kelvin YEUNG, at [redacted].

Regards,
WONG Wing-huen, Fion
Environmental Protection Officer (Regional N) 31
Environmental Protection Department
[redacted]

---

**From:** Dorothy Tse, Uen Yung [redacted]
**Sent:** Tuesday, July 7, 2026 10:01 AM
**To:** EPD_Enquiry/EPD <enquiry@epd.gov.hk>
**Subject:** Request for Odour Complaint Records – Hang Tau Village SPS and Beas River Country Club STP

REF: 91994

Dear Sir/ Madam,

We are the environmental consultants appointed by Fonnie Holdings Limited (please refer to the appointment letter attached) to undertake an environmental assessment for the following project:
**"Pre-submission for Section 16 Application for Proposed Comprehensive Development at Various Lots in D.D. 92 and D.D. 94 and Adjoining Government Land, Hang Tau, Tai Po, Kwu Tung South"**

As per the comments issued by EA division of EPD (See below), we would like to check whether there are any odour complaint records related to (1)Hang Tau Village Sewage Pumping Station (SPS); and (2)Sewage Treatment Plant at Beas River Country Club.

14. Section 3.7.3.3:

    1. Please provide a figure identifying the Sewage Pumping Station and ASRs, clearly indicating horizontal dis justification.
    2. Please check with our regional office on whether there were odour complaint records related to those Sewa

Your assistance and prompt reply by 9 July would be greatly appreciated, as we are working towards a tight submission schedule.

Thank you for your kind support. Please feel free to contact me if you require any further information regarding this request.

**Dorothy Tse**
**Environmental Consultant**

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Meinhardt Consulting Engineers
[redacted]

[redacted]

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