

# *Appendix 4*

---

AIR VENTILATION ASSESSMENT –  
EXPERT EVALUATION

Prepared by

**Ramboll Hong Kong Limited**

**S16 PLANNING APPLICATION FOR PROPOSED MINOR  
RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC  
HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**

**AIR VENTILATION ASSESSMENT - EXPERT EVALUATION**



Date **11 February 2025**

Prepared by **Echo Cao**  
**Environmental Consultant**



Signed

Approved by **Tony Cheng**  
**Senior Manager**



Signed

Project Reference **KTATTRCUEI00**

Document No. **R9549\_V1.3 - clean version.docx**

No part of this document may be reproduced or transmitted, in any form or by any means electronic, mechanical, photographic, recording or otherwise, or stored in a retrieval system of any nature without the written permission of Ramboll Hong Kong Ltd, application for which shall be made to Ramboll Hong Kong Ltd, 21/F, BEA Harbour View Centre, 56 Gloucester Road, Wan Chai, Hong Kong.

Disclaimer: This report is made on behalf of Ramboll Hong Kong Ltd. No individual is personally liable in connection with the preparation of this report. By receiving this report and acting on it, the client or any third party relying on it accepts that no individual is personally liable in contract, tort or breach of statutory duty (including negligence).

Ramboll Hong Kong Limited

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

Tel: (852) 3465 2888  
Fax: (852) 3465 2899  
Email: [hkinfo@ramboll.com](mailto:hkinfo@ramboll.com)

Q:\Projects\RLPHSNCWEI00\04 Deliverables\02 AVA EE Report\R9549\_V1.3 - clean version.docx

## CHAPTERS

	Page
<b>1. INTRODUCTION .....</b>	<b>3</b>
1.1 Project Background.....	3
1.2 Objectives .....	3
1.3 Application Site and its Environs.....	4
1.4 Proposed Scheme .....	4
1.5 Baseline Scheme .....	5
1.6 Comparison Between Proposed and Baseline Scheme.....	5
<b>2. SITE WIND AVAILABILITY.....</b>	<b>8</b>
2.1 Regional Atmospheric Modelling System (RAMS) .....	8
2.2 Topography and Building Morphology .....	8
2.3 Summary of Existing Site Wind Availability .....	10
<b>3. EVALUATION OF AIR VENTILATION PERFORMANCE .....</b>	<b>12</b>
3.1 Areas Frequently Accessed by Public .....	12
3.2 Assessment Methodology.....	12
3.3 Wind Flow from ENE Direction .....	12
3.4 Wind Flow from E Direction .....	13
3.5 Wind Flow from ESE Direction .....	13
3.6 Wind Flow from SE Direction .....	14
3.7 Wind Flow from SSW and SW Direction .....	14
3.8 Good Design Features .....	15
<b>4. CONCLUSION .....</b>	<b>17</b>

## TABLES

Table 1.1	Comparison of the Dimensions of Good Design Features under the Baseline Scheme and the Proposed Scheme.....	6
Table 2.1	Summary of RAMS Data and Wind Direction.....	8
Table 2.2	Building Heights and Site Formation Levels of the Surrounding Developments .....	9

## FIGURES

Figure 1	Location of the Application Site and its Environs
Figure 2	Good Design Features of the Proposed Scheme
Figure 3	Good Design Features of the Baseline Scheme
Figure 4	Windrose Diagram (at 200m) extracted from RAMS
Figure 5	Potential Wind Flow under Existing Condition
Figure 6	Illustration of ENE Wind Flow for the Baseline Scheme and Proposed Scheme
Figure 7	Illustration of E Wind Flow for the Baseline Scheme and Proposed Scheme
Figure 8	Illustration of ESE Wind Flow for the Baseline Scheme and Proposed Scheme
Figure 9	Illustration of SE Wind Flow for the Baseline Scheme and Proposed Scheme
Figure 10	Illustration of SSW and SW Wind Flow for the Baseline Scheme and Proposed Scheme
Figure 11	Comparison between the Baseline Scheme and Proposed Scheme (A: MLP, B: Section A-A, C: Section B-B, C-C and D-D)

## APPENDICES

Appendix 1	Master Layout Plan of the Proposed Scheme
Appendix 2	Master Layout Plan of the Baseline Scheme

## 1. INTRODUCTION

### 1.1 Project Background

- 1.1.1 The Ngau Chi Wan Village Redevelopment is one of the Government's Housing Initiatives, as outlined in the Chief Executive's 2019 to 2021 Policy Addresses, to increase the supply of adequate and affordable housing with a view to rebuilding a new community therein. The Proposed Development is intended to be developed by HKHS as a Dedicated Rehousing Estate to support the Government's development clearance exercises and redevelopment projects in urban areas. The Proposed Development will be a key housing site to provide affordable housing at a site with high accessibility in meeting the acute housing demand.
- 1.1.2 The Hong Kong Housing Society ("HKHS") has been invited by the Government to implement the public housing development at Ngau Chi Wan Village ("NCWV"), Kowloon (hereafter "the Proposed Development" / "the Site" / "the Application Site").
- 1.1.3 The NCWV Redevelopment Project Site (the "Project Site") consists of three portions, namely Sites C, D1, and D2, of which Sites C and D1 will be developed as a Subsidised Sales Flat ("SSF") Development and Public Rental Housing ("PRH") Development (respectively, while D2 will subsequently be implemented as a Public Open Space ("POS") maintained and managed by the Leisure and Cultural Services Department ("LCSD"). The s.16 Planning Application pertains to Sites C and D1 (hereafter "the Site" / "the Application Site"). As Site D2, being developed as a POS, conforms to the OZP, it is excluded from this s.16 Planning Application
- 1.1.4 The Site is currently zoned "Residential (Group A)1" ("R(A)1") on the Approved Ngau Chi Wan Outline Zoning Plan No. S/K12/18 ("Approved OZP") gazetted on 5 May 2023. The "R(A)1" zone is subject to Maximum Building Height ("BH") Restrictions of 130mPD and 115mPD at Site C and Site D1 respectively and a total Maximum Plot Ratio ("PR") Restriction of 9.0 (of which the Domestic PR shall not exceed 7.5) for both Site C and Site D1. As stipulated in the Approved OZP, based on the individual merits of the development proposal, minor relaxation of building height restrictions may be considered by the Town Planning Board ("TPB") on application under s.16 of the Town Planning Ordinance (hereafter "s.16 Planning Application").
- 1.1.5 This s.16 Planning Application aims to seek minor relaxation of the BH restrictions to 165mPD and 140mPD at Site C and D1 respectively to promulgate a better design of the Proposed Development comprising of Subsidised Sale Flats at Site C and Public Rental Housing at Site D1, providing about 2,725 units in total, with associated retail and GIC facilities with incorporation of an aboveground car park and podium garden to enhance the local amenity provision. There is no change to the PR restrictions imposed on the Site.

### 1.2 Objectives

- 1.2.1 In this Air Ventilation Assessment (AVA) – Expert Evaluation (EE) is prepared in support of the s.16 Planning Application for proposed minor relaxation of BH restrictions for the Proposed Development.
- 1.2.2 Ramboll Hong Kong Limited is commissioned by the applicant to prepare for AVA-EE in support of the s.16 Planning Application. This AVA-EE aims to assess the potential air ventilation impact due to the proposed development upon the sensitive use of the surrounding area. The scope of this AVA-EE includes a qualitative assessment to the design and/or design options and facilitates the identification of problems and issues and any recommendation on feasible mitigation measures, if applicable.
- 1.2.3 The AVA-EE prepared for the Site Formation and Infrastructure Works for Proposed Public Housing Developments at Ying Fung Lane, Wong Tai Sin Community Centre and

Ngau Chi Wan Village, Wong Tai Sin – Feasibility Study (Agreement No. CE 32/2019 (CE)) (hereafter “Feasibility Study”) by Civil Engineering and Development Department (CEDD) for the rezoning is referred and compared with the Proposed Scheme. This is the Baseline Scheme for the evaluation of the potential Air Ventilation impact with the Proposed Scheme.

### 1.3 Application Site and its Environs

- 1.3.1 **Figure 1** shows the location of the Application Site and the surrounding environs.
- 1.3.2 The Applicant Site is bounded by Wing Ting Road to its north, Lung Cheung Road to its southwest and Lung Chi Path to its south. Choi Hung MTR Station can be accessed via C2 Exit across Lung Chi Path. The Site, with formation levels at about 6.5mPD to 14.5mPD, is currently an urban squatter area against a hilly backdrop, i.e. Hammer Hill with a height of 140mPD to its northeast. Lung Cheung Road section to the west of the Application Site has an elevation of ~6-7mPD. While Wing Ting Road section near the Application Site rises from ~11 mPD in the south to ~19mPD in the north. The site formation levels of the developments to the northeast of the Application Site are generally equal or higher than those of Wing Ting Road.
- 1.3.3 Man Fat Nunnery, a Grade 3 historic building, is situated at the northwest portion of the Site. The Hong Kong Breast Cancer Foundation Jockey Club Breast Health Centre (Kowloon) is located at the northwestern corner of the Site fronting Lung Cheung Road. Both buildings are located within Site C, and will be retained in-situ.
- 1.3.4 The predominant use in the surrounding area is residential developments consists of public housing estates, private housing and village houses, coupled with G/IC uses and sports facilities serving the local community. To the immediate southeast of the Application Site, there is a composite development under an approved planning application No. A/K12/34-2 currently under construction.

### 1.4 Proposed Scheme

- 1.4.1 The indicative MLP is shown in **Appendix 1**. Phase 1 includes Site C, while Phase 2 includes Site D1 and Site D2, with Site D2 being the POS to be handed over to the Government upon completion. This study will focus on Site C and Site D1 (i.e. the Application Site).
- 1.4.2 For Site C, there is one tower with an elevation of 165mPD, named Tower 1, on top of a podium.
- 1.4.3 Site D1 includes two towers, named Tower 2 and Tower 3, both with a building height of 140mPD, on top of a podium.
- 1.4.4 The following good design features have been adopted in the Proposed Scheme (as shown in **Figure 2a** and **2b**)
- ~16m building setback from Tower 1 to the site boundary along Lung Cheung Road;
  - ~2m podium setback from Tower 1 to the site boundary along Wing Ting Road;
  - ~7.5m podium setback from G/F and above of Tower 1 to the northwestern site boundary;
  - ~10m tower setback from Tower 1 to the site boundary abutting Fortune Garden;
  - ~10m tower setback from Tower 2 to the site boundary abutting Fortune Garden;
  - ~3.5m tower setback from Tower 3 to the southeastern site boundary;

- Minimum 2m podium and tower setback from Towers 2 & 3 to the site boundary along Wing Tin Road;
- ~15m building separation between Tower 2 & Tower 3;
- Stepped building heights between Site C and Site D1;
- Empty bay designs with openings of 15m in width and minimum 30m in height from G/F to 5/F (Landscaped Open Space for residents), with an open-sided footbridge at 5/F at Site C;
- Minimum 3.5m tower and podium setback from Towers 2 & 3 to the site boundary along Lung Chi Path;
- Landscaped Open Space located on 5/F of Site C and Site D1, with heights of approximate 6-7m and 8-8.5m, respectively, to improve the wind penetration of the Application Site;
- Terraced podium design to improve the air ventilation nearby;

## 1.5 Baseline Scheme

1.5.1 The Baseline Scheme refers to the approved scheme in the Feasibility Study by CEDD, i.e. the scheme in the Feasibility Study for rezoning by CEDD mentioned in section 1.2.3. It consists of three residential towers, i.e. one residential tower with 34 storeys over a five-storey podium (excluding 2 basement levels) at Site C (northwestern part of the site) and two residential towers of 30 storeys over a four-storey podium (excluding 2 basement levels) at Site D1 (southeastern part of the Site).

1.5.2 The following good design features have been adopted in the Baseline Scheme (as shown in **Figure 3a and 3b**)

- ~14m tower setback from Tower 1 to the site boundary along Lung Cheung Road;
- ~2m podium setback at Tower 1 to Tower 3 to the site boundary along Wing Ting Road;
- ~7.5m podium setback from Tower 1 to the northwestern site boundary;
- ~12.5m tower setback from Tower 1 to the site boundary abutting Fortune Garden;
- ~4m tower setback from Tower 2 to the site boundary abutting Fortune Garden;
- ~15m building separation between Tower 2 & Tower 3;
- ~7.5m tower and podium setback from Tower 3 to the southeastern site boundary;
- ~7.5m tower and podium setback from Towers 2 & 3 to the site boundary along Lung Chi Path;
- Stepped building heights between Site C and Site D1;
- Empty bay designs with two openings of 15m in width above podium level with a height of 35m at Site C.

1.5.3 **Appendix 2** shows the indicative MLP and section of the Baseline Scheme.

## 1.6 Comparison Between Proposed and Baseline Scheme

1.6.1 Below describes the major difference between the Proposed and Baseline Scheme (as shown in **Figure 11a to 11c**).

- 1.6.2 Unlike the Baseline Scheme, there is no basement carpark at the Proposed Scheme. According to the latest practice note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers – APP-2 issued by Building Department in Dec 2023, in order to reduce the construction time and cost, the GFA of aboveground carpark required to be provided under lease for subsidised sale/ rental flats to be provided by HKHS could be fully exempted as accepted by the Government. In order to expedite the public housing development so as to alleviate the housing shortage, above-ground carpark is proposed for the Proposed Scheme, which resulting that there is an increase of 1 storey podium storey at the Application Site.
- 1.6.3 In addition, in response to the suggestions of Town Planning Board (TPB) members expressed during the 1286<sup>th</sup> TPB meeting dated 16 December 2022 on “slightly increasing the BH and adjusting the height between the transfer plate and the podium levels in order to allow flexibility to provide quality covered open space at the podium levels”, landscaped open space(for residents) with heights of approximately 6-7m and 8-8.5m are newly proposed at the podium roof of Site C and Site D1 respectively.
- 1.6.4 For the residential tower at Site C which is immediate next to the Lung Cheung Road, the detailed traffic noise results show that having the residential units parallel to this busy trunk road would be subject to excessive traffic noise with the noise level which cannot be mitigated by any existing practical traffic noise mitigation measures. In order to fulfil the relevant traffic noise standard under the Hong Kong Planning Standards and Guidelines, the residential units at the previous Baseline Scheme facing towards the Lung Cheung Road is relocated to the area away from or perpendicular to this trunk road under the Proposed Scheme.
- 1.6.5 **Table 1.1** illustrates the dimensions of good design features under the two schemes.

**Table 1.1 Comparison of the Dimensions of Good Design Features under the Baseline Scheme and the Proposed Scheme**

Good Design Features	Proposed Scheme	Baseline Scheme
Tower Setback from T1 to the site boundary along Lung Cheung Road	~16m	~14m
Podium Setback from T1 to the site boundary along Wing Ting Road	~2m	~2m
Podium Setback to the northwestern site boundary	~7.5m from G/F and above	~7.5m
Tower Setback from T1 to the site boundary abutting Fortune Garden	~10m	~12.5m
Tower Setback from T2 to the site boundary abutting Fortune Garden	~10m	~4m
Tower setback from T3 to the southeastern site boundary	~3.5m	~7.5m
Podium and tower setback from T2 & T3 to the site boundary along Wing Trin Road	~2m	~2m
Building separation between T2 & T3	~15m	~15m
Tower and podium setback from T2 & T3 to the site boundary along Lung Chi Path	~3.5m	~7.5m
Empty Bays	15m in width and 30m in height from G/F to 5/F	Two openings of 15m in width and 35m in height
Landscaped open space podium	6-7m and 8-8.5m in height on 5/F of Site C and D1	NA

- 1.6.6 From Table 1.1, most of the beneficial design features are preserved, with only minor adjustments, such as the dimensions and locations of the empty bays. Some setbacks have been increased, including the tower setback of T1 from the Lung Cheung Road site boundary and the tower setback of T2 from the boundary adjacent to Fortune Garden. Conversely, there are slight reductions in some design features, such as the tower setback of T1 from the Fortune Garden boundary and the setbacks of the tower and podium for T2 and T3 from the Lung Chi Path boundary. Additionally, the Proposed Scheme introduces more landscaped open space podium.



## 2. SITE WIND AVAILABILITY

### 2.1 Regional Atmospheric Modelling System (RAMS)

- 2.1.1 According to the Planning Department's website, a meso-scale Regional Atmospheric Modeling System (RAMS) was used to produce a simulated 10-year wind climate at the horizontal resolution of 0.5 km x 0.5 km covering the whole territory of Hong Kong. The simulated wind data represents the annual, winter and summer wind conditions at various levels, i.e. 200 m, 300 m, and 500 m above terrain.
- 2.1.2 The RAMS data of the grid (X: 087, Y:046) has been extracted from the Site Wind Availability Data of Planning Department's website.
- 2.1.3 The available wind rose data at different heights (200m, 300m, and 500m) indicates that the 200m wind data best represents the wind conditions at the Application Site, considering the topographical effects in the area. Therefore, the 200m wind roses is selected to study the prevailing wind conditions and their influence on the Application Site, considering the impact on the surrounding topography.
- 2.1.4 According to the wind roses at 200m altitude, annual prevailing wind directions for the Application Site are ENE, E and ESE whereas summer prevailing wind directions are E, SE, SSW and SW. **Figure 4** shows the relevant wind rose diagram representing the frequency and wind speed distribution of the district concerned for both annual and summer conditions.
- 2.1.5 **Table 2.1** summarized the simulated wind availability data including probability of occurrence.

**Table 2.1 Summary of RAMS Data and Wind Direction**

Wind Direction	Probability for Annual Condition (%)	Probability for Summer Condition (%)
N	3.1	1.0
NNE	8.3	1.1
NE	6.7	1.0
ENE	12.3	2.9
E	24.8	10.9
ESE	9.1	9.0
SE	6.7	10.6
SSE	3.5	7.1
S	3.4	7.5
SSW	4.8	10.8
SW	5.6	14.8
WSW	3.8	9.8
W	2.9	6.5
WNW	2.1	3.6
NW	1.5	2.0
NNW	1.4	1.4

Note: Characters highlighted in grey represent the selected prevailing wind directions for evaluation.

### 2.2 Topography and Building Morphology

#### Topography

- 2.2.1 The Site is bounded by existing Wing Ting Road, Lung Cheung Road, Lung Chi Path and nearby buildings and structures including the Hammer Hill Road Sports Ground and Hammer Hill Road Swimming Pool with existing ground level ranging from 6.5

mPD at the southwestern side to 14.5 mPD at the northeastern side near Wing Ting Road.

- 2.2.2 The immediate surroundings of the Application Site have a relatively flat topography. To the north and northwest, the terrain starts to become more undulating, with a series of low hills and ridges, such as Beacon Hill and Lion Rock, which rises to an elevation of around 450mPD. Further to the northeast, the topography becomes more dramatically hilly, as the slopes of the Kowloon range begin to take shape. Peaks like Middle Hill and Kowloon Peak can be seen in the distance, reaching elevations of over 500m. Given this topography, it is anticipated that wind from northeast quarter will be blocked to some extent by the higher terrain features in the surrounding area. The undulating hills and ridges, as well as the prominent peaks of the Kowloon mountains, are likely to have a shielding effect on wind flows approaching the Application Site from the northeast direction.

#### Building Morphology

- 2.2.3 Several large-scale public residential developments are located in proximity to the Site. Choi Hung Estate and Choi Wan Estate are high-density residential developments situated to the southwest and southeast of the Site, respectively. Additionally, there are medium-density private housing developments located immediately northeast of the Site, including Bay View Garden, Wealth Garden, Fortune Garden, and the Fire Services Department Wind Ting Road Fire Services Married Quarters. To the south of the Site across Clear Water Bay Road, there is a public rental housing development named Ping Shek Estate, with the building height restrictions at 80mDP and 100mPD. A public transport interchange (PTI) is located to the northeast of Ping Shek Estate. 8 Clear Water Bay Road, a residential tower with the building height at 180mPD is situated above the PTI.
- 2.2.4 To the immediate southeast of the Application Site, there is a composite development zoned "Comprehensive Development Area" ("CDA") under an approved planning application (No. A/K12/34-2), consisting of five residential towers constructed above a podium for non-domestic uses. The overall building height reaches an elevation of 230mPD.
- 2.2.5 A cluster of G/IC facilities are located to the immediate northwest of the Site, including East Kowloon Polyclinic, Hammer Hill Road Swimming Pool. Ngau Chi Wan Municipal Service Building and Ngau Chi Wan Sports Centre are located to the south of the Site.
- 2.2.6 To the southeast of the Application Site, across Clear Water Bay Road, there are three educational institutions located in the vicinity: Ping Shek Estate Catholic Primary School, C&MA Sun Kei Primary School (Ping Shek) and Hong Kong Society For the Blind Factory for the Blind. In addition, Buddhist Hung Sean Chau memorial College is located to the north.
- 2.2.7 **Table 2.3** highlighted the building height of the surrounding developments. The source of the data is from Spatial Data & Topographic Map of Lands Department. Please refer to Figure 1 for the building height level profile.

**Table 2.2 Building Heights and Site Formation Levels of the Surrounding Developments**

Name of Development	Building Height (mPD)	Site Formation Level (mPD)	Location relative to the Application Site
Choi Hung Estate	26-61	6-7	Southwest
Choi Hung Estate Redevelopment	190 (assumption based on	7	Southwest

Name of Development	Building Height (mPD)	Site Formation Level (mPD)	Location relative to the Application Site
	proposed BH of 50 storeys)		
Ping Shek Estate	32-86	6-10	Southeast
Choi Fung Court	150	43	Southeast
Choi Wan (I) Estate	94-127	40-63	Southeast
Choi Wan (II) Estate	117-143	56-69	Further Southeast
Bay View Garden	114	19	East
Fortune Garden	95	16	East
Wealth Garden	103	13	East
FSD Married Quarters	111	18	East
Composite Development zoned Comprehensive Development Area (CDA)	230	16	Southeast
Hing Yip Building	78	7	South
8 Clear Water Bay Road	184	8	Southeast
Hammer Hill Road Swimming Pool	29	15	Northwest
Buddhist Hung Sean Chau memorial College	51	26	North
Ngau Chi Wan Municipal Service Building and Ngau Chi Wan Sports Centre	45	9	Southeast
Educational Institutions across Clear Water Bay Road	32-37	12-16	Southeast

### 2.3 Summary of Existing Site Wind Availability

- 2.3.1 Based on the summary of data from RAMS, the annual prevailing winds are mainly from the northeast quadrants. The ENE, E and ESE winds are the most dominant annual winds. On the other hand, the major summer prevailing winds come from E, SE, SSW and SW.
- 2.3.2 According to the Feasibility Study for rezoning by CEDD, certain wind flow direction analysis has been discussed in the Section 10 of the Feasibility Study report regarding Air Ventilation Aspects.
- 2.3.3 It is anticipated that the major wind corridors near the Application Site is Lung Cheung Road, which is a major road in Kowloon.
- 2.3.4 Under the annual ENE, existing high-rise residential buildings like Bay View Garden, Wealth Garden and Fire Services Department Wing Ting Road Fire Services Married Quarters, at upwind area will reduce the wind reaching the Application Site. However, On Ting Road as well as the building separations between these developments would allow part of the upcoming winds from Ngau Chi Wan Park to pass towards the Application Site and downwind areas.
- 2.3.5 Under annual/ summer E winds, Choi Wan Estate as well as the future high-rise composite development zoned CDA with a BH of 230mPD are located at upwind area, and these compact high-rise developments will reduce the wind reaching the Application Site. The E wind is expected to flow along the Ping Ting Road East and reach the northern part of the Application site and downwind area.
- 2.3.6 Under ESE and SE winds, it is anticipated that there will be a decrease in air ventilation performance at the Application Site and its downstream areas. This is due to the

approved CDA Development to the southeast of the Application Site, with the building height at ~230mPD, which obstruct air flow.

2.3.7 Under summer prevailing SSW and SW winds, Choi Hung Estate, which is located at the upwind area with the highest elevation at 61mPD, blocks a portion of the incoming wind. As a result, this reduces the availability of wind reaching the Application Site.

2.3.8 **Figure 5** shows the annual and summer prevailing wind directions under the existing condition.

### 3. EVALUATION OF AIR VENTILATION PERFORMANCE

#### 3.1 Areas Frequently Accessed by Public

3.1.1 Important surrounding areas that the public would often access have been identified as the following:

- Roads surrounding the Application Site (Lung Cheung Road, Wing Ting Road, On Ting Road, Lung Chi Path);
- Nearby residential developments (Bay View Garden, Fortune Garden, Wealth Garden, Choi Hung Estate, Fire Services Department Wing Ting Road Fire Services Married Quarters, village houses between Lung Chi Path and Lung Cheung Road); and
- Hammer Hill Road Sports Ground and Swimming Pool.

3.1.2 Location of those listed areas frequently accessed by public is also shown in **Figure 1**.

#### 3.2 Assessment Methodology

3.2.1 Section 2 describes the wind availability at the Application Site and the prevailing wind flows during annual and summer conditions. It is noted that the annual prevailing wind directions for the district are from ENE, E and ESE. The summer prevailing wind directions would be from E, SE, SSW and SW.

3.2.2 The ventilation performance of the proposed development at Application Site on the nearby areas frequently accessed by public will be evaluated by comparing with the Baseline condition with respect to the identified dominant wind directions, i.e. ENE, E, ESE, SE, SSW and SW.

#### 3.3 Wind Flow from ENE Direction

3.3.1 It is anticipated that a stream of ENE wind flows from Ngau Chi Wan Park. However, existing high-rise residential buildings, including Bay View Garden, Wealth Garden and Fire Services Department Wing Ting Road Fire Services Married Quarters, will obstruct and reduce the wind availability to the Application Site and its downstream areas.

3.3.2 The placement of Tower 1 in the Baseline Scheme, along with the podium underneath with setback of 7.5m from the northwestern site boundary would facilitate the flow of ENE wind flow to penetrate through to reach Lung Cheung Road and Choi Hung Estate at the downwind area. In addition, the two openings above podium level at Tower 1 enable some ENE winds along On Ting Road to reach pedestrian level and provide some localised improvements to the surroundings near Choi Hung Estate. Moreover, the 4m tower setback from Tower 2 to the site boundary abutting Fortune Garden will help channel portion of the ENE winds to reach Lung Cheung Road and Choi Hung Estate.

3.3.3 Compared to the Baseline Scheme, the building height of Tower 1 has been increased from 130mPD to 165mPD at Site C, while the heights of Tower 2 & 3 at Site D1 have been raised from 115mPD to 140mPD. The 7.5m-wide setback at the northwestern site boundary from the G/F upwards in the Proposed Scheme still allows ENE winds to pass through, reaching pedestrian levels as the ground slopes down from Wing Ting Road to Lung Cheung Road. Additionally, the openings in Tower 1 have been retained with modified angles, which will permit some ENE winds to flow through to Lung Cheung Road. The location of this opening is lowered towards the ground level in the Proposed Scheme instead of above the podium in the Baseline Scheme, enhancing the passing over of the pedestrian level wind across the site and reach the downwind area. A footbridge is proposed on 5/F to enhance the connectivity by linking two portions of podium of Tower 1 at Site C. Since the footbridge is non-enclosed, open-sided and permeable, it would not hinder the wind penetration through the 30m-height opening.

Furthermore, the separation between Tower 2 and Fortune Garden has been increased from 4m to 10m, potentially allowing more ENE wind to pass through to the downwind area.

- 3.3.4 The additional landscape gardens on 5/F with the height of 6-7m would increase the permeability of the Application Site to benefit the further downwind area.
- 3.3.5 Overall, although the increased height may impose larger wake area at the downwind areas, given that the beneficial design features have largely been preserved and/ or enhanced, the Proposed Scheme is considered causing no significant adverse impact on wind performance in the downwind areas, including Lung Cheung Road and Choi Hung Estate, compared to the Baseline Scheme.

### **3.4 Wind Flow from E Direction**

- 3.4.1 Similar to the ENE wind, the annual and summer prevailing E winds mainly flows from Ngau Chi Wan Park and along Ping Ting Road for this area. In view of the presence of the existing high-rise residential buildings at immediate upwind area, including Bay View Garden, Wealth Garden, Fire Services Department Wing Ting Road Fire Services Married Quarters and the future high-rise composite development zoned CDA, the E wind will be obstructed by these compact developments, and so the wind availability to the Application Site and its downstream areas is reduced.
- 3.4.2 Under the Baseline Scheme, the 4m-wide tower setback between Tower 2 and the site boundary abutting Fortune Garden will facilitate the flow of E winds coming through the open space between Bay View Garden and Wealth Garden, allowing them to continue towards Choi Hung Estate and Lung Cheung Road. In addition, the positioning of Tower 1 and its podium with 7.5m setback from the northwestern site boundary will widen the separation between Tower 1 and Hammer Hill Road Swimming Pool building, further enhancing the flow to reach Lung Cheung Road.
- 3.4.3 Compared to the Baseline Scheme, the building height of Tower 1 has been increased from 130mPD to 165mPD at Site C, while the heights of Tower 2 & 3 at Site D1 have been raised from 115mPD to 140mPD. The 7.5m-wide setback at the northwestern site boundary from the G/F upwards in the Proposed Scheme still allows E winds to pass through, reaching pedestrian levels as the ground slopes down from Wing Ting Road to Lung Cheung Road. Furthermore, the tower setback between Tower 2 and the site boundary abutting Fortune Garden has been increased from 4m to 10m, potentially allowing more E wind to pass through to the downwind area.
- 3.4.4 The additional landscape gardens on 5/F at both Sites C and D1 with the height of 6-7m and 8-8.5m, respectively would increase the permeability of the Application Site to benefit the further downwind area.
- 3.4.5 Overall, since the beneficial design features have largely been preserved and/ or enhanced, the Proposed Scheme is considered causing no significant adverse impact on wind performance in the downwind areas, including Lung Cheung Road and Choi Hung Estate, compared to the Baseline Scheme.

### **3.5 Wind Flow from ESE Direction**

- 3.5.1 The approved application (No. A/K12/34-2) with the maximum building height at 230mPD is located at the upwind side of the Application Site which would reduce the wind availability of ESE winds. It is anticipated that the upcoming wind would mainly flow along Lung Chi Path to Lung Cheung Road.
- 3.5.2 The Baseline Scheme incorporated setback from Tower 1 to the site boundary along Lung Cheung Road, as well as a setback from the podiums of Tower 2 & 3 to Lung Chi Path. These setbacks would enhance the wind permeability and facilitate the flow of ESE wind along Lung Cheung Road. Additionally, the stepped building heights, with

Site C reaching 130 mPD and Site D1 at 115 mPD, are intended to enhance vertical air movement.

- 3.5.3 Compared to the Baseline Scheme, the setback from Tower 1 to the site boundary along Lung Cheung Road is increased from 14m to approximate 16m. In contrast, the setback from the podiums of Tower 2 & 3 to Lung Chi Path has been decreased from ~7.5m to a minimum 3.5m. However, given that Lung Cheung Road is the major road which has a width of at least 30m, it is expected to function as a potential wind corridor. Furthermore, due to the reduced wind availability caused by adjoining high-rise composite development zoned CDA with a maximum BH of 230mPD, it is expected that Lung Cheung Road will experience comparable wind performance under both schemes.
- 3.5.4 The building heights in the Baseline Scheme are 130mPD for Site C and 115mPD for Site D1, while in the Proposed Scheme, they increase to 165mPD for Site C and 140mPD for Site D1. It is anticipated there may be larger wind wake in the downwind area. Despite the increased heights, the stepped BH profile is maintained, which may minimise the potential impact in the wind environment in areas such as Hammer Hill Road Swimming Pool in the downwind region.
- 3.5.5 Therefore, the Proposed Scheme is not anticipated to have significant adverse impact on wind performance in the downwind areas compared to the Baseline Scheme.

### **3.6 Wind Flow from SE Direction**

- 3.6.1 Similar to the ESE winds, the composite development zoned CDA, with a maximum building height of 230mPD, is situated upwind of the Application Site, which could reduce the availability of SE winds. It is expected that the prevailing winds will primarily flow along Lung Chi Path and Lung Cheung Road.
- 3.6.2 The Baseline Scheme incorporated 14m-wide setback from Tower 1 to the site boundary along Lung Cheung Road, as well as a 7.5m-wide setback from the podiums of Tower 2 & 3 to Lung Chi Path. These setbacks would enhance the wind permeability and facilitate the flow of SE wind along Lung Cheung Road. Additionally, the stepped building heights, with Site C reaching 130 mPD and Site D1 at 115 mPD, are intended to enhance vertical air movement.
- 3.6.3 Compared to the Baseline Scheme, the setback from Tower 1 to the site boundary along Lung Cheung Road is increased from 14m to approximate 16m. In contrast, the setback from the podiums of Tower 2 & 3 to Lung Chi Path has been decreased from ~7.5m to a minimum 3.5m. However, given that Lung Cheung Road is the major road which has a width of at least 30m, it is expected to function as a potential wind corridor. Furthermore, due to the reduced wind availability caused by adjoining high-rise composite development zoned CDA with a maximum BH of 230mPD, it is expected that Lung Cheung Road will experience comparable wind performance under both schemes.
- 3.6.4 The building heights in the Baseline Scheme are 130mPD for Site C and 115mPD for Site D1, while in the Proposed Scheme, they increase to 165mPD for Site C and 140mPD for Site D1. It is anticipated there may be larger wind wake in the downwind area. Despite the increased heights, the stepped BH profile is maintained, which may minimise the potential impact in the wind environment in areas such as Hammer Hill Road Swimming Pool in the downwind region.
- 3.6.5 To mitigate the wind impacts from SE winds, the proposed development layout has been optimized by orienting the shorter frontage of the building towards the SE wind direction similar to the Baseline Scheme.

### **3.7 Wind Flow from SSW and SW Direction**

- 3.7.1 Choi Hung Estate is located at the upwind area under SSW and SW winds, which would moderate the upcoming wind to reach the Application Site. Both the Baseline Scheme



and the Proposed Scheme feature building heights that exceed those of Choi Hung Estate, which is likely to induce downwash winds under SSW/SW conditions. Consequently, it is expected that the wind environment along Lung Cheung Road will be preserved. Since the building heights in the Proposed Scheme are greater than those in the Baseline Scheme, the downwash effect may be stronger, if any, potentially enhancing wind performance along Lung Cheung Road.

- 3.7.2 In the Proposed Scheme, the three building blocks maintain minor setbacks of 2m from the northeastern site boundary along Wing Ting Road, compared to the Baseline Scheme. This design aims to mitigate wind impacts.
- 3.7.3 Furthermore, the Proposed Scheme retains the 15m building separation between Towers 2 and 3. Although the tower setback from Tower 1 to the site boundary abutting Fortune Garden is decreased from 12.5m to 10m, the setback from the site boundary abutting Fortune Garden to Tower 2 has been increased from 4m to 10m, which may allow winds to reach further downwind areas, such as Bay View Garden.
- 3.7.4 Therefore, although the BHs in the Proposed Scheme are higher than in the Baseline Scheme, all key design features have been preserved. As a result, it is expected that the Proposed Scheme will not have any significant adverse impacts on the downwind areas, i.e. Bay View Garden, Wealth Garden and the Fire Services Department Wing Ting Road Fire Services Married Quarters.
- 3.7.5 According to a government press release, Choi Hung Estate is set to be redeveloped in three phases starting in 2028. The redevelopment is expected to increase building heights to provide more public rental housing (PRH) units, rising from 7,400 to 9,200 flats, as mentioned in the press release. The residential towers may reach approximately 50 stories, with assumed heights potentially reaching around 190 mPD. Consequently, this will likely create a larger blockage effect on SSW and SW winds, further reduce the wind availability to the Application Site, which is located downwind of Choi Hung Estate.
- 3.7.6 Due to the already decreased wind availability caused by the redevelopment of Choi Hung Estate, the overall impact of the Proposed Scheme on the air ventilation in the area will be diminished.

### **3.8 Good Design Features**

- 3.8.1 Section 3.3 to 3.6 discussed the ventilation impact between the Baseline Scheme and Proposed Scheme. It is considered that the Proposed Development may slightly increase the blockage effect, but it is not expected to significantly impact the surrounding sensitive areas compared to the Baseline Scheme. This is due to the increased building heights and the minor changes to the empty bays/openings in Tower 1.
- 3.8.2 Notwithstanding, the proposed scheme has incorporated the followed good design features to facilitate the air ventilation:
- ~16m building setback from Tower 1 to the site boundary along Lung Cheung Road;
  - ~2m podium setback from Tower 1 to the site boundary along Wing Ting Road;
  - ~7.5m podium setback from G/F and above of Tower 1 to the northwestern site boundary;
  - ~10m tower setback from Tower 1 to the site boundary abutting Fortune Garden;
  - ~10m tower setback from Tower 2 to the site boundary abutting Fortune Garden;

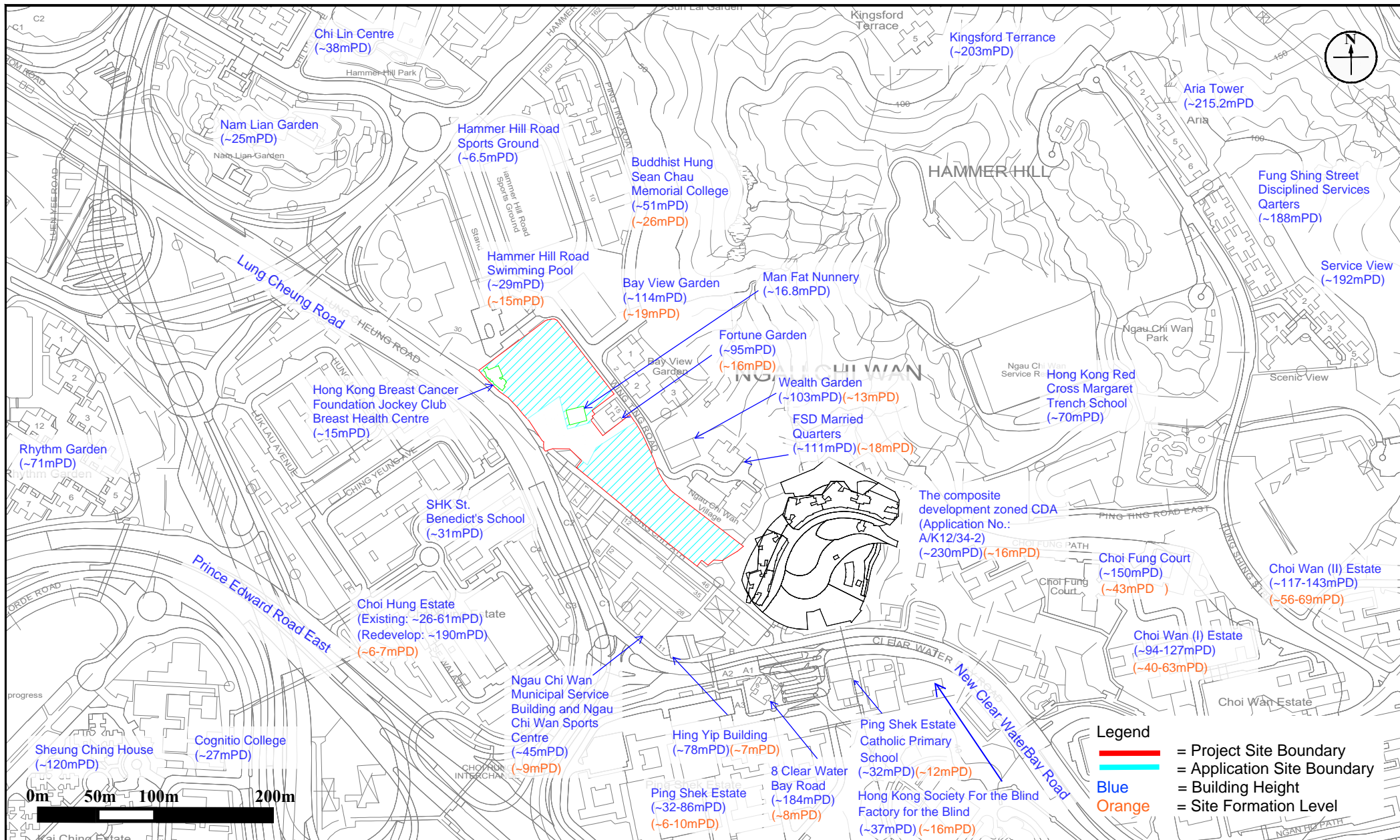


- ~3.5m tower setback from Tower 3 to the southeastern site boundary;
- Minimum 2m podium and tower setback from Towers 2 & 3 to the site boundary along Wing Tin Road;
- ~15m building separation between Tower 2 & Tower 3;
- Stepped building height between Site C and Site D1;
- Empty bay designs with openings of 15m in width and minimum 30m in height from G/F to 5/F (open landscape space for residents), with an open-sided footbridge at 5/F at Site C;
- Minimum 3.5m tower and podium setback from Towers 2 & 3 to the site boundary along Lung Chi Path;
- Landscape garden located on 5/F of Site C and Site D1, with heights of approximate 6-7m and 8-8.5m, respectively, to improve the wind penetration of the Application Site;
- Terraced podium design to improve the air ventilation nearby.

## 4. CONCLUSION

- 4.1.1 Further to the Feasibility Study for rezoning conducted by CEDD, a qualitative assessment on the air ventilation performance of the Proposed Development has been carried out to update the findings based on the latest scheme.
- 4.1.2 The annual wind of the study area is mainly from ENE, E and ESE wind directions. The summer wind is mainly from the E, SE, SSW and SW wind directions. After considering the potential air ventilation impacts of the Application Site, the layout of the Proposed Scheme has incorporated good design measures to enhance its air ventilation performance. Taking into consideration the existing topography, the location of the existing built areas, and the provision of mitigation measures, it is considered that the Proposed Scheme should not have a significant adverse impact on the air ventilation of surrounding environment.
- 4.1.3 The Proposed Scheme has incorporated effective good design features such as building separations and setbacks along the site boundary near the air corridors, as well as the empty bays. Compared to the Baseline Scheme, some of the setback and separation dimensions have undergone minor changes, either increasing or decreasing slightly. Some setbacks have been increased, including the tower setback of T1 from the Lung Cheung Road site boundary (~14m in the Baseline Scheme to ~16m in the Proposed Scheme) and the tower setback of T2 from the boundary adjacent to Fortune Garden (~4m in the Baseline Scheme to ~10m in the Proposed Scheme). Conversely, there are slight reductions in some design features, such as the tower setback of T1 from the Fortune Garden boundary (~12.5m in the Baseline Scheme to ~10m in the Proposed Scheme) and the setbacks of the tower and podium for T2 and T3 from the Lung Chi Path boundary (~7.5m in the Baseline Scheme to ~3.5m in the Proposed Scheme). Additionally, landscaped open spaces has been introduced in the Proposed Scheme on the podium levels to enhance site penetration and improve conditions in the downwind area. Although the increased building height may generate some localized air ventilation impacts compared to the Baseline Scheme, with the proposed design measures in place, the Proposed Scheme would not impose a significant adverse impact on the surroundings sites from air ventilation perspective, when compared to the Baseline Scheme.

## Figures



**Figure: 1**

**Title:** Location of the Application Site and its Environs

**Project:** Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon

**RAMBOLL**

Drawn by: KL

Checked by: EC

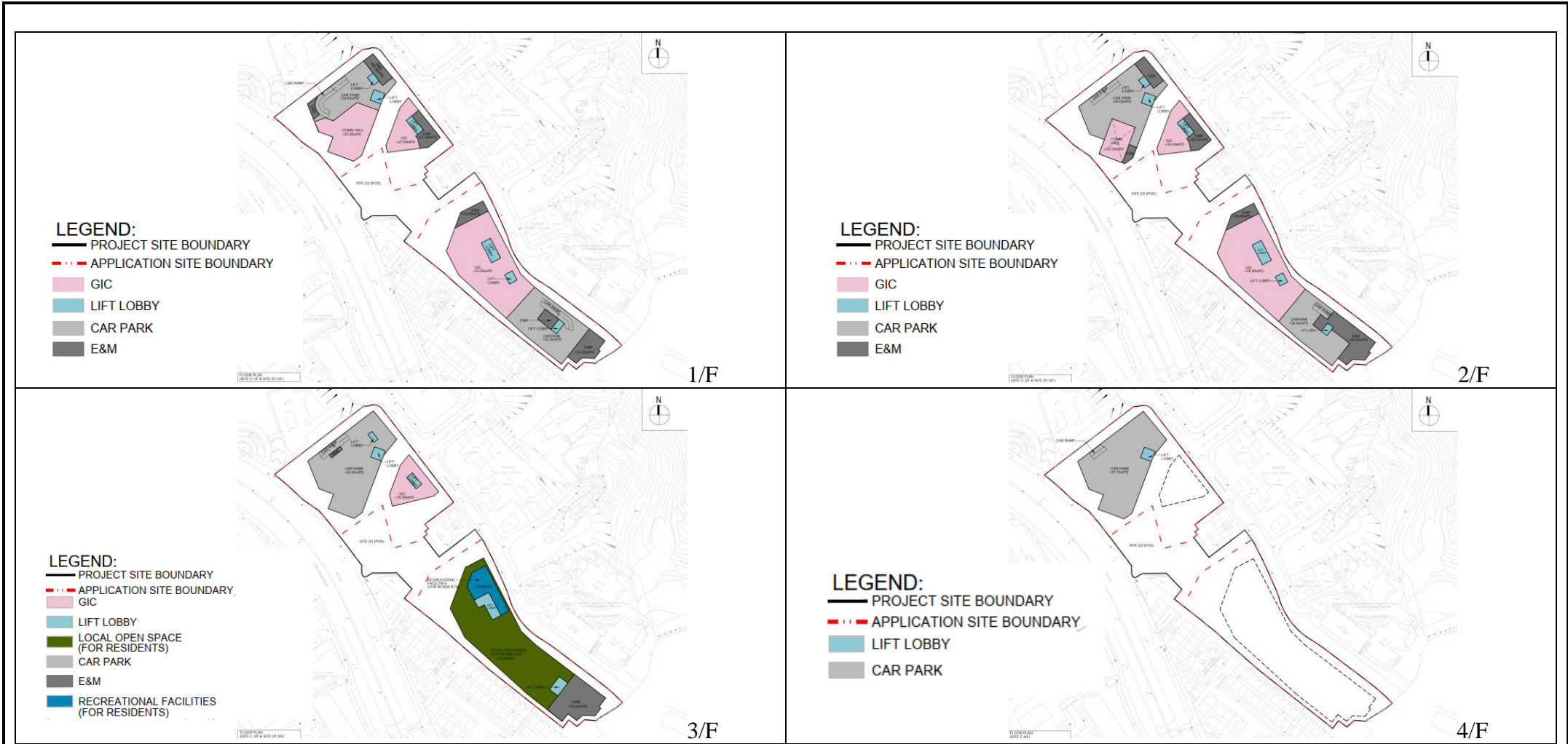
Rev.: 1.0

Date: OCT 2024



<b>Figure:</b> 2a	
<b>Title:</b> Good Design Features Provided in the Proposed Scheme – Setbacks and Building Separations	Drawn by: EC
	Checked by: TC
<b>Project:</b> Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon	Rev.: 1.4
	Date: Feb 2025





**Figure:** 2b



**Title:** Good Design Features Provided in the Proposed Scheme – Empty Bays

Drawn by: EC

Checked by: TC

**Project:** Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon

Rev.: 1.0

Date: Feb 2025



**Figure:** 3a

**Title:** Good Design Features Provided in the Baseline Scheme – Setbacks and Building Separations

**Project:** Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon



Drawn by: EC

Checked by: TC

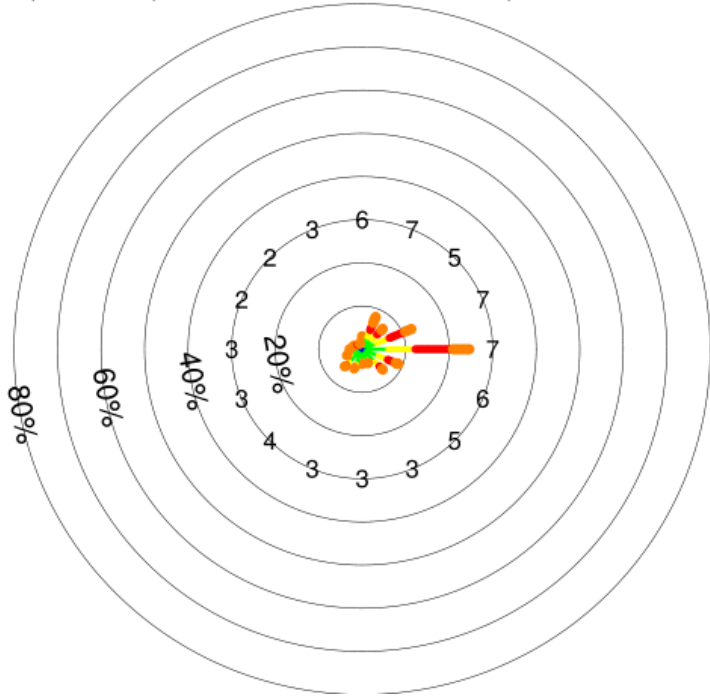
Rev.: 1.1

Date: Dec 2024



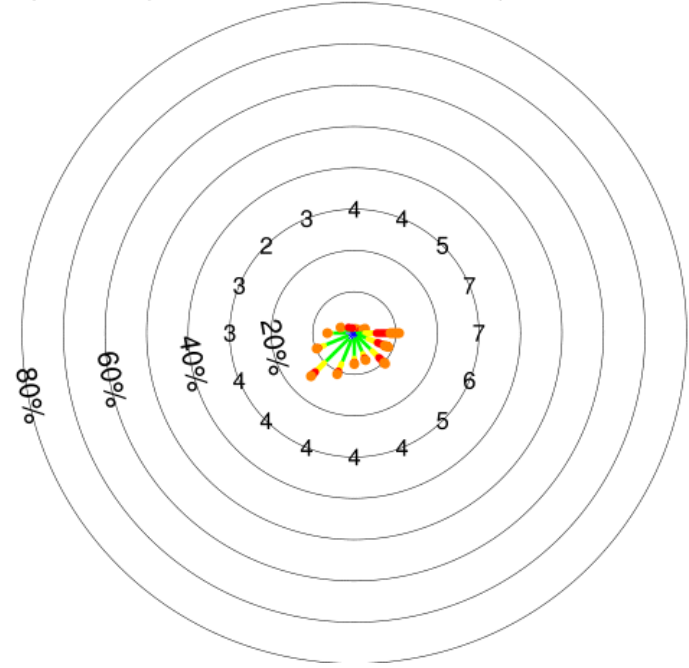


SpdAve=5 SpdStd=3 DirAve=83 No Calm Reports Nwnd=87670



Annual Condition (200m)

SpdAve=5 SpdStd=3 DirAve=156 No Calm Reports Nwnd=22078



Summer Condition (200m)



**Figure:** 4



**Title:** Windrose Diagram (at 200m) extracted from RAMS

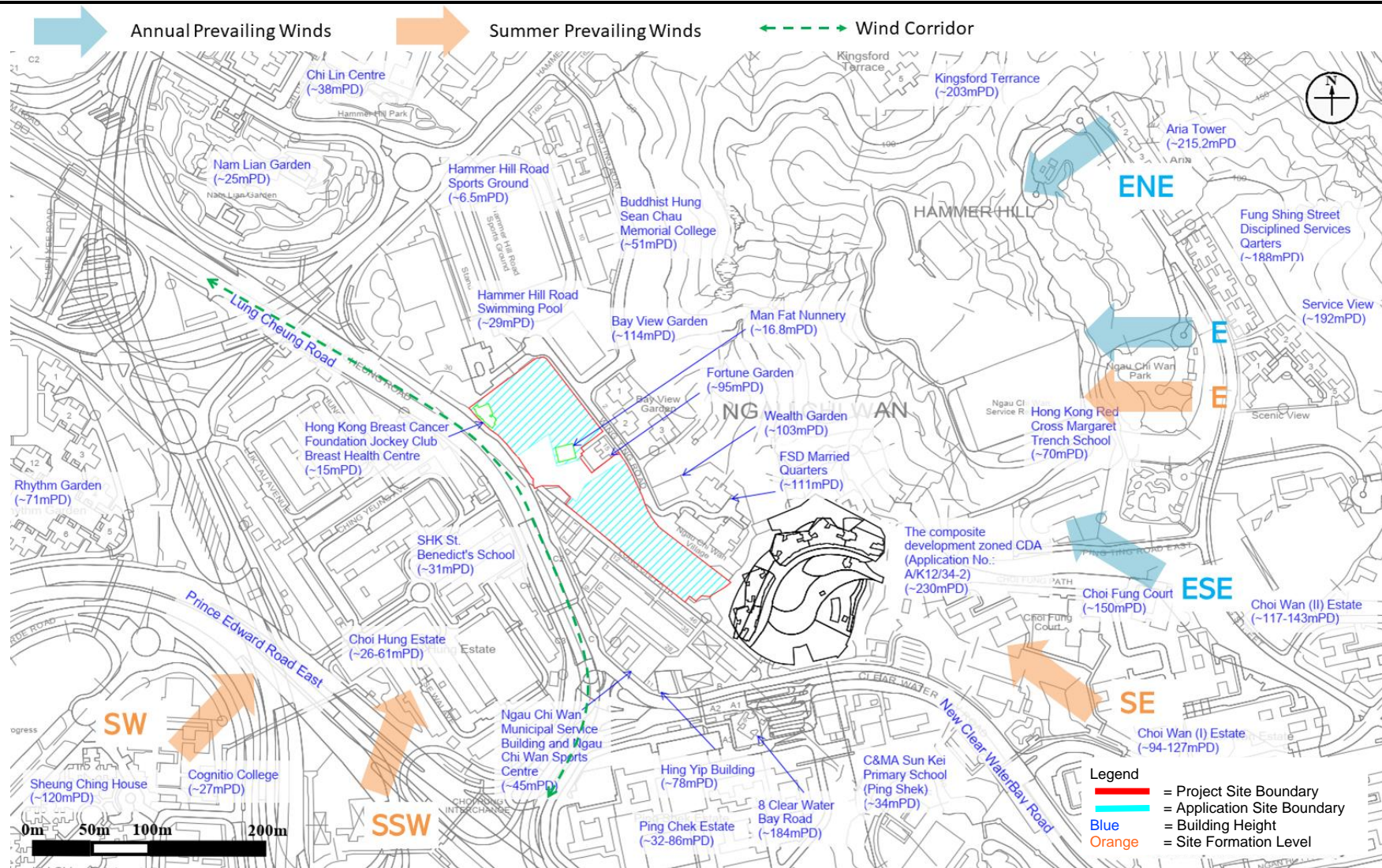
Drawn by: KL

Checked by: EC

**Project:** Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon

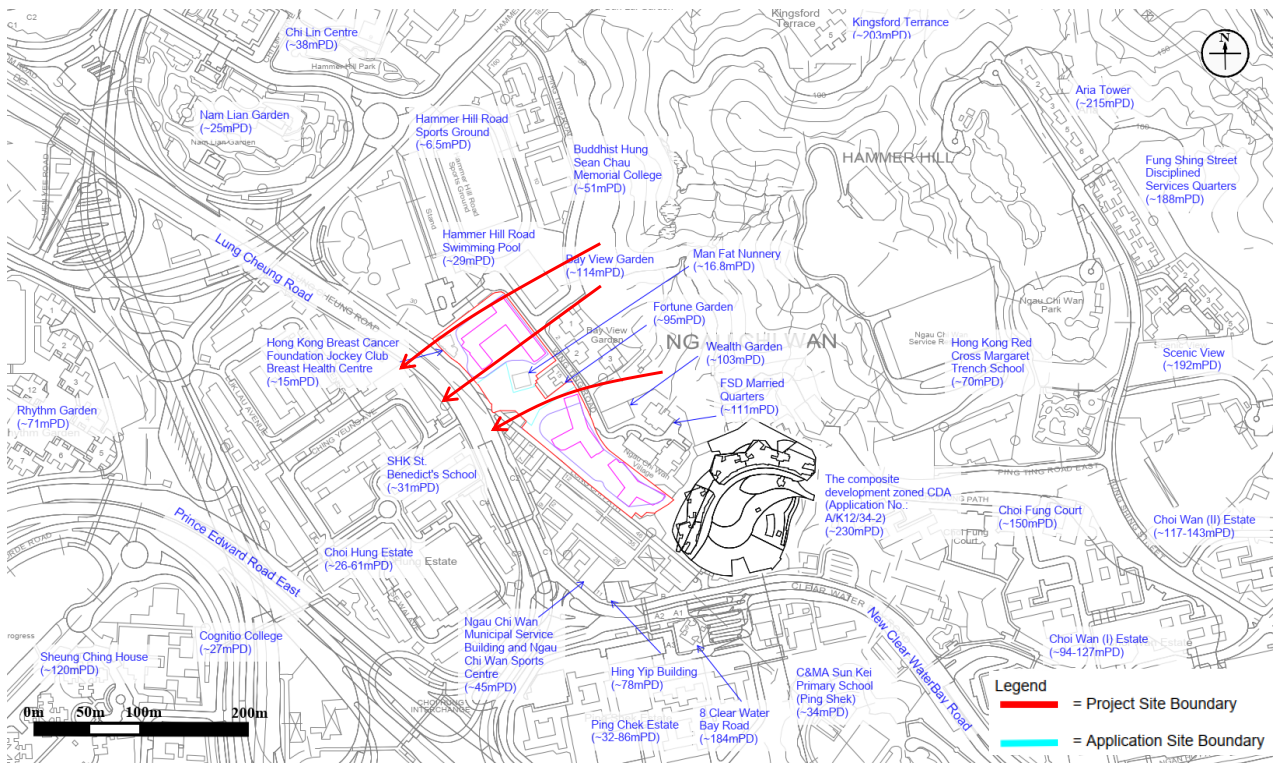
Rev.: 1.0

Date: OCT 2024

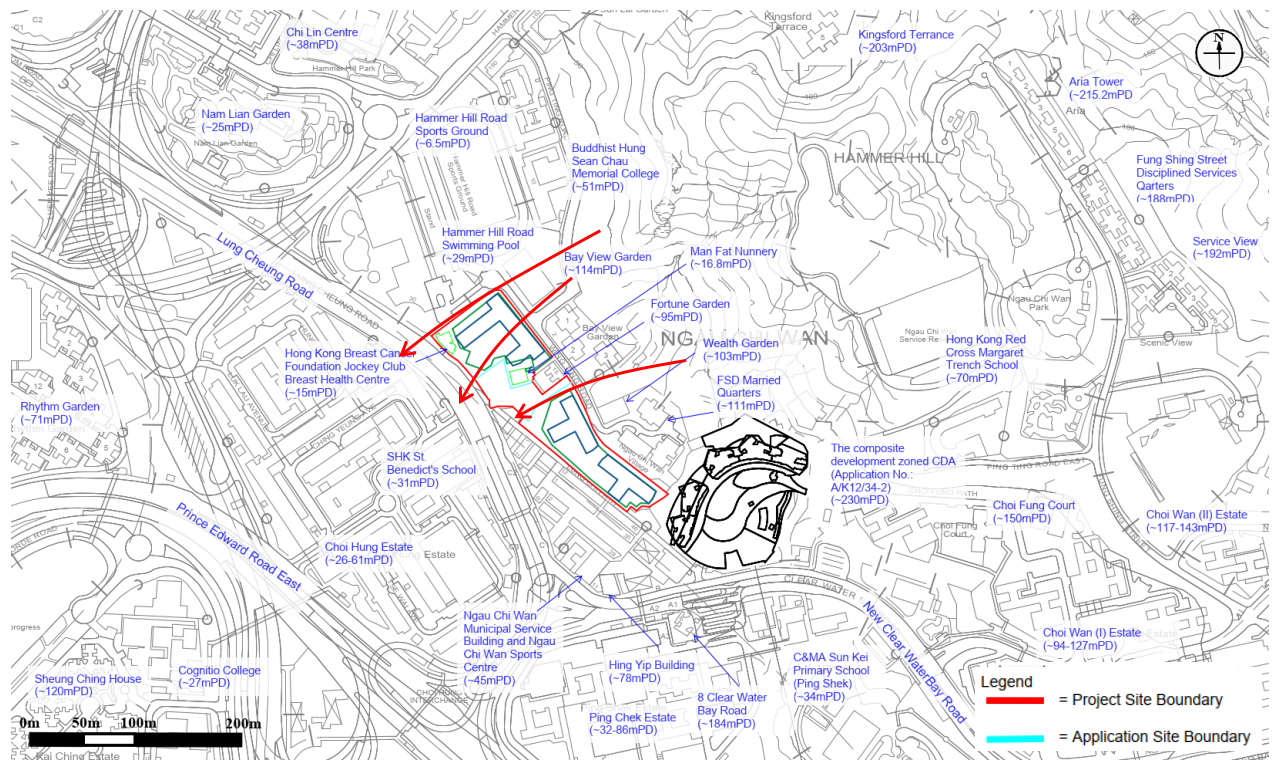


<b>Figure:</b> 5	
<b>Title:</b> Potential Wind Flow under Existing Condition	Drawn by: KL
	Checked by: EC
<b>Project:</b> Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon	Rev.: 1.1
	Date: Dec 2024






Baseline Scheme

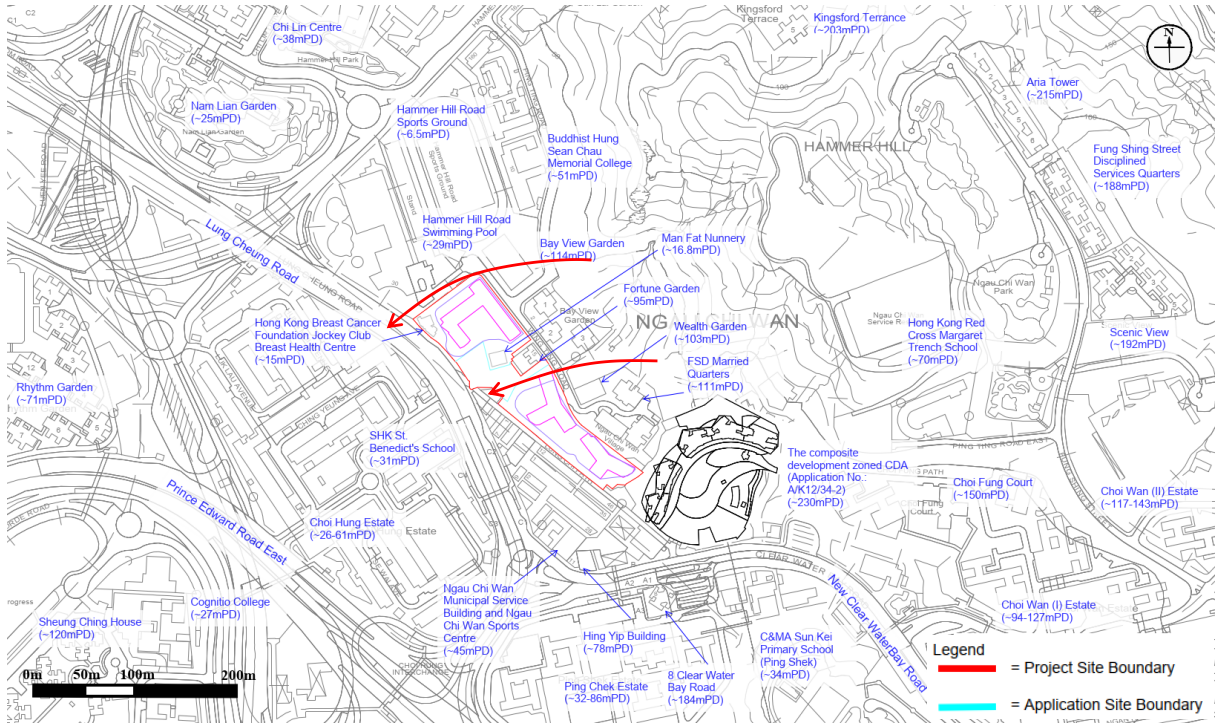


Proposed Scheme

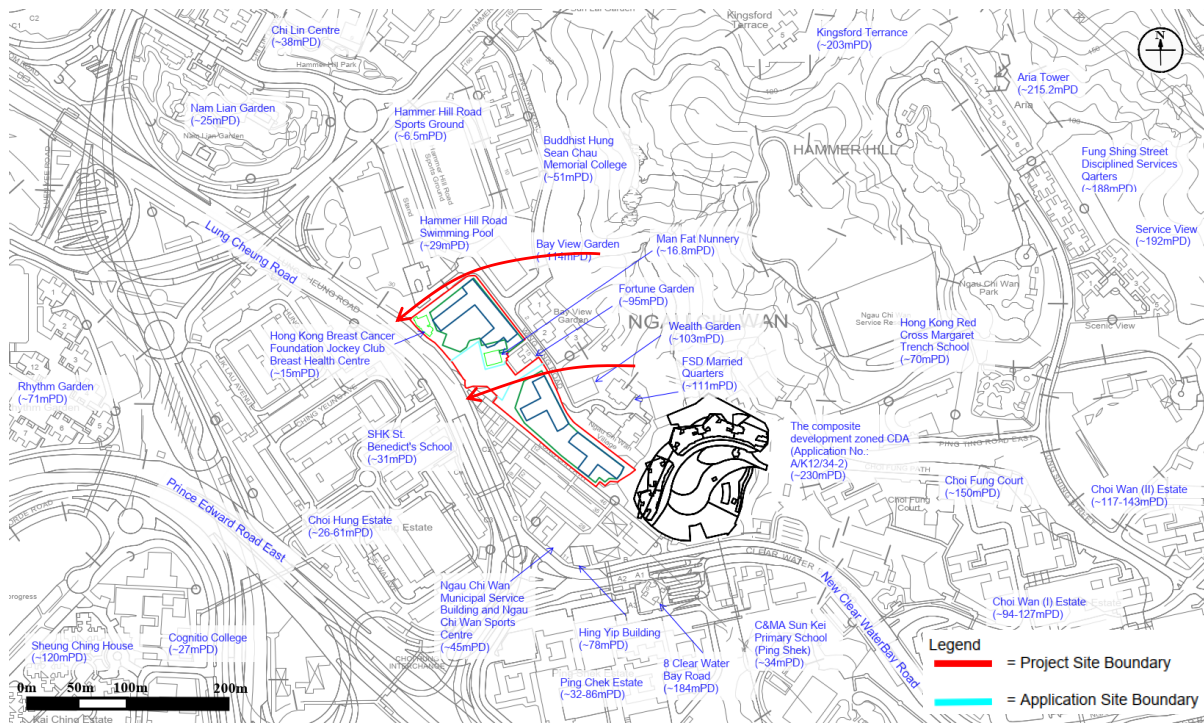
<b>Figure:</b> 6	
<b>Title:</b> Illustration of Wind Flow from ENE Wind Direction	Drawn by: EC Checked by: TC
<b>Project:</b> Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon	Rev.: 1.1 Date: Sep 2024



Expected Wind Flow



Baseline Scheme



Proposed Scheme

Figure: 7



Title: Illustration of Wind Flow from E Wind Direction

Drawn by: EC

Checked by: TC

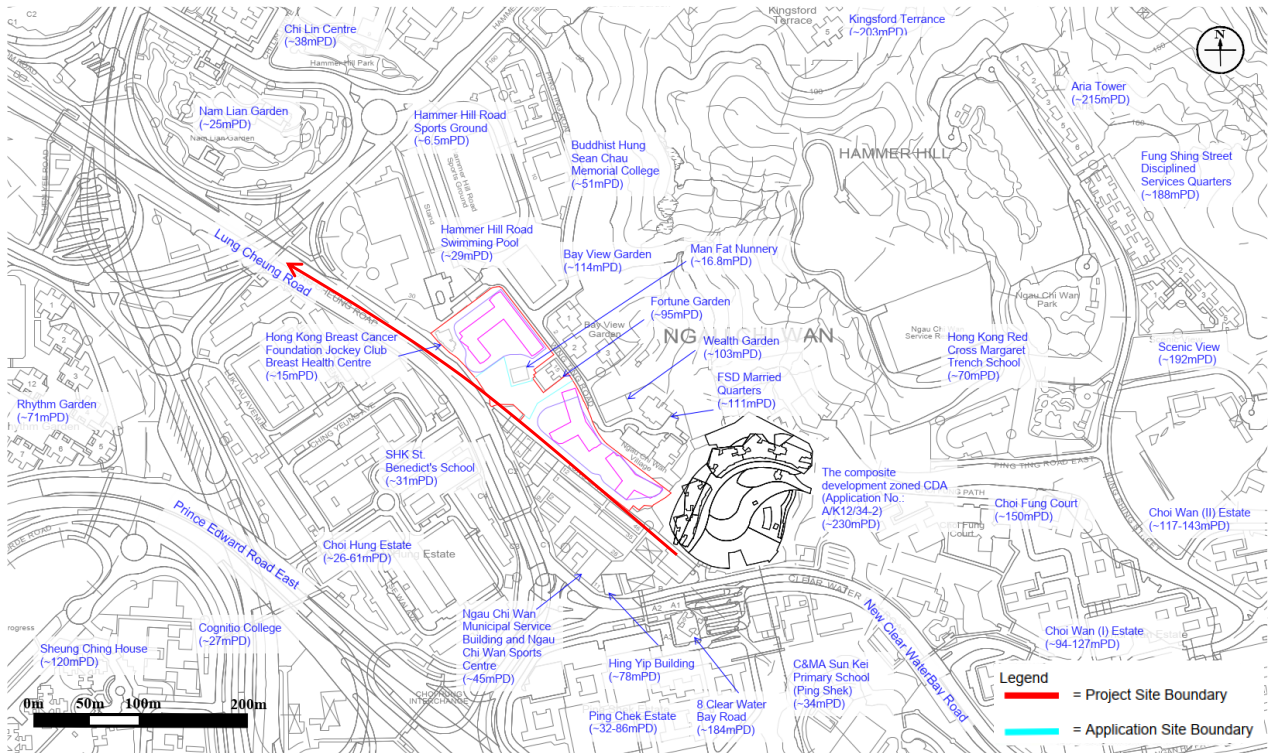
Project: Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon

Rev.: 1.0

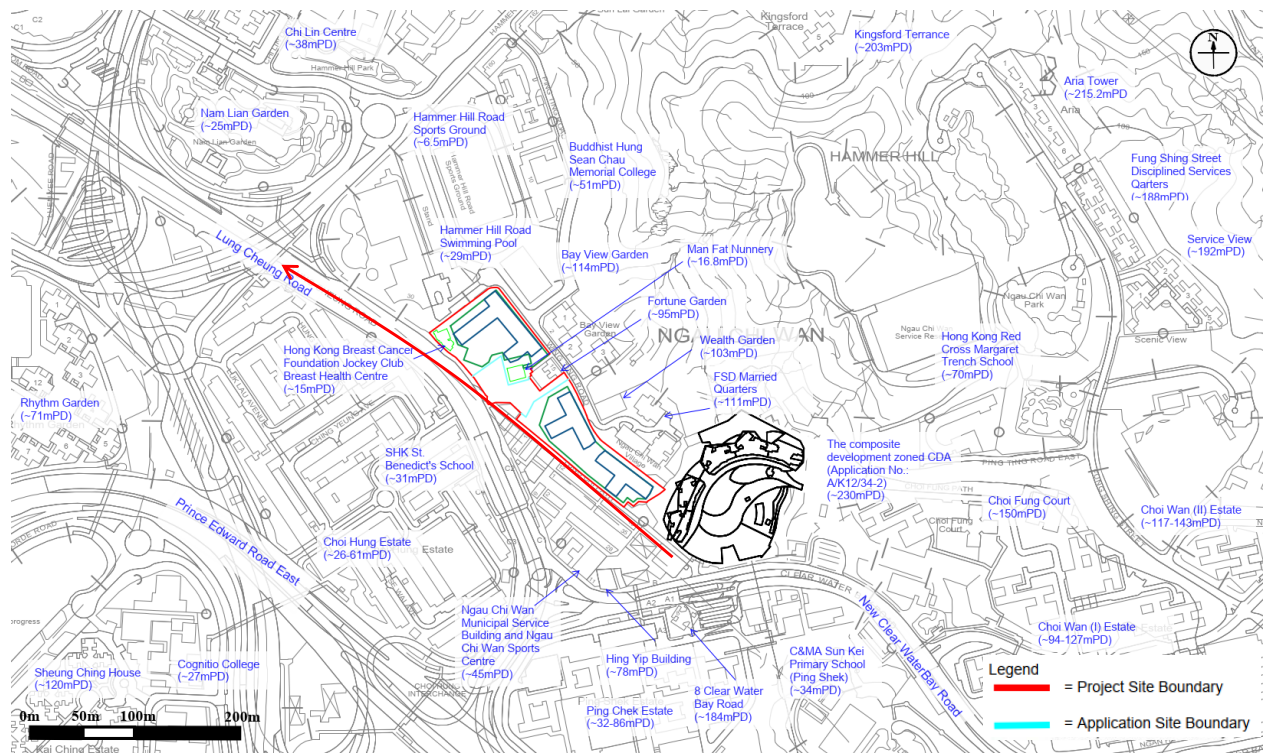
Date: Sep 2024



→ Expected Wind Flow



Baseline Scheme



Proposed Scheme

Figure: 8



Title: Illustration of Wind Flow from ESE Wind Direction

Drawn by: EC

Checked by: TC

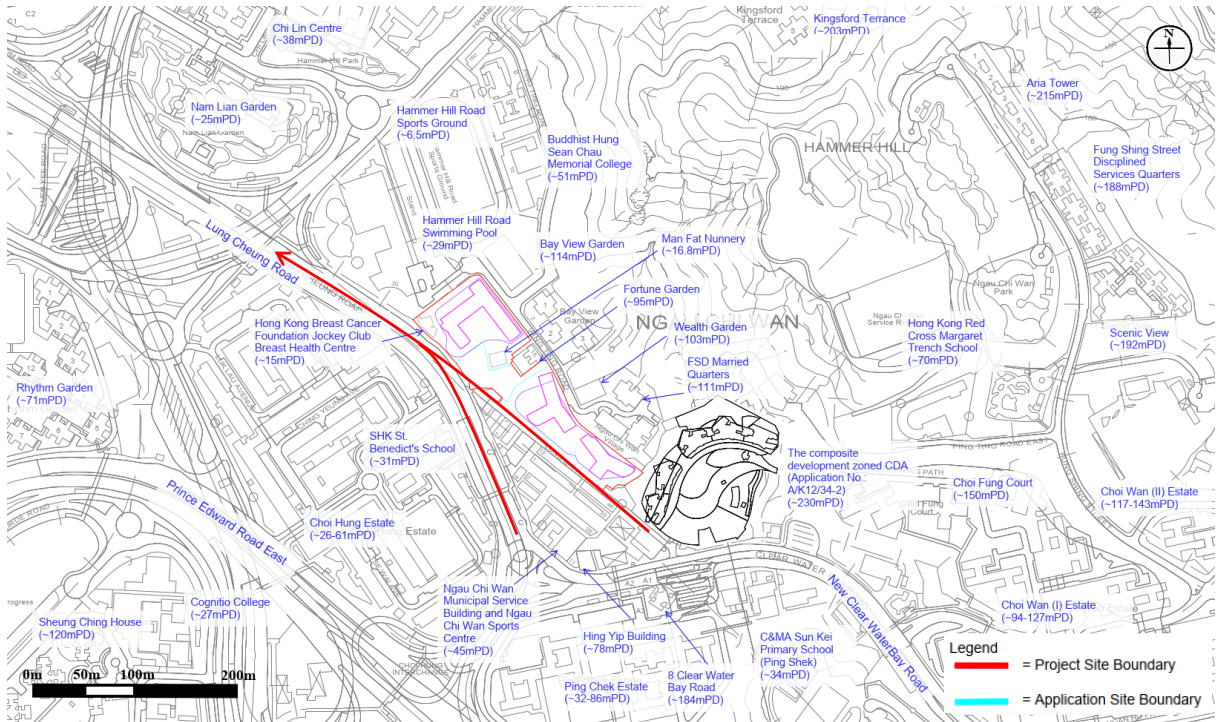
Project: Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon

Rev.: 1.0

Date: Sep 2024



→ Expected Wind Flow



Baseline Scheme

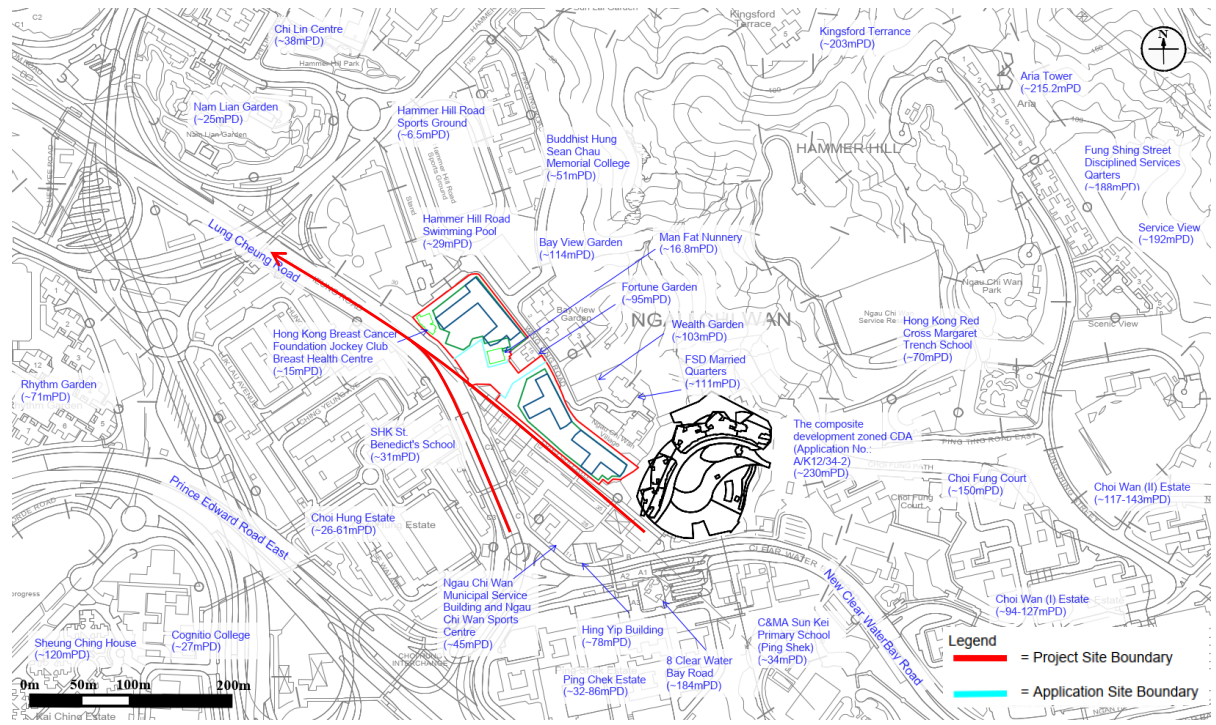


Figure: 9



Title: Illustration of Wind Flow from SE Wind Direction

Drawn by: EC

Checked by: TC

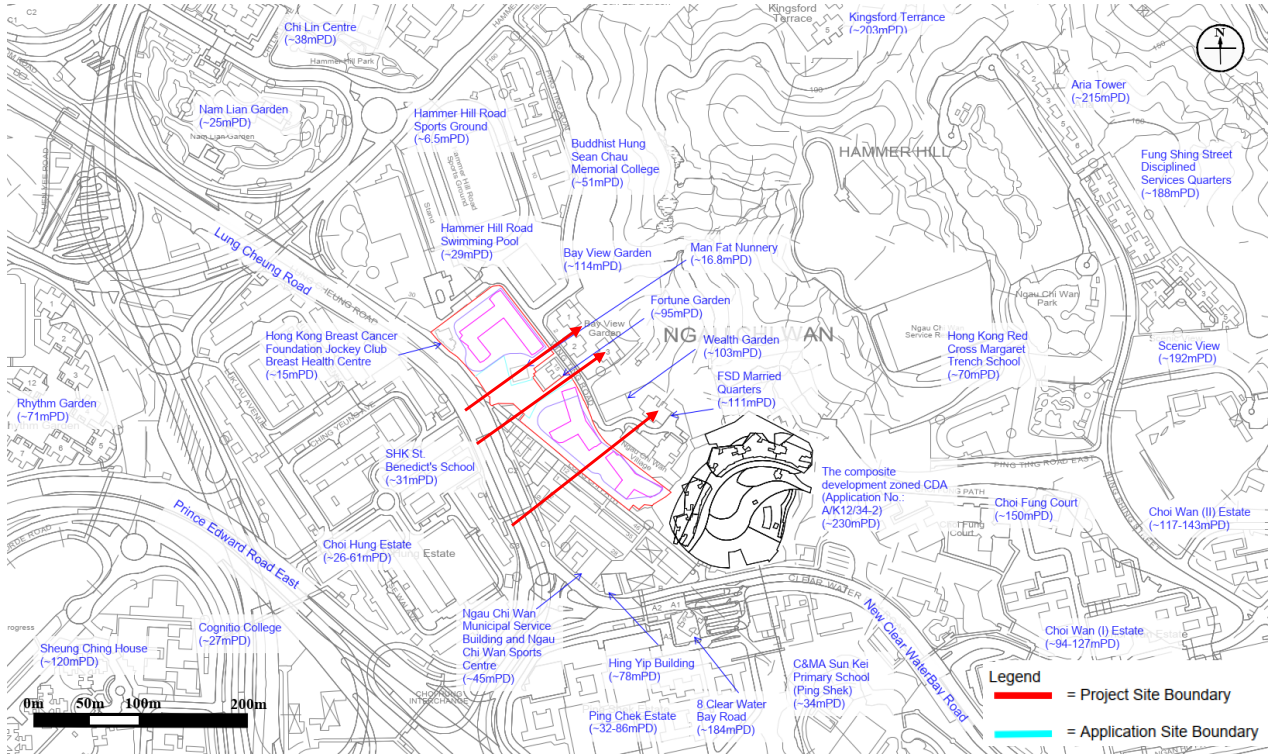
Project: Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon

Rev.: 1.0

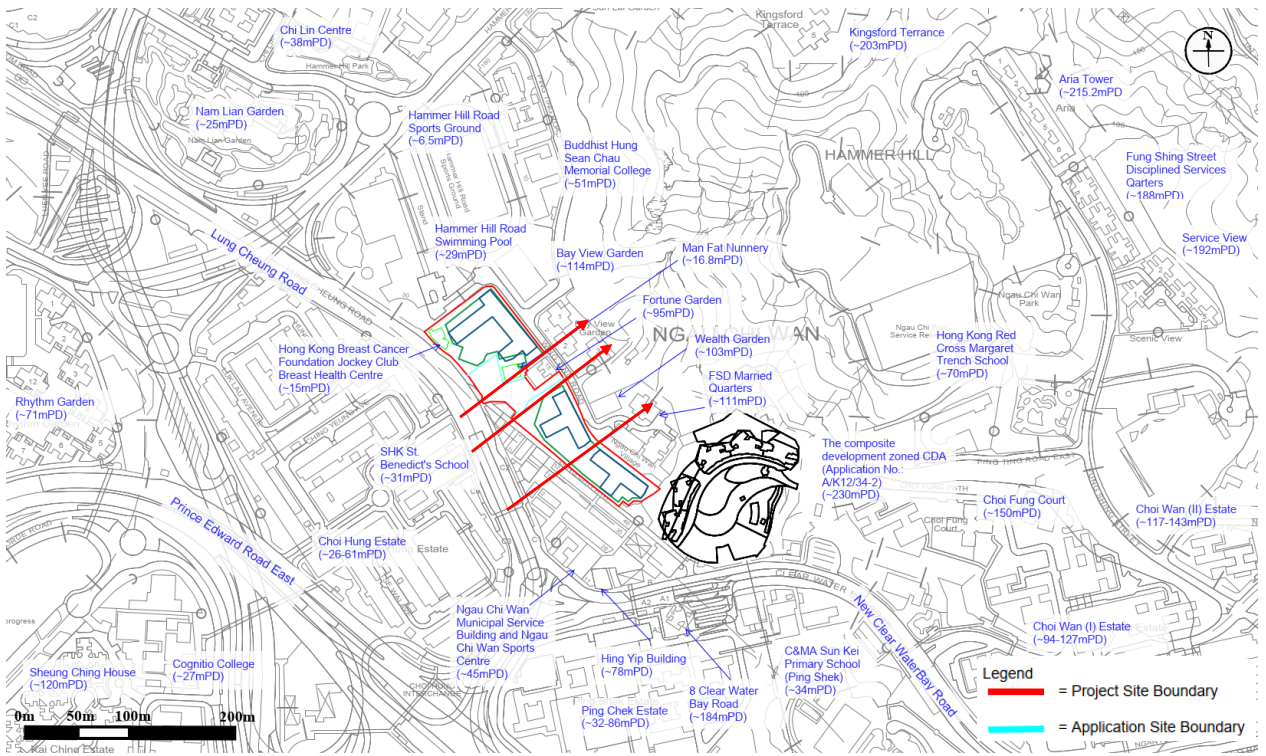
Date: Sep 2024



Expected Wind Flow



Baseline Scheme



Proposed Scheme

Figure: 10

**RAMBOLL**

Title: **Illustration of Wind Flow from SSW and SW Wind Directions**

Drawn by: EC

Checked by: TC

Project: **Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon**

Rev.: 1.2

Date: Jan 2025



Baseline Scheme



Proposed Development

COMPARISON OF MASTER LAYOUT PLAN

Figure: 11a



Title: Comparison between the Baseline Scheme and Proposed Scheme (MLP)

Drawn by: EC

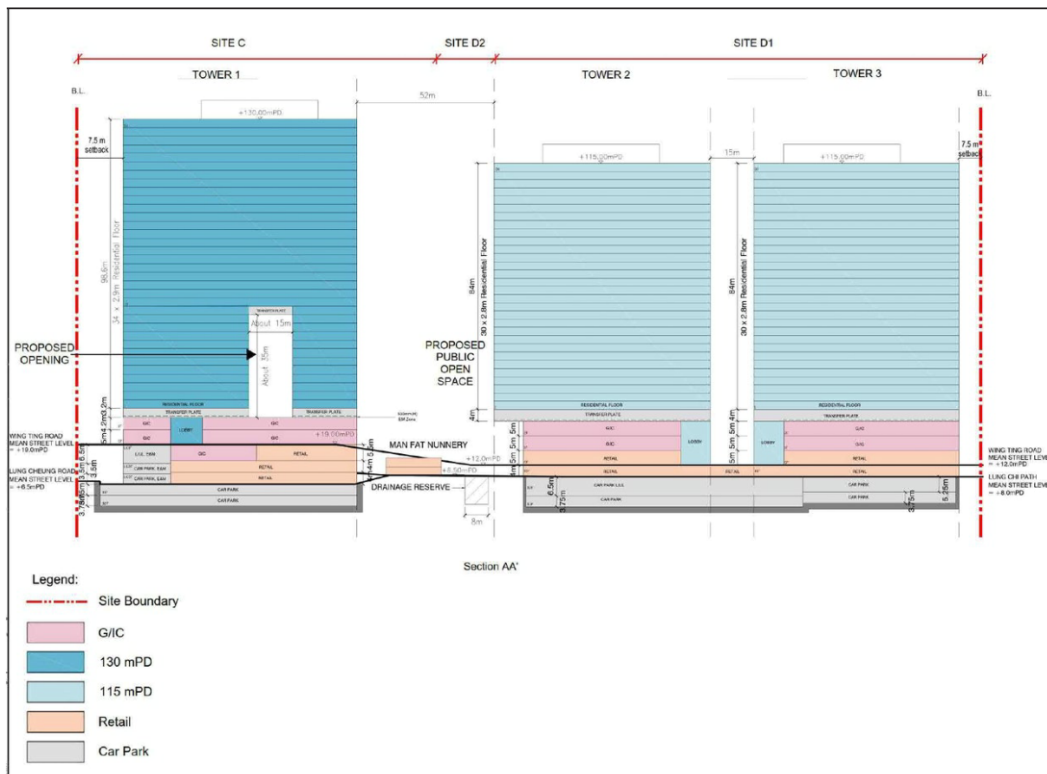
Checked by: TC

Project: Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon

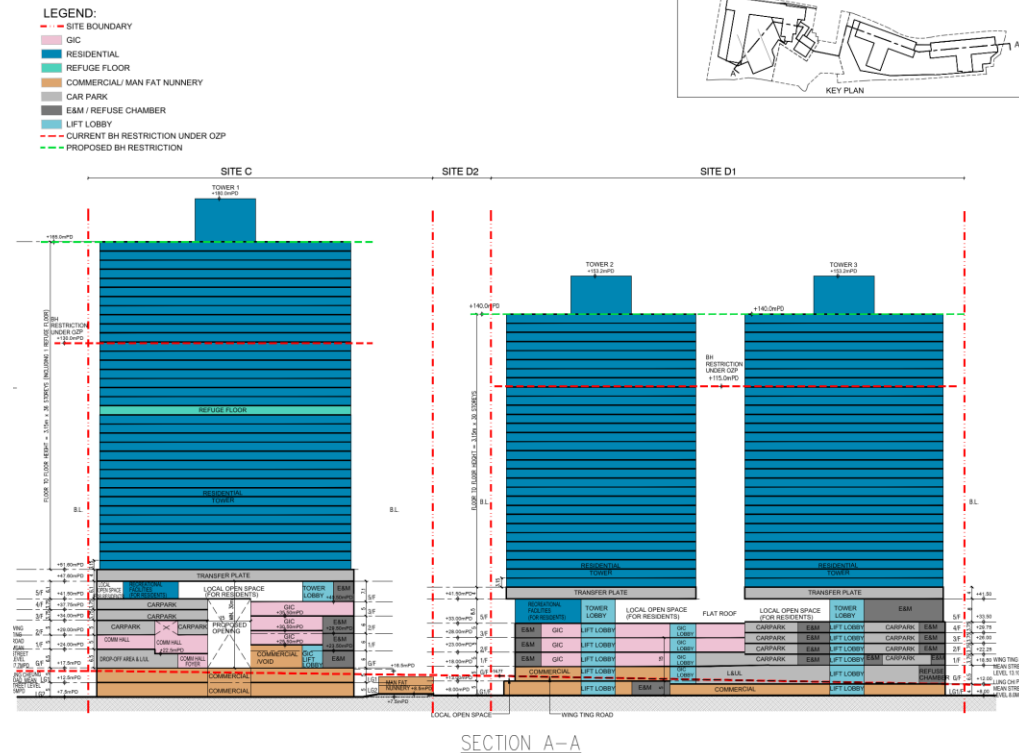
Rev.: 1.4

Date: Feb 2025





Baseline Scheme



Proposed Development

COMPARISON OF SECTION

Figure: 11b

Title: Comparison between the Baseline Scheme and Proposed Scheme (Section A-A)

Project: Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon

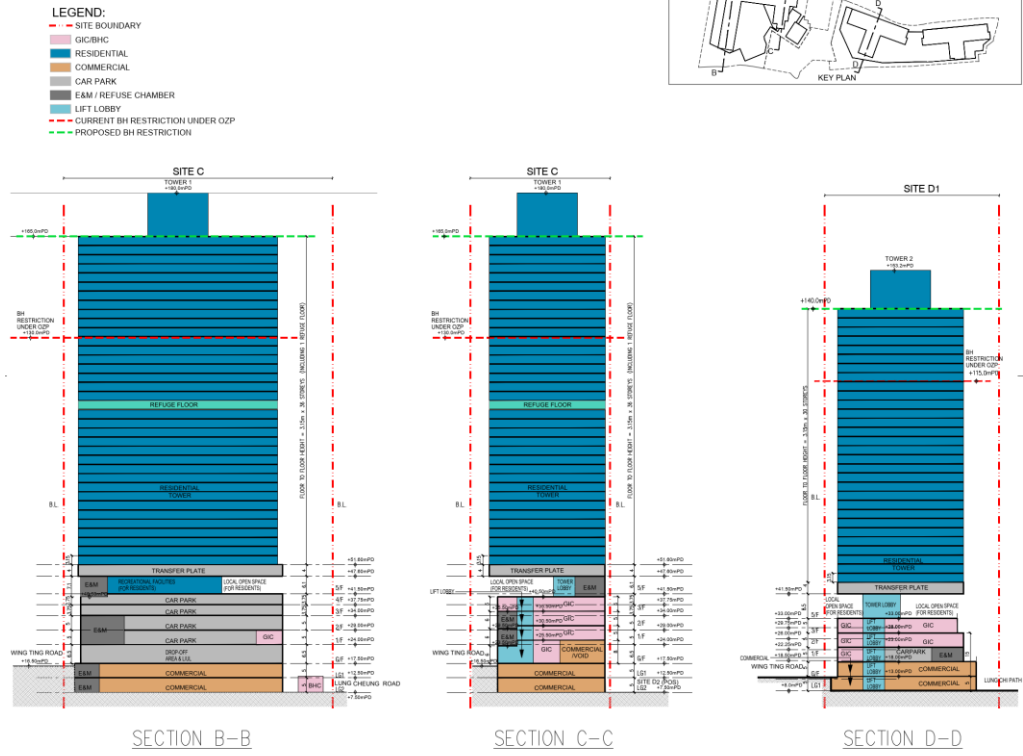
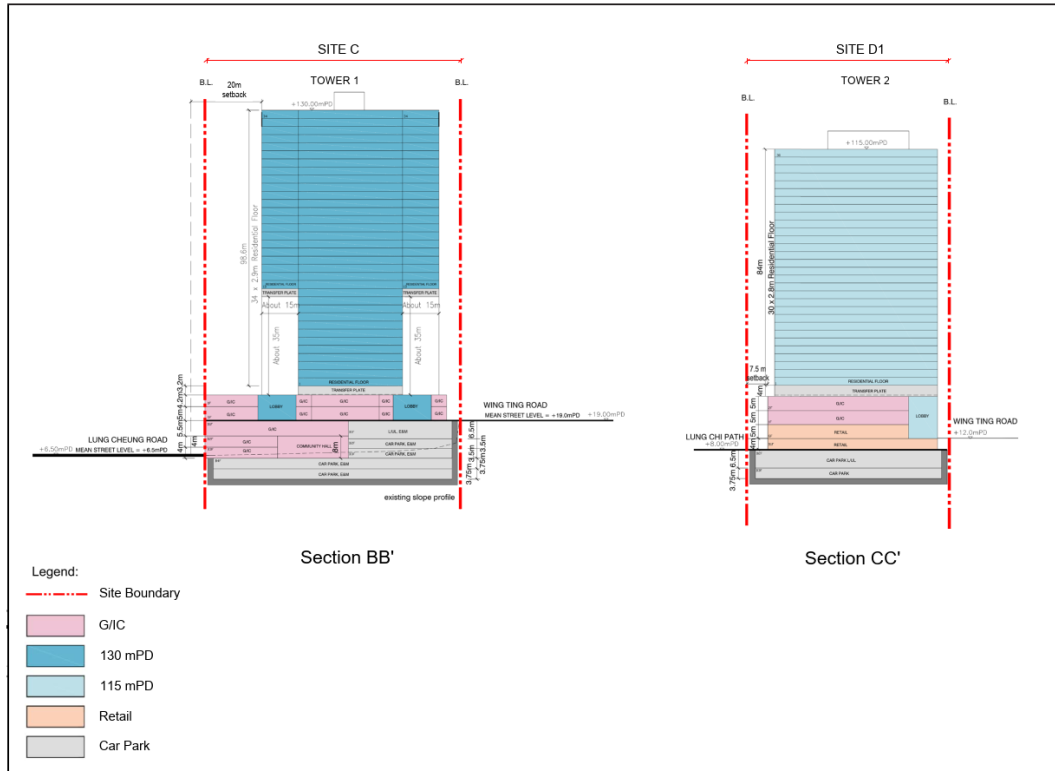


Drawn by: EC

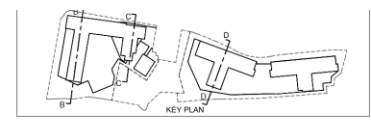
Checked by: TC

Rev.: 1.2

Date: Feb 2025



- LEGEND:**
- - - SITE BOUNDARY
  - GIC/BHC
  - RESIDENTIAL
  - CAR PARK
  - EAM / REFUSE CHAMBER
  - LIFT LOBBY
  - - - CURRENT BH RESTRICTION UNDER OZP
  - - - PROPOSED BH RESTRICTION



Baseline Scheme

Proposed Development

COMPARISON OF SECTION

<b>Figure:</b>	<b>11c</b>
<b>Title:</b>	<b>Comparison between the Baseline Scheme and Proposed Scheme (Section B-B, C-C and D-D)</b>
<b>Project:</b>	<b>Proposed Minor Relaxation of Building Height Restrictions for Public Housing Development at Ngau Chi Wan Village, Kowloon</b>

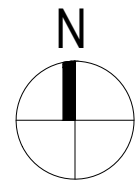


Drawn by:	EC
Checked by:	TC
Rev.:	1.2
Date:	Feb 2025

**Appendix 1    Master Layout Plan of the Proposed Scheme**



- LEGEND:**
- PROJECT SITE BOUNDARY
  - APPLICATION SITE BOUNDARY
  - BUILDING BLOCK
  - PODIUM WITH LOCAL OPEN SPACE
  - AT-GRADE LOCAL OPEN SPACE
  - MAN FAT NUNNERY (TO BE RETAINED)
  - BHC (TO BE RETAINED)
  - PROPOSED PUBLIC OPEN SPACE (POS) AT SITE D2 (NOT FORMING PART OF THIS S16 PLANNING APPLICATION)
  - CARRIAGEWAY



Project No. **23140KL** Scale **1:1000 @ A3**  
 Drawing No. **PA\_001** Issue Date **04/02/2025**  
 Drawing Purpose **PLANNING SUBMISSION**

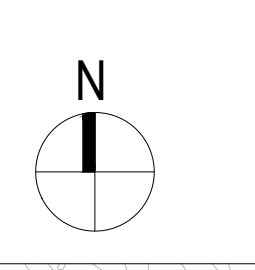
Project Title **S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title **MASTER LAYOUT PLAN**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

B.D. Ref.	F.S.D. Ref.	D.L.O. Ref.	Drawn	SZO	Date	04/02/2025	Checked	JH	Date	04/02/2025	Approved	DAW	Date	04/02/2025
Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.														





- LEGEND:**
- PROJECT SITE BOUNDARY
  - APPLICATION SITE BOUNDARY
  - LIFT LOBBY
  - COMMERCIAL/ MAN FAT NUNNERY
  - AT-GRADE LOCAL OPEN SPACE
  - BHC
  - E&M

FLOOR PLAN  
(SITE C LG2/F & SITE D1 LG1/F)

Project No. **23140KL** Scale **1:1000 @ A3**  
 Issue date **04/02/2025**  
 Drawing No. **PA\_002**  
 Drawing Purpose

**PLANNING SUBMISSION**

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title  
**FLOOR PLAN (SITE C LG2/F & SITE D1 LG1/F)**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

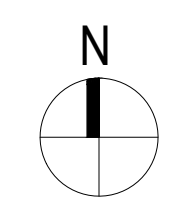
Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

B.D. Ref. \_\_\_\_\_  
 F.S.D. Ref. \_\_\_\_\_  
 D.L.O. Ref. \_\_\_\_\_

Drawn	SZO	Date	04/02/2025
Checked	JH	Date	04/02/2025
Approved	DAW	Date	04/02/2025

Check all measurements on site. Do not scale off drawings.  
 This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.  
 This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Coif File No. \_\_\_\_\_



- LEGEND:**
- PROJECT SITE BOUNDARY
  - APPLICATION SITE BOUNDARY
  - LIFT LOBBY
  - LOCAL OPEN SPACE
  - COMMERCIAL/ MAN FAT NUNNERY
  - BHC
  - E&M / REFUSE CHAMBER
  - CAR PARK

FLOOR PLAN  
(SITE C LG1/F & SITE D1 G/F)

Project No. **23140KL** Scale **1:1000 @ A3**  
 Issue date **04/02/2025**  
 Drawing No. **PA\_003**  
 Drawing Purpose **PLANNING SUBMISSION**

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title  
**FLOOR PLAN (SITE C LG1/F & SITE D1 G/F)**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

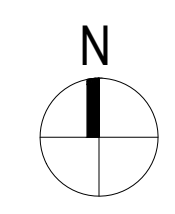
  

B.D. Ref.	F.S.D. Ref.	D.L.O. Ref.	Drawn	SZO	Date	04/02/2025
			Checked	JH	Date	04/02/2025
			Approved	DAW	Date	04/02/2025

Check all measurements on site. Do not scale off drawings.  
 This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.  
 This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Conf. File No. - -





- LEGEND:**
- PROJECT SITE BOUNDARY
  - APPLICATION SITE BOUNDARY
  - GIC
  - LIFT LOBBY
  - LOCAL OPEN SPACE
  - COMMERCIAL
  - CAR PARK
  - E&M / REFUSE CHAMBER

FLOOR PLAN  
(SITE C G/F & SITE D1 1/F)

Project No. **23140KL** Scale **1:1000 @ A3**  
 Drawing No. **PA\_004** Issue date **04/02/2025**  
 Drawing Purpose **PLANNING SUBMISSION**

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title  
**FLOOR PLAN (SITE C G/F & SITE D1 1/F)**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

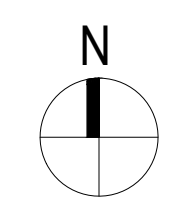
Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

B.D. Ref.	F.S.D. Ref.	D.L.O. Ref.	Drawn	SZO	Date	Checked	JH	Date	Approved	DAW	Date
					04/02/2025			04/02/2025			04/02/2025

Check all measurements on site. Do not scale off drawings.  
 This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.  
 This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Conf. File No. - -



- LEGEND:**
- PROJECT SITE BOUNDARY
  - APPLICATION SITE BOUNDARY
  - GIC
  - LIFT LOBBY
  - CAR PARK
  - E&M

FLOOR PLAN  
(SITE C 1/F & SITE D1 2/F)

Project No. **23140KL** Scale **1:1000 @ A3**  
 Drawing No. **PA\_005** Issue date **04/02/2025**  
 Drawing Purpose **PLANNING SUBMISSION**

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title  
**FLOOR PLAN (SITE C 1/F & SITE D1 2/F)**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

B.D. Ref.	F.S.D. Ref.	D.L.O. Ref.

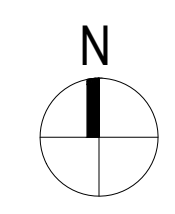
  

Checked	Drawn	Date
SZO	JH	04/02/2025
DAW	JH	04/02/2025

Check all measurements on site. Do not scale off drawings.  
 This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.  
 This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Conf. File No. - -





- LEGEND:**
- PROJECT SITE BOUNDARY
  - APPLICATION SITE BOUNDARY
  - GIC
  - LIFT LOBBY
  - CAR PARK
  - E&M

FLOOR PLAN  
(SITE C 2/F & SITE D1 3/F)

Project No. **23140KL** Scale **1:1000 @ A3**  
 Drawing No. **PA\_006** Issue date **04/02/2025**  
 Drawing Purpose **PA\_006**

PLANNING SUBMISSION

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title  
**FLOOR PLAN (SITE C-2/F & SITE D1-3/F)**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

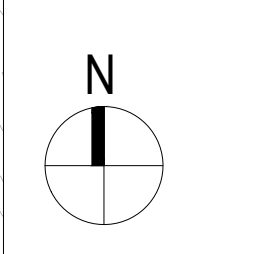
B.D. Ref. \_\_\_\_\_ F.S.D. Ref. \_\_\_\_\_ D.L.O. Ref. \_\_\_\_\_  
 Drawn SZO Date 04/02/2025 Checked JH Date 04/02/2025 Approved DAW Date 04/02/2025  
 Check all measurements on site. Do not scale off drawings.  
 This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.  
 This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Coif File No. \_\_\_\_\_



- LEGEND:**
- PROJECT SITE BOUNDARY
  - APPLICATION SITE BOUNDARY
  - LIFT LOBBY
  - CAR PARK
  - E&M

FLOOR PLAN (SITE D1 4/F)



Project No. **23140KL** Scale **1:1000 @ A3**  
 Drawing No. **PA\_007** Issue date **04/02/2025**  
 Drawing Purpose **PLANNING SUBMISSION**

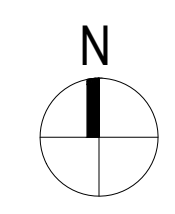
Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title  
**FLOOR PLAN (SITE D1 4/F)**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

B.D. Ref.	F.S.D. Ref.	D.L.O. Ref.	Drawn	SZO	Date	04/02/2025	Checked	JH	Date	04/02/2025	Approved	DAW	Date	04/02/2025
<small>Check all measurements on site. Do not scale off drawings.            This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.            This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.</small>														





- LEGEND:**
- PROJECT SITE BOUNDARY
  - APPLICATION SITE BOUNDARY
  - GIC
  - LIFT LOBBY
  - LOCAL OPEN SPACE (FOR RESIDENTS)
  - CAR PARK
  - E&M
  - RECREATIONAL FACILITIES (FOR RESIDENTS)

FLOOR PLAN  
(SITE C 3/F & SITE D1 5/F)

Project No. **23140KL** Scale **1:1000 @ A3**  
 Issue date **04/02/2025**  
 Drawing No. **PA\_008**  
 Drawing Purpose

**PLANNING SUBMISSION**

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title  
**FLOOR PLAN (SITE C 3/F & SITE D1 5/F)**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

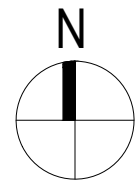
B.D. Ref.	F.S.D. Ref.	D.L.O. Ref.	Drawn	SZO	Date	04/02/2025
			Checked	JH	Date	04/02/2025
			Approved	DAW	Date	04/02/2025

Check all measurements on site. Do not scale off drawings.  
 This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.  
 This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Conf. File No. - -







- LEGEND:**
- PROJECT SITE BOUNDARY
  - APPLICATION SITE BOUNDARY
  - LIFT LOBBY
  - E&M
  - LOCAL OPEN SPACE (FOR RESIDENTS)
  - TRANSFER PLATE
  - RECREATIONAL FACILITIES (FOR RESIDENTS)

FLOOR PLAN  
(SITE C 5/F & SITE D1 TRANSFER PLATE)

Project No. **23140KL** Scale **1:1000 @ A3**  
 Drawing No. **PA\_010** Issue date **04/02/2025**  
 Drawing Purpose **PLANNING SUBMISSION**

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title  
**FLOOR PLAN (SITE C 5/F & SITE D1 TRANSFER PLATE)**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

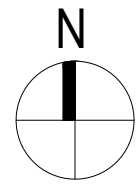
Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

B.D. Ref. \_\_\_\_\_  
 F.S.D. Ref. \_\_\_\_\_  
 D.L.O. Ref. \_\_\_\_\_

Drawn **SZO** Date **04/02/2025**  
 Checked **JH** Date **04/02/2025**  
 Approved **DAW** Date **04/02/2025**

Check all measurements on site. Do not scale off drawings.  
 This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.  
 This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Conf. File No. \_\_\_\_\_



Project No. **23140KL** Scale **1:1000 @ A3**  
 Drawing No. **PA\_011** Issue date **04/02/2025**  
 Drawing Purpose **PLANNING SUBMISSION**

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**  
 Drawing Title  
**TYPICAL TOWER PLAN**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

B.D. Ref. -  
 F.S.D. Ref. -  
 D.L.O. Ref. -

Drawn **SZO** Date **04/02/2025**  
 Checked **JH** Date **04/02/2025**  
 Approved **DAW** Date **04/02/2025**

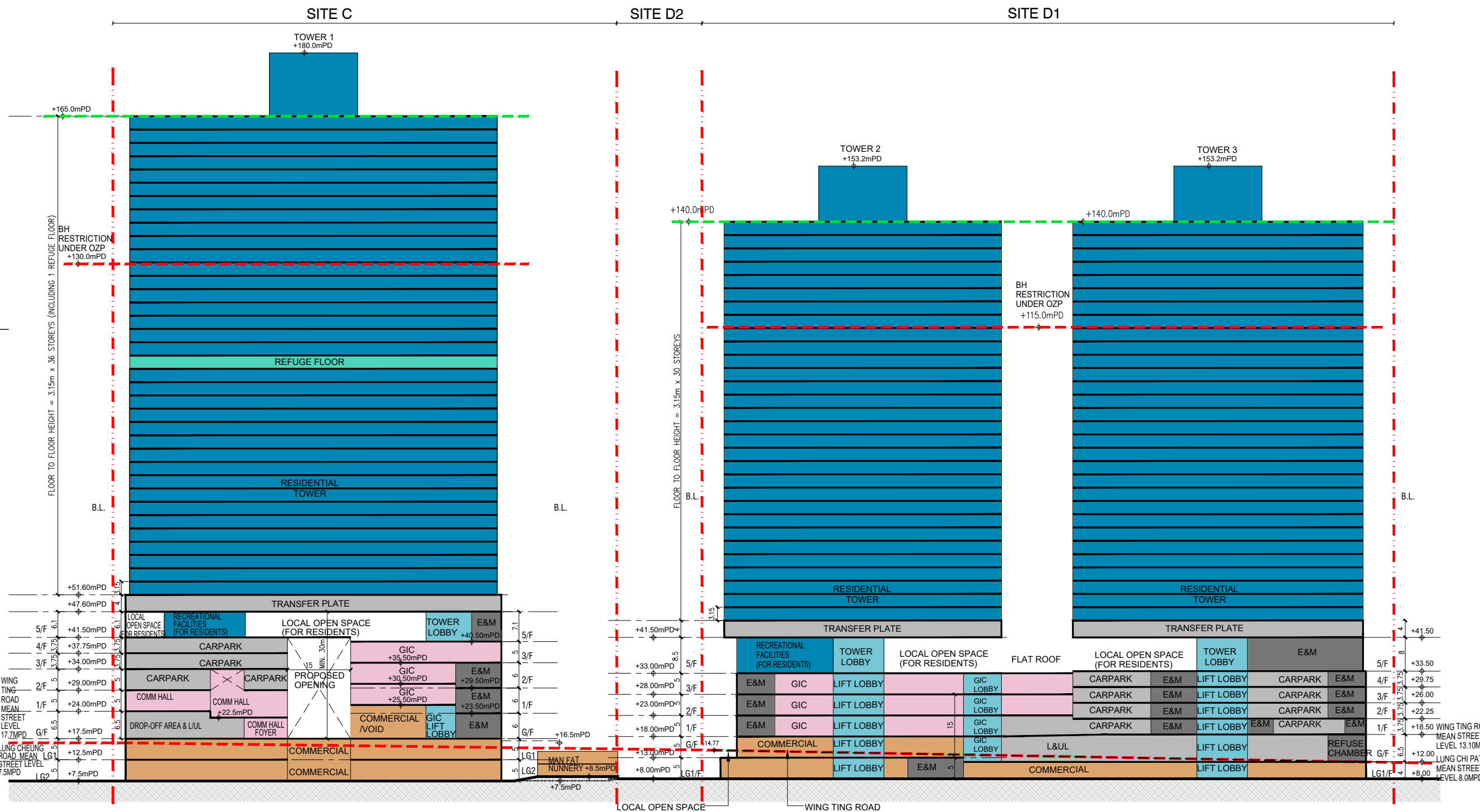
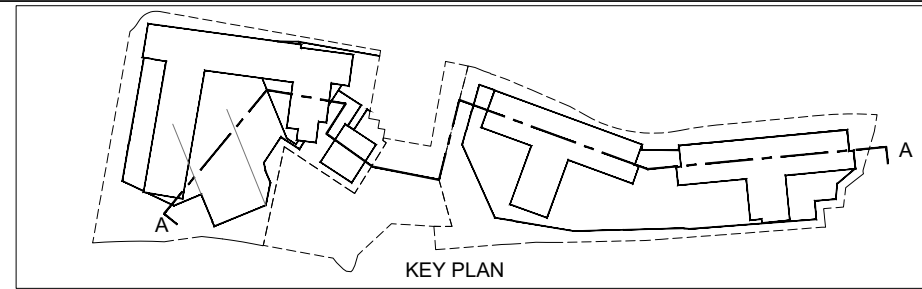
Check all measurements on site. Do not scale off drawings.  
 This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.  
 This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

Conf. File No. - -

**LEGEND:**

- - - SITE BOUNDARY
- GIC
- RESIDENTIAL
- REFUGE FLOOR
- COMMERCIAL/ MAN FAT NUNNERY
- CAR PARK
- E&M / REFUSE CHAMBER
- LIFT LOBBY
- - - CURRENT BH RESTRICTION UNDER OZP
- - - PROPOSED BH RESTRICTION



Project No. **23140KL**  
Scale **1:1000 @ A3**  
Drawing No. **PA\_012**  
Issue Date **04/02/2025**  
Drawing Purpose **PLANNING SUBMISSION**

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**

Drawing Title  
**SECTION A**

**RONALD LU & PARTNERS**  
呂元祥建築師事務所

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

B.D. Ref.	F.S.D. Ref.	D.L.O. Ref.	Drawn	Checked	Approved	Date
			SZO	JH	DAW	04/02/2025

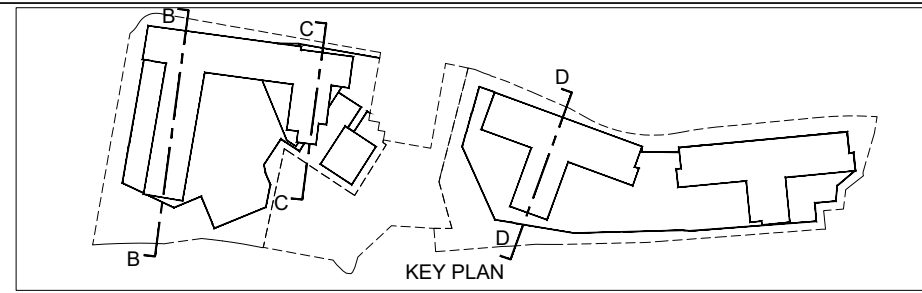
Check all measurements on site. Do not scale off drawings.  
This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect.  
This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Conf File No. -



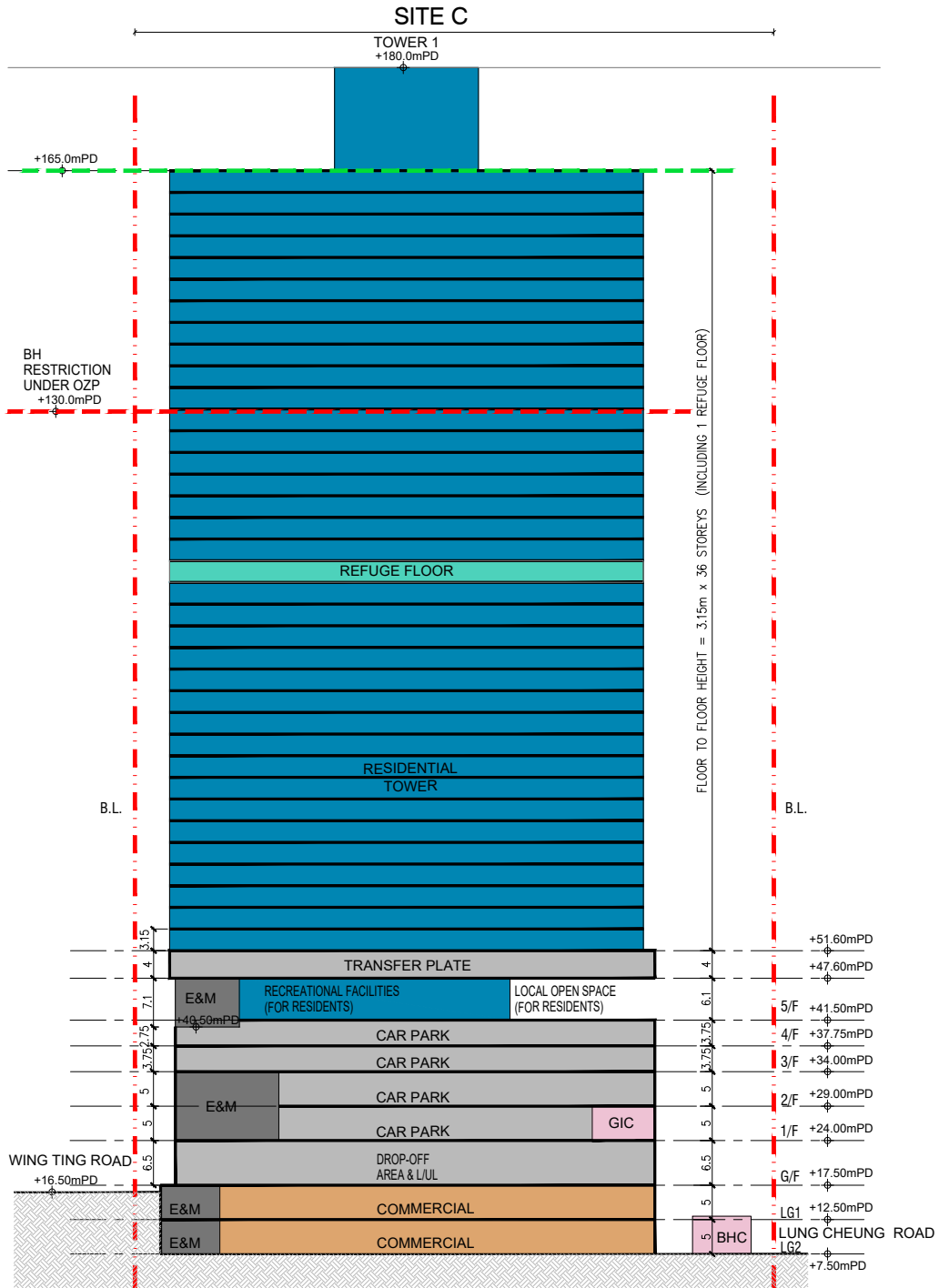
**LEGEND:**

- - - SITE BOUNDARY
- GIC/BHC
- RESIDENTIAL
- COMMERCIAL
- CAR PARK
- E&M / REFUSE CHAMBER
- LIFT LOBBY
- - - CURRENT BH RESTRICTION UNDER OZP
- - - PROPOSED BH RESTRICTION

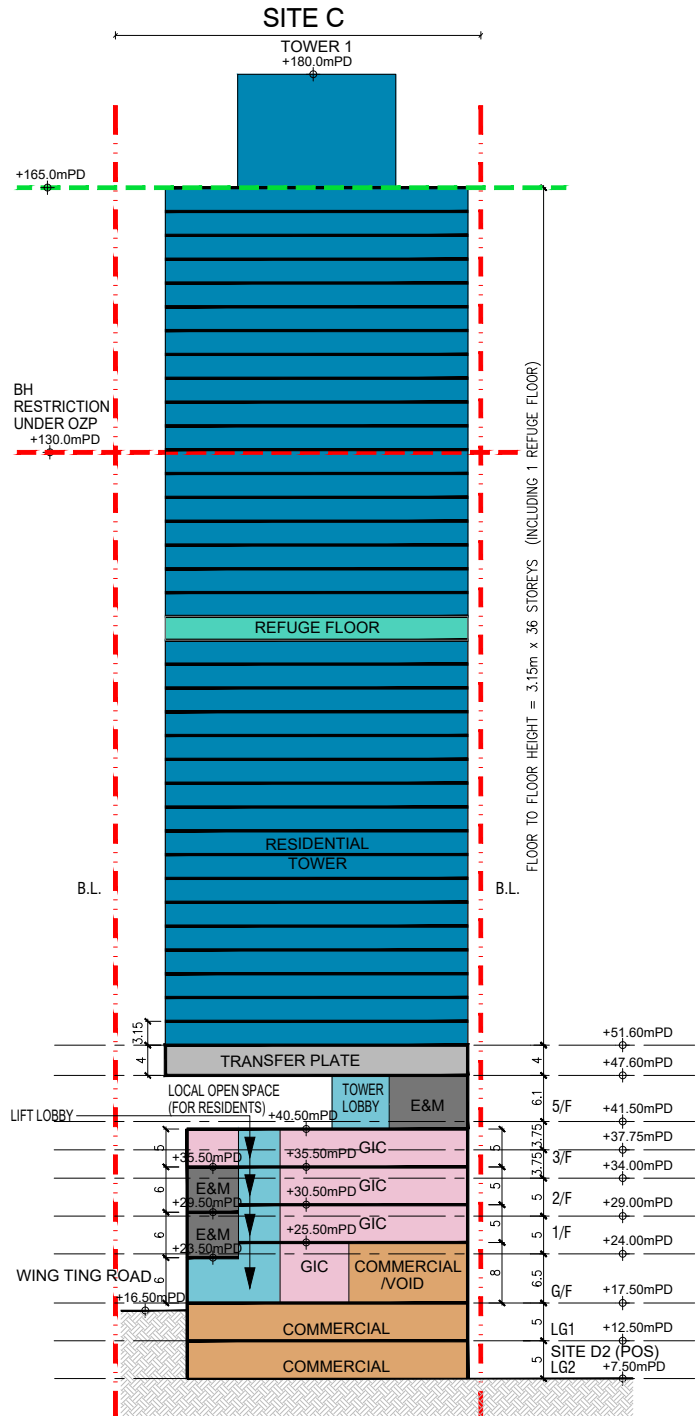


Project No. **23140KL** Scale **1:1000 @ A3**  
 Drawing No. **PA\_013** Issue Date **04/02/2025**  
 Drawing Purpose **PLANNING SUBMISSION**

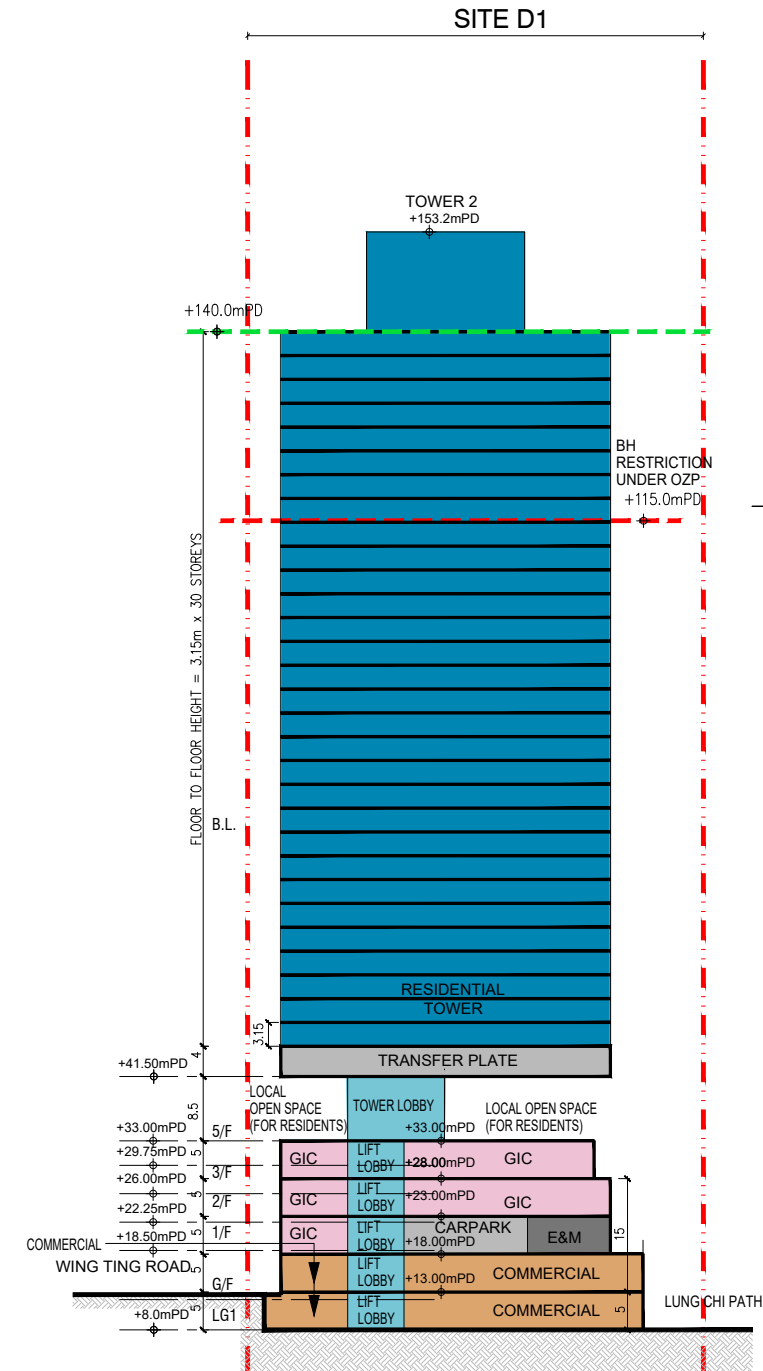
PLANNING SUBMISSION



SECTION B-B



SECTION C-C



SECTION D-D

Project Title  
**S16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF BUILDING HEIGHT RESTRICTIONS FOR PUBLIC HOUSING DEVELOPMENT AT NGAU CHI WAN VILLAGE, KOWLOON**

Drawing Title  
**SECTION B, C & D**

**RONALD LU & PARTNERS**  
 呂元祥建築師事務所

Rev.	Description	Drawn	Checked	Approved	Date
-	SUBMISSION	SZO	JH	DAW	04/12/2024
-	SUBMISSION	SZO	JH	DAW	04/02/2025

B.D. Ref.	F.S.D. Ref.	D.L.O. Ref.	Drawn	Checked	Approved	Date
-	-	-	SZO	JH	DAW	04/02/2025

Check all measurements on site. Do not scale off drawings. This drawing is to be read in conjunction with the specification and any discrepancies are to be immediately reported to the Architect. This drawing remains the copyright property of the Architect and is not to be reproduced in whole or in part without permission of the Architect.

Cod File No. - -

**Appendix 2      Master Layout Plan of the Baseline Scheme**

ISO A1 594mm x 841mm  
Approved:  
Checked:  
Designer:  
Project Management Initials:  
2021/4/22  
Plot File by: LUH9



**LEGEND:**

- PROPOSED NCW DEVELOPMENT
- PROPOSED AT-GRADE LOCAL OPEN SPACE
- PROPOSED PODIUM OF HOUSING SITE
- GRADED BUILDING (MAN FAT NUNNERY) TO BE PRESERVED IN SITU
- PROPOSED BUILDING BLOCKS
- PROPOSED PUBLIC OPEN SPACE
- THE JOCKEY CLUB BREAST HEALTH CENTRE TO BE RETAINED

**AECOM**

**PROJECT**  
項目

**SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT WONG TAI SIN - FEASIBILITY STUDY**

**CLIENT**  
業主

**CEDD** 土木工程拓展署  
Civil Engineering and Development Department

**CONSULTANT**  
顧問公司

AECOM Asia Company Ltd.  
www.aecom.com

**SUB-CONSULTANTS**  
分判工程師/公司

**ISSUE/REVISION**  
修訂

I/R	DATE	DESCRIPTION	CHK.

**STATUS**  
狀態

**SCALE**  
比例

A3 1 : 1000

**DIMENSION UNIT**  
尺寸單位

METRES

**KEY PLAN**  
索引圖

**PROJECT NO.**  
項目編號

60625506

**AGREEMENT NO.**  
協議編號

CE 32/2019(CE)

**SHEET TITLE**  
圖紙名稱

NOTIONAL SCHEME BY HKXS (NCWV)

**SHEET NUMBER**  
圖紙編號

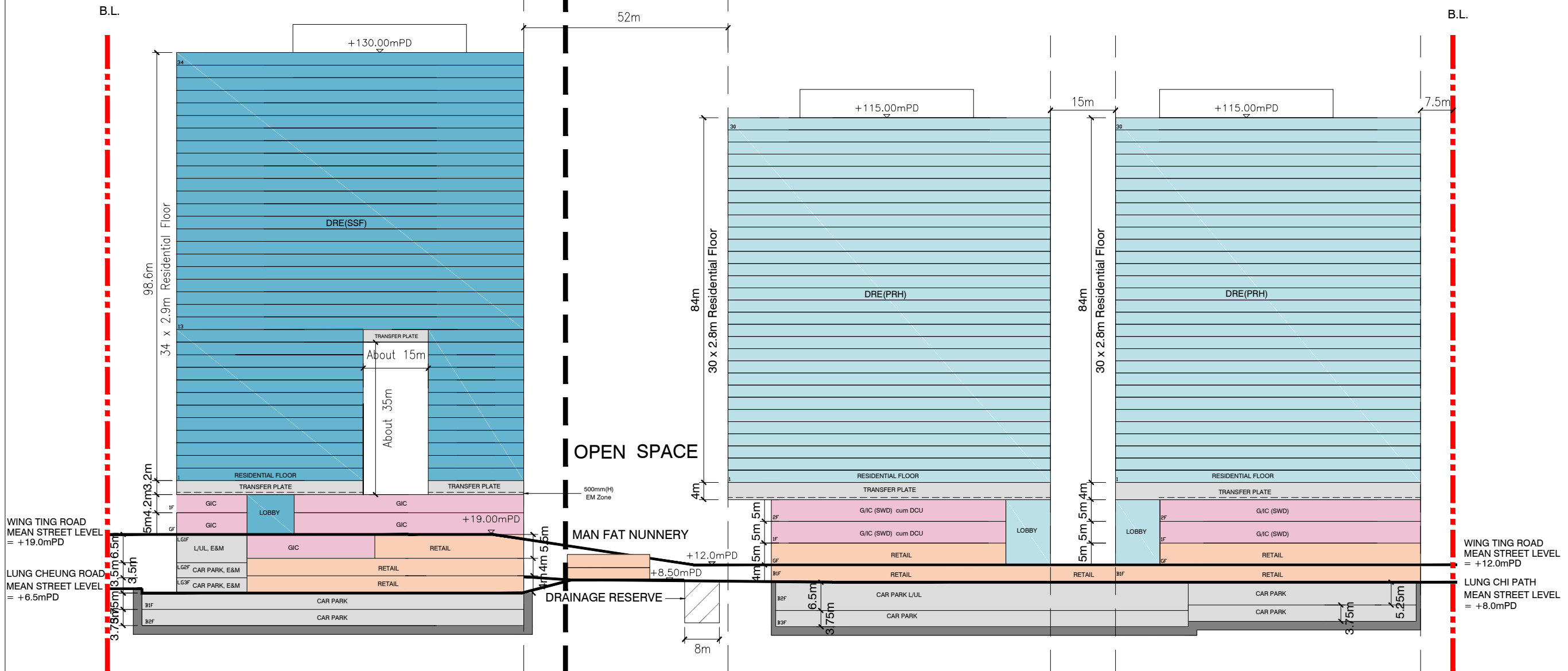
APPENDIX A

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, for any part, that less or more on this drawing, without AECOM's express written consent. All measurements must be obtained from the stated dimensions.

T1 DRE(SSF)  
SITE C

T2[DRE(PRH)]

T3[DRE(PRH)]  
SITE D



WING TING ROAD MEAN STREET LEVEL = +19.0mPD  
 LUNG CHEUNG ROAD MEAN STREET LEVEL = +6.5mPD  
 MAN FAT NUNNERY +12.0mPD  
 WING TING ROAD MEAN STREET LEVEL = +12.0mPD  
 LUNG CHI PATH MEAN STREET LEVEL = +8.0mPD

**Legend**

- - - Site Boundary
- GIC
- RESIDENTIAL (SSF)
- RESIDENTIAL (PRH)
- RETAIL
- CAR PARK

Section AA'

FOR OFFICIAL USE

SCALE	比例	DATE	日期
1:1000		MAR 2022	
DRAWN BY	製作人	CHECKED BY	檢查
B.C.		P.C.	
JOB NO.	工程項目	DRAWING NO.	圖號
N2990-H		NCW-02	

B.D. REFERENCE	屋宇署檔案
F.S.D. REFERENCE	消防處檔案
W.W.O. REFERENCE	水務署檔案
CAD FILE NAME	檔案編號
NOTES	注釋

NO.	REVISIONS	DATE	BY
修定號	修定內容	日期	經手人

**DLN**  
 DLN Architects Limited  
 劉樂儀伍煥民建築師有限公司  
 48-47 Floor, Tower One, Times Square  
 Matheson Street, Causeway Bay, Hong Kong  
 香港銅鑼灣勿拉士街  
 時代廣場一座46至47樓  
 T +852 2895 6888 F +852 2576 4074 email: general@dln.com.hk www.dln.com.hk

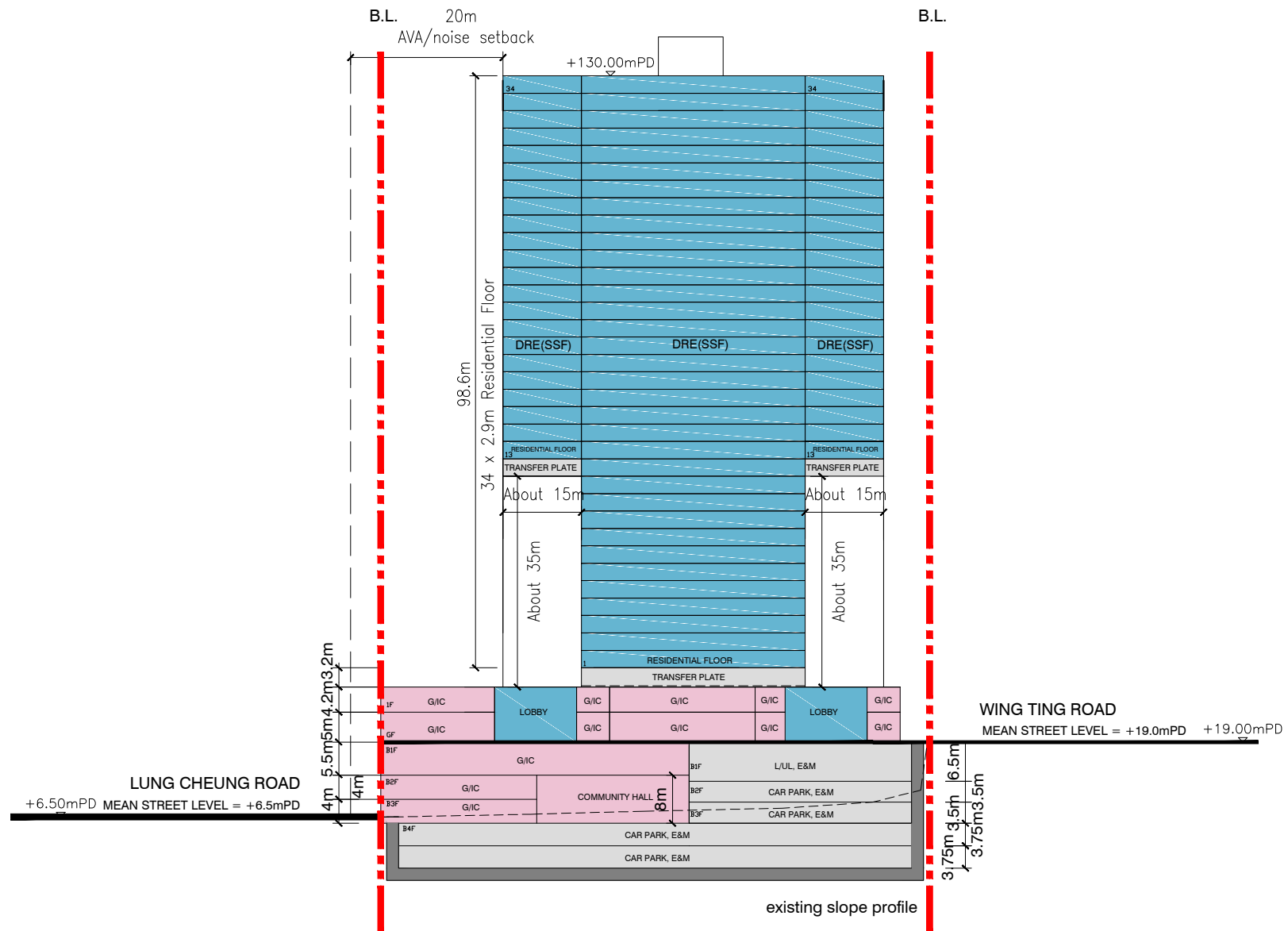
ALL MEASUREMENTS MUST BE CHECKED AT THE WORK BY THE CONTRACTOR  
 所有尺寸必須由承辦商在工地上校核  
 DO NOT SCALE FROM DRAWINGS 尺寸不應由圖紙直接量度  
 ALL PRINTS SPECIFICATIONS AND THEIR COPYRIGHT ARE THE PROPERTY OF  
 THE ARCHITECT AND SHALL BE RETURNED AT THE COMPLETION OF THE WORK  
 所有印圖、規格說明及所有版權均屬建築師及業主工程人員財產

PROJECT 項目名稱  
 FEASIBILITY STUDY ON  
 NGAU CHI WAN VILLAGE

DRAWING TITLE 標題  
 SCHEME ALT-2B23A



# SITE C



Legend	
	Site Boundary
	GIC
	RESIDENTIAL (SSF)
	CAR PARK

## Section BB'

B.D. REFERENCE	屋宇署檔案
F.S.D. REFERENCE	消防處檔案
W.W.O. REFERENCE	水務署檔案
CAD FILE NAME	檔案編號
NOTES	注釋



**DLN Architects Limited**  
 劉樂廣伍德民建築師有限公司  
 48-47 Floor, Tower One, Times Square  
 Matheson Street, Causeway Bay, Hong Kong  
 香港銅鑼灣勿拉士街  
 時代廣場一座46至47樓  
 T +852 2895 6888 F +852 2576 4074 email: general@dln.com.hk www:dln.com.hk

ALL MEASUREMENTS MUST BE CHECKED AT THE WORK BY THE CONTRACTOR  
 所有尺寸必須由承造商於工地上校核  
 DO NOT SCALE FROM DRAWINGS 尺寸不要由圖紙直接量取  
 ALL PRINTS, SPECIFICATIONS AND THEIR COPYRIGHT ARE THE PROPERTY OF  
 THE ARCHITECT AND SHALL BE RETURNED AT THE COMPLETION OF THE WORK  
 所有印圖、規格說明及所有之版權屬於建築師及應在工程完結時交還建築師

PROJECT 項目名稱  
**FEASIBILITY STUDY ON  
 NGAU CHI WAN VILLAGE**

DRAWING TITLE 標題  
**SCHEME ALT-2B23A**

SCALE 比例	DATE 日期
1:1000	MAR 2022
DRAWN BY 製作人	CHECKED BY 檢查
B.C.	P.C.
JOB NO. 工程項目	DRAWING NO. 圖號
N2990-H	NCW-03

FOR OFFICIAL USE