
Appendix E
Air Ventilation Assessment
(Expert Evaluation)

Prepared by

Ramboll Hong Kong Limited

**SECTION 12A PLANNING APPLICATION FOR PROPOSED
AMENDMENTS TO THE SHA TIN OUTLINE ZONING PLAN TO
REZONE "OPEN SPACE" ZONE TO "OTHER SPECIFIED USE (HOTEL
DEVELOPMENT)" ZONE IN SUPPORT OF PROPOSED HOTEL
DEVELOPMENT AT VARIOUS LOTS IN D.D. 184 AND ADJOINING
GOVERNMENT LAND, SHA TIN, NEW TERRITORIES**

AIR VENTILATION ASSESSMENT - EXPERT EVALUATION

Date **4 June 2026**

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Signed _____

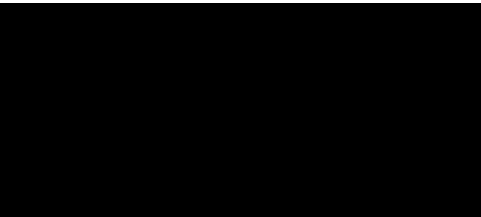
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1. INTRODUCTION

1.1 Project Background

- 1.1.1 The Application Site is located at various lots in D.D. 184 and adjoining government land, Sha Tin. It falls within an area zoned "Open Space" ("O") on the draft Sha Tin Outline Zoning Plan (OZP) No. S/ST/39.
- 1.1.2 The current planning application proposes to rezone the Application Site from "O" to "Other Specified Use (Hotel Development)" to facilitate a proposed hotel development (the Proposed Development) with an active public realm that contains retail/ F&B and recreational elements and the preserved Main Building of Ng Yuen.
- 1.1.3 To support this planning application, Ramboll Hong Kong Limited has been commissioned by the Applicant to conduct the Air Ventilation Assessment (AVA) - Expert Evaluation. Architectural drawings and technical information of the developments are provided by the Project Architect.

1.2 Objectives

- 1.2.1 This AVA – Expert Evaluation is prepared to assess the potential air ventilation impact due to the Proposed Development upon the sensitive use of the surrounding areas.
- 1.2.2 This AVA – Expert Evaluation is prepared with reference to the Housing, Planning and Lands Bureau and Environment, Transport and Works Bureau Technical Circular No. 1/06.

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 Application Site is located by the riverside of Shing Mun River. It has remained idle for years and is currently fenced off and occupied by a Grade 3 Historic Building – "Ng Yuen" and some temporary structures only. The site is located in the "Open Space" zone, where Shing Mun River Promenade Garden No. 1 is found to the east. Immediately to the west is the Hong Kong Bible Research and Education Centre, which consists of three low-rise buildings and some temporary structures. To the south, across Tai Chung Kiu Road, lies Tsang Tai Uk Playground.
- 1.3.3 All the major noise barriers, elevated structures, existing, planned and committed developments (including their heights) within the surrounding area have been taken into account in this study. The section of Trunk Road T4 located in the vicinity is also included; this is an elevated roadway crossing the Shing Mun River Channel. The information of Trunk Road T4 is referred to the EIA report. **Appendix 3** shows the reference.

1.4 Baseline Scheme

- 1.4.1 The Baseline Scheme adopts the existing condition of the Application Site.
- 1.4.2 Ng Yuen and Garden Villa B, featuring building height of 15.3mPD and 10.5mPD are located within the Application Site.
- 1.4.3 **Appendix 1** shows the layout of the Baseline Scheme.

1.5 Proposed Scheme

- 1.5.1 The Proposed Development is a hotel development supported by ancillary commercial uses with a total non-domestic GFA of about 18,246m². The Proposed Development consists of 2 blocks, which are (i) a new hotel block of 14 storeys and a maximum BH of 68 mPD (up to the main roof) and (ii) the preserved Main Building of Ng Yuen, which is a two-storeys building that will be adaptively re-used under the Proposed Development.
- 1.5.2 The following good design features have been adopted in the Proposed Scheme (as shown in **Figure 2a and 2b**)
- ~20m building setback from the lobby to the northern site boundary from G/F to 1/F;
 - ~5m building setback from eastern commercial portion to the eastern site boundary from G/F to 2/F;
 - Permeable podium design with provision of ~6m building separation between Main Building of Ng Yuen and the western commercial portion from G/F to 2/F;
 - ~10m building setback from western commercial portion to the western site boundary from G/F to 2/F;
 - ~9m tower setback from the hotel tower to the western site boundary;
 - ~11m tower setback from the hotel tower to the northern site boundary;
 - Podium garden is provided at the second floor to enhance the wind permeability; and
 - Cascading building design from 10/F – 13/F.

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 Modelling 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: 083, Y:055) 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. **Figure 3** shows the relevant wind rose diagram representing the frequency and wind speed distribution of the district concerned for both annual and summer conditions.
- 2.1.4 **Table 2.2** 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	1.4	0.8
NNE	6.8	1.5
NE	17.1	3.2
ENE	15.6	5.6
E	20.9	11.4
ESE	6.2	6.6
SE	3.0	5.1
SSE	2.6	5.6
S	2.8	6.8
SSW	6.7	14.7
SW	8.5	20.6
WSW	4.3	10.3
W	2.1	4.9
WNW	0.6	1.1
NW	0.5	0.9
NNW	0.8	0.8

2.2 Hong Kong Observatory (HKO) Weather Data

- 2.2.1 The nearest wind station of HKO is the Sha Tin Wind Station.
- 2.2.2 The Sha Tin Wind Station is located inside the Sha Tin Racecourse near the Sing Mun River Channel. To its northeast are the Hong Kong Jockey Club Stable and Sha Tin Sewage Treatment Works, providing it with exposure to unobstructed waters of Tolo Harbour. However, mountain ranges and high-rise buildings are present to its northwest and southeast. Overall, the station is more exposed to winds from NE and SW sectors. **Figure 4** shows the location of the Sha Tin Wind Station.

- 2.2.3 The annual wind rose (1985-2024) and the monthly wind roses are presented in **Figure 5a** and **Figure 5b** respectively. **Table 2.2** summarized the dominant prevailing wind directions of the monthly wind rose.

Table 2.2 Monthly Prevailing Wind Direction (Sha Tin Station)

Month	Prevailing Wind Direction	Month	Prevailing Wind Direction
Jan	NE	Jul	SSW
Feb	NE	Aug	SSW
Mar	E	Sep	E
Apr	E	Oct	NE
May	SSW	Nov	NE
Jun	SSW	Dec	NE

- 2.2.4 The annual prevailing wind is from NE and SSW direction, where summer prevailing wind is mainly SSW direction.
- 2.2.5 The Sha Tin Wind Station is located ~3.6km to the northwest of the Application Site. It is considered a reliable reference to represent the site wind availability at the Application Site.

2.3 Topography and Building Morphology

Topography

- 2.3.1 The Application Site is located in the Sha Tin district of Hong Kong and by the riverside of Shing Mun River. The Shing Mun River flows through a broad, flat valley that cuts north-south through the eastern New Territories. The immediate area around the Application Site is low-lying and densely urbanized.
- 2.3.2 Steep hills and mountain ridges rise sharply on both the east and west sides of the river valley. Needle Hill, reaching an elevation at 520mPD is located about 2.5 km northwest of the Application Site, across the Shing Mun River. To the south, about 2.5km away, lies Unicorn Ridge with an elevation of around 430 mPD. Additionally, Tate’s Ridge, with a height of 570 mPD, is located about 3km southeast of the Application Site.

Building Morphology

- 2.3.3 As shown in **Figure 1**, the building morphology in the vicinity of the Application Site is characterized by high-rise residential estates (both public and private), educational institutions, villages and recreational spaces and promenades.
- 2.3.4 To the west of the Application Site is the low-rise Hong Kong Bible Research and Education Centre, with an approximate elevation of about 12mPD. Further west, across Lion Rock Tunnel Road, is The Riverpark residential development, which comprises four towers with a maximum building height of 155mPD.
- 2.3.5 To the east of the Application Site are Shing Mun River Promenade Garden No.1 and Jat Min Chuen. The building heights in Jat Min Chuen range from 32mPD to 93mPD. In general, the towers oriented east-west end to end reach about 93mPD, while those oriented north-south end to end ranged about 30 to 32mPD.

- 2.3.6 To the south lies Tsang Tai Uk Recreation Ground and Tsang Tai Uk with low-rise village houses which are situated further south.
- 2.3.7 To the southwest, across Tai Chung Kiu Road, is Sha Tin Tau which consists of village houses and the Stewards High Rock Centre at 40mPD. To the west of it, it is Chun Shek Estate, where building heights range from 20mPD to 83mPD.
- 2.3.8 Several GIC facilitates, including Heritage Museum, Sha Tin Government Secondary School and Sha Tin Assembly of God Church are located to the northwest, across Shing Mun River Channel.
- 2.3.9 Additionally, Sha Tin Park is located to the north of the Application Site, across the Shing Mun River Channel. Further north are New Town Plaza Phase III and Hilton Plaza, with building heights ranging from 87 mPD to 100 mPD.
- 2.3.10 **Table 2.3** highlighted the building height of the surrounding developments.

Table 2.3 Building Height of the Surrounding Developments

Name of Development	Building Height	Location relative to the Application Site
Hong Kong Bible Research and Education Centre	~12mPD	West
The Riverpark	~155mPD	West
Jat Min Chuen	~12 to 93mPD	East
Sha Tin Wai Dr. Catherine F. Woo Memorial School	~30mPD	Southeast
Immaculate Heart of Mary College	~28mPD	Southeast
Tsang Tai Uk New Village	~14mPD	Southeast
Tsang Tai Uk	~8 to 13mPD	Southeast
Sha Tin Tau	~8 to 27mPD	South
Stewards High Rock Centre	~40mPD	Southwest
Chun Shek Estate	~20 to 83mPD	Southwest
Heritage Museum	~45mPD	Northwest
Sha Tin Government Secondary School	~26mPD	Northwest
Sha Tin Assembly of God Church	~20mPD	Northwest
New Town Plaza	~85 to 88mPD	North
Hilton Plaza	~100mPD	north

2.4 Summary of Existing Site Wind Availability

- 2.4.1 **Table 2.4** shows the summary of the prevailing wind directions extracted from different wind data sources.

Table 2.4 Summary of the Prevailing Wind Directions from Different Data Sources

	RAMS (200m)	Sha Tin Wind Station
Annual Condition	NE, ENE, E	NE
Summer Condition	E, SSW, SW	SSW

- 2.4.2 Based on the summary of data from RMAS and HKO, the annual prevailing winds are mainly from the eastern sectors. The NE, ENE and E winds are the most dominant annual winds. On the other hand, the major summer prevailing winds come from E, SSW and SW.
- 2.4.3 Under the annual NE wind, the Shing Mun River and Sha Tin Park, located across the river, are relatively unobstructed, allowing clear access to the Application Site.
- 2.4.4 Under ENE and E winds, the upwind compact residential development, Jat Min Chuen, may obstruct a portion of the incoming wind. This is due to the maximum building height of Jat Min Cheun, which reaches approximately 95 mPD, exceeding the building heights of both the Baseline Scheme and the Proposed Scheme.
- 2.4.5 While under the summer prevailing winds SSW and SW winds, it is expected that the blockage effect caused by surrounding buildings will be relatively reduced as Sha Tin Tau consists of low-rise houses. However, Stewards High Rock Centre, which stands at ~40mPD and is located on a slight slope, may still create some obstruction to the incoming winds.
- 2.4.6 **Figure 6** shows the annual and summer prevailing wind directions under the existing condition.

2.5 Previous Expert Evaluation near the Study Area

- 2.5.1 In August 2023, a "Term Consultancy Category A For an Instructed Project for Shek Mun and Siu Lek Yuen, Shatin (ST EE) was prepared under the Planning Department's term consultancy study. This report discusses the air ventilation performance of six Project Sites located in the Shek Mun and Siu Lek Yune regions within Sha Tin District, near the Application Site.
- 2.5.2 In the ST EE, the identified annual prevailing wind comes from the northeast quadrant while the summer wind comes from the east and south westerly. Major breezeways/wind corridors at different locations of the study area have been identified. Shing Mun River is identified as the most observable wind corridor while Tai Chung Kiu Road is breezeway under annual prevailing NNE/NE winds and summer prevailing SSW/SW winds.
- 2.5.3 The identified major wind corridors are retained and remained non-obstructed upon the Proposed Development.

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 (Tai Chung Kiu Road, Lion Road Tunnel Road, Sha Kok Street);
- Nearby residential developments (Sha Tin Tau, Chun Shek Estate, The Riverpark, Jat Min Chuen);
- GIC developments (Hong Kong Bible Research and Education Centre, Stewards High Rock Centre, Heritage Museum); and
- Open Spaces (Tsang Tai Uk Recreation Ground, Shing Mun River Promenade Garden No. 1, Sha Tin Park).

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 E, NE and ENE. The summer prevailing wind directions would be from SW, SSW and E.

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 existing land condition with respect to the identified dominant wind directions, i.e. NE, ENE, E, SW and SSW.

3.2.3 According to the ST EE, the primary wind corridor for several sites in Shek Mun and Siu Lek Yuen is the Shing Mun River. The Application Site is situated by the riverside. As long as there is no encroachment on the river, the wind flow along it will remain unaffected by the proposed increase in building height. Similarly, the wind flow along the Tai Chung Kiu Road is also unobstructed. Therefore, it is anticipated that the overall wind performance in the area will not be significantly impacted.

3.2.4 The wind performance of the local area surrounding the Application Site may be affected due to the proposed increase of building height / GFA restrictions, and so the following sections address this potential impact for the prevailing annual and summer wind directions.

3.3 Wind Flow from NE Direction

3.3.1 **Figure 7** illustrates the wind flow of the Baseline Scheme and Proposed Scheme under the NE wind direction.

3.3.2 The concerned downwind areas are Hong Kong Bible Research and Education Centre, Junction between Tai Chung Kiu Road and Lion Rock Tunnel Road, and Chun Shek Estate. The Riverpark is not directly at the downwind area of the Application Site from the NE wind, and so it is not considered to in this review under NE wind.

3.3.3 It is expected that the NE wind mainly flows along Shing Mun River as well as Tai Chung Kiu Road to the southwest. The upcoming NE wind from Shing Mun River would flow towards the Application Site.

- 3.3.4 Under the Baseline Scheme, the low-rise existing buildings, such as Ng Yuen and Garden Villa B, will allow portion of the upcoming NE wind to skim over or penetrate the Application Site, reaching downwind area such as Hong Kong Bible Research and Education Centre to the immediate west, as well as the Lion Rock Tunnel Road. On the other hand, another portion of upcoming NE wind at pedestrian level would be diverted by the easternmost building of Hong Kong Bible Research and Education Centre, continuing towards Tai Chung Kiu Road. Due to the relative open space to the northeast of Chun Shek Estate, the eastern portion of the estate is exposed to some NE wind; while the high-rise residential development Riverpark would block western portion of the estate from the NE wind.
- 3.3.5 Under the Proposed Scheme, the increased building height from ~15 mPD to ~68 mPD is expected to reduce the wind performance of immediate downwind area, including Hong Kong Bible Research and Education Centre and a section of Lion Rock Tunnel Road. However, permeable design has been incorporated in the Proposed Development to minimize the potential blockage effect. The 20m setback from the Proposed Scheme to the northern site boundary from G/F to 1/F would allow some NE winds to penetrate the northern portion of the Application Site, mitigating the potential blockage effect, to reach the Hong Kong Bible Research and Education Centre at pedestrian level. Apart from the 20m setback at northern site boundary mentioned above, there is a ~ 9m setback from the Proposed Development to the western boundary. Similar to the Baseline Scheme, a portion of NE wind at pedestrian level would be diverted by the easternmost building of Hong Kong Bible Research and Education Centre, continuing toward Tai Chung Kiu Road through the 9m setback at the western site boundary.
- 3.3.6 Nevertheless, the Proposed Scheme may result in some impact on the localized downwind area. The wind performance at the junction between the Tai Chung Kiu Road and Lion Rock Hill Road is expected to be slightly reduced. Also, it is anticipated the Proposed Development will have minor impact on the eastern portion of the Chun Shek Estate. However, since the proposed hotel is lower than the estate's maximum building height of approximately 83mPD and incorporates a permeable design, the impact on the estate, located about 250m away, is not expected to be significant.

3.4 Wind Flow from ENE Direction

- 3.4.1 **Figure 8** illustrates the wind flow of the Baseline Scheme and Proposed Scheme under the ENE wind direction.
- 3.4.2 The concerned downwind areas are Hong Kong Bible Research and Education Centre, Lion Rock Tunnel Road and The Riverpark.
- 3.4.3 It is expected that the ENE wind mainly flows along Shing Mun River and Sha Kok Street toward the southwest. The upcoming ENE wind from Shing Mun River Promenade Garden No. 1 will reach the Application Site, particularly the northern portion, as Jat Min Chuen, located in the upwind area, will obstruct some of the ENE wind from reaching the southern portion.
- 3.4.4 Under the Baseline Scheme, the upcoming ENE wind from Shing Mun River Promenade Garden No. 1 would reach and penetrate the Application Site, extending to the immediate downwind area of the Hong Kong Bible Research and Education Centre and further to a section of Lion Rock Tunnel Road located just behind the centre. However, it is not anticipated that a significant portion of this NE wind will reach The Riverpark, which is situated further downwind of Lion Rock Tunnel Road, due to the future semi-closed noise barrier of Trunk Road T4 positioned between Lion Rock Tunnel Road and The Riverpark.

- 3.4.5 Similar to the Baseline Scheme, under the Proposed Scheme, the upcoming ENE wind from Shing Mun River Promenade Garden No. 1 is expected to reach the Application Site and pass through the 20m setback from to the northern site boundary from G/F to 1/F, benefiting the Hong Kong Bible Research and Education Centre and extending to a section of Lion Rock Tunnel Road located just behind the centre. As mentioned, most of the ENE wind would flow through the northern portion of the Application Site, although the building height of the proposed hotel is increased compared to the Baseline Scheme, the 20m setback at ground floor would help in mitigating the potential blockage effect of the proposed hotel tower. Therefore, it is anticipated that the impact on the Hong Kong Bible Research and Education Centre and further to a section of Lion Rock Tunnel Road will be minor.
- 3.4.6 Regarding The Riverpark, the future semi-closed noise barrier of Trunk Road T4 positioned between Lion Rock Tunnel Road and The Riverpark, is expected to already reduce and limit the upcoming ENE wind to that area. With the Proposed Development, it is believed that only a portion of high-level wind reaching The Riverpark will be reduced slightly, as the building height of 155mPD is significantly greater than the Proposed Scheme of ~68 mPD. Apart from the building height, the permeable ground floor would help to minimise the potential blockage effect. Consequently, the air ventilation impact from the Proposed Scheme is expected to not to be significant.

3.5 Wind Flow from E Direction

- 3.5.1 **Figure 9** illustrates the wind flow of the Baseline Scheme and Proposed Scheme under the E wind direction.
- 3.5.2 The concerned downwind areas are Hong Kong Bible Research and Education Centre, and Lion Rock Tunnel Road. The Riverpark is not located directly downwind from the Application Site under the E wind and is not considered to be the concerned downwind area.
- 3.5.3 Jat Min Chuen, a compact residential estate with varying building heights from 30mPD to 93mPD is located in the upwind area of the Application Site. As a result, it is anticipated that this estate would limit the upcoming E wind to reach the Application Site. Jat Min Chuen consists of five residential towers. Those oriented east-west end to end reach about 93mPD, while those oriented north-south end to end ranged about 30 to 32mPD. Consequently, only a portion of the E wind may skim over the two lower towers to reach the Application Site at mid to high level.
- 3.5.4 Under the Baseline Scheme, this portion of E wind mainly reaches the northern portion of the Application Site as the 93 mPD Ming Shun Lau of Jat Min Chuen is located upwind of the southern and centre portion of the Application Site. The 32mPD residential tower of Jat Min Chuen is located at the upwind of the northern portion of the Application Site, and so the E wind may skim over it and benefit a little northern part of Hong Kong Bible Research and Education Centre, and the section of Lion Rock Tunnel Road across the Shing Mun River.
- 3.5.5 Similar to the Baseline Scheme, the portion of E wind that skims over the two lower towers of Jat Min Chuen would reach the Proposed Scheme at mid to high level. The building height of the Proposed Scheme is 68 mPD which is lower than the tall residential towers of the Jat Min Chuen at the upwind area. The northern portion of the proposed hotel tower is higher than the 32mPD residential tower of Jat Min Chuen and so would block the potential E wind at the level above 32 mPD. However, because the 20m setback to the northern site boundary is provided from G/F to 1/F of the Proposed Scheme, it is anticipated that a portion of the E wind could penetrate the podium garden and reach the downwind area, including northern part of Hong Kong

Bible Research and Education Centre, and the section of Lion Rock Tunnel Road across the Shing Mun River, thereby minimizing the potential blockage effect.

- 3.5.6 Given that Jat Min Chuen (from 32 mPD to 93 mPD) is located in the upwind area, the already limited E wind reaching the Application Site means that the blockage effect caused by the Proposed Scheme (68 mPD building height with permeable ground floor design) is minor.

3.6 Wind Flow from SSW and SW Directions

- 3.6.1 **Figure 10** illustrates the wind flow of the Baseline Scheme and Proposed Scheme under the SSW and SW wind directions respectively.
- 3.6.2 The concerned downwind areas are the promenade, portion of Shing Mun River Promenade Garden No. 1, and Sha Tin Park, with Sha Tin Park located across the Shing Mun River in the further downwind area.
- 3.6.3 Since the upwind area under SSW and SW winds are relative open – featuring locations such as Tsang Tai Uk Recreation Ground, the slope beneath Stewards High Rock Centre, and Sha Tin Tau, it is anticipated that sufficient and unobstructed SSW and SW winds could reach the Application Site.
- 3.6.4 The existing low-rise buildings in the Baseline Scheme would allow the upcoming SSW and SW winds to reach the promenade, portions of Shing Mun River Promenade Garden No. 1 and Sha Tin Park without any obstruction.
- 3.6.5 Under the Proposed Scheme, it is expected that the upcoming SSW and SW winds would penetrate the Application Site through the ~9m setback to the western site boundary to reach the promenade just behind the Application Site. However, less flow could reach the northwestern portion of Shing Mun River Promenade Garden No. 1. It's important to note that the playgrounds are situated in the centre of the promenade garden, so the overall impact on the garden is relatively minor. From the figure, the proposed hotel tower is not located directly upwind of the playgrounds under SSW and SW winds. The SSW and SW winds could still flow across the eastern side of the Application Site and reach the playgrounds.
- 3.6.6 Additionally, the podium garden may provide some assistance in facilitating the penetration of SSW and SW winds into the Application Site, benefiting the further downwind area. As for Sha Tin Park, it is situated over 100m away from the Application Site, across the Shing Mun River, and is significantly larger than the proposed building height of 68 mPD. From the figure, the playgrounds and sitting areas of the Sha Tin Park is located north to northwest of the Application Site, and the SSW and SW wind could still flow across both sides of the Application Site and reach these sensitive areas. Therefore, the expected impact from the Proposed Scheme is anticipated to be minor.

3.7 Good Design Features

- 3.7.1 Section 3.3 to 3.6 discussed the ventilation impact between the Baseline Scheme and Proposed Scheme. It is considered that Proposed Development will not induce any significant impact to the surrounding sensitive areas compared to the Baseline Scheme.
- 3.7.2 Although the Proposed Scheme includes a hotel development with a height of ~68 mPD, which is taller than the existing low-rise buildings, several effective design features have been incorporated to enhance air ventilation:
- ~20m building setback from the lobby to the northern site boundary from G/F to 1/F;

- ~5m building setback from eastern commercial portion to the eastern site boundary from G/F to 2/F;
- Permeable podium design with provision of ~6m building separation between Main Building of Ng Yuen and the western commercial portion from G/F to 2/F;
- ~10m building setback from western commercial portion to the western site boundary from G/F to 2/F;
- ~9m tower setback from the hotel tower to the western site boundary;
- ~11m tower setback from the hotel tower to the northern site boundary;
- Podium garden is provided at the second floor to enhance the wind permeability; and
- Cascading building design from 10/F – 13/F.

4. CONCLUSION

- 4.1.1 A qualitative assessment on the air ventilation performance of the Proposed Development has been carried out.
- 4.1.2 The Applicant proposes to rezone the Application Site from "Open Space" to "Other Specified Use (Hotel Development)".
- 4.1.3 According to the Planning Department's study for an Instructed Project for Shek Mun and Siu Lek Yuen, Shatin (ST EE), the most prominent wind corridor/breezeway identified in the nearby Shek Mun Business Area (SMBA) is the Shing Mun River and Tai Chung Kiu Road. Since the Application Site is situated away from these wind corridors/breezeway and permeable ground floor design has been incorporated, the rezoning is not expected to reduce wind flow along them significantly.
- 4.1.4 The annual wind of the study area is mainly from NE, ENE and E wind directions. The summer wind is mainly from the E, SSW and SW wind directions.
- 4.1.5 After evaluating the potential air ventilation impacts of the Application Site, the layout of the Proposed Scheme has incorporated effective design measures to enhance its air ventilation performance. While the proposed hotel development, with its increased height, may create a slightly greater blockage effect in some immediate downwind areas, resulting in localized effects. Taking into the proposed design features (including setbacks, building void, podium gardens, and cascading building design), along with the existing topography and the placement of current built areas, it is concluded that the Proposed Scheme has no significant impact in air ventilation terms.

Figures

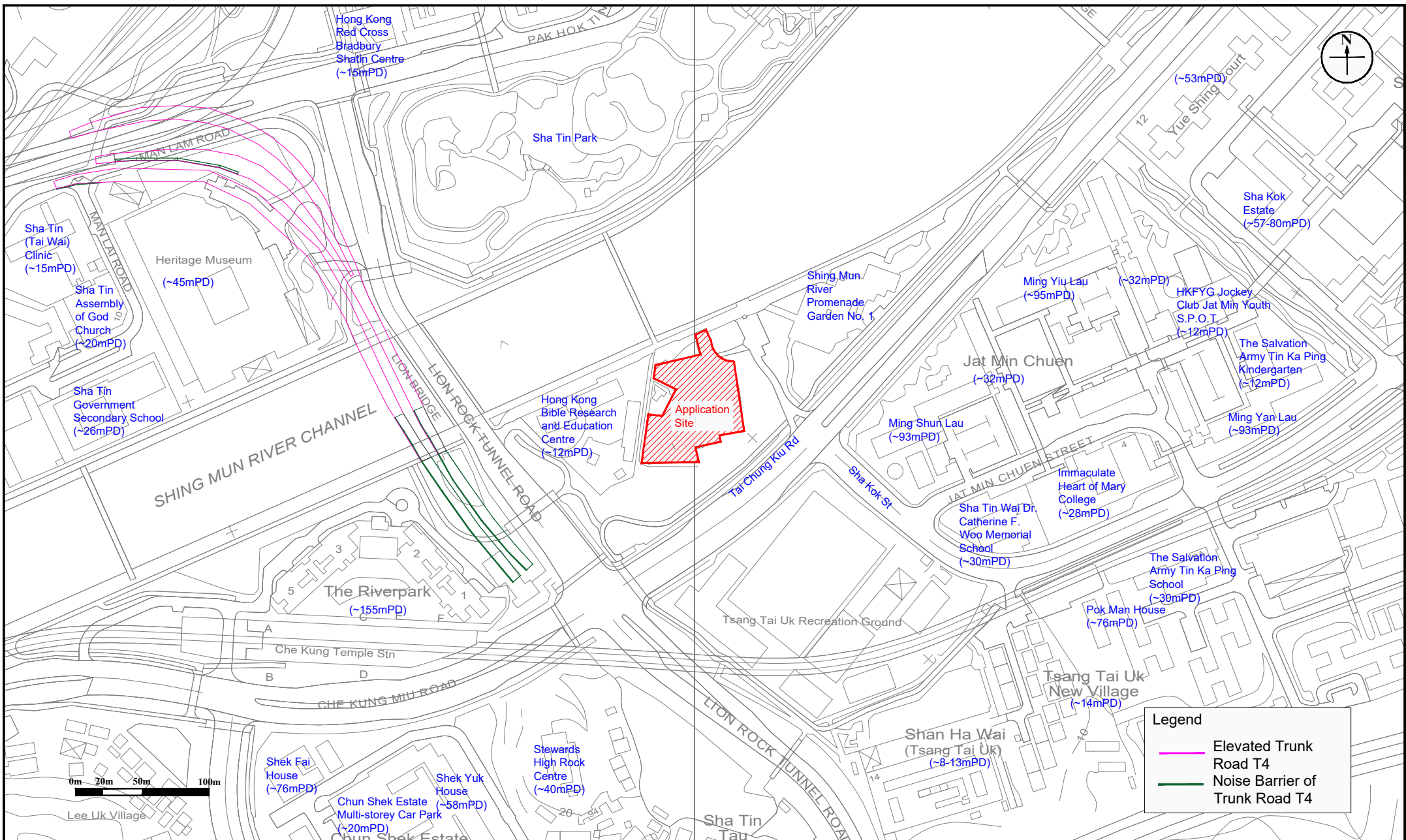


Figure: 1

Title: Location of the Application Site and its Environs

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone "Open Space" Zone to "Other Specified Use (Hotel Development)" Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

RAMBOLL

Drawn by: EC

Checked by: TC

Rev.: 1.0

Date: August 25

INDICATIVE BLOCK PLAN

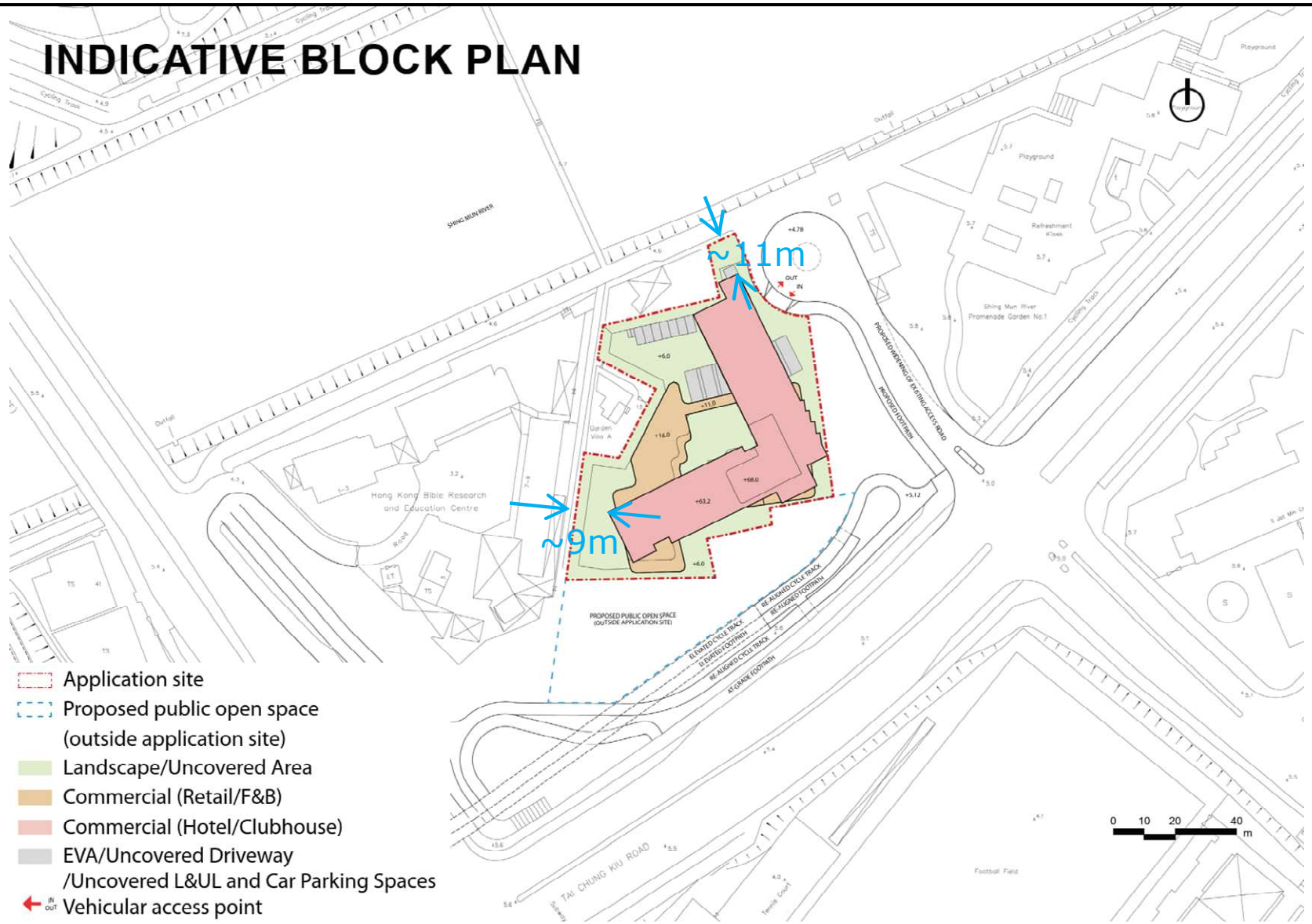


Figure: 2a



Title: Good Design Features Provided in the Proposed Scheme - MLP

Drawn by: EC

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone "Open Space" Zone to "Other Specified Use (Hotel Development)" Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

Checked by: TC

Rev.: 1.2

Date: Apr 2026

GROUND FLOOR PLAN



Figure: 2b

RAMBOLL

Title: Good Design Features Provided in the Proposed Scheme – Ground Floor

Drawn by: EC

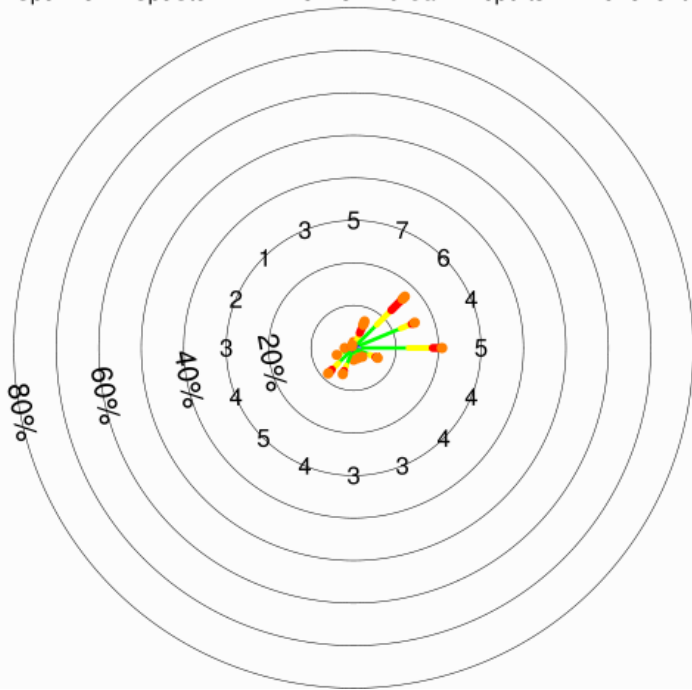
Checked by: TC

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone "Open Space" Zone to "Other Specified Use (Hotel Development)" Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

Rev.: 1.2

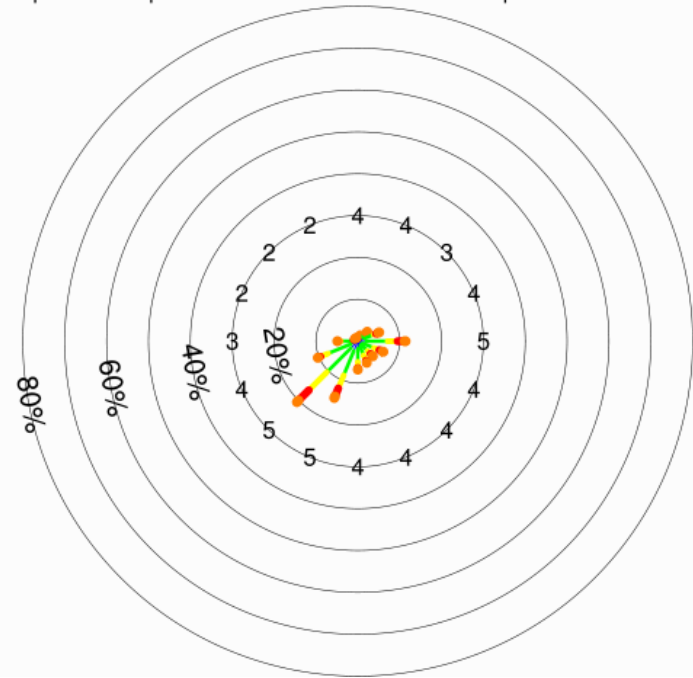
Date: Apr 2026

SpdAve=4 SpdStd=2 DirAve=75 No Calm Reports Nwnd=87670



Annual Condition (200m)

SpdAve=4 SpdStd=3 DirAve=187 No Calm Reports Nwnd=22078



Summer Condition (200m)

Figure: 3



Title: Windrose Diagram at 200m (grid: 083, 055) extracted from RAMS

Drawn by: EC

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone "Open Space" Zone to "Other Specified Use (Hotel Development)" Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

Checked by: TC

Rev.: 1.0

Date: Aug 2025

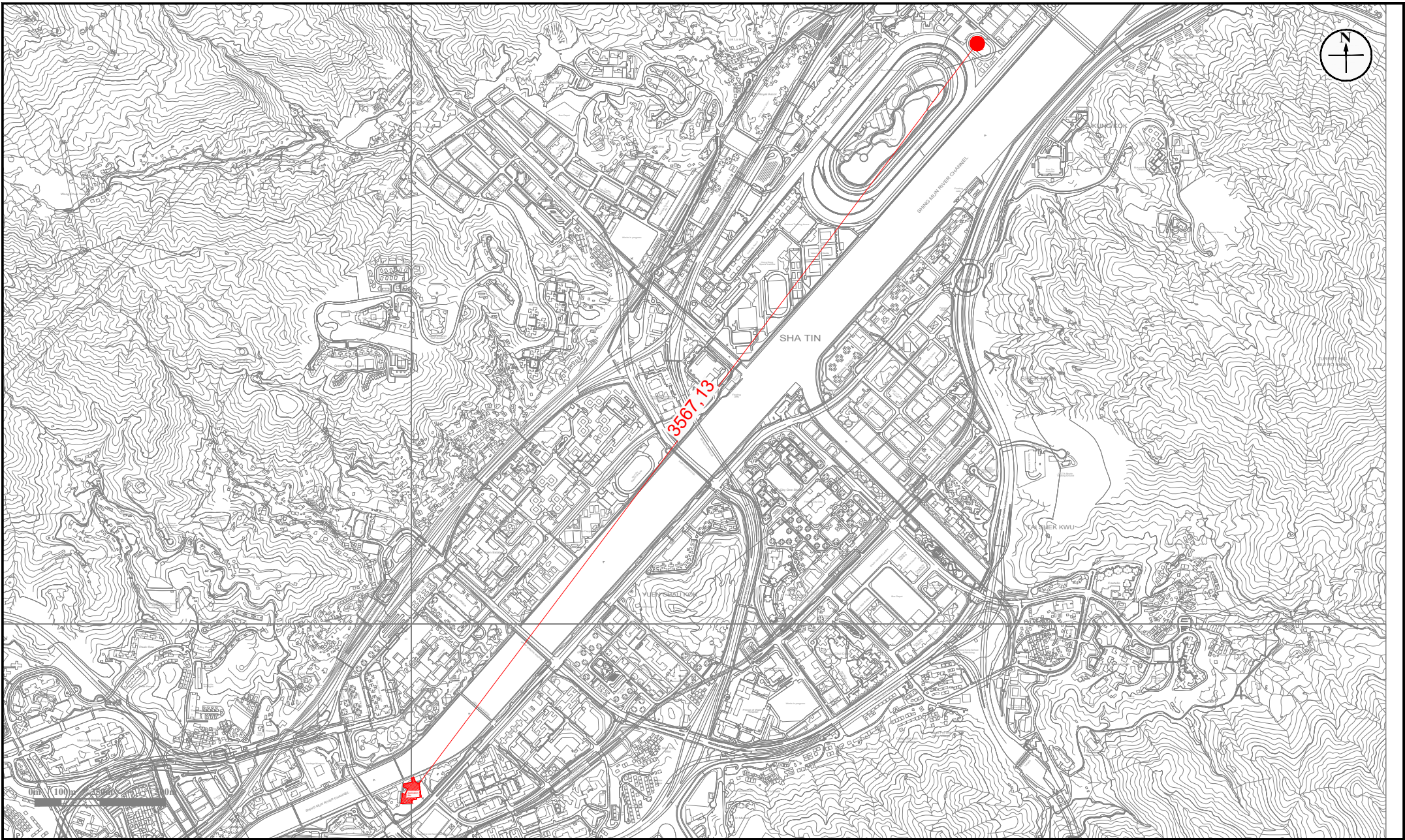


Figure: 4

Title: Location of the Sha Tin Wind Station

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone "Open Space" Zone to "Other Specified Use (Hotel Development)" Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

RAMBOLL

Drawn by: EC

Checked by: TC

Rev.: 1.0

Date: Jun-25

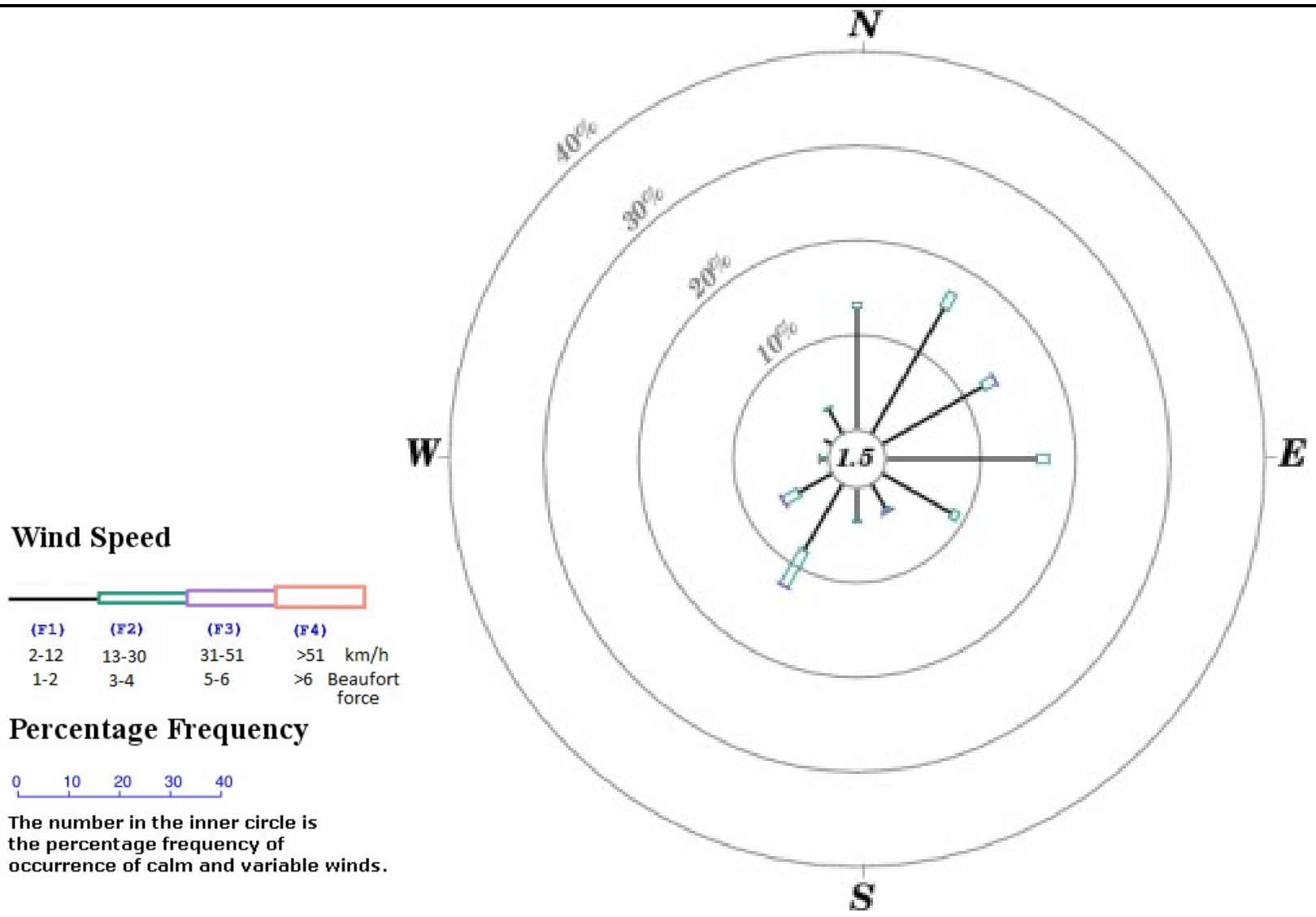


Figure: 5a



Title: Windrose Diagram (1985-2023) of Sha Tin Wind Station (Annual)

Drawn by: EC

Checked by: TC

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone “Open Space” Zone to “Other Specified Use (Hotel Development)” Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

Rev.: 1.0

Date: Aug 2025

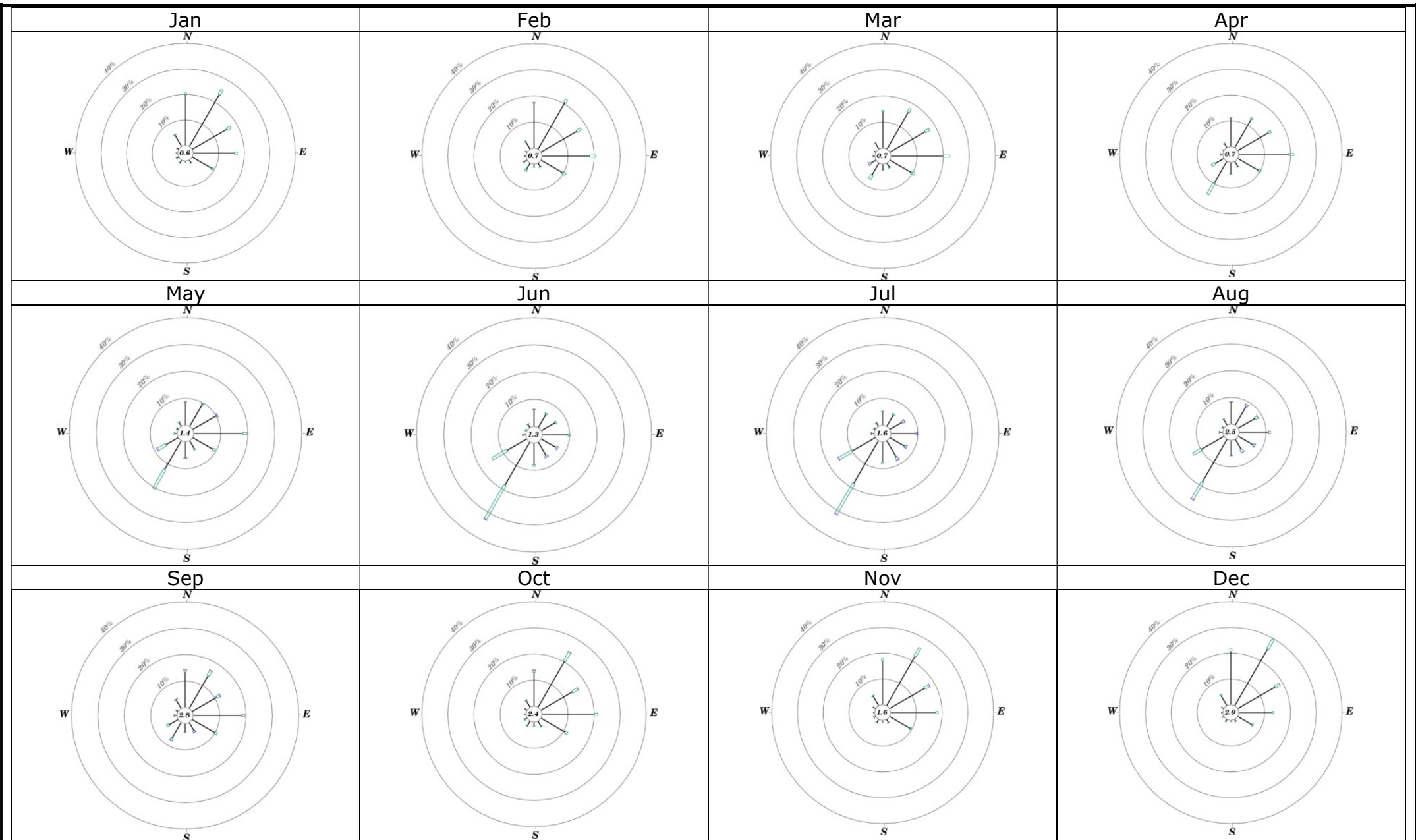


Figure: 5b



Title: Windrose Diagram (1985-2023) of Sha Tin Wind Station (Monthly)

Drawn by: EC

Checked by: TC

Project Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone “Open Space” Zone to “Other Specified Use (Hotel Development)” Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

Rev.: 1.0

Date: Aug 2025

- ➡ Annual Prevailing Winds
- ↔ Wind Corridors
- ➡ Summer Prevailing Winds
- ↔ Breezeways

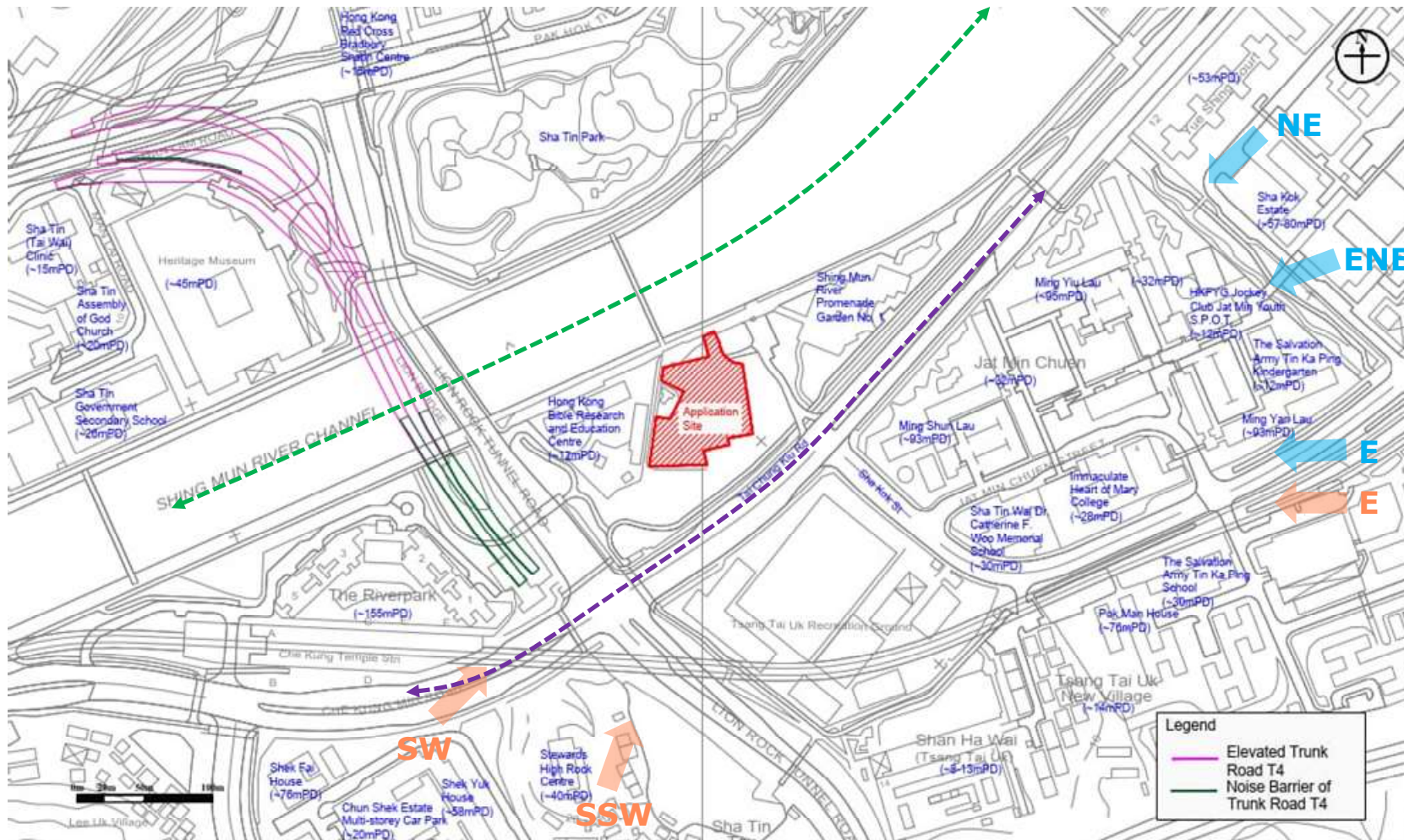


Figure: 6



Title: Potential Wind Flow under Existing Condition

Drawn by: EC

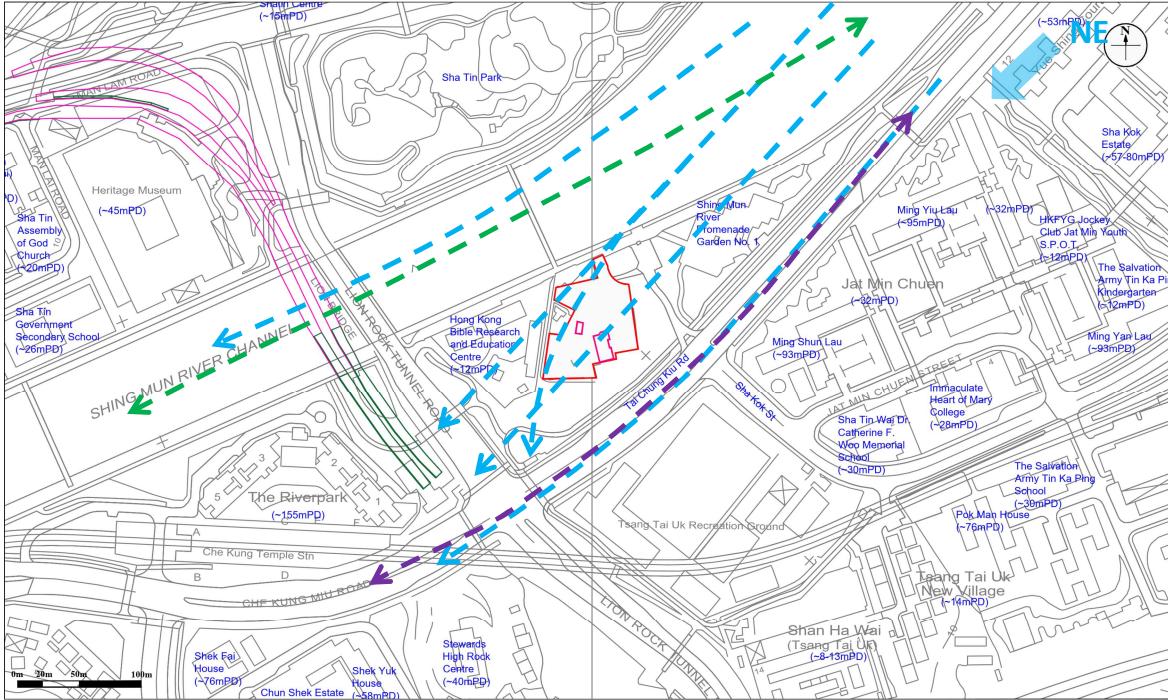
Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone "Open Space" Zone to "Other Specified Use (Hotel Development)" Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

Checked by: TC

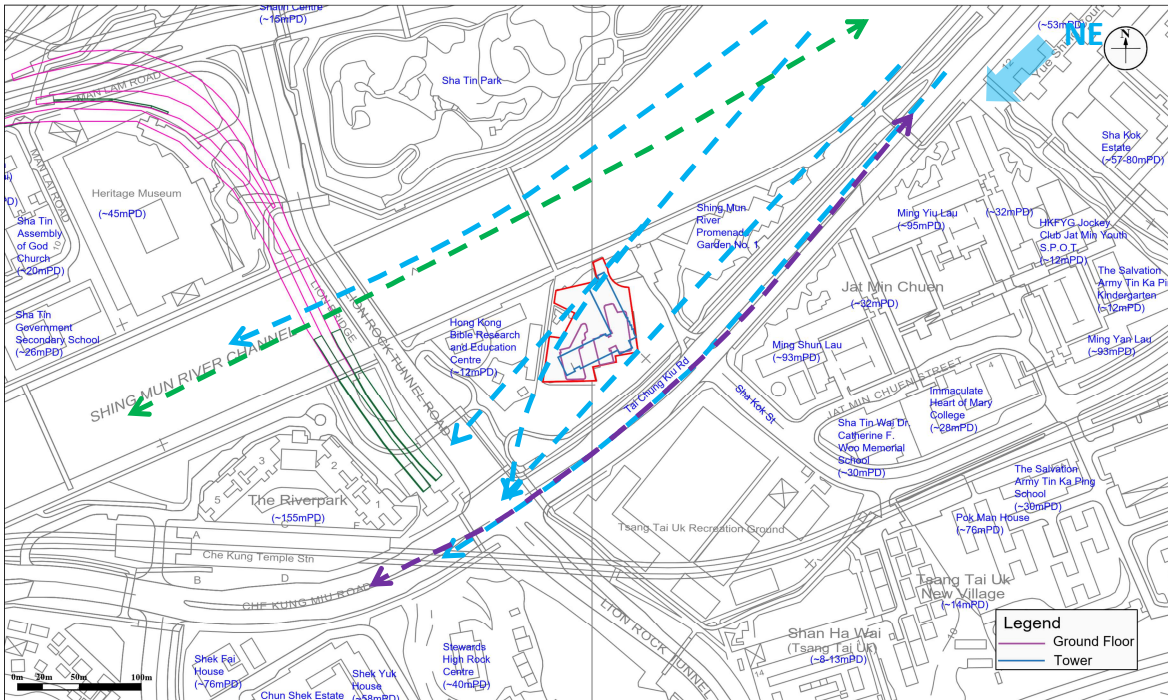
Rev.: 1.0

Date: Aug 2025

- Expected Annual Wind Flow
- Breezeway
- Wind Corridor
- Trunk Road T4
- Noise Barrier



Baseline Scheme



Proposed Scheme

Figure: 7



Title: Illustration of Wind Flow from NE Wind Direction

Drawn by: EC

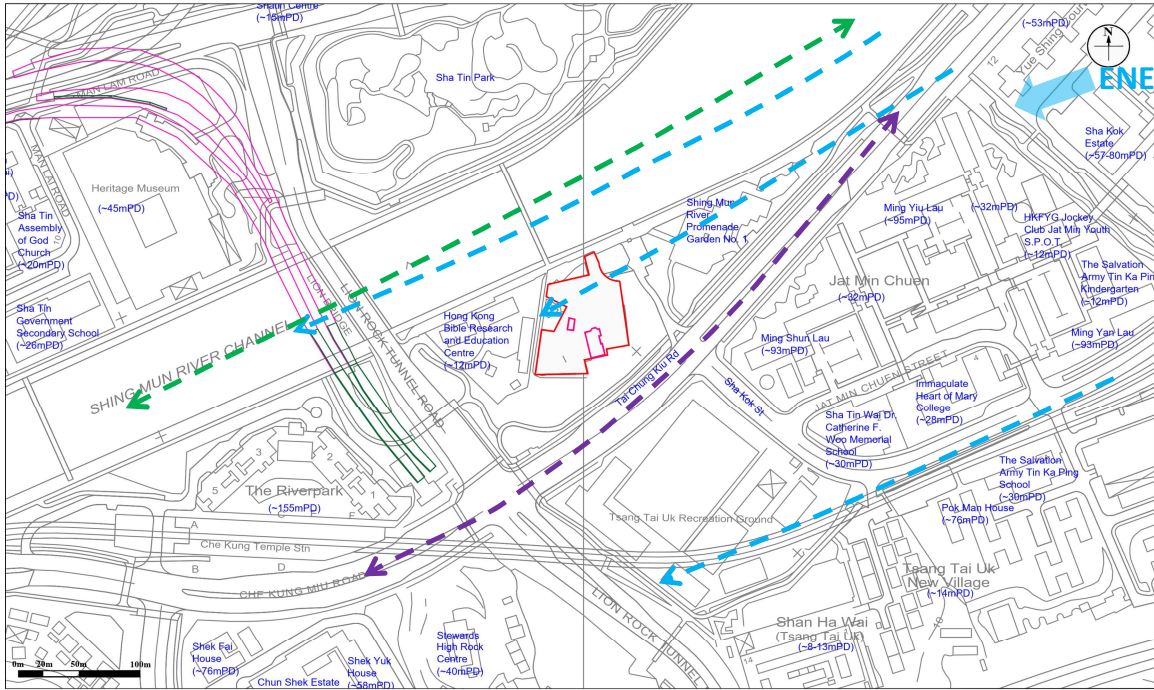
Checked by: TC

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone “Open Space” Zone to “Other Specified Use (Hotel Development)” Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

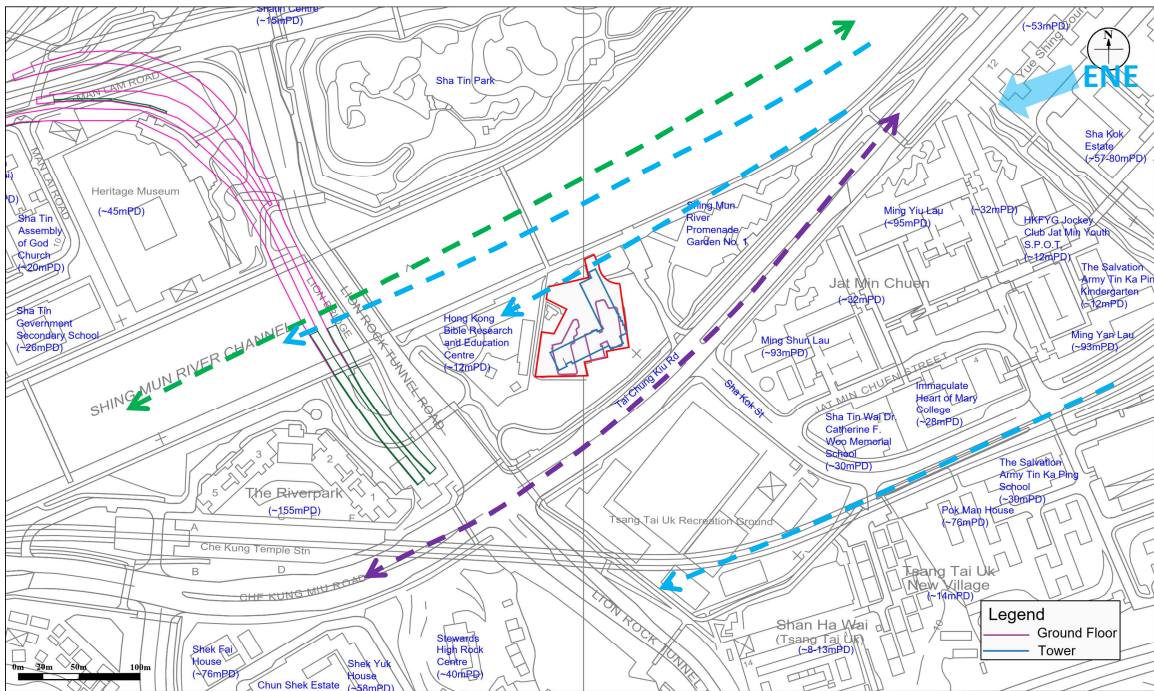
Rev.: 1.1

Date: Nov 2025

- Expected Annual Wind Flow
- Breezeway
- Wind Corridor
- Trunk Road T4
- Noise Barrier



Baseline Scheme



Proposed Scheme

Figure: 8



Title: Illustration of Wind Flow from ENE Wind Direction

Drawn by: EC

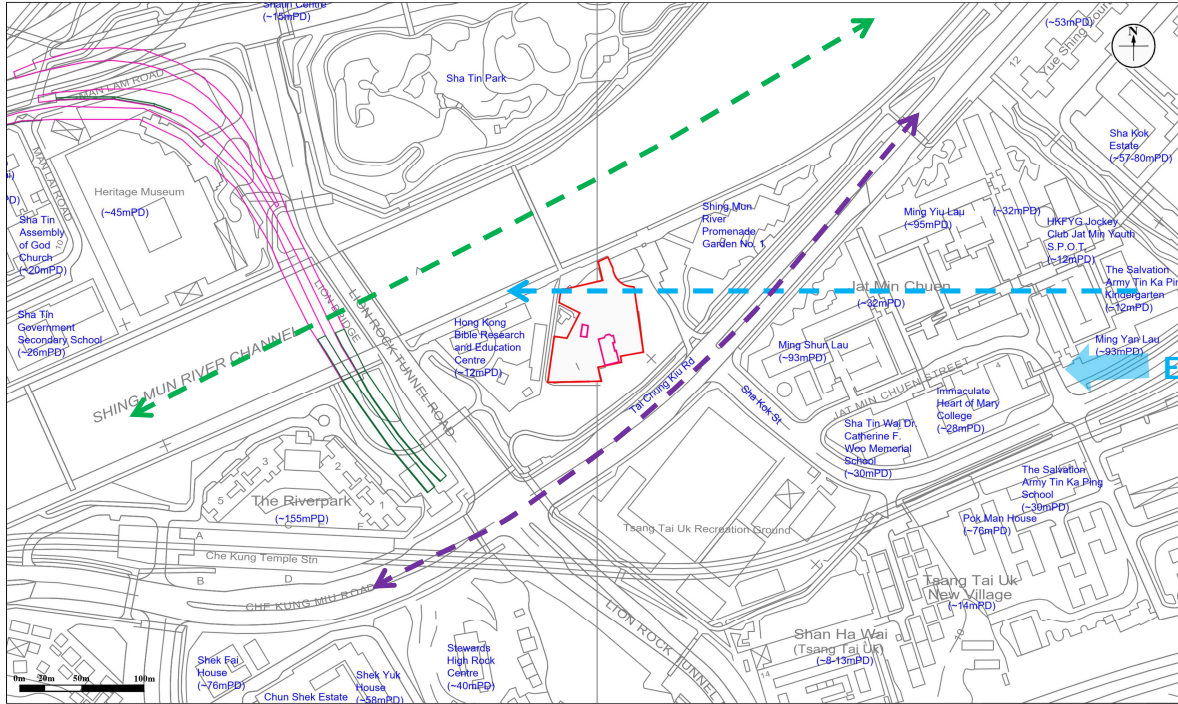
Checked by: TC

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone "Open Space" Zone to "Other Specified Use (Hotel Development)" Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

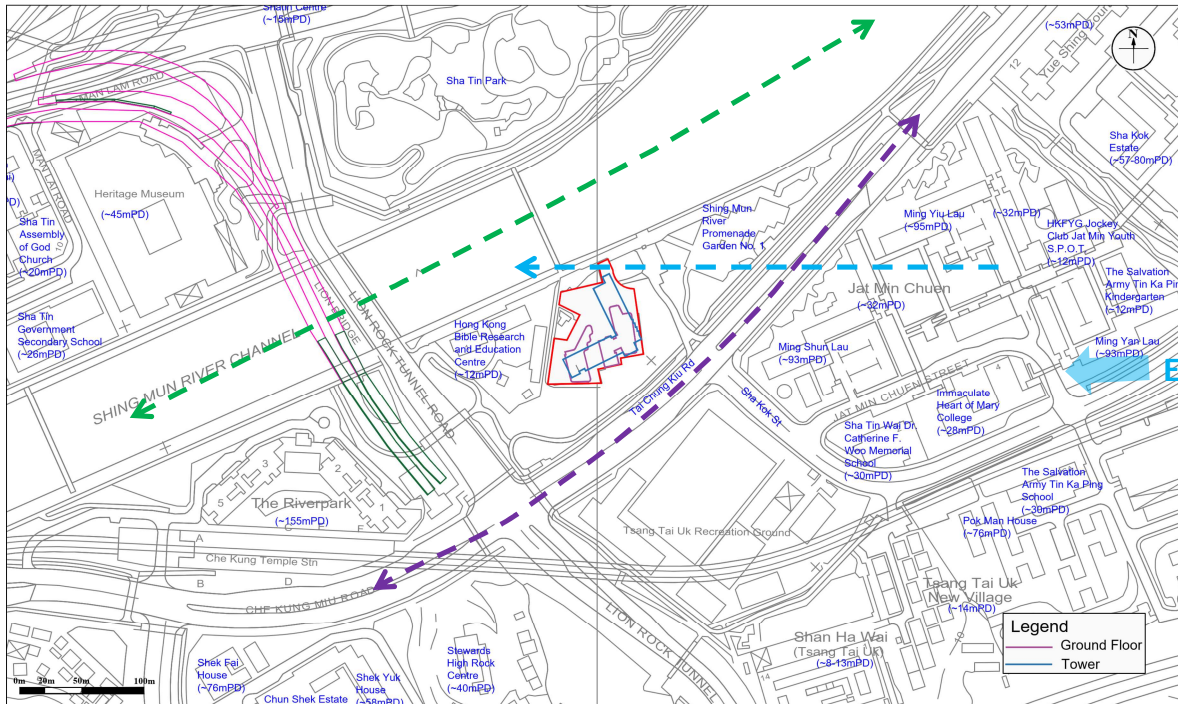
Rev.: 1.2

Date: Apr 2026

- Expected Annual and Summer Wind Flow
- Breezeway
- Wind Corridor
- Trunk Road T4
- Noise Barrier



Baseline Scheme



Proposed Scheme

Figure: 9



Title: Illustration of Wind Flow from E Wind Direction

Drawn by: EC

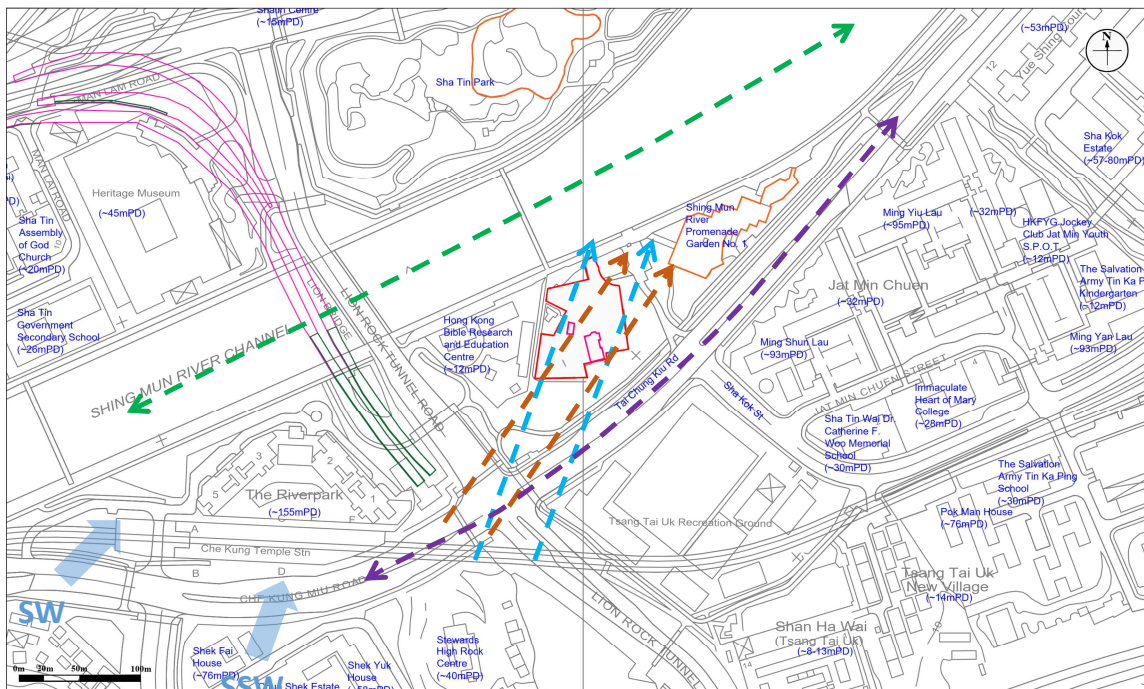
Checked by: TC

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone “Open Space” Zone to “Other Specified Use (Hotel Development)” Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

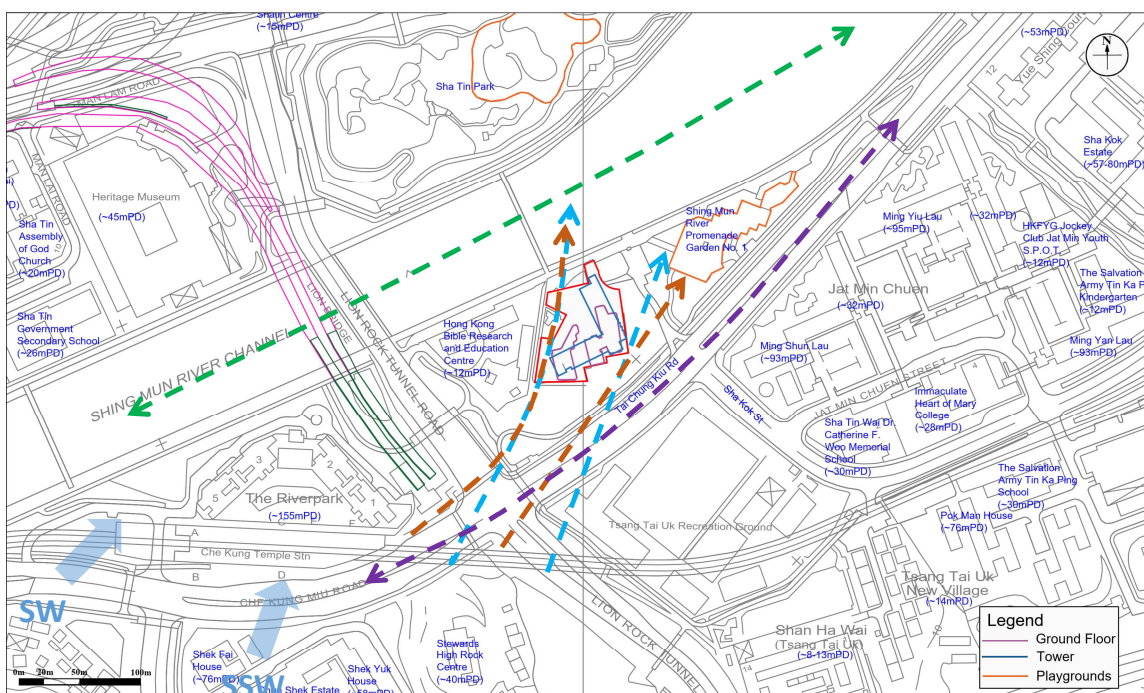
Rev.: 1.2

Date: Apr 2026

- Expected Summer SSW Wind Flow
- Breezeway
- Wind Corridor
- Expected Summer SW Wind Flow
- Trunk Road T4
- Noise Barrier



Baseline Scheme



Proposed Scheme

Figure: 10



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

Drawn by: EC

Checked by: TC

Project: Section 12A Planning Application for Proposed Amendments to the Sha Tin Outline Zoning Plan to Rezone "Open Space" Zone to "Other Specified Use (Hotel Development)" Zone in Support of Proposed Hotel Development at Various Lots in D.D. 184 and Adjoining Government Land, Sha Tin, New Territories

Rev.: 1.1

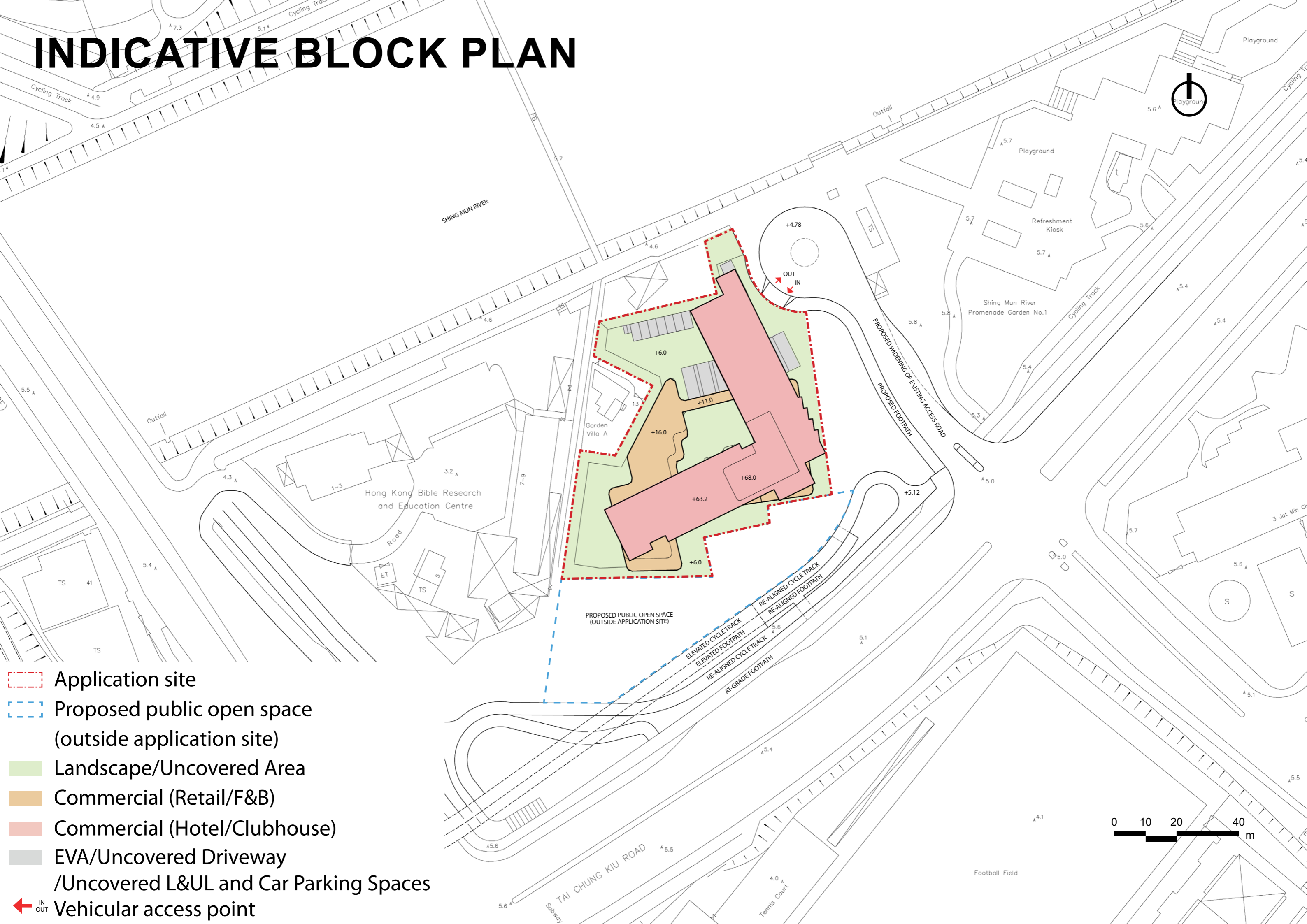
Date: Nov 2025

Appendix 1 Master Layout Plan of the Baseline Scheme

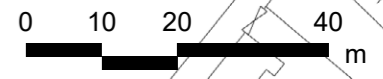


Appendix 2 Master Layout Plan of the Proposed Scheme

INDICATIVE BLOCK PLAN



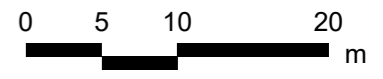
- Application site
- Proposed public open space (outside application site)
- Landscape/Uncovered Area
- Commercial (Retail/F&B)
- Commercial (Hotel/Clubhouse)
- EVA/Uncovered Driveway /Uncovered L&UL and Car Parking Spaces
- IN
OUT Vehicular access point



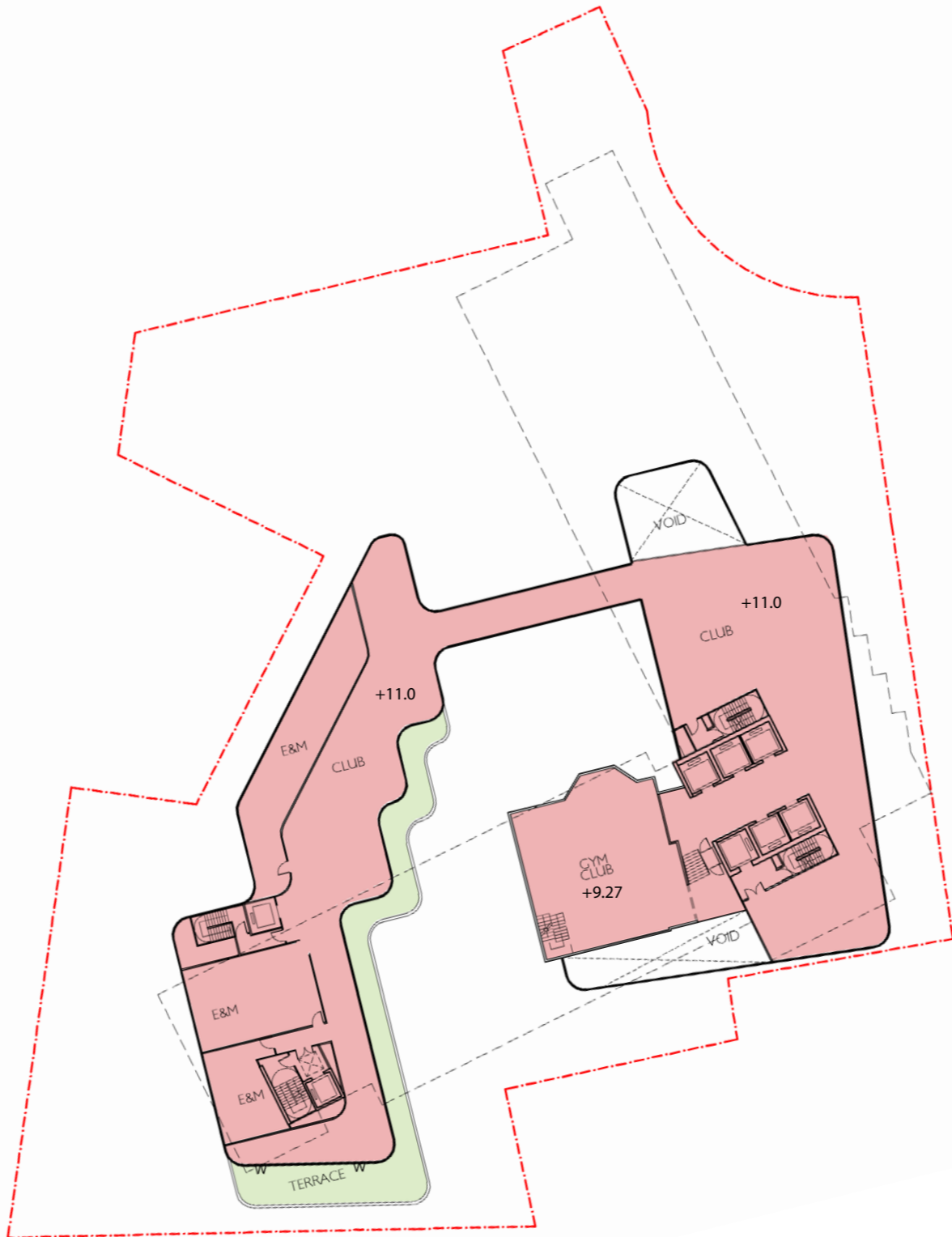
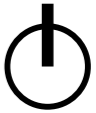
GROUND FLOOR PLAN



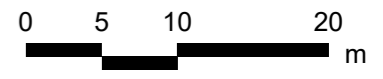
- Application site
- Landscape/Uncovered Area
- Commercial (Retail/F&B)
- Commercial (Hotel/Clubhouse)
- EVA/Uncovered Driveway
/Uncovered L&UL and Car Parking Spaces



FIRST FLOOR PLAN



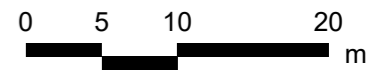
- Application site
- Landscape/Uncovered Area
- Commercial (Hotel/Clubhouse)



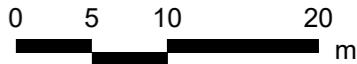
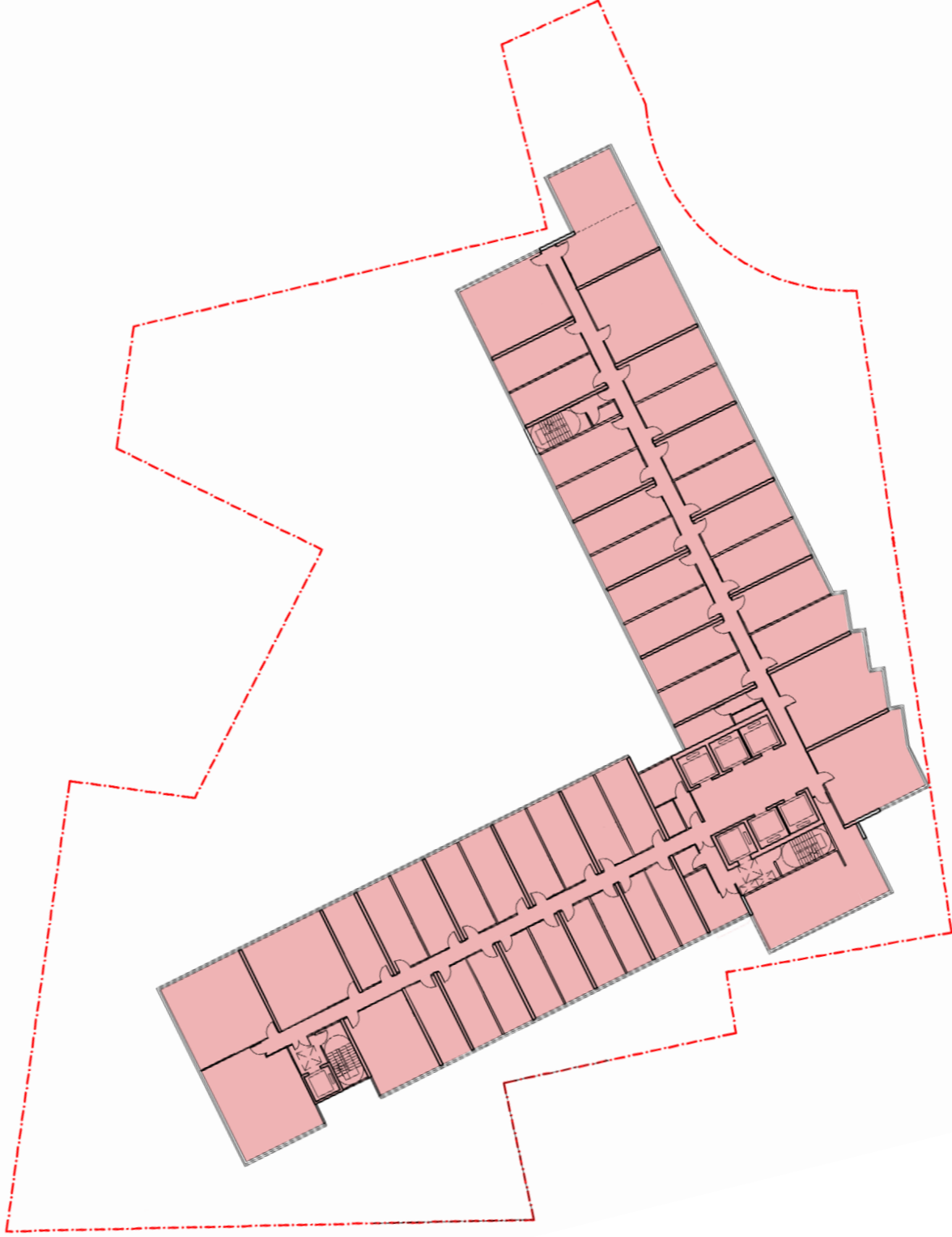
SECOND FLOOR PLAN



- Application site
- Skylight
- Landscape/Uncovered Area
- Commercial (Hotel/Clubhouse)

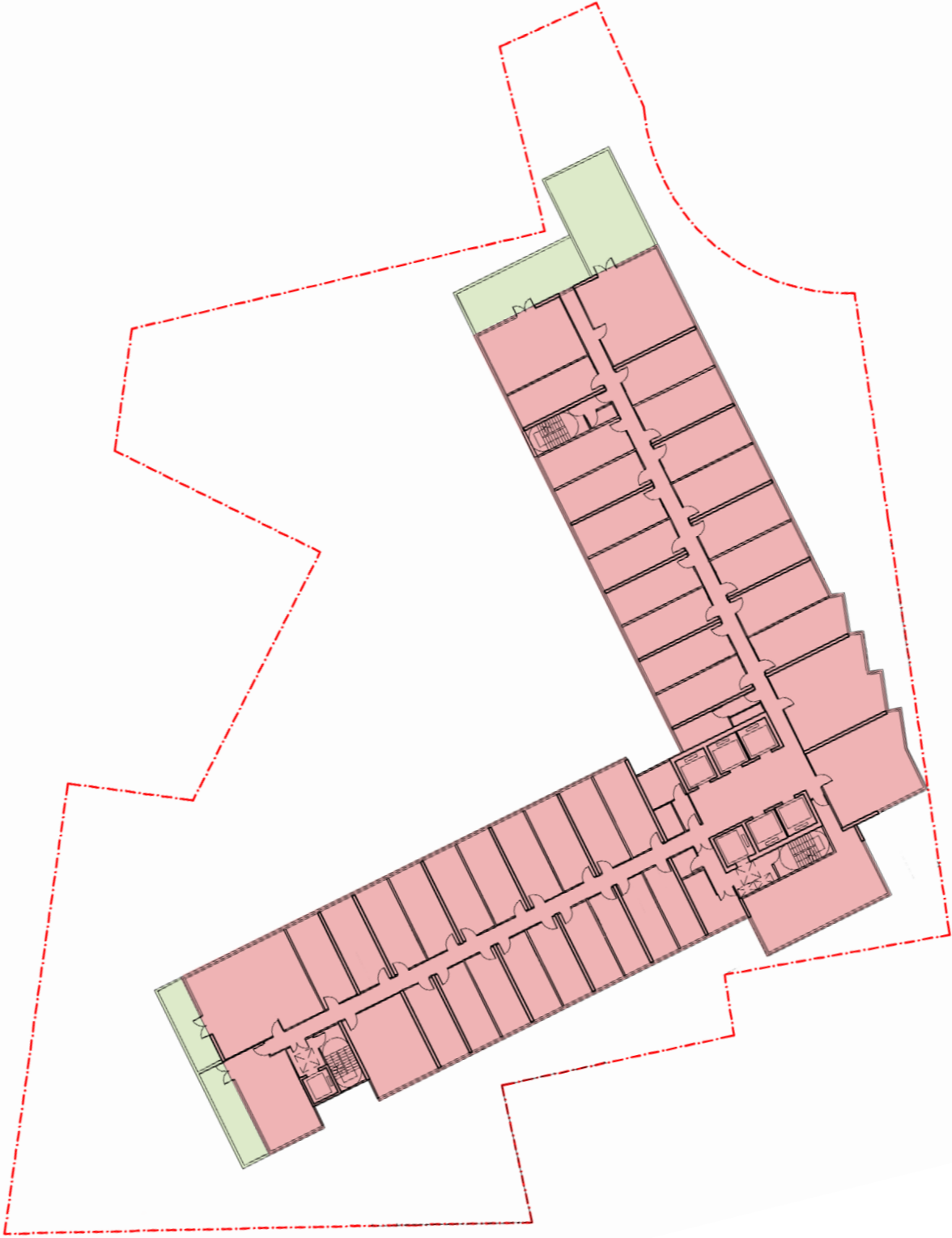





TYPICAL FLOOR PLAN

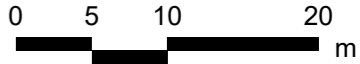


 Application site
 Commercial (Hotel/Clubhouse)

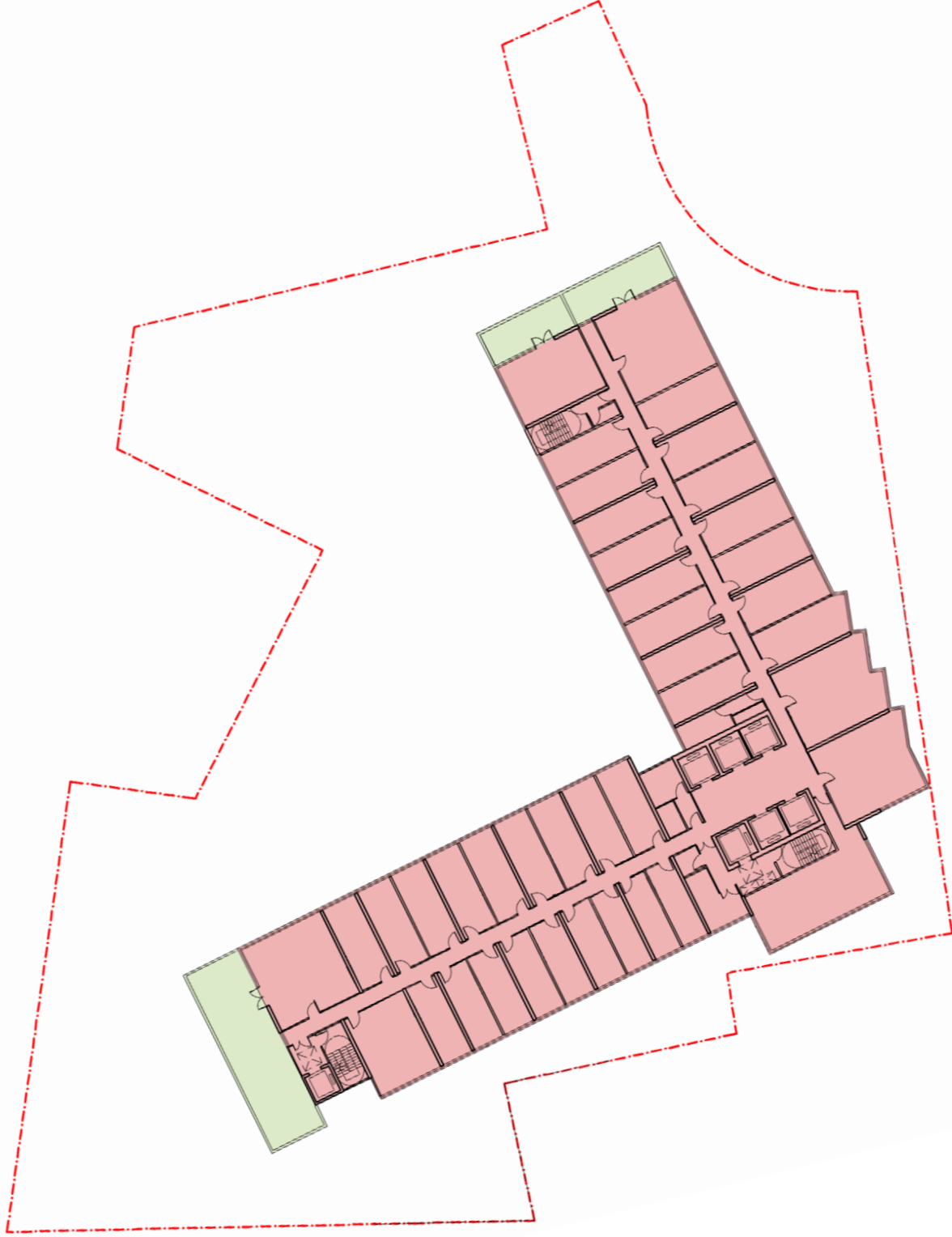
TENTH FLOOR PLAN





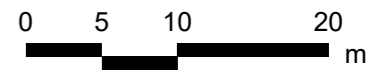
-  Application site
-  Landscape/Uncovered Area
-  Commercial (Hotel/Clubhouse)



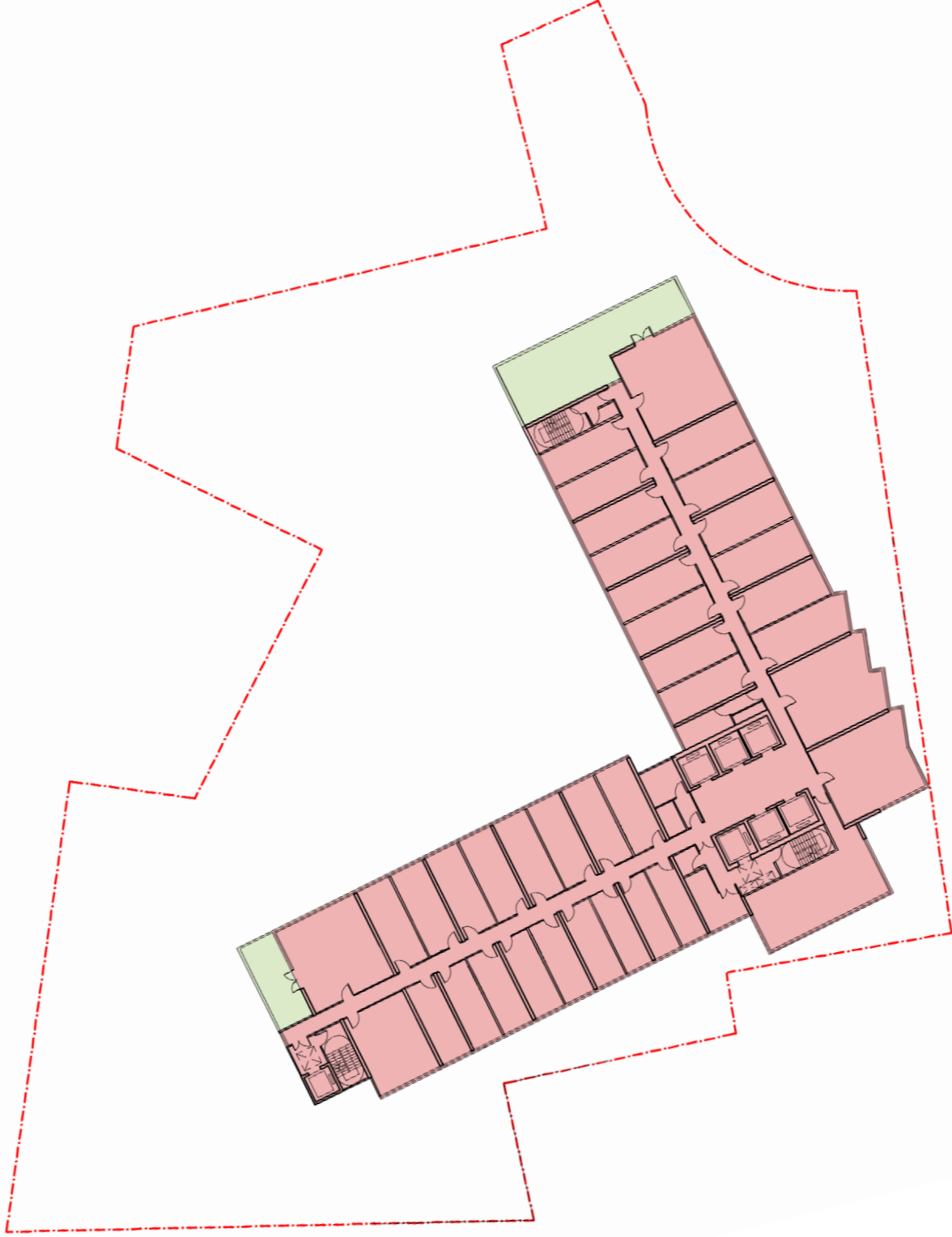
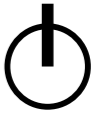
ELEVENTH FLOOR PLAN



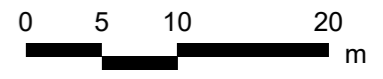
-  Application site
-  Landscape/Uncovered Area
-  Commercial (Hotel/Clubhouse)



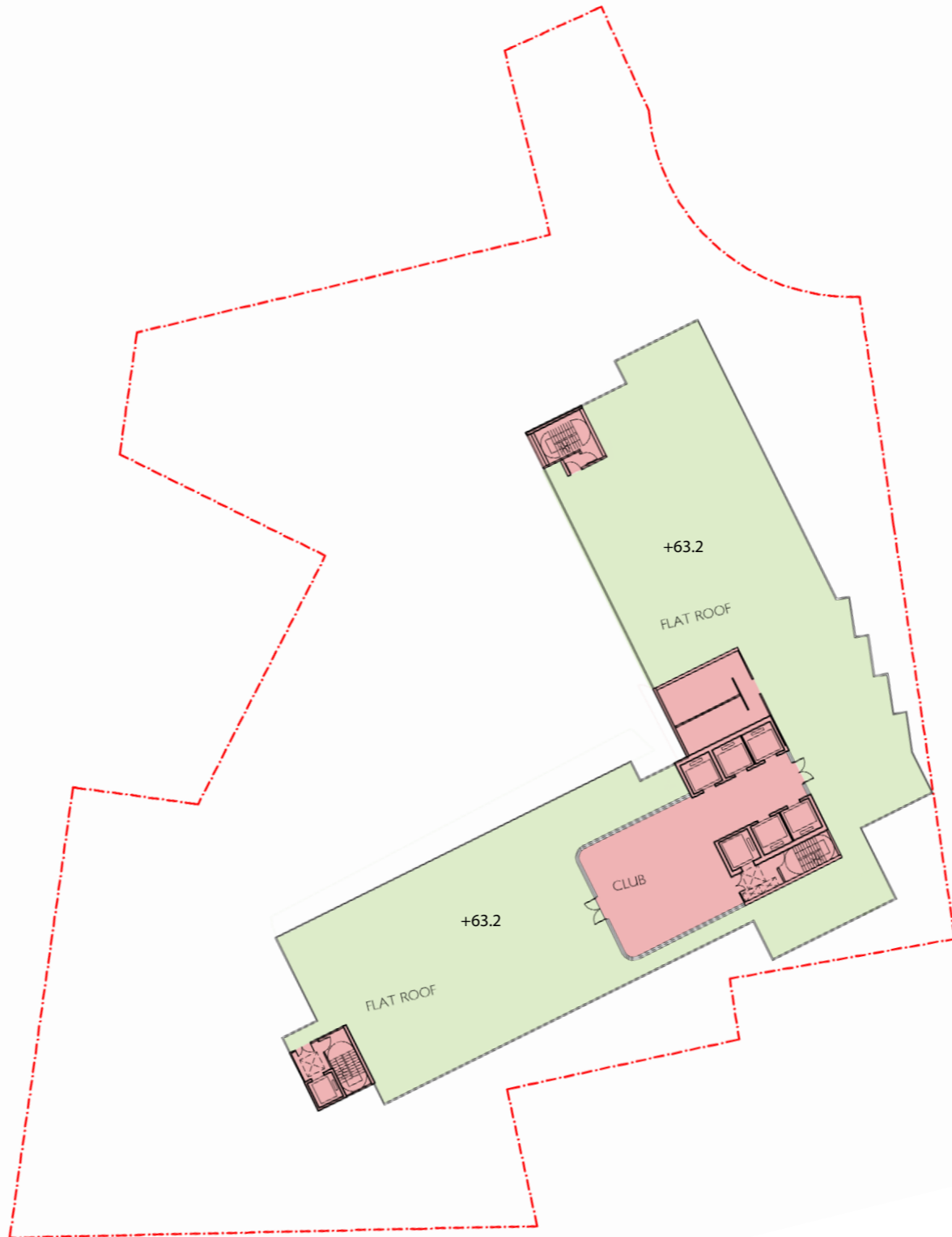
TWELFTH FLOOR PLAN



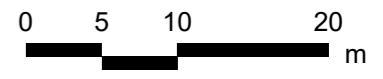
-  Application site
-  Landscape/Uncovered Area
-  Commercial (Hotel/Clubhouse)



THIRTEEN FLOOR PLAN



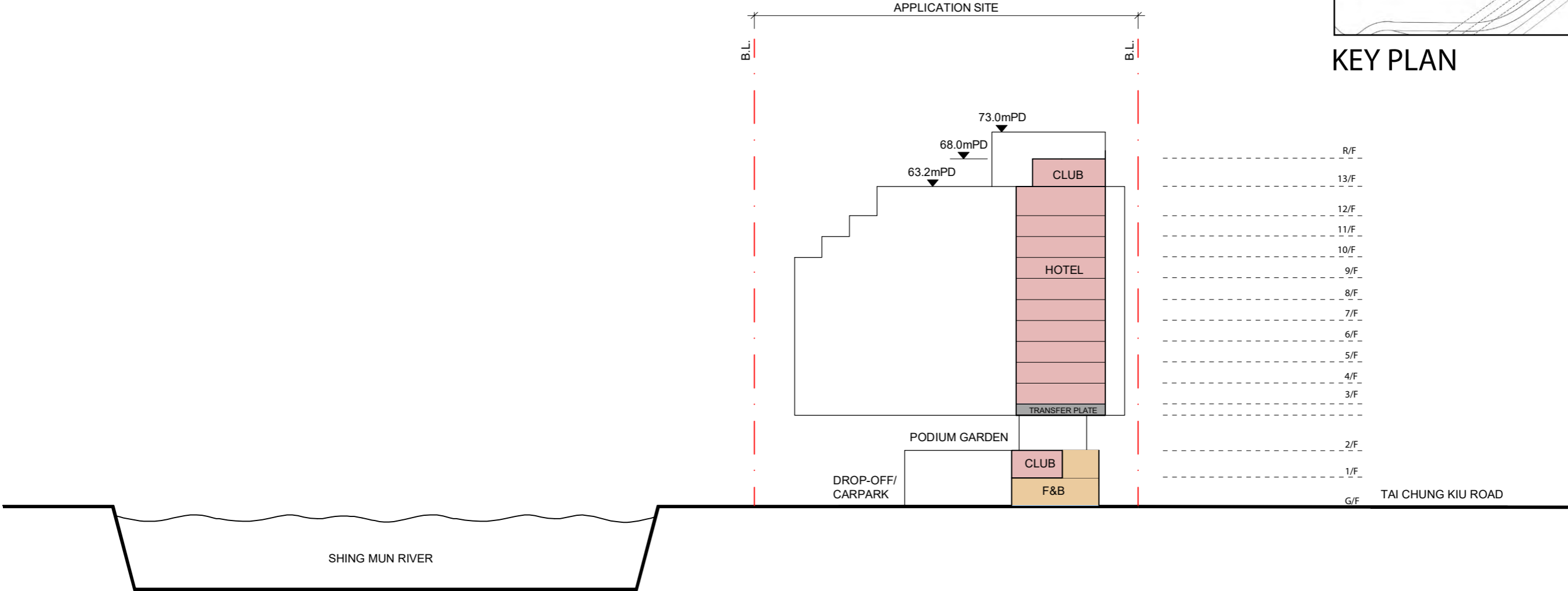
- Application site
- Landscape/Uncovered Area
- Commercial (Hotel/Clubhouse)



SECTION



KEY PLAN

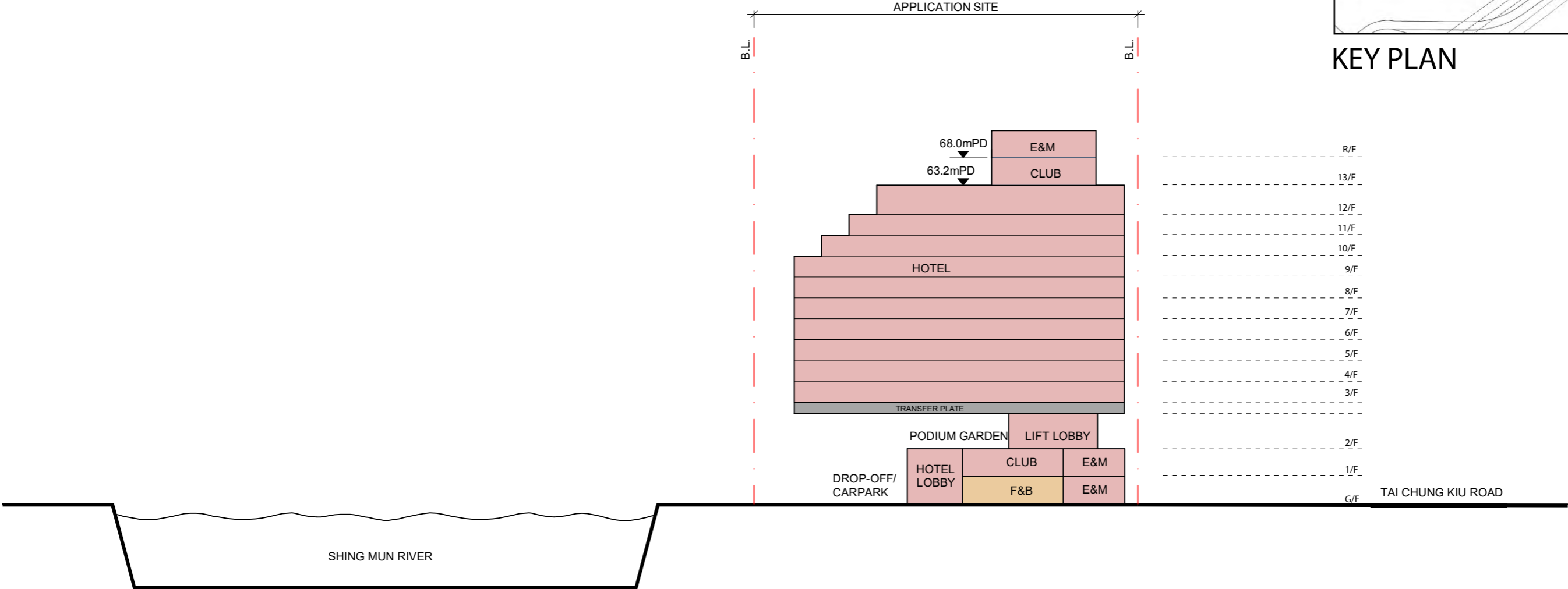


- Application site
- Landscape/Uncovered Area
- Commercial (Retail/F&B)
- Commercial (Hotel/Clubhouse)

SECTION



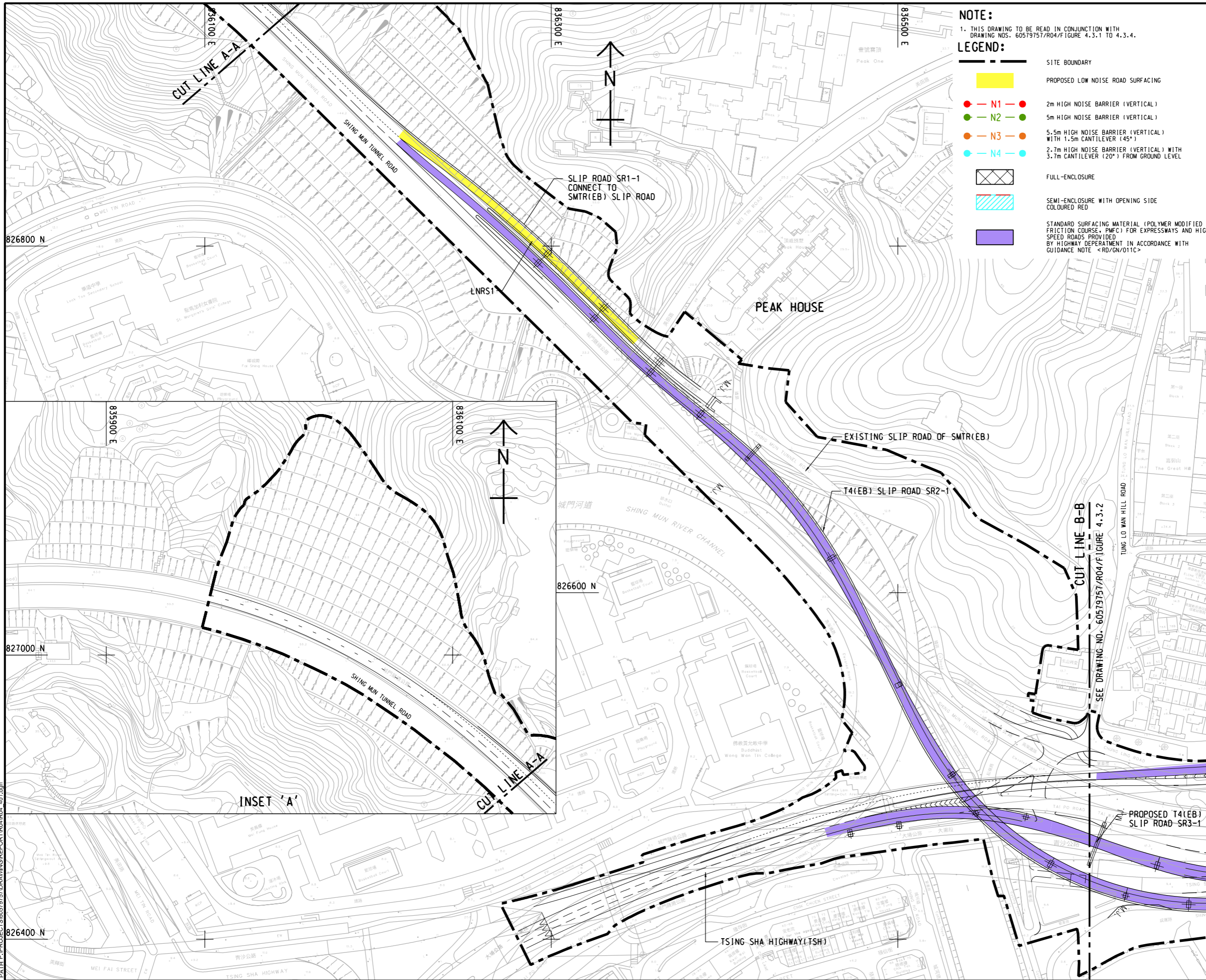
KEY PLAN



- Application site
- Landscape/Uncovered Area
- Commercial (Retail/F&B)
- Commercial (Hotel/Clubhouse)

Appendix 4 Layout of Revised Trunk Road T4

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:
Plot File by: Yuxuan, the 2021/7/26
PATH P:\PROJECTS\60579757\DRAWING\REPORT\R04\R04_401.dgn



NOTE:
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60579757/R04/Figure 4.3.1 TO 4.3.4.

- LEGEND:**
- SITE BOUNDARY
 - PROPOSED LOW NOISE ROAD SURFACING
 - N1 2m HIGH NOISE BARRIER (VERTICAL)
 - N2 5m HIGH NOISE BARRIER (VERTICAL)
 - N3 5.5m HIGH NOISE BARRIER (VERTICAL) WITH 1.5m CANTILEVER (45°)
 - N4 2.7m HIGH NOISE BARRIER (VERTICAL) WITH 3.7m CANTILEVER (20°) FROM GROUND LEVEL
 - FULL-ENCLOSURE
 - SEMI-ENCLOSURE WITH OPENING SIDE COLOURED RED
 - STANDARD SURFACING MATERIAL (POLYMER MODIFIED FRICTION COURSE, PMFC) FOR EXPRESSWAYS AND HIGH SPEED ROADS PROVIDED BY HIGHWAY DEPARTMENT IN ACCORDANCE WITH GUIDANCE NOTE <RD/GN/D11C>

AECOM

PROJECT
REVISED TRUNK ROAD
T4 IN SHA TIN

CLIENT
CEED 土木工程拓展署
Civil Engineering and
Development Department

CONSULTANT
AECOM Asia Company Ltd.

SUB-CONSULTANTS
分列工程有限公司

ISSUE/REVISION

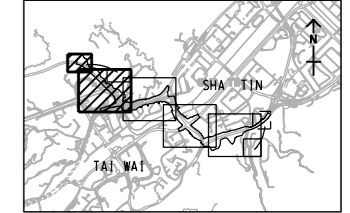
IR	DATE	DESCRIPTION	CHK.

STATUS

SCALE
比例
A3 1:2000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN A3 1:10000
索引圖



PROJECT NO.
項目編號
60579757

AGREEMENT NO.
協議編號
CE8/2018 (HY)

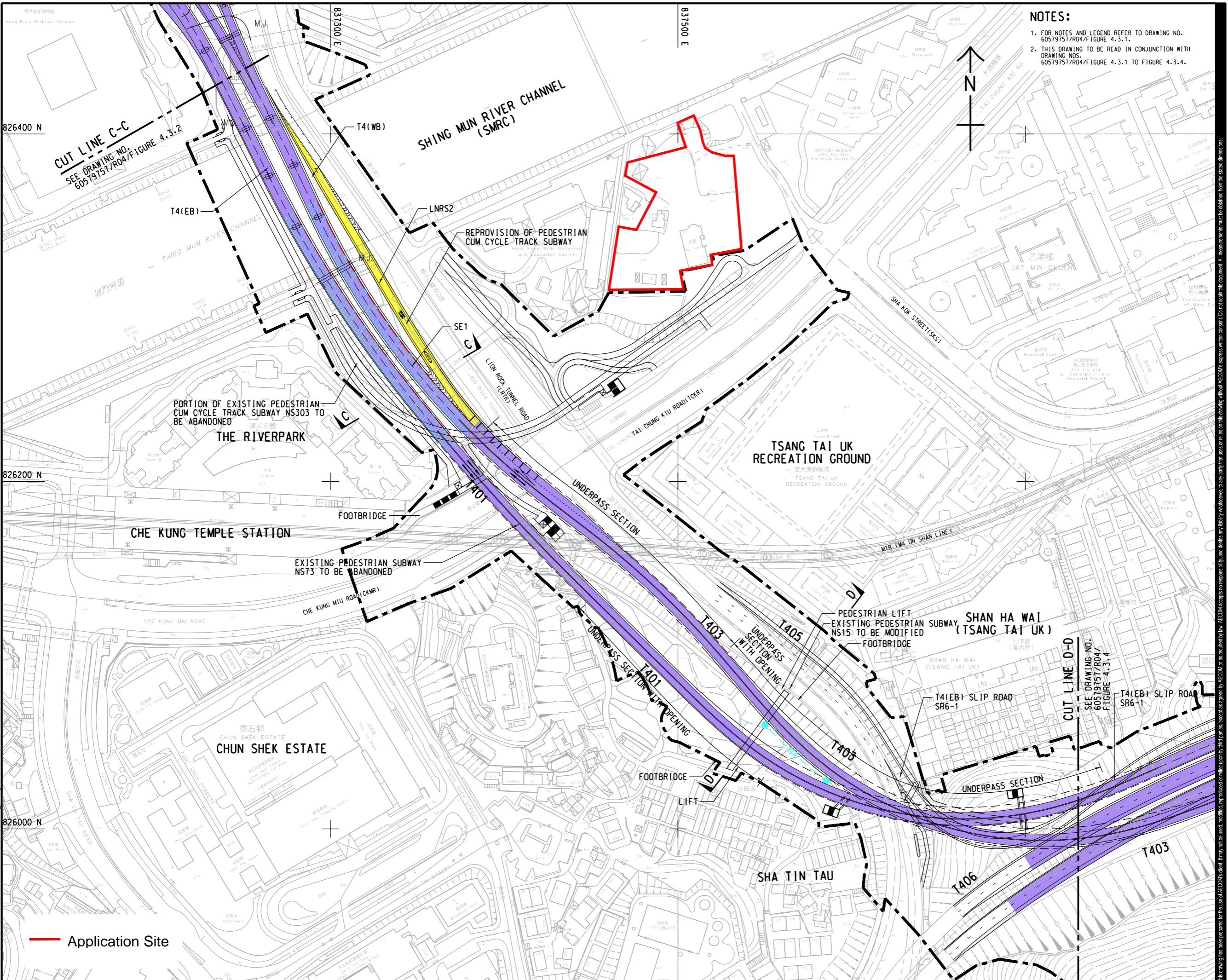
SHEET TITLE
圖紙名稱
LOCATIONS OF PROPOSED TRAFFIC NOISE MITIGATION MEASURES

SHEET NUMBER
圖紙編號
60579757/R04/FIGURE 4.3.1

SHEET 1 OF 4

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ISO A1 594mm x 841mm
 Approved:
 Checked:
 Designer:
 Project Management Initials:
 2021/1/23
 PATH PROJECTS/60579757/DRAWINGREPORT/RA/R04_403.dgn
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NOTES:

- FOR NOTES AND LEGEND REFER TO DRAWING NO. 60579757/R04/Figure 4.3.1.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60579757/R04/Figure 4.3.1 TO Figure 4.3.4.



PROJECT
 項目
REVISED TRUNK ROAD T4 IN SHA TIN

CLIENT
 業主
 土木工程拓展署
 Civil Engineering and Development Department

CONSULTANT
 顧問公司
 AECOM Asia Company Ltd.

SUB-CONSULTANTS
 分判工程顧問公司

ISSUE/REVISION
 修訂

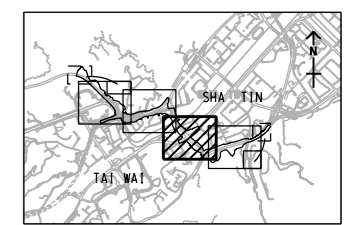
IR	DATE	DESCRIPTION	CHK.

STATUS
 階段

SCALE
 比例
 A3 1:2000

DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN
 索引圖
 A3 1:100000



PROJECT NO.
 項目編號
 60579757

AGREEMENT NO.
 協議編號
 CE8/2018 (HY)

SHEET TITLE
 圖紙名稱
 LOCATIONS OF PROPOSED TRAFFIC NOISE MITIGATION MEASURES

SHEET NUMBER
 圖紙編號
 60579757/R04/FIGURE 4.3.3

Application Site