

Appendix VI

Air Quality Impact Assessment

Issue No. : Issue 1
Issue Date : October 2025
Project No. : 2215



AIR QUALITY IMPACT ASSESSMENT

FOR

**PROPOSED SCAA SPORTS
LINK AT SOUTH CHINA
ATHLETIC ASSOCIATION, 88
CAROLINE HILL ROAD, HONG
KONG**

Prepared by

Allied Environmental Consultants Limited

COMMERCIAL-IN-CONFIDENCE

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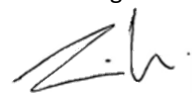
**Project Title**

Proposed SCAA Sports Link
at South China Athletic
Association, 88 Caroline Hill
Road, Hong Kong

Project No.
2215

Document Title

Air Quality Impact Assessment

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1. Introduction

- 1.1.1. Allied Environmental Consultants Limited (“AEC”) has been commissioned to prepare an Air Quality Impact Assessment (“AQIA”) in support of the Section 16 Planning Application for the Proposed SCAA Sports Link (“Proposed Development”) at South China Athletic Association, 88 Caroline Hill Road, Hong Kong (“Subject Site”).

2. Objectives

- 2.1.1. Main objective of the study is to evaluate potential air quality impacts associated with the Proposed Development during construction and operation phase. Where necessary, appropriate mitigation measures are recommended to reduce the impacts from the Proposed Development and the nearby sources at the Air Sensitive Receivers to satisfy the relevant environmental ordinance, standards and guidelines.

3. Description of the Proposed Development

- 3.1.1. The Proposed Development is a 4-story complex consist of facilities for sports and recreational usage (i.e., Multi-proposed/ activities Rooms, artificial turf pitches, tennis courts and ancillary office & facilities etc.). The site layout plans for the Proposed Development are provided in **Appendix 3-1**.
- 3.1.2. Subject Site falls within Wong Nai Chung Inland Lot No. 9041 zoned Other Specified Uses (Sports and Recreation Club) (“OU (Sports and Recreation Club)”) on the Approved Wong Nai Chung Outline Zoning Plan No. S/H7/21. The Proposed Development is expected to be operated in Year 2030.
- 3.1.3. The Subject Site area is approximately 6,132m². It is located at the north of the existing South China Stadium of South China Athletic Association, and at the south of the Disciplined Services Sports and Recreation Club. Its surrounding areas are zoned Other Specified Uses (“OU”), Government, Institution or Community (“G/IC”), Commercial (“C”), Open Space (“O”), Residential (Group B) (“R(B)”), Residential (Group C) (“R(C)”) and Green Belt (“GB”). **Figure 3-1** shows the location of the Subject Site.

4. Environmental Legislation, Standards and Guidelines

4.1. Hong Kong Air Quality Objectives

- 4.1.1. Air quality in Hong Kong is governed under the Air Pollution Control Ordinance (“APCO”) (Cap. 311) and its subsidiary Regulations. Under this legislation, the Government has designated Air Control Zones (“ACZ”) for the whole territory, along with the new Air Quality Objectives (“AQOs”) which was taken effect in 2025. The AQOs stipulate the statutory limits for 7 pollutants and dictate the maximum number of allowable exceedances over specified time periods. For details, please refer to **Table 4-1** below.

Table 4-1 Hong Kong Air Quality Objectives (AQOs)

Pollutant	Averaging Time	Concentration Limit (ug/m ³) ^[1]	Number of Exceedances to be allowed
Sulphur Dioxide (SO ₂)	10-minute	500	3
	24-hour	50	3
RSP or PM ₁₀ ^[2]	24-hour	100	9
	Annual	50	N/A
FSP or PM _{2.5} ^[3]	24-hour	50	18
	Annual	25	N/A
Nitrogen Dioxide (NO ₂)	1-hour	200	18
	Annual	40	N/A
Ozone (O ₃)	8-hour	160	9
Carbon monoxide (CO)	1-hour	30,000	0
	8-hour	10,000	0
Lead (Pb)	Annual	0.5	N/A

Note:

[1] All measurements of the concentration of gaseous air pollutants, i.e., sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.

[2] Respirable suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.

[3] Fine suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

4.2. Hong Kong Planning Standards and Guidelines

- 4.2.1. General design guidelines are stated in the Hong Kong Planning Standards and Guidelines (“HKPSG”) as indicated in **Table 4-2**.

Table 4-2 Guidelines on Usage of Open Space Site under HKPSG

Polluting Uses	Sensitive Uses	Recommended Buffer Distance
Multi-storey industrial building	(a) residential areas, schools (b) commercial and GIC uses	100m 30m
Industrial areas	hospitals	500m
Industrial chimneys	(a) sensitive uses (b) high-rise buildings (c) active open spaces	Within 500m, consult EPD 200m 10 – 100m
Odour sources	sensitive uses	200m
Dusty uses	sensitive uses	100m
Trunk roads	(a) active and passive recreational uses (b) passive recreational uses (c) amenity areas	>20m 3-20m < 3m
Primary distributors	(a) active and passive recreational uses (b) passive recreational uses	>20m 3-20m
District distributors	(a) active and passive recreational uses (b) passive recreational uses	>10m <10m
Local distributors	(a) active and passive recreational uses (b) passive recreational uses	>5m <5m
Construction and Earth Moving Activities	(a) active and passive recreational uses (b) passive recreational uses	>50m <50m

5. Potential Air Quality Impact in Construction Phase

- 5.1.1. To assess the air quality impact associated with the construction works of the Proposed Development, the ASRs in the vicinity have been identified as summarised in **Table 5-1**.

Table 5-1 The Separation Distance between Nearby ASRs and the Proposed Development

ASR	Separation distance (m)
Proposed Commercial Development on IL No.8945 at Caroline Hill Road, Causeway Bay, Hong Kong	~25
Proposed District Court at Caroline Hill Road	~28
St. Paul's Convent	~32
Disciplined Services Sports and Recreation Club	~22
So Kon Po Recreation Ground	~14
Indian Recreation Club	~22
Eastern Hospital Road Sitting-Out Area	~76
Confucius Hall Secondary School	~114
Existing South China Athletic Association	~8

- 5.1.2. As the Subject Site is currently a vacant site, no extensive site formation work or excavation work are expected. Only foundation and superstructure works during construction phase are anticipated. Hence, dust emission associated with the construction activities will be limited to localized at-grade construction works.

- 5.1.3. Nonetheless, dust mitigation measures to minimize dust impacts at nearby ASRs during construction phase is recommended as below:

- Plan site layout so that machinery and dust causing activities (e.g. haul roads and stockpiling areas) are located away from ASRs as far as possible;
- Erect solid screens or barriers around dusty activities;
- Erect hoarding with sufficient height from ground level along the site boundary;
- Connecting construction plant and equipment to mains electricity supply and avoid use of diesel generators and diesel-powered equipment can be considered as far as practicable to minimize air quality impact arising from construction machinery.

- 5.1.4. With the implementation of good site practices and sufficient dust suppression measures as stipulated under the Air Pollution Control (Construction Dust) Regulation, significant dust generated from the construction of the Proposed Development is not anticipated. Hence, adverse dust impact during the construction phase would not be anticipated.
- 5.1.5. Construction-related machines employed in the Subject Site will follow the requirements as stipulated in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery. Therefore, gaseous emission from construction equipment would be minor and would not cause any adverse air quality impact.

6. Potential Air Quality Impact in Operation Phase

6.1.1. Study area for AQIA has been identified by a distance of 500m from the boundary of the Subject Site. **Figure 3-1** illustrates the extent of the study area. Vehicular emissions and industrial emissions are the key air pollution sources in the vicinity of the Subject Site that might impose air quality impacts during operation phase.

6.2. Vehicular Emissions from Open Road Traffic

6.2.1. The Subject Site is surrounded by an open road, namely Caroline Hill Road to the north. According to the information from the Annual Traffic Census (2023) published by Transport Department, the road section near to the Subject Site are classified as Local Distributor ("LD").

6.2.2. With reference to the HKPSG, recommended minimum buffer distance from the nearby roads to minimise potential adverse air quality impact due to open-road vehicular emissions have been adopted as summarised in **Table 6-1**. The buffer distance is illustrated in **Figure 6-1**.

Table 6-1 Buffer distance from the Adjacent Roads

Road Name	Road Type	HKPSG Guideline Buffer Distance Requirement
Caroline Hill Road	Local Distributor	5m

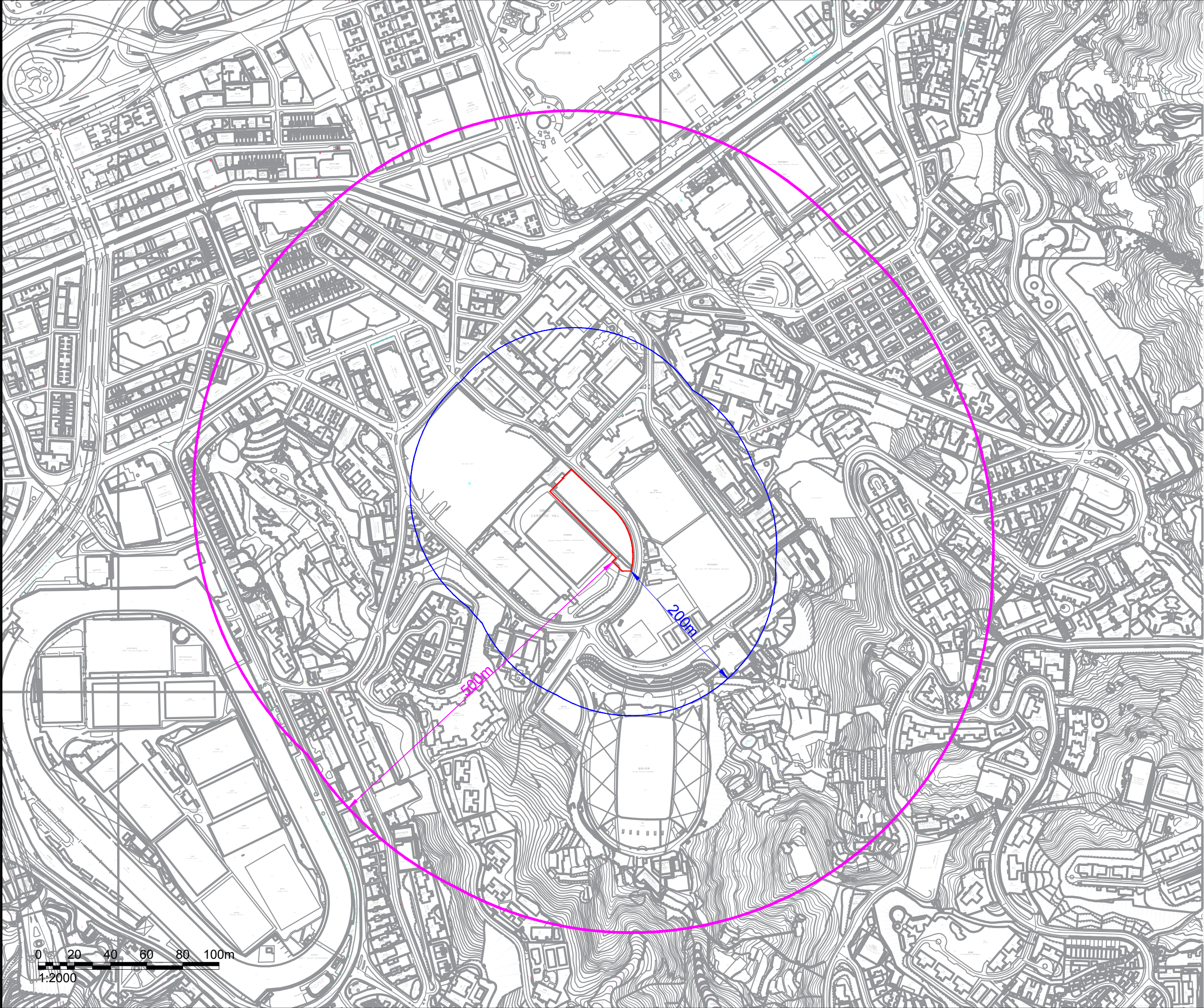
6.2.3. The offices and multi-purpose rooms of the Proposed Development will rely on the centralized AC system whereas the sports facilities and carpark will rely on natural ventilation. As shown in **Figure 6-1**, no air sensitive uses (including openable windows, open space for active recreation use, and fresh air intake of mechanical ventilation) will be located within the buffer zones from G/F to R/F during the operation phase. Hence, no significant air quality impact is anticipated during the operation phase.

6.3. Industrial Emissions from Chimneys

- 6.3.1. Site survey was carried out on 18 March 2025 to review the existing environmental conditions.
- 6.3.2. Chimneys were identified at Tung Wah Eastern Hospital and the Saint Paul's Hospital Main Block during the survey. According to the previous planning application (No. A/H7/182), a chimney was also present at Saint Paul's Convent, but it is noted that this chimney has been removed during the survey. Accordingly, sufficient buffer distance shall be provided between the chimneys and air sensitive use (including openable windows, open space for active recreation use, and fresh air intake of mechanical ventilation) of the Proposed Development as stipulated in HKPSG and as shown in **Figure 6-2**.
- 6.3.3. There are 4 nos. of chimneys at Saint Paul's Hospital Main Block with a height of 124.7mPD. The Subject Site is located more than 100m away from the Saint Paul's Hospital Main Block. Area with 100-200m horizontal buffer distance from chimney required 20m difference in height between industrial chimney exit and fresh air intake location (i.e. allowable fresh air intake location at or below 104.7mPD). Hence, the associated buffer distance criteria (i.e. 104.7mPD) should be adopted. Details of the allowable fresh air intake location are enclosed in **Figure 6-2**.
- 6.3.4. A diesel generator owned by Tung Wah Eastern was found during the site surveys within the 200m assessment area. The location of the diesel emergency generator is shown in **Figure 6-2**. Verbal communication with Tung Wah Eastern Hospital confirmed that the diesel generator is for emergency purpose. In view of the diesel generator is for emergency use only, no adverse air quality impact to the Proposed Development and nearby air sensitive receivers is expected.
- 6.3.5. With compliance of the HKPSG recommendations, no air impact caused by the surrounding chimneys is anticipated.
- 6.3.6. Slaughterhouses, sewage treatment works facilities, village incinerators, odour sources and dusty uses are not found within 500m radius of the Proposed Development. Therefore, no adverse odour impact is expected.

7. Conclusions

- 7.1.1. Fugitive dust due to construction works and gaseous emission from construction equipment would make insignificant air quality impacts to the nearby air sensitive receivers, with the implementation of dust suppression measures and good site practice as stipulated under Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation.
- 7.1.2. Air sensitive uses (including openable windows, fresh air intake for mechanical ventilation and open space for active recreational use) in the Subject Site shall maintain sufficient buffer distance from nearby road sections and industrial chimney as promulgated in the HKPSG. No adverse air quality impact is anticipated at the Subject Site during operation phase.



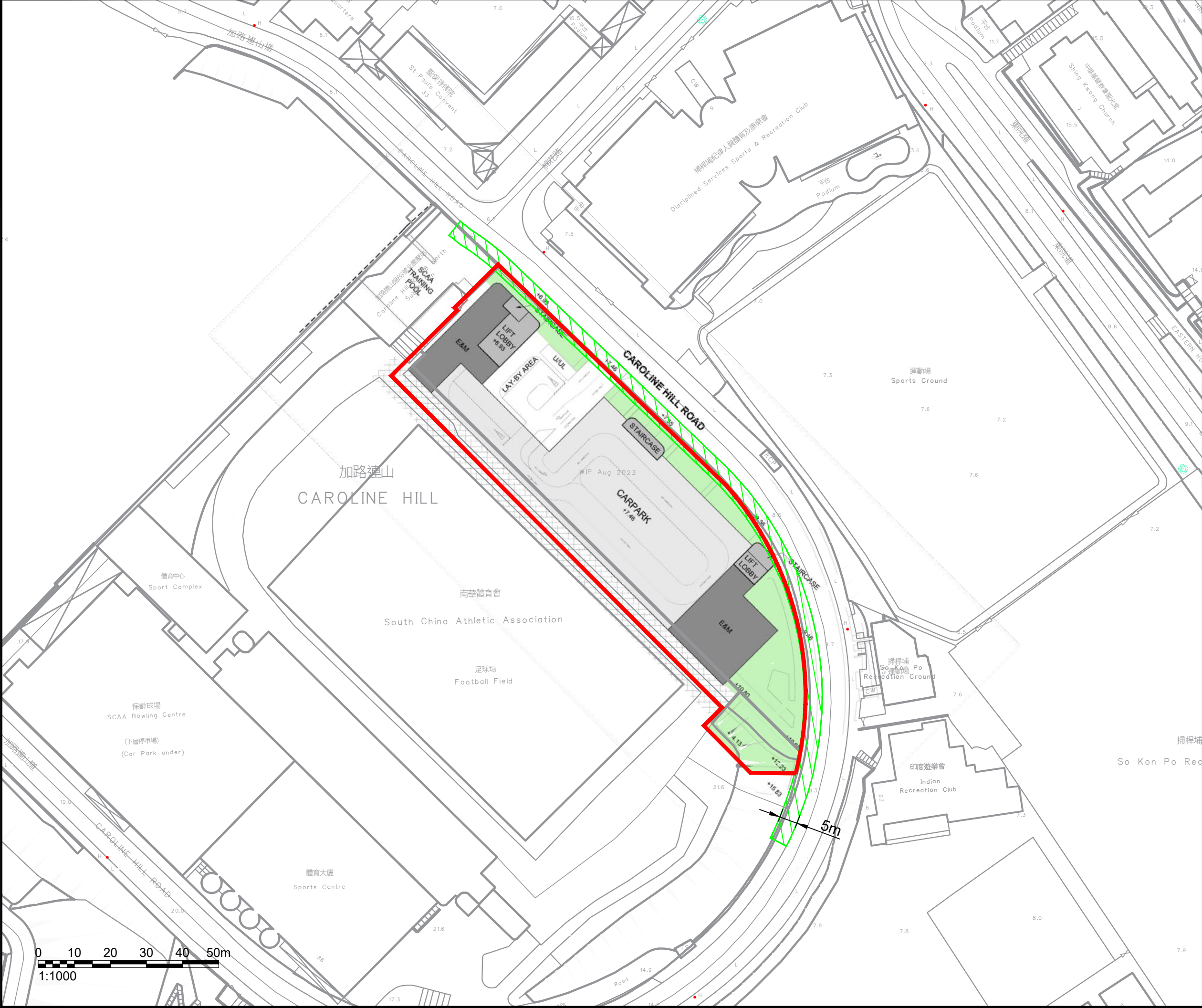
- NOTES :
- SUBJECT SITE
 - 200m ASSESSMENT AREA
 - 500m ASSESSMENT AREA

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Drawing Title :	SUBJECT SITE LOCATION AND ASSESSMENT AREA
Drawing No. :	FIGURE 3-1
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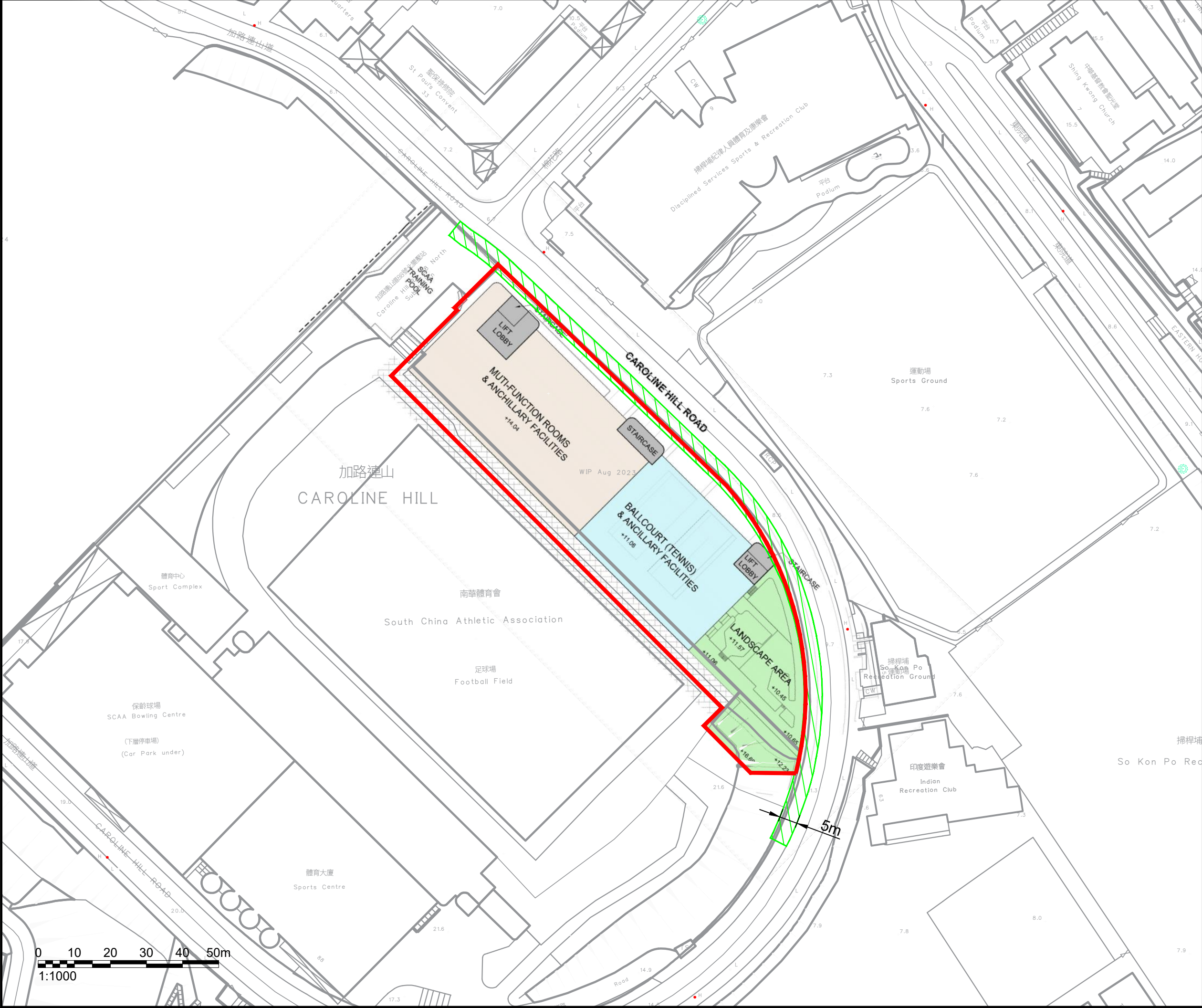
- NOTES :
- SUBJECT SITE
 - ROAD BUFFER DISTANCE

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- NOTES :
-  SUBJECT SITE
 -  ROAD BUFFER DISTANCE

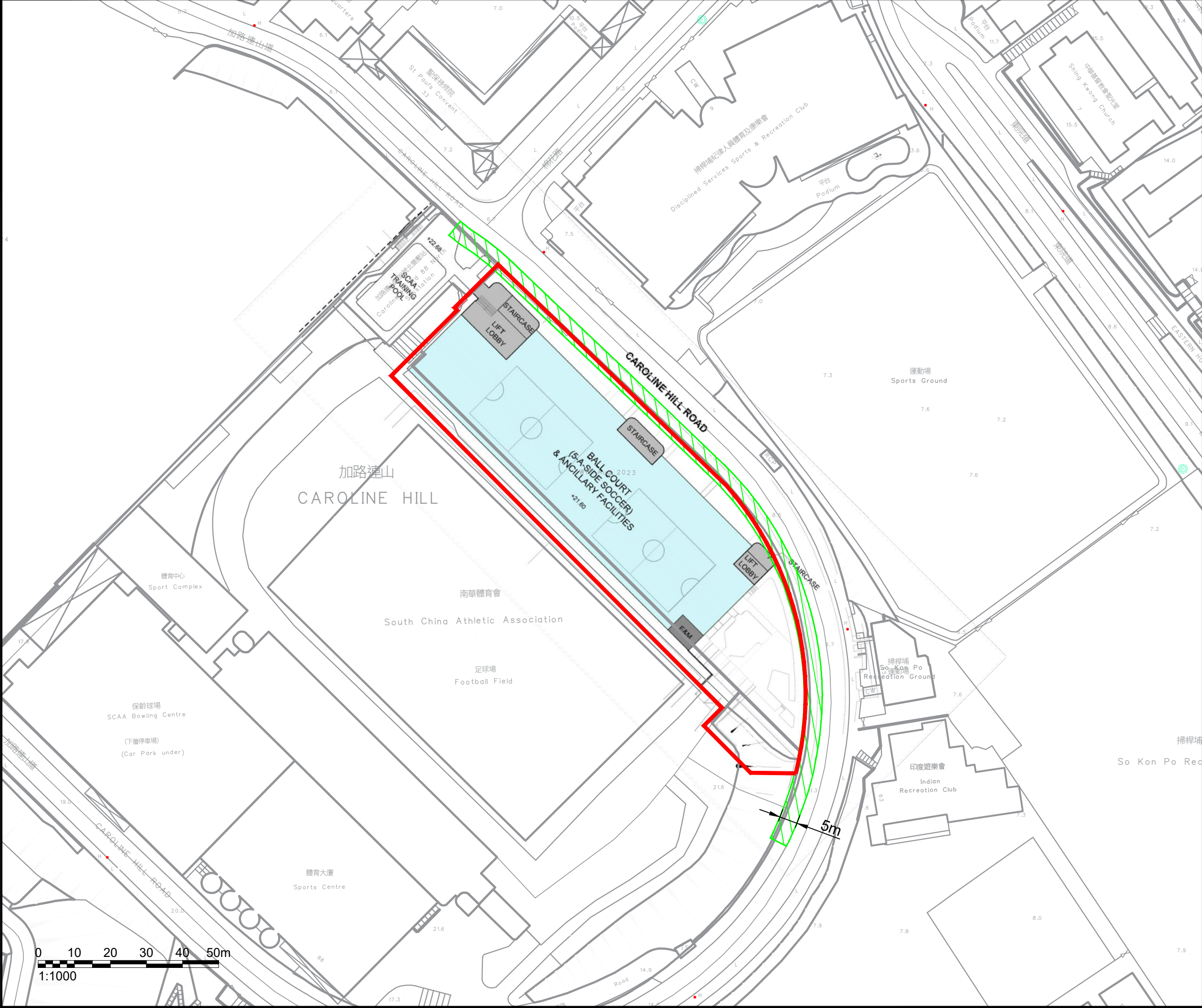
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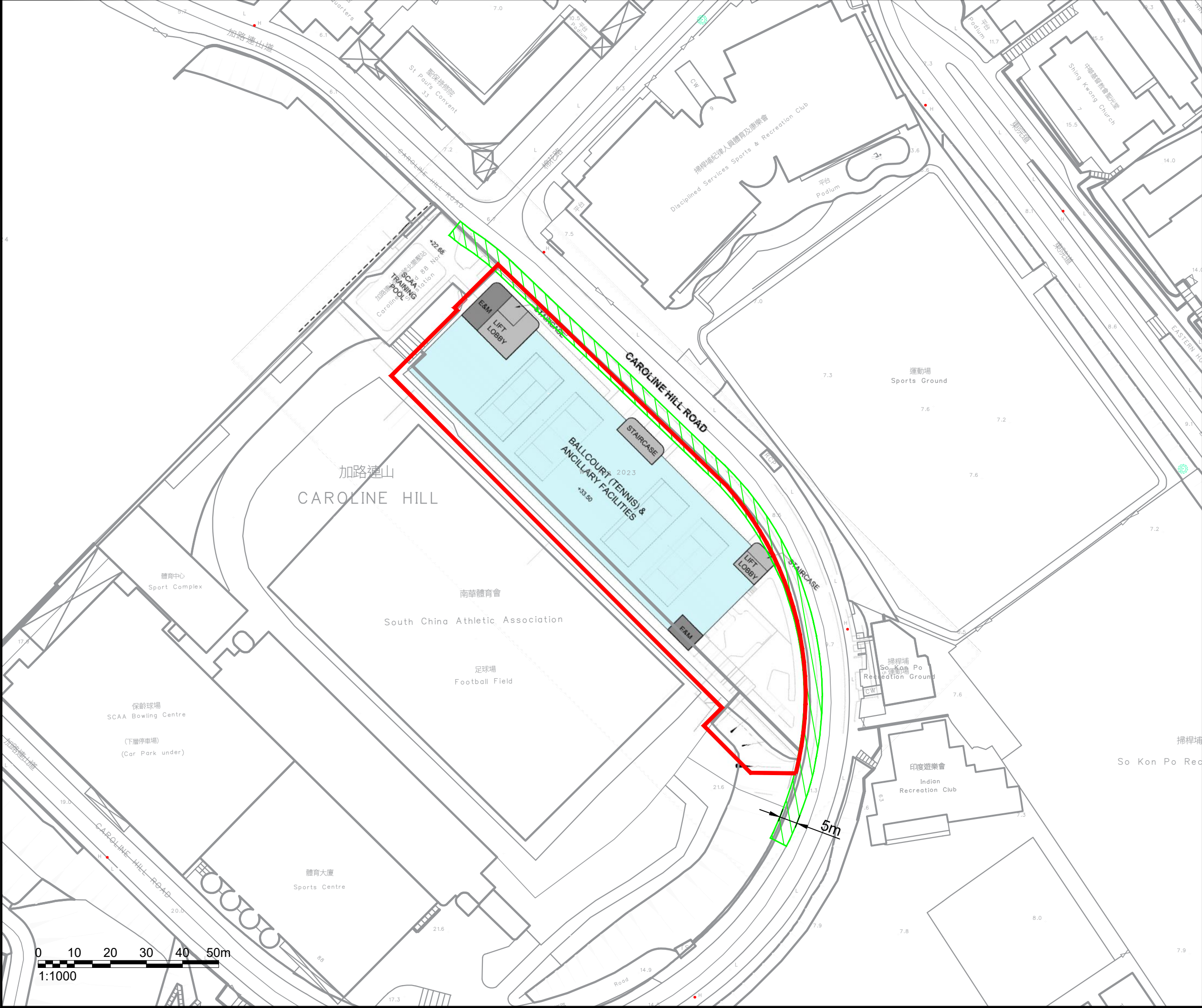
- NOTES :
- SUBJECT SITE
 - ROAD BUFFER DISTANCE

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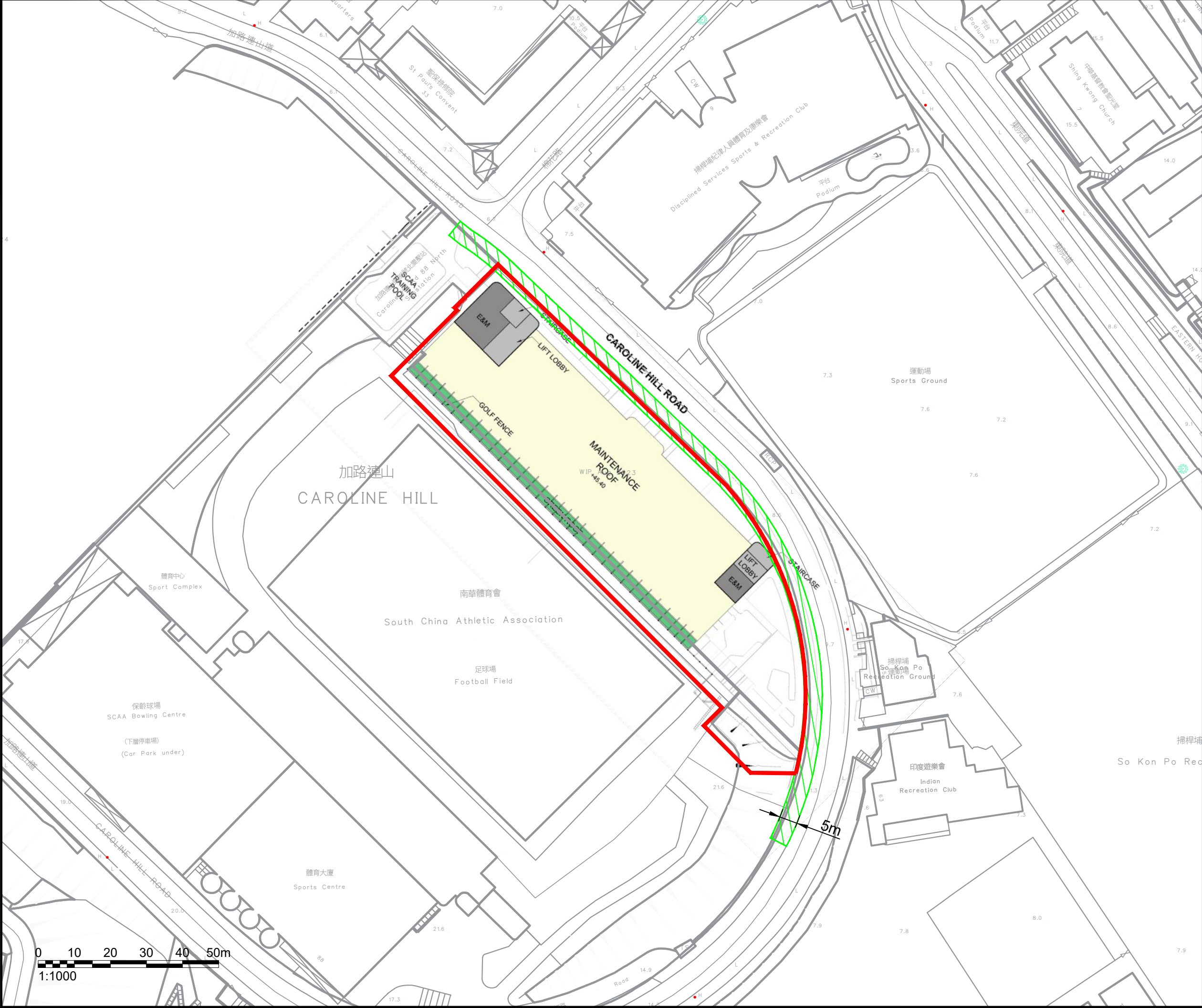
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- NOTES :
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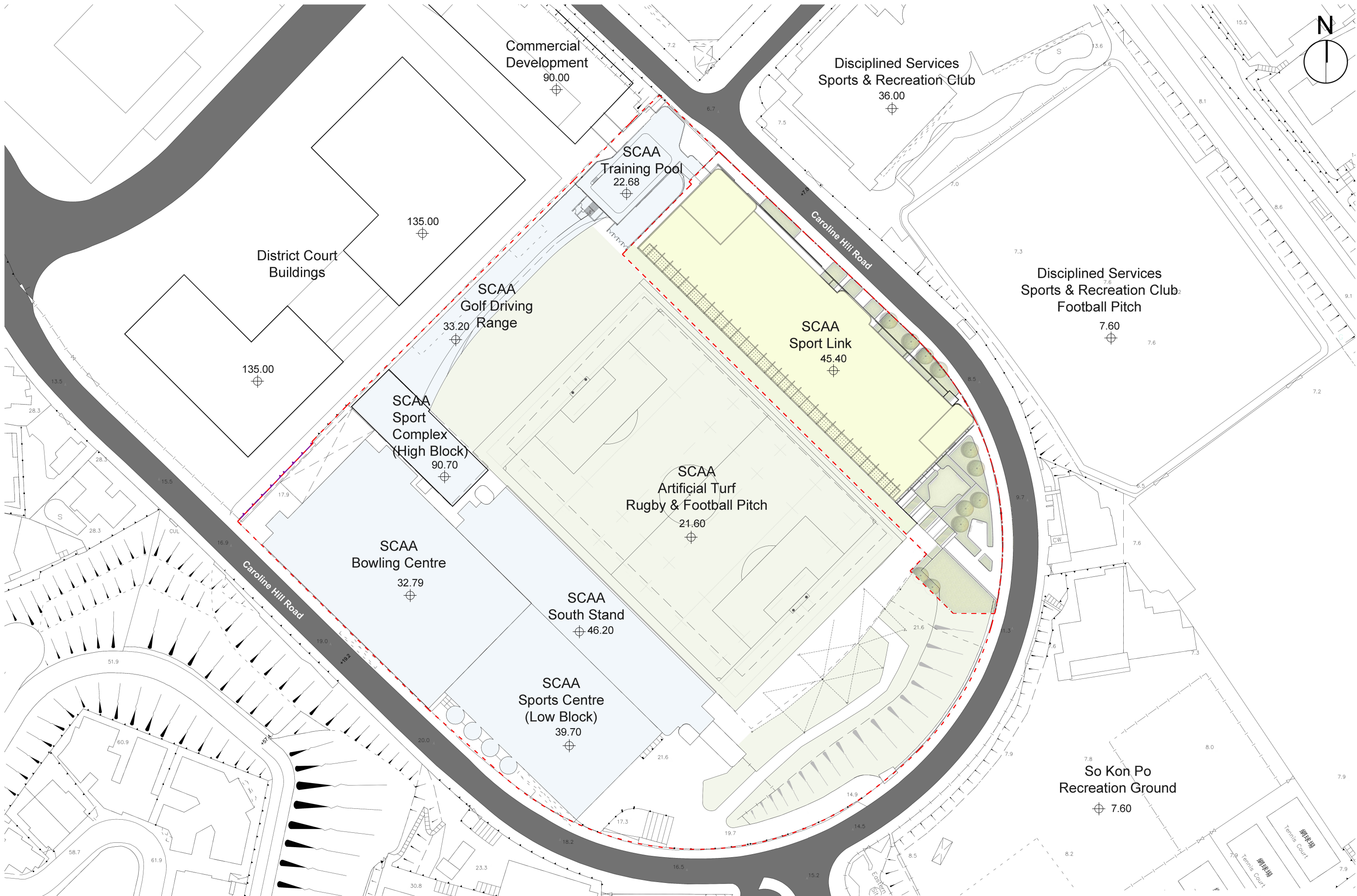
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Appendix 3-1

Site Layout Plan



Proposed SCAA Sports Link at South China Athletic Association, 88 Caroline Hill Road, Hong Kong
Master Layout Plan ◦ 1:1000 (A3) ◦ 13 Oct 2025

