TOWNLAND CONSULTANTS LTD.
URBAN AND REGIONAL PLANNING, DEVELOPMENT CONSULTANCY, MASTER PLANNING, URBAN DESIGN, ARCHITECTURE, LANDSCAPE ARCHITECTURE, PROJECT MANAGEMENT AND SOCIAL DEVELOPMENT

Reference SYRKTS/JANICE/01
Date 23 October 2025

By HAND only

The Secretary, Town Planning Board
c/o Planning Department
15/F North Point Government Offices
333 Java Road, North Point, HONG KONG

Dear Sir / Madam,

SECTION 12A PLANNING APPLICATION
TOWN PLANNING ORDINANCE (CHAPTER 131)

PROPOSED AMENDMENT TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22 FROM "AGRICULTURE" ZONE AND "GREEN BELT" ZONE TO "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE AT VARIOUS LOTS IN D.D. 94, 98, & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

We are instructed by the Applicant, Global King Investment Limited, Winpost (HK) Investment Limited and Rand Development Limited, to seek the BOARD's permission for the captioned Application under Section 12A of the Town Planning Ordinance.

Please find enclosed one (1) original copy of the Section 12A Planning Application Form duly completed and the Site Location Plan, together with 4 hard copies of the Supplementary Planning Statement ("**SPS**") for Government Departmental circulation and distribution to Members of the BOARD. In case of discrepancies, please refer to the Architectural Drawings furnished at ***Appendix 1*** of the SPS.

Should there be any queries, please do not hesitate to contact the undersigned or Ms Janice Wong at [redacted]

Yours faithfully,
FOR AND ON BEHALF OF
TOWNLAND CONSULTANTS LIMITED

Vincent Lau
Director

VIN/JANICE/yv

Enc Application Form – 1 copy
SPS – 4 hard copies
cc Client / Team

城市規劃顧問

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TOWNLAND CONSULTANTS PVT. LIMITED (India)
PT TOWNLAND INTERNATIONAL (Indonesia)
HOWARD & SEDDON PARTNERSHIP (United Kingdom)

ISO 9001: 2015
Certificate No.: CC844

Reference SYRKTS/JANICE/02
Date 14 November 2025

By EMAIL only

The Secretary, Town Planning Board
c/o Planning Department
15/F North Point Government Offices
333 Java Road, North Point, HONG KONG

Dear Sir / Madam,

SECTION 12A PLANNING APPLICATION
TOWN PLANNING ORDINANCE (CHAPTER 131)

PROPOSED AMENDMENT TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22 FROM "AGRICULTURE" ZONE AND "GREEN BELT" ZONE TO "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE AT VARIOUS LOTS IN D.D. 94, 98, & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

We write with regards to the captioned Planning Application submitted to the Town Planning Board ("**TPB**") on 23 October 2025.

Please be clarified:

1) The Rezoning Site relates to "*Various Lots in D.D.94, 98 & 100* refers to: *D.D.94 – Lot Nos. 426 S.A, 426 S.B RP, 428, 430, 432, 433 S.A, 433 S.B, 434, 437 RP, 438 S.A, 438 S.B, 439 S.A, 439 S.B, 440 RP, 901; D.D.98 – Lot Nos. 563, 564, 565, 566, 583, 584, 585, 600; and D.D.100 – Lot Nos. 3 S.A, 3 S.B, 5 RP, 5 S.A, 5 S.B, 5 S.C, 5 S.D, 5 S.E, 5 S.F, 5 S.G, 5 S.H, 5 S.I, 5 S.J, 5 S.K, 5 S.L, 5 S.M, 8, 9 S.A&S.B, 10 S.A&S.B, 11, 12, 13, 15, 16, 17, 18, 19, 20 S.A&S.B, 21, 22, 23, 26 RP, 28, 30, 31 RP, 41 RP, 42 RP, 42 S.A, 43, 44, 884, 885, 887, 888, 889, 890, 892, 894, 895, 896, 899 RP, 901 RP, 903, 904, 905 S.A, 905 S.B, 906, 907, 908, 909, 912, 913, 914, 915, 918, 919, 921 (Part)".* Lot D.D. 100 41 S.A is excluded from the Rezoning Site.

2) The GFA of the Primary School Block and Ancillary Staff Dormitories in Table 5.1 of the Supplementary Planning Statement ("**SPS**") should read approx. 48,100m^2 and approx. 32,600m^2 respectively.

3) Amendment to the Schedule of Uses of the "G/IC" zone of the Approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22 is no longer proposed. In this regard, Page 21 of the SPS (Figure 4.2) is no longer applicable and will not be used.

城市規劃顧問

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ISO 9001: 2015
Certificate No.: CC844

TOWNLAND

Reference SYRKTS/JANICE/02
Date 14 November 2025

By EMAIL only

The Secretary, Town Planning Board
c/o Planning Department

Please find enclosed the (1) Replacement Pages to SPS (***Annex 1*** refers) and (2) Updated ***Appendix 1:*** Architectural Drawings (***Annex 2*** refers). Please refer to the attached for the latest Architectural Drawings of the Indicative Development Scheme.

Should there be any queries, please do not hesitate to contact the undersigned or Ms Janice Wong at [redacted]

Yours faithfully,
FOR AND ON BEHALF OF
TOWNLAND CONSULTANTS LIMITED

Vincent Lau
Director

VIN/JANICE/yv

Enc Replacement Pages to SPS
Updated Appendix 1: Architectural Drawings

cc Client / Team

SECTION 12A PLANNING APPLICATION UNDER THE TOWN PLANNING ORDINANCE (CAP. 131)

PPROPOSED AMENDMENT TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22 FROM "AGRICULTURE" ZONE AND "GREEN BELT" ZONE TO "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE AT VARIOUS LOTS IN D.D. 94, 98, & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

- Supplementary Planning Statement -

TOWNLAND CONSULTANTS LIMITED

SECTION 12A PLANNING APPLICATION
THE TOWN PLANNING ORDINANCE (CHAPTER 131)

PROPOSED AMENDMENT TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22 FROM "AGRICULTURE" ZONE AND "GREEN BELT" ZONE TO "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE AT VARIOUS LOTS IN D.D. 94, 98, & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

- SUPPLEMENTARY PLANNING STATEMENT –

Applicant	Global King Investment Limited, Winpost (HK) Investment Limited, and Rand Development Limited
Education Provider/Operator	BASIS International School
Planning Consultant and Submitting Agent	Townland Consultants Limited
Project Architect	Ronald Lu & Partners (Hong Kong) Limited
Landscape Architect and Visual Impact Specialist	Scenic Landscape Studio Limited
Environmental and Engineering Consultant	Ramboll (HK) Limited
Traffic Consultant	CKM Asia Limited

File Reference: SYRKTS

Approved by : _____

Position : Director

Date : 23 October 2025

23 October 2025

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EXECUTIVE SUMMARY

This Section 12A Planning Application / Rezoning Request ("**S12A**"/ "**RR**") is submitted on behalf of Global King Investment Limited, Winpost (HK) Investment Limited and Rand Development Limited (the "**Applicant**") to seek permission from the TOWN PLANNING BOARD ("**TPB**"/"the **BOARD**") to amend the Approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22 ("**Approved OZP**") at various lots in D.D. 94, 98, and 100 and adjoining Government Land, Kwu Tung South, New Territories (the "**Site**"/ "**Rezoning Site**").

The Rezoning Site is currently mainly zoned "Agriculture" ("**AGR**") zone with a minor portion falling within the "Green Belt" ("**GB**") zone on the Approved OZP. This S12A seeks to rezoning the Rezoning Site to "Government, Institution or Community" ("**G/IC**") zone to facilitate the development of a proposed international school development (the "**Proposed School**").

The Proposed School is a unique project and a pioneering initiative in response to the current National and Government Policy Initiatives to promote quality international education in the Northern Metropolis. It will serve as the BASIS International School in Hong Kong, offering an innovative and unique learning environment designed for early childhood and Kindergarten to Year 12 ("**K-12**") education. Kwu Tung South has been identified as an ideal location for this forward-looking international education hub by leveraging its proximity to the surrounding New Development Areas ("**NDAs**") such as Ngau Tam Mei NDAand San Tin Technopole in the Northern Metropolis, and is an ideal location for setting up the Proposed School, synergising with surrounding GIC and Education uses.

The Proposed School will implement a "through-train" learning mode, consisting of kindergarten, primary and middle/high school education facilities support with ancillary student and staff accommodation. The Proposed School will accommodate a total of approx. 3,000 Students upon completion. An Indicative Development Scheme of the Proposed School that adopts a low-density low-impact approach has been prepared in support of the Rezoning Request.

Th RR is justified on the following grounds:

- The RR is fully in line with the with Government's current Policy Directives on education, promoting diversified learning opportunities and STEAM education in the Northern Metropolis, supporting community needs and Hong Kong's role as an international hub;
- The Rezoning Site is strategically located within the Northern Metropolis in proximity to the KTN NDA, San Tin Technopole and Ngau Tam Mei areas, and the Proposed School can serve as a sustainable educational anchor for the evolving community;
- The Proposed School will meet rising demand for international education, offering a globally oriented curriculum, alleviating pressure on existing schools, and supporting long-term population and economic growth;
- The RR will better complement and synergise with the future development context of the wider area, to cater for the future changes in planning circumstances brought by the Northern Metropolis, with more educational and research resources allocated.
- A proposed international school at the Rezoning Site will be compatible with surrounding village, and residential uses;
- The development scale and design of the Indicative Development Scheme are appropriate, integrating sensitively with the surrounding environment;
- Sustainable and resilient design principles are incorporated, including natural ventilation, daylighting, rooftop greening, and energy-efficient systems;
- The Proposed School delivers public planning benefits by enhancing educational infrastructure, supporting Greater Bay Area development, improving local traffic and safety, integrating with a mixed-use innovation zone, promoting environmental quality, and generating employment, contributing to the social, environmental, and economic vitality of the Northern Metropolis; and
- It is anticipated that the Indicative Development Scheme will not create significant adverse ecological, environmental, landscape, visual, traffic, drainage, sewerage, water supplies and air ventilation impacts.

In view of the above justifications and as detailed in this Supplementary Planning Statement ("**SPS**"), we respectfully request the BOARD to give favourable consideration to this RR.

行政摘要

（內文如有差異，應以英文版本為準）

根據城市規劃條例第 12A 條，我司代表帝京投資有限公司、永寶（香港）投資有限公司和萊特發展有限公司（下稱「**申請人**」）向城市規劃委員會（下稱「**城規會**」）就古洞南分區計劃大綱核准圖編號 S/NE-KTS/22（下稱「**核准圖**」）內的新界古洞南丈量約份第 94、98 及 100 約多個地段及毗連政府土地（下稱「**地盤**」或「**改劃用途地點**」）呈交修訂圖則申請／改劃用途地帶要求（下稱「**改劃要求**」）。

改劃用途地點目前在核准圖中主要座落於核准圖中的「農業」地帶和一小部份的「綠化地帶」地帶。此改劃要求將地盤改劃為「政府、機構或社區」地帶，以促進擬議國際學校發展（「**擬議學校**」）。

擬建學校是一項具戰略意義的先驅計劃，旨在回應政府現時推動北部都會區優質國際教育的政策方針。該校將作為貝賽思國際學校的香港校區，為幼兒教育及 K-12（幼兒園到十二年級）教育體系提供創新且獨特的學習環境。古洞南能憑藉毗鄰周邊新發展區如牛潭尾新發展區以及新田科技城的地理優勢，與牛潭尾的政府、機構及社區設施及教育用途產生協同效應，是設立此前瞻性國際教育樞紐的理想地點，亦是設立擬建學校的絕佳選址。

擬建學校將採用「一條龍」辦學模式，涵蓋幼稚園、小學及中學教育設施，並輔以學生與教職員宿舍，竣工後可容納約 3,000 名學生。改劃要求為擬建學校擬備了低密度、綠色低碳概念發展方案，以證明改劃要求的融合可行性。

改劃要求具備以下充分理據的支持：

- 改劃要求完全符合政府現行教育政策方針，旨在推動北部都會區的多元學習機會及 STEAM 教育，以滿足大灣區需求和鞏固香港作為國際教育樞紐的地位；
- 改劃用途地點的地理位置優越，坐落於北區都會區內，毗鄰古洞北新發展區、新田科技城及牛潭尾北都大學教育城地區，有助擬建學校成為發展中社區的永續教育樞紐；
- 擬建學校可滿足國際教育日益增長的需求，透過提供全球化導向課程，以緩解現有學校壓力，並支持長期的人口與經濟增長；
- 改劃要求將有效地因應北方都會區規劃帶來的影響，分配更多教育與研究資源，以配合並與周邊地區的未來發展脈絡產生協同效應；
- 擬建學校於將與周邊鄉村及住宅的用途相互兼容；
- 概念發展方案的開發規模與設計恰當，能與周邊環境融合；
- 概念發展方案的設計採納了可持續和韌性設計，包含自然通風、採光設計、屋頂綠化及節能系統；
- 擬建學校將透過建設高質量教育設施、培養國際化視野思維、增強中西文化交流及激發創新精神，支持大灣區區域發展、改善當地交通與安全、整合多功能創新區、提升環境品質及創造就業機會，為社會帶來不同公眾規劃增益，促進北部都會區的社會、環境與經濟活力；及
- 擬建學校將不會在生態、環境、景觀、視覺、交通、排水、排污、供水及空氣流通方面造成不良影響。

鑒於上述原因及這份補充規劃文件中詳述的理由，我司懇請城規會考慮批准是次規劃申請。

Reference: SYRKTS/JANICE/01
Date: 23 October 2025

TO THE TOWN PLANNING BOARD:

SECTION 12A PLANNING APPLICATION
TOWN PLANNING ORDINANCE (CHAPTER 131)

PROPOSED AMENDMENT TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22 FROM "AGRICULTURE" ZONE AND "GREEN BELT" ZONE TO "GOVERNMENT, INSTITUTION OR COMMUNITY" ZONE AT VARIOUS LOTS IN D.D. 94, 98, & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

1 INTRODUCTION

1.1 We are instructed by Global King Investment Limited, Winpost (HK) Investment Limited and Rand Development Limited (the "**Applicant**") to submit this Section 12A Planning Application / Rezoning Request ("**S12A**"/ "**RR**") to amend the Approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22 ("**Approved OZP**") at various lots in D.D. 94, 98, and 100 and adjoining Government Land, Kwu Tung South, New Territories (the "**Site**"/ "**Rezoning Site**").

1.2 The Rezoning Site is currently mainly zoned "Agriculture" ("**AGR**") zone with a minor portion falling within the "Green Belt" ("**GB**") zone on the Approved OZP. This S12A seeks to rezone the Rezoning Site to "Government, Institution or Community" ("**G/IC**") zone to facilitate the development of a proposed international school development ("**Proposed School**").

1.3 The Proposed School represents a pioneering initiative aligned with current National and Government Policy Initiatives for Education. It will serve as the BASIS International School in Hong Kong, offering an innovative and unique learning environment for early childhood and Kindergarten to Year 12 ("**K-12**") education. The Proposed School aims to cultivate graduates equipped with the skills, perspectives, and leadership qualities necessary to thrive in a rapidly evolving global landscape.

1.4 Kwu Tung South has been identified as an ideal location for this forward-looking educational hub. Its strategic position facilitates collaboration with Mainland Chinese and international institutions, fostering a vibrant exchange of knowledge and expertise. Furthermore, the site's proximity to various New Development Areas and San Tin Technopole in the Northern Metropolis, its integration within the Greater Bay Area, and support provided for Hong Kong to develop into an international innovation and technology hub to nurture and retain talents underscores its potential to become a key driver of regional educational excellence and innovation.

1.5 This Supplementary Planning Statement ("**SPS**") provides relevant information on the Application to facilitate the Town Planning Board ("**TPB**"/ the "**BOARD**")'s consideration. The following Sections will provide a description of the Rezoning Site and its surroundings, the planning context, details of the Proposed School and Public Planning Gain ("**PPG**") to the area together with the justifications in support of the Application.

2 SITE CONTEXT

2.1 Site Location and Existing Use

2.1.1 The Rezoning Site is located in Kwu Tung South to the south of Fanling Highway on both sides of Sheung Yue River (Beas River). The Site is located in an area flanked by Ki Lun Shan (Hadden Hill) to the west, with Hang Tau Tai Po and Hang Tau Village to the east (***Figures 2.1*** and ***2.2*** refer).

2.1.2 The Rezoning Site, with an area of approx. 127,000m^2, is generally flat and predominantly occupied by clusters of vegetated or agricultural land, temporary structures for open storage/workshop uses, squatters and ruins. A few graves are also located within the Site.

2.2 Land Status

2.2.1 The Rezoning Site comprises various private lots in D.D.94, D.D.98 and D.D.100 and adjoining Government Land (***Figure 2.1*** refers). The private lots within the Rezoning Site (including purchase under negotiation) are listed in ***Table 2.1*** below.

Table 2.1 Private Lots within the Rezoning Site

D.D. 94	D.D. 98	D.D. 100
(**15** nos. of lot) 426 S.A, 426 S.B RP, 428, 430, 432, 433 S.A, 433 S.B, 434, 437 RP, 438 S.A, 438 S.B, 439 S.A, 439 S.B, 440 RP, 901	(**8** nos. of lot) 563, 564, 565, 566, 583, 584, 585, 600	(**67** nos. of lot) 3 S.A, 3 S.B, 5 RP, 5 S.A, 5 S.B, 5 S.C, 5 S.D, 5 S.E, 5 S.F, 5 S.G, 5 S.I, 5 S.J, 5 S.K, 5 S.L, 5 S.M, 8, 9 S.A&S.B, 10 S.A&S.B, 11, 12, 13, 15, 16, 17, 18, 19, 20 S.A&S.B, 21, 22, 23, 26 RP, 28, 30, 31 RP, 41 RP, 42 RP, 42 S.A, 43, 44, 884, 885, 887, 888, 889, 890, 892, 894, 895, 896, 899 RP, 901 RP, 903, 904, 905 S.A, 905 S.B, 906, 907, 908, 909, 912, 913, 914, 915, 918, 919, 921 (Part)

2.3 Surrounding Land Uses

2.3.1 The land use pattern around the Rezoning Site is predominantly rural in character, intermixed with low-rise residential developments and village houses, cultivated/fallow agricultural land, vegetated land, open storage yards and vacant land. Several graveyards can also be found within the Site (***Figure 2.2*** refers).

- To the immediate north of the Site are predominantly occupied by temporary structures mainly for open storage and warehouse uses, existing rural settlements, and fallow agricultural land, which fall within the "Agriculture" ("**AGR"**) zone. The Sheung Shui Hang Tau Village Sitting-out Area No. 2 is situated among the temporary structures.

- To the further north of the Site is a large-scale low-rise residential development known as Valais, which falls within the "Residential (Group C)2" ("**R(C)2**") zone. The planned Kwu Tung Station, which will be part of the East Rail Line and Northern Link ("**NOL**") and is scheduled to be completed in 2027, is also located further north of the Site.

- To the northeast of the Site are occupied by existing rural settlements intermixed with temporary structures for open storage yard and open-air car parking area, which are zoned "Residential (Group D)" ("**R(D)"**) and "R(D)1" in Hang Tau Tai Po, including the approved residential development with forty-two (42) houses (TPB

Ref. A/NE-KTS/525). To the further northeast along the two sides of Hang Tau Road are low-rise residential development and government, institution and community ("**GIC**") facilities, temporary structures which fall under the sub-areas of "Residential (Group C)" ("**R(C)**"), "Government, Institution and Community" ("**G/IC**") zone and "Recreation" ("**REC**") zone, including Goodwood Park, Sister Aquinas Memorial Women's Treatment Centre, The Hong Kong Girl Guides Association Jockey Club Beas River Lodge and Casa Domingo.

- To the east of the Site is a piece of vegetated land zoned "Green Belt" ("**GB**"). Furthermore, there are several clusters of low-rise village houses, including Hang Tau Village (a recognised village), Serenity Garden, Richmond Villa, Richmond Garden, Golf View Garden, Grand View, Regent Garden, Rose Garden, Po Shue Garden, The Fairyland, Wah Lok Villa, Caverdish Villa and Grand Garden, falling within "Village Type Development" ("**V**") zone.

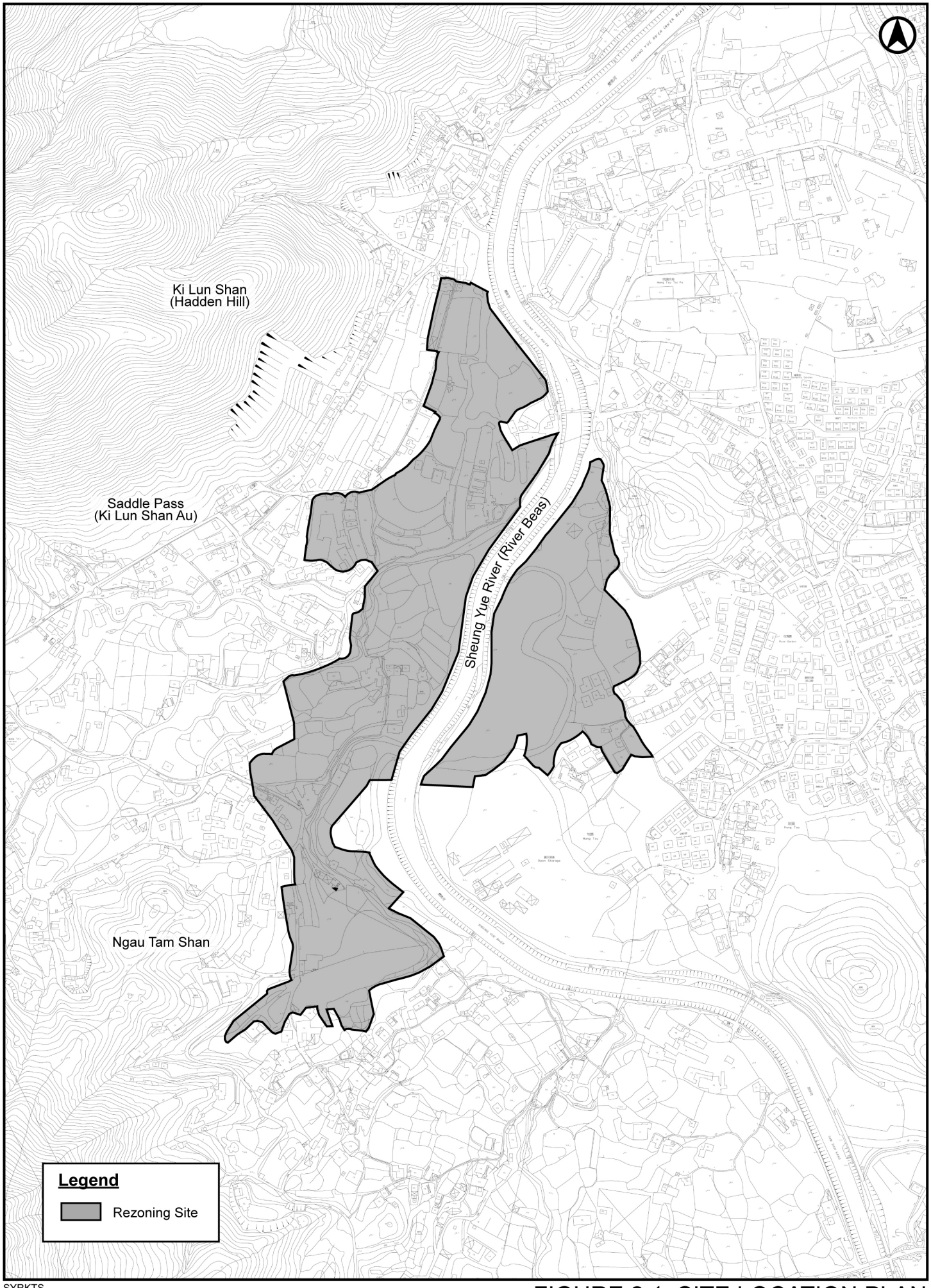
- To the immediate south of the Site in the western portion is a piece of open storage yard zoned "AGR". The area further south of the Site comprises various agricultural farmland and temporary structures around Cheung Lek.

- To the northwest of the Site are the natural mountainous areas of Ki Lun Shan (Hadden Hill) and Ki Lun Shan Au (Saddle Pass). The permitted burial ground area no. YL/7 and Kwu Tung Reservoir are situated in the Ki Lun Shan area. The indicative alignment of the planned Northern Metropolis Highway – San Tin Section also runs across the mountainous areas to the west of the Site.

2.4 Accessibility

2.4.1 The Rezoning Site is currently accessible from a local road which branches off from Kwu Tung Road in the western portion from Ki Luen Tsuen side and a local road which branches off from Hang Tau Road in the eastern portion.

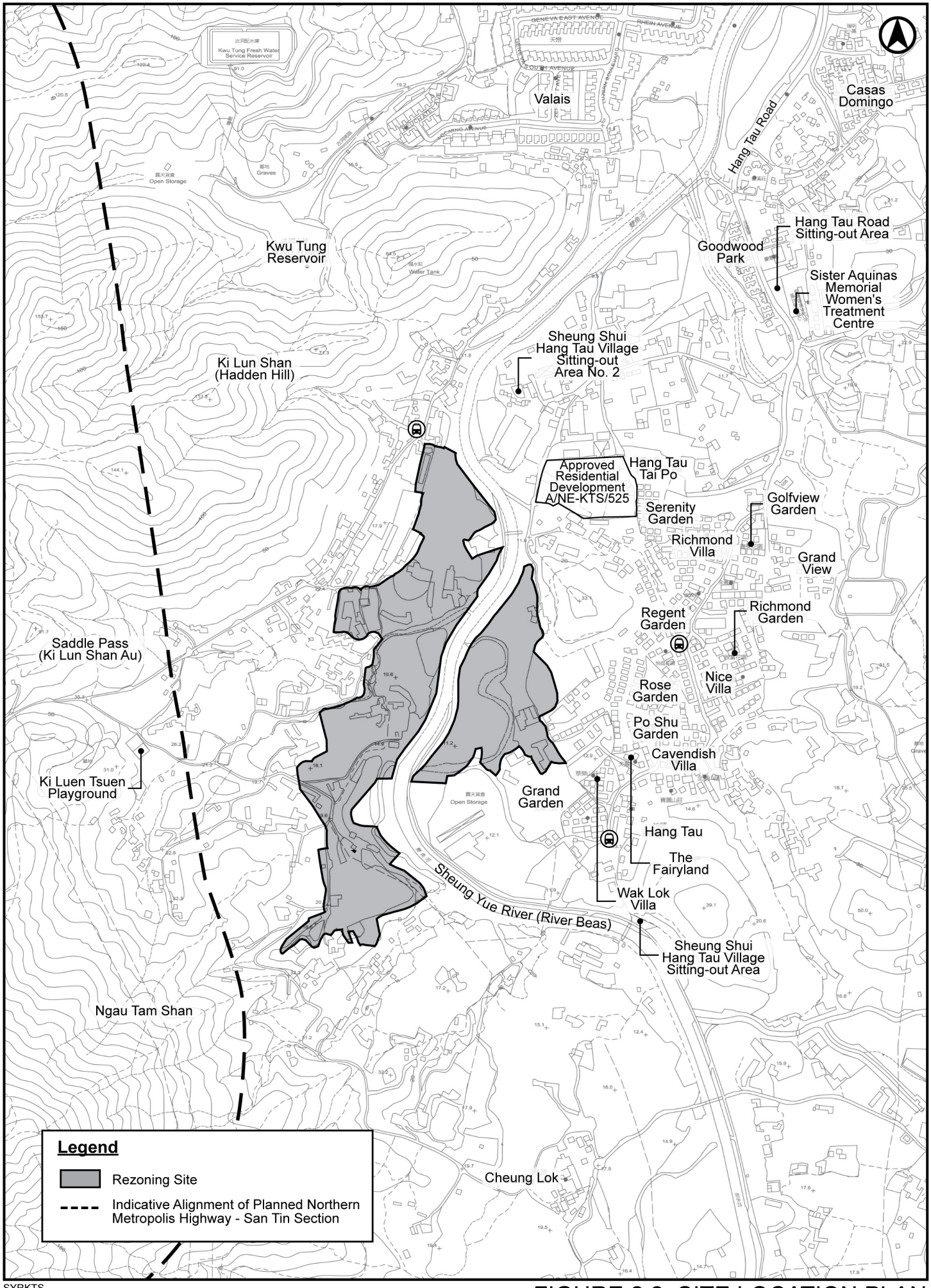
2.4.2 The Rezoning Site is situated approx. 2.96 km from Sheung Shui Station and approx. 3.93km from Fanling Station. The Site is served by the green minibus ("**GMB**") route no. 605 to the western portion of the Site and GMB route no. 50K to the eastern portion of the Site in Hang Tau Village from Sheung Shui Station (***Figure 2.2*** refers). The Site will be accessible by a footpath of about 2.2km walking distance leading from the planned Kwu Tung Station.



SYRKTS

FIGURE 2.1 SITE LOCATION PLAN

SCALE 1 : 5,000



SYRKTS

FIGURE 2.2 SITE LOCATION PLAN

SCALE 1 : 7,500

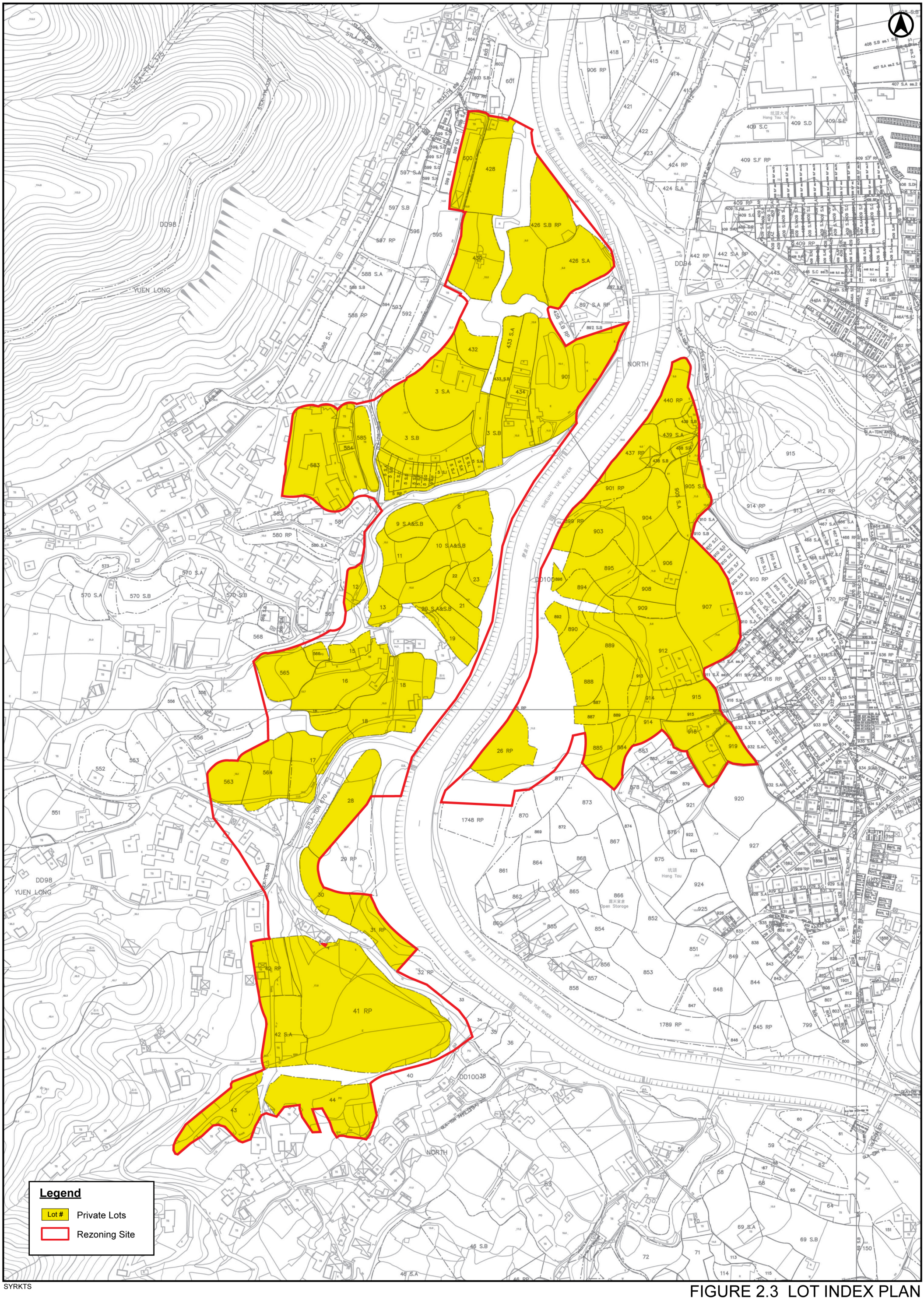


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FIGURE 2.3 LOT INDEX PLAN

SCALE 1 : 2,500

3 PLANNING CONTEXT

3.1 Statutory Planning Context

Approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22

3.1.1 The Rezoning Site is predominately zoned "Agriculture" ("**AGR**"), while a minor portion falls within "Green Belt" ("**GB**") zone on the *Approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22* ("**Approved OZP**") (***Figures 3.1*** and ***3.2*** refer). According to the Statutory Notes of the Approved OZP, the planning intention of the "AGR" zone is "*intended primarily to retain and safeguard good quality agricultural land/farm/fish ponds for agricultural purposes. It is also intended to retain fallow arable land with good potential for rehabilitation for cultivation and other agricultural purposes*, while the "GB" zone is "*primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone*." There are currently no development restrictions stipulated within the "AGR" and "GB" zones under the Approved OZP.

3.2 Non-Statutory Planning Policies and Guidelines

National 14th Five-Year Plan

3.2.1 Under the National 14th Five-Year Plan, the education and youth development focus on promoting equitable access to quality education, fostering innovation and practical skills, and supporting the holistic growth of young people. Emphasis is placed on improving educational infrastructure, expanding vocational training, and cultivating talents that align with China's economic and technological advancement. The plan also underscores the importance of moral education, mental health support, and encouraging youth participation in social and scientific initiatives to build a resilient and skilled future generation.

3.2.2 The National 14th Five-Year Plan also indicates clear support for Hong Kong's development into an international innovation and technology hub, better integration into the overall development of the country as well as deepening of the co-operation between Mainland and Hong Kong in innovation and technology, and for the first time includes the Shenzhen-Hong Kong Loop as a major platform of co-operation in the Greater Bay Area.

3.2.3 Under the Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area, the education development in the Greater Bay Area focuses on promoting cooperation and development in education from Guangdong, Hong Kong and Macao Areas. The educational initiatives include enhancing exchanges and cooperation in basic education, encourage primary and secondary schools of Guangdong, Hong Kong and Macao to link up as "sister schools", and set up schools or provide specific classes for the admission of Hong Kong and Macao children in Guangdong with boarding service.

Policy Address ("Policy Address")

3.2.4 The Policy Address ("**Policy Address**") is the annual address made by the Chief Executive ("**CE**") of Hong Kong outlining the policy objectives of the Government for the following year. Emphasis has constantly been placed on strengthening education and youth development through various measures, including enhancing student potential, improving teaching effectiveness, and promoting STEAM (Science, Technology, Engineering, the Arts and Mathematics) education at the primary and secondary levels. The first Youth Development Blueprint was also launched in 2022

by the Home and Youth Affairs Bureau ("**HYAB**"), underscoring whole-person development and preparing young people to contribute to Hong Kong and beyond.

The Chief Executive's 2023 Policy Address and corresponding Education Bureau's Policy Initiatives

3.2.5 In the CE's 2023 Policy Address, the CE launched a series of measures to trawl talents around the globe and capitalise on the city's strength in education to develop Hong Kong as an international hub for post-secondary education and an education and talents hub. In particular, the Government was committed to take forward the development of Northern Metropolis University Town ("**NMUT**") to strengthen co-operation with renowned Mainland and overseas institutions and achieve greater synergy through resources sharing and complementary industry development within the region (*Paras. 57, 157-158 of 2023 Policy Address refer)*. The Government also expressed their on-going commitment to support the development of a vibrant international school sector, to closely monitor the demand for and supply of international school places and reserve sites in the Northern Metropolis for the development of international schools to meet the education needs of non-local families living in Hong Kong and families coming to Hong Kong for work or investment (*Legislative Council Panel on Education: The Chief Executive's 2023 Policy Address Education Bureau's Policy Initiatives* refers).

The Chief Executive's 2025 Policy Address and corresponding Education Bureau's Policy Initiatives

3.2.6 More recently, it was reaffirmed in the CE's 2025 Policy Address where the Government continues its commitment to promote the integrated development of education, technology and talents by building an international education hub in Hong Kong with acceleration in the construction of NUMT (*Paras. 134 – 135 of the 2025 Policy Address* refer).

3.2.7 To tie in with the country's goal to develop into a leading country in education and the national strategy of invigorating the country through science and education, the Government is committed to promote the said integrated development along with the initiative in advancing the development of a leading country in education on all fronts. As such, the Government is committed to give full play to the unique advantages of Hong Kong's highly internationalised and diversified education system under "One Country, Two Systems", and forge new competitive edges in development through digitalisation of education. The major education-related initiatives as stated in the 2025 Policy Address include:

(1) Develop an International Education Hub and Talent Hub
(2) Promote Digital Education and Enhance the Quality of Teaching and Learning
(3) Cultivate Values and Strengthen Sense of Belonging to our Country
(4) Enhance Physical and Mental Health and Promote Parent Education
(5) Strengthen Professionalism of Teachers and Nurture a High-quality Teaching Force
(6) Cater for Students with Diverse Learning Needs and Provide Support for Non-Chinese Speaking Students

(*Legislative Council Panel on Education: The Chief Executive's 2025 Policy Address Education Bureau's Policy Initiatives* refers)

3.2.8 In terms of development for international school, the Government is committed to developing a vibrant international school sector to meet the demand for education from non-local families living in Hong Kong as well as families coming to Hong Kong for work or investment. In response to the short-term fluctuations in demand for

international schools arising from non-local families, including those of incoming talents, the Government recognises the demand for international schools placement in the Northern Metropolis and as such, the Education Bureau ("**EDB**") has allocated two vacant school premises through the School Allocation Exercise to offer some 1,000 school places. To address long-term needs, the EDB has reserved sites in the Northern Metropolis for the development of international schools. To better meet the diverse needs of non-local students, the Government also encourages international schools to increase their admission quotas and will remove barriers and ease restrictions to allow quality international schools to build new facilities and enhance existing ones, including student boarding facilities, at their school sites on a self-financing basis (*Paras. 145-146 of the 2025 Policy Address* and *Legislative Council Panel on Education: The Chief Executive's 2025 Policy Address Education Bureau's Policy Initiatives* refer).

*Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030 ("**HK2030+**")*

3.2.9 Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030 ("**HK2030+**") is a long-term planning framework that will guide Hong Kong's planning, land and infrastructure development, and shape Hong Kong's built and natural environment beyond 2030. HK2030+ recognises the importance of enhancing liveability in a compact high-density city while promoting the health, age-friendliness, well-being, and quality living environment of Hong Kong people. There is a stronger focus on providing conducive environment for enhancing and optimising human capital and provide adequate land supply at strategic locations for different economic activities, including improving Human capital vis Higher Education Institutions and STEAM Centres and through planning support to upgrade education and training facilities with broader range of education/ training opportunities (*Final Report of HK2030+* refers).

Northern Metropolis Development Strategy

3.2.10 The Northern Metropolis Development Strategy is formulated on the basis of HK2030+ and references the national policy support to expand the Northern Economic Belt to cover new towns and New Development Areas ("**NDAs**") and their nearby rural areas and to consolidate the area into a holistic metropolis which is good for people to live in, work and travel. The Northern Metropolis, which covers an area of over 30,000 hectares including Yuen Long and North Districts, emphasises providing new land for the growth of the Innovation and Technology ("**I&T**") industry, to serve as a new engine to inject new economic impetus for the future development of Hong Kong. The Northern Metropolis is envisioned to be one of the main sources of future housing land supply targeting to provide over 500,000 new residential units to accommodate a population of 2.5 million, around one-third of Hong Kong's current population, upon full development.

3.2.11 The Rezoning Site falls within the "Innovation and Technology Zone" of the Northern Metropolis and is located in close proximity to a number of NDAs/ Government initiatives.

Innovation and Technology Zone

3.2.12 The "Innovation and Technology Zone" of the Northern Metropolis is designated as a hub for I&T clusters with strong synergy with Shenzhen I&T zone, which is an international high ground for specialised, skilled and distinctive talents. The Zone is situated at the heart of the Northern Metropolis and covers San Tin Technopole (including the Hong Kong-Shenzhen I&T Park in the Loop and San Tin areas) and extends southwards along the Northern Link to the Ngau Tam Mei area. To the north, it connects to the Futian District in Shenzhen and the Shenzhen I&T Zone through the

Lok Ma Chau Spur Line / Futian boundary control point and Lok Ma Chau / Huanggang boundary control point (***Diagram 3.1*** below refers).

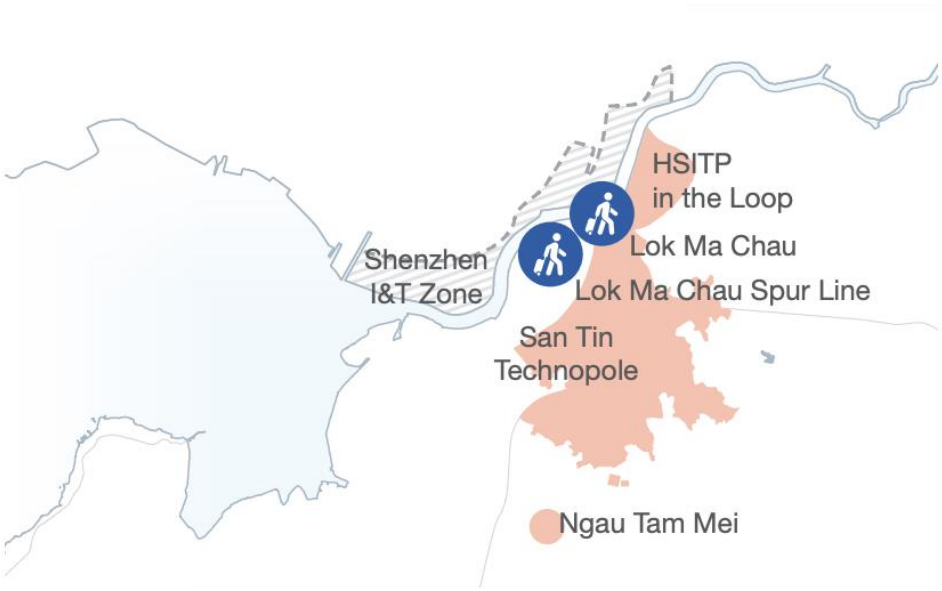


Diagram 3.1 Location of Innovation and Technology Zone (Source: Northern Metropolis Action Agenda 2023)

*San Tin Technopole and the Hong Kong-Shenzhen Innovation and Technology Park In the Loop ("**HSITP**")*

3.2.13 Covering approx. 610 hectares, San Tin Technopole will bolster innovation and technology, residential spaces, community and commercial facilities, and other vital infrastructure in Hong Kong. About half of the land in the San Tin Technopole is allocated for I&T and will be distributed in the San Tin / Lok Ma Chau area and the HSITP in the Loop, capable of providing a GFA of about 7 million square metres, equivalent to 17 Science Parks. The HSITP and the Shenzhen I&T Zone will form the Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone (Cooperation Zone), realising the development pattern of "one river, two banks" and "one zone, two parks". The HSITP is under construction and its Hong Kong Park under the HSITP is expected to officially enter its operational phase in the second half of 2025.

3.2.14 San Tin Technopole, along with the inland area surrounded by mountains such as Ki Lun Shan and Ngau Tam Mei to the west of the Rezoning Site, is strategically sited near Shenzhen's Innovation and Technology Zone in Huangang and Futian. This ambitious project plays a central role in the extensive development of the Northern Metropolis, envisioned as a new International Innovation and Technology hub. The phased development of San Tin Technopole is expected to welcome its first residents by 2031. Upon its full realization, San Tin Technopole will provide about 50,000 – 54,000 housing units and 6,400 talent accommodations. In addition to the 52,000 jobs in HSITP, the I&T Park and San Tin Town Centre will together create 165,000 jobs or above (including 120,000 or more on I&T sites), improving home-job balance in the New Territories. The layout of San Tin Technopole and its proximity to the HSITP and the Shenzhen I&T zone is illustrated in ***Diagram 3.2*** below.

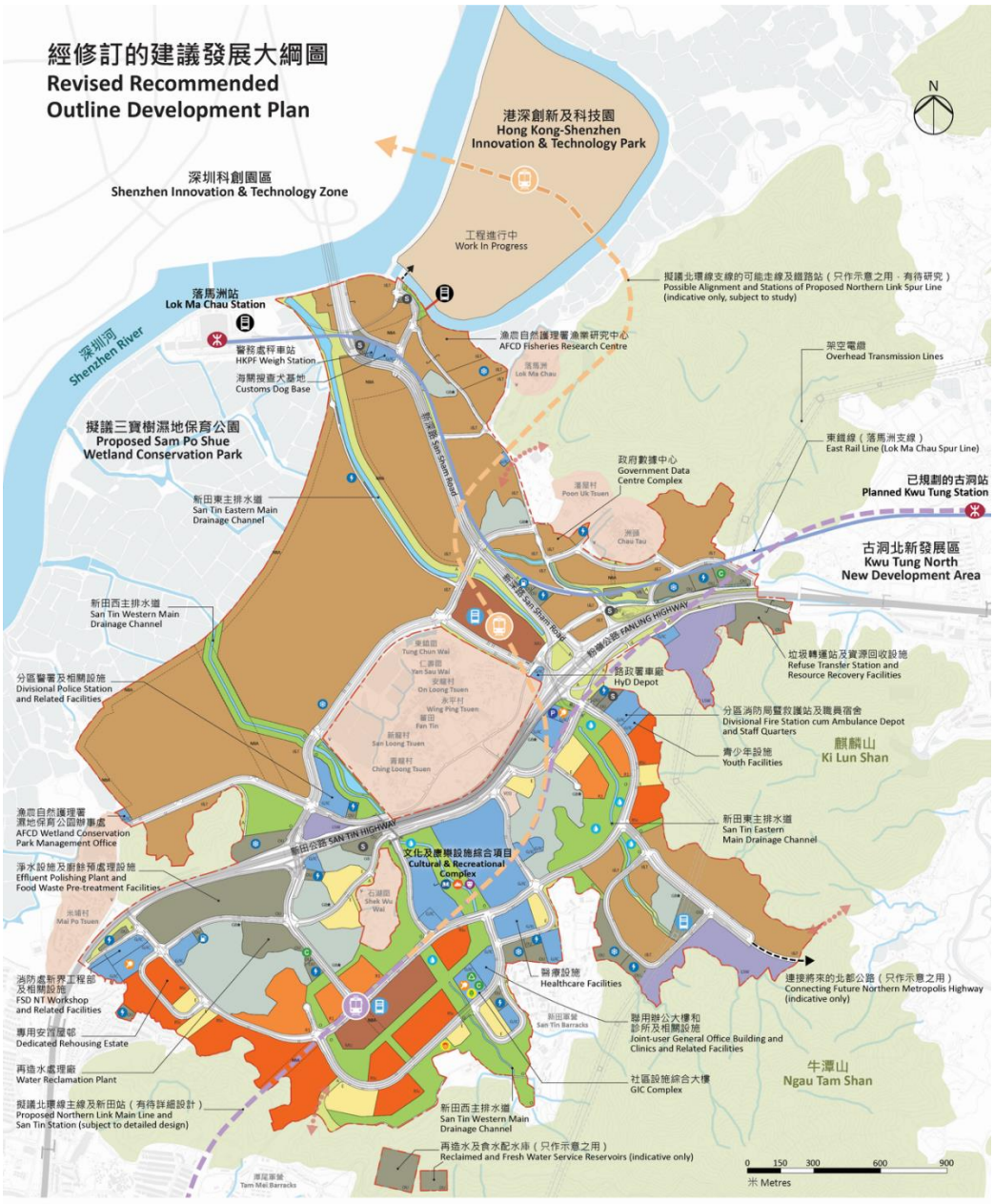


Diagram 3.2 San Tin Technopole - Recommended Outline Development Plan (Source: Civil Engineering and Development Department and Planning Department, 2025)

Ngau Tam Mei New Development Area (NTM NDA)

3.2.15 Ngau Tam Mei New Development Area ("**NTM NDA**") is situated to the northeast of Yuen Long Town, within the Innovation and Technology Zone of the Northern Metropolis, adjacent to the San Tin Technopole. Upon completion of the planned NOL Main Line, NTM NDA will only be one station away from STT and well connected with the rest of Northern Metropolis and the urban area.

3.2.16 Currently under planning, NTM NDA, positioned as an Academic and Research District, is one of the areas where land (about 52 ha) will be reserved for developing the Northern Metropolis University Town ("**NMUT**"). With the goal of developing Hong Kong into an international education hub and a cradle for future talent, and making good use of the Northern Metropolis, with new land, new population, excellent connectivity, development opportunities of different industries and close connections with the Mainland. The government has been committed to providing space to develop and enhance the quality and capacity of education in Hong Kong. It is anticipated that

government-led site formation works in NTM NDA can commence in 2027 at the earliest, with the first batch of land for the NMUT formed in 2029 at the earliest.

Kwu Tung North and Fanling North NDAs

3.2.17 Located to the north of the Rezoning Site, Kwu Tung North ("**KTN**") / Fanling North ("**FLN**") NDA is located within the Boundary Commerce and Industry Zone along with existing new towns in Fanling/Sheung Shui. The KTN/FLN NDA covers approximately 612 hectares, supporting an additional population of about 226,700 and approximately 53,100 new jobs. They will offer diverse housing options, infrastructure, and community facilities, guided by four guiding principles, namely, strategic roles of the NDA, people-oriented communities, sustainable living environment and appropriate implementation mechanism. This core mixed-use community will help address long-term housing demand and support economic growth by developing into an integrated town centre with a mix of residential, commercial, research, and retail uses, alongside infrastructure and ecological conservation efforts.

3.2.18 The Kwu Tung Station on the East Rail Line is under construction as part of Phase 1 of the Northern Link, scheduled for completion in 2027, to serve KTN residents. The Northern Metropolis Highway will further improve connectivity, linking KTN/FLN NDA with other development nodes like New Territories North New Town, San Tin Technopole, and Ngau Tam Mei.

STEAM Education

3.2.19 STEAM is an acronym that refers collectively to the academic disciplines of Science, Technology, Engineering, the Arts and Mathematics. STEAM education was first proposed to be promoted "for all", "for fun" and "for diversity" in primary and secondary education in the 2022 Policy Address and further supported in the subsequent Policy Addresses. Apart from cultivating students' interest in Science, Technology, the Arts and Mathematics, and developing among them a solid knowledge base, the policy aims to strengthen students' ability to integrate and apply knowledge and skills with the use of creative thinking for problem-solving in real life across different STEAM disciplines as well as better equip students with the 21st century competencies, unleash their potential and nurture future I&T talents for our country and Hong Kong, thereby enhancing Hong Kong's international competitiveness (*LC Paper No. CB(4)71/2023(03)* refers).

Policy and Statistical Highlights on International schools in Hong Kong

3.2.20 The Government is committed to supporting the development of a vibrant international school sector, mainly to meet the demand for school places from non-local families living in Hong Kong and families coming to Hong Kong for work or investment. This policy objective is crucial in attracting and retaining talent in support of Hong Kong's development as an international centre on finance, business, innovation and technology, education and culture, and reinforcing Hong Kong's role as an international cosmopolitan with global connectivity.

3.2.21 In the 2023/24 school year, international schools account for 6.4% of the student population at both primary and secondary levels. Presently, there are 53 international schools in Hong Kong, including 20 are primary schools, 7 secondary schools and 26 primary-cum-secondary schools and 1 special school. 15 among the 53 international schools are operated by the English Schools Foundation ("**ESF**") under recurrent government subvention, while 16 are operated on leased government premises (e.g. vacant school premises) or developed on greenfield sites allocated by the Government.

3.2.22 While the allocation of vacant school premises and greenfield sites are part of the

measures introduced by the Government in the 2000s to address the projected shortfall of international school places, no vacant school premises or greenfield sites are allocated to international schools during the past decade, Nonetheless, there has been a growing number of applications for student visa/entry permit for non-local children aged 17 or below coming to Hong Kong for education granted by the Immigration Department. In light of the overwhelming response to various talent admission schemes since 2022, the EDB conducted a school allocation exercise ("**SAE**") to allocate two vacant school premises for international school development to meet the short-term surge in education needs of dependent children of incoming talent from both the Mainland and overseas in 2024.

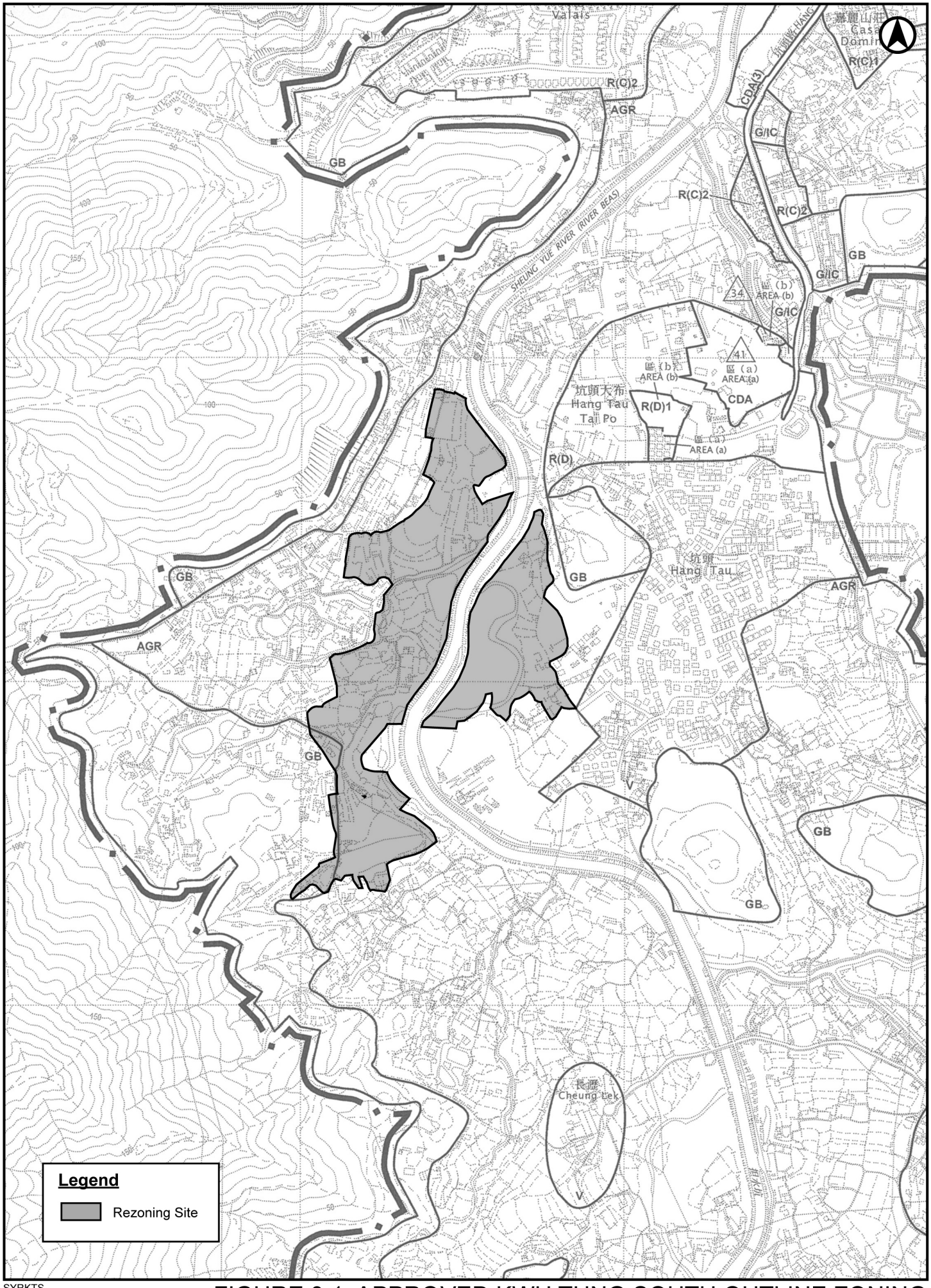
Study on the Provision of International School Places in Primary and Secondary Levels in Hong Kong (2012, 2017 and 2024)

3.2.23 EDB commissioned and issued a Study on the Provision of International School Places in Primary and Secondary Levels in Hong Kong in December 2012, which at the time, recognised an increase in local students applying for international schools. Most international schools are concentrated on Hong Kong Island, yet the majority of students reside in Kowloon and the New Territories. Location became an important consideration of parents of non-local students attending international schools. The Study recommended that in the long term, future allocation of greenfield sites for international schools should take into account the geographical distribution of students to minimize as far as possible travelling by students to attend schools.

3.2.24 While a subsequent update of the Study in 2024 identified an overall surplus of places in international schools in primary and secondary levels by 2028/29 largely due to the overall projected decrease in the number of children in the relevant school-age population,it concluded that there is a high degree of uncertainty concerning the future changes in the demand for international school places from non-local students as the actual effect regarding Government's series of admission schemes and related measures to trawl talents in bolder and proactive manner since 2022 is yet to be evaluated. In particular, a very positive response has been received to the schemes with around 81 000 talents arrivals under various talent admission schemes had arrived in Hong Kong, which has far exceeded the Government's target to admit at least 35,000 talents annually from 2023 to 2025. In view of the uncertainties, the EDB's recommended the Government to (1) regularly monitor and review the supply and demand for international school places and (2) consider measures which could temporarily allow flexibility for international schools to be receptive to short-term fluctuation in the demand for non-local students.

The International Institute for Management Development's World Talent Ranking 2025 (2025)

3.2.25 A more recent update on the results of the policy measures regarding the talent admission schemes and measures is provided by the International Institute for Management Development's report on the World Talent Ranking 2025 released in September 2025. The Report indicates that by the end of August 2025, over 520,000 applications were received under various talent admission schemes, with over 350,000 applications approved. During the same period, over 230,000 people of talent arrived in Hong Kong through various talent admission schemes. The findings of the Report reaffirms that the Government's talent admission measures are on the right track and yielding results. It recommended that the Government should refine the measures in a timely manner and at the same time further enhance the diversity of the talent pool and effectiveness of the talent attraction measures to strengthen the talent support for Hong Kong's future development.



SYRKTS

FIGURE 3.1 APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22

SCALE 1 : 7,500

AGRICULTURE

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Government Use (Police Reporting Centre only) On-Farm Domestic Structure Public Convenience Religious Institution (Ancestral Hall only) Rural Committee/Village Office	Animal Boarding Establishment Barbecue Spot Burial Ground Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) House (New Territories Exempted House only, other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes) Picnic Area Place of Recreation, Sports or Culture (Horse Riding School, Hobby Farm, Fishing Ground only) Public Utility Installation Religious Institution (not elsewhere specified) School Utility Installation for Private Project

Planning Intention

This zone is intended primarily to retain and safeguard good quality agricultural land/farm/fish ponds for agricultural purposes. It is also intended to retain fallow arable land with good potential for rehabilitation for cultivation and other agricultural purposes.

(Please see next page)

SYRKTS

FIGURE 3.2 STATUTORY NOTES ATTACHED TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22 (EXTRACT)

AGRICULTURE (Cont'd)

Remarks

(a) Any filling of pond, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

(b) Any filling of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the draft Kwu Tung South Outline Zoning Plan No. S/NE-KTS/10 without the permission from the Town Planning Board under section 16 of Town Planning Ordinance. This restriction does not apply to filling of land specifically required under prior written instructions of Government department(s) or for the purposes specified below:

(i) laying of soil not exceeding 1.2m in thickness for cultivation; or

(ii) construction of any agricultural structure with prior written approval issued by the Lands Department.

FIGURE 3.2 (CONT'D) STATUTORY NOTES ATTACHED TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22 (EXTRACT)

GREEN BELT

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Barbecue Spot Government Use (Police Reporting Centre only) Nature Reserve Nature Trail On-Farm Domestic Structure Picnic Area Public Convenience Tent Camping Ground Wild Animals Protection Area	Animal Boarding Establishment Broadcasting, Television and/or Film Studio Burial Ground Columbarium (within a Religious Institution or extension of existing Columbarium only) Crematorium (within a Religious Institution or extension of existing Crematorium only) Field Study/Education/Visitor Centre Golf Course Government Refuse Collection Point Government Use (not elsewhere specified) Helicopter Landing Pad Holiday Camp House (other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes) Petrol Filling Station Place of Recreation, Sports or Culture Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Religious Institution Residential Institution Rural Committee/Village Office School Service Reservoir Social Welfare Facility Utility Installation for Private Project

Planning Intention

The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone.

(Please see next page)

SYRKTS

FIGURE 3.2 (CONT'D) STATUTORY NOTES ATTACHED TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22 (EXTRACT)

GREEN BELT (Cont'd)

Remarks

Any filling of land/pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

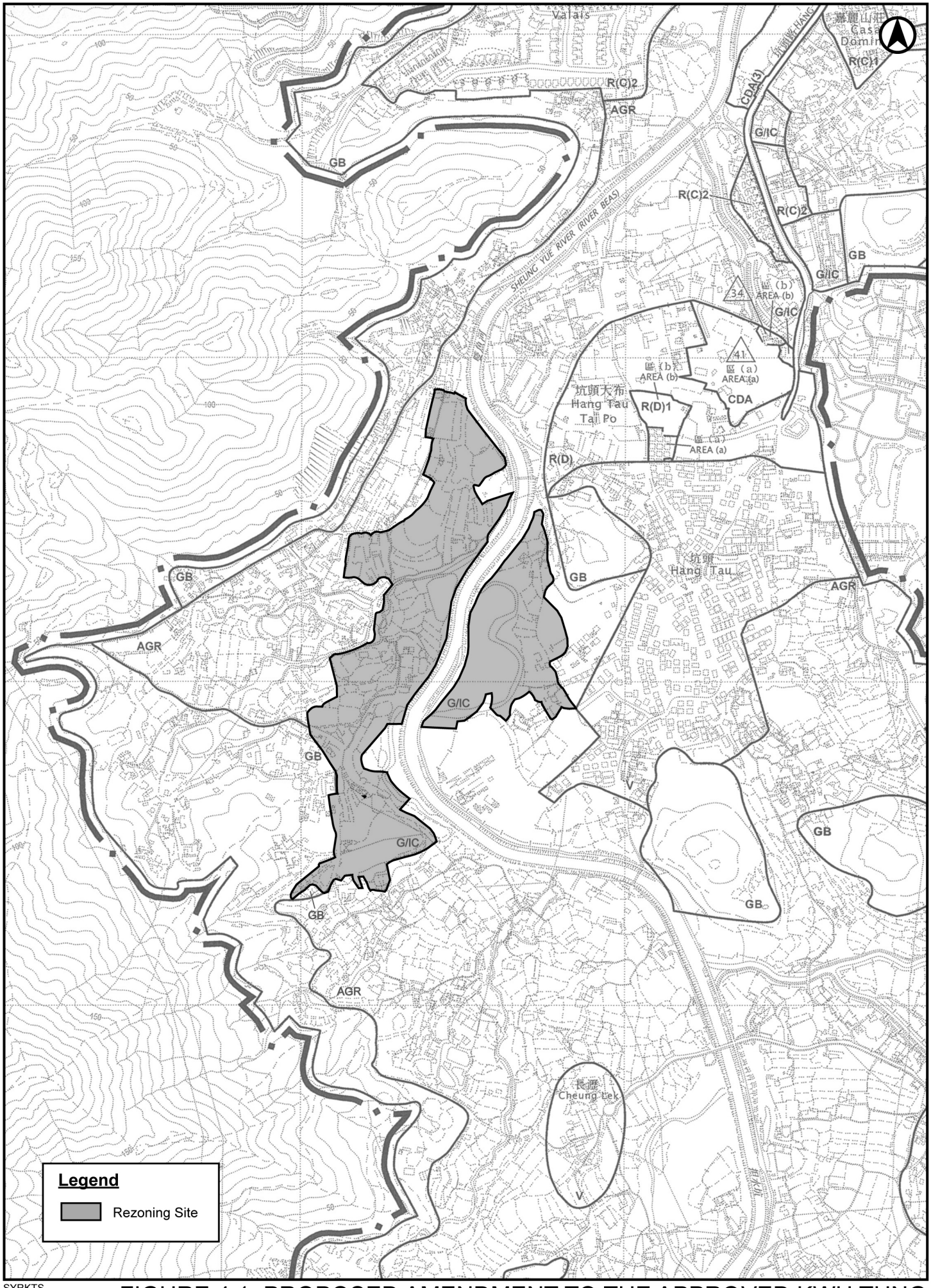
FIGURE 3.2 (CONT'D) STATUTORY NOTES ATTACHED TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22 (EXTRACT)

4 PROPOSED AMENDMENT TO THE APPROVED OZP

4.1 Proposed "Government, Institution or Community" Zone

4.1.1 In response to Government's commitment in the development of international schools, especially focused in establishing an international education hub in the Northern Metropolis, the Applicant is proposing to rezone the Rezoning Site from "AGR" zone and "GB" zone to "G/IC" zone to enable the development of a Proposed International School to meet future demand. 'School' is a Column 1 use always permitted in respect of the "G/IC" zone. The Statutory Planning Intention of the "G/IC" zone is "*intended primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments*" (***Figure 4.1*** refers).

4.1.2 Flexibility should be provided over the proposed use, scale and intensity so to achieve optimisation of the development potential of the Rezoning Site.



SYRKTS

FIGURE 4.1 PROPOSED AMENDMENT TO THE APPROVED KWU TUNG SOUTH OUTLINE ZONING PLAN NO. S/NE-KTS/22

SCALE 1 : 7,500

5 PROPOSED INDICATIVE DEVELOPMENT SCHEME

5.1 Indicative Development Scheme

5.1.1 The Applicant has prepared an Indicative Development Scheme under the Proposed "G/IC" zone to demonstrate the feasibility of establishing the Proposed School at the Rezoning Site.

5.1.2 The Proposed School will be implemented in a "through-train" mode, with kindergarten, primary and middle/high school facilities with ancillary student and staff accommodation, sports, cultural, art and sciences education facilities. The Indicative Development Scheme yields a total GFA of approx. 171,000m^2 including approx. 103,750 m² for school development and ancillary educational facilities and approx. 67,250 m^2 for ancillary staff and student dormitories.

5.1.3 In line with the low-rise topography of Kwu Tung South, the Indicative Development Scheme consists of twenty-four (24) structures of varied building heights with not more than 10 storeys (not more than 53.5mPD) and adopts a total Plot Ratio ("**PR**") of approx. 1.35 and a Site Coverage ("**SC**") of approx. 30.5% for non-domestic portion and approx. 6.7% for dormitory portion. The Indicative Development Scheme will accommodate a total of approx. 3,000 Students and 443 Teaching and Supporting Staff. Ancillary Student Accommodation for about 1,400 Middle/High School Students will be provided within approx. 350 units (average 4-student dormitory units) while 571 units of ancillary staff accommodation will be provided.

5.2 The Education Provider/Operator and Education Programme

5.2.1 The Proposed School will be operated by BASIS International School, offering an innovative and transformative learning environment designed to redefine early childhood and K-12 education. Adopting the internationally recognised BASIS Curriculum, it combines the strengths of liberal arts and STEM education to cultivate critical thinking, creativity, and problem-solving skills. Developed in the United States, the BASIS Curriculum is academically rigorous, aligning with global standards while fostering inquiry-based learning and interdisciplinary connections. It emphasises strong foundations in mathematics, science, and the humanities, complemented by arts, physical education, and character development. With its proven track record in preparing students for top universities worldwide, the BASIS model ensures that students are equipped not only with academic excellence but also with the adaptability and resilience needed to thrive in a rapidly changing global environment. Small class teaching of average 25 students per classroom will be adopted to encourage classroom interaction and enhance students' learning efficiencies.

5.3 The Proposed Architectural and Design Concept

5.3.1 In formulating the Indicative Development Scheme for the Rezoning Site, careful consideration has been given to both the building design and overall layout. The objective is to establish the Rezoning Site into an international school development that is compatible with the surrounding environment. The key design concepts that have guided the planning process include:

Creating a student-focused educational campus

5.3.2 The campus layout is carefully designed with flexibility as a core principle, allowing for adaptable restructuring of teaching facilities to accommodate evolving educational needs and technological advancements. This approach ensures the creation of a student-focused educational campus that remains responsive to future learning requirements while being compatible with long-term planning objectives of the

Northern Metropolis.

5.3.3 The Proposed School, operating under the BASIS Curriculum, seeks to cultivate a well-rounded educational environment that supports holistic whole-person development and equips students from a young age to meet future challenges with confidence. The Indicative Development Scheme puts forward a comprehensive campus plan that goes beyond academic classrooms and boarding facilities to include a diverse range of educational and recreational amenities that encourage the discovery and development of students' personal interests and talents, while supporting their physical, creative, and intellectual growth.

5.3.4 To optimise accessibility and efficiency, the major academic blocks are centrally located, enabling convenient movement for both students and teaching staff. This centralisation also ensures compatibility with safety, circulation, and operational efficiency standards expected of modern international schools.

Capitalising on Strategic Location and Regional Connectivity

5.3.5 The Proposed School leverages its prime location at Kwu Tung South, situated in close proximity to the Northern Metropolis, KTN NDA, San Tin Technopole, and Ngau Tam Mei technology hub. This unique positioning provides opportunities to establish the Proposed School as a world-class institution, facilitating collaborations with industry and academic partners across the Greater Bay Area and beyond.

5.3.6 The design also integrates with major planned infrastructure, incorporating seamless connections with the proposed Northern Metropolis Highway – San Tin Section to the west. These transport linkages are not only functional but also compatible with the regional mobility framework, ensuring efficient connectivity. The anticipated commencement of the Proposed School will also follow the commissioning of the Northern Metropolis Highway – San Tin Section.

Respecting the Surrounding Environment and Local Context

5.3.7 The architectural and design concept for the Indicative Development Scheme is rooted in respecting the natural topography and creating a harmonious riverside campus, inspired by the principles of natural integration. The design emphasizes a seamless connection with the surrounding environment, enhancing the site's scenic beauty and fostering a tranquil, conducive learning atmosphere. The design harnesses its locational advantage on the two sides of the Beas River with the introduction of plazas and promenades to enhance the sense of leisure and recreation in the campus.

5.3.8 The building height and layout are carefully considered to complement the existing and future visual context, ensuring the development aligns with the surrounding landscape while projecting a modern and prestigious image. The building blocks adopt dynamic and fluid building forms that are broken down with varying building heights in order to minimise visual impact to the nearby residential settlements as much as practicable. The varied building heights are not incompatible with the BHs of the future surrounding context that are mostly medium or high rise in nature upon the full development of the Northern Metropolis. Notwithstanding, the stepped building height profile descend towards the riverbanks to soften the building mass. Overall, the design seeks to provide a first-class educational environment that enhances the international school's competitiveness and reinforces its status as a leading educational resource.

Adopting Sensitive Design to Minimise Impacts on the Surroundings

5.3.9 Architectural and sustainability design strategies will be applied to the design to minimise impacts on the surrounding environment and to also enhance the visual appearance and functionality of each building. Façade treatment and finishes will help achieve a better integration with surrounding environment and reduce the visual mass of the development. The site formation levels are based on floor prevention levels to enhance safety risk of the campus.

5.3.10 The building blocks are carefully dispositioned to maximise natural sunlight to enhance staff and students' well-being. Sustainable eco-friendly materials and noise mitigation design will be adopted in the construction stage to enhance the buildings integration with the surrounding natural landscape and Beas River, subject to detailed design.

Pedestrian Connectivity, Riverside Promenade and a Landscape Network

5.3.11 The Proposed School incorporates a design of a sustainable pedestrian and cycling network to facilitate students and staff transit throughout the campus. Riverside promenades are designed on both sides of the Beas River to foster social interactions between students and staff and provide spaces for recreation and leisure (***Appendix 2*** refers). Landscaped open spaces such as outdoor landscaped gardens are provided throughout the campus area to facilitate integration between the campus and the surrounding natural environment along the Beas River, provide high quality open space areas for students and staff as well as respect the vision on the provision of blue and green infrastructure in the development strategy of the Northern Metropolis.

5.4 Layout of the Indicative Development Scheme

5.4.1 The campus layout adopts a context-sensitive and user-centric architectural design which seeks to enhance the living quality and experience of future students with various high-quality educational amenities (***Table 5.1*** refers).

5.4.2 The campus is organised in functional clusters of buildings and uses along an approximately 800m long section of the meandering Beas River, utilising land on both sides. Educational Facilities are located mainly in the central portion of the campus, with kindergarten, primary school, and ancillary educational and sports facilities (three (3) blocks) forming the core building cluster along the western side of the River and near to the campus entrance, while the Middle/High School and ancillary educational and sports facilities (five (5) blocks) located along the eastern side of the River. These blocks are dedicated to secondary education, incorporating classrooms, educational facilities such as art and music studios, science laboratories and associated sports amenities that support the school's STEAM-focused curriculum. The spatial separation between primary and secondary levels supports age-appropriate independence, while maintaining overall campus cohesion.

5.4.3 Ancillary Student and Staff Accommodation (fourteen (14) blocks) are located at the northern and southern ends of the Campus at the western portion of the River to offer a more tranquil and quality living environment. Centrally located outdoor sports facilities (two (2) blocks) (i.e. golf driving range at the eastern side of the River and sports ground at the western side of the River) are positioned between the academic and residential areas. This location optimises accessibility for students of all grade levels and enhances the holistic educational experience. These outdoor spaces also serve an important visual function, acting as buffers that help to break up the building mass and reduce the perceived scale of development.

Building Height Profile

5.4.4 The Indicative Development Scheme adopts a low-density development strategy, with a stepped and varied building height profile designed to respond sensitively to the site's natural topography. Building heights are carefully modulated to descend gradually toward the riverbanks, internal circulation routes, and surrounding green landscape, facilitating a seamless transition between built form and the existing environment.

5.4.5 At the western portion, the primary educational blocks are arranged against the backdrop of the wooded valley slopes. The clustering of different building typologies and heights in this area creates a visually interesting composition that mirrors the undulating terrain and the winding course of the river. In several locations, building massing steps down towards the riverside to soften the development edge and improve visual permeability, ensuring that the overall campus form remains integrated within its natural setting.

5.4.6 Located at the periphery of the campus, the staff and student dormitories are similarly designed with varying building heights, from three (3) storeys to a maximum height of nine (9) storeys, serving as a transition from the educational facilities to the surrounding areas.

5.5 Implementation Programme

5.5.1 The Indicative Development Scheme is anticipated to commence operation in 2036, upon the commissioning of the Northern Metropolis Highway – San Tin Section.

5.6 Technical and Accommodation Schedule

5.6.1 The Technical and Accommodation Schedule provided at ***Table 5.1*** summarises the major development parameters of the Indicative Development Scheme, while the Architectural Drawings of the Indicative Development Scheme are furnished in ***Appendix 1***.

Table 5.1: Technical and Accommodation Schedule

Development Parameters	Indicative Development Scheme
Rezoning Site Area	Approx. 127,000m^2
Site Formation Level[1]	Approx. 9-20.5mPD
Total Plot Ratio	Approx. 1.35
Total GFA[2]	Approx. 171,000 m^2
- Non-domestic (School Development and Ancillary Facilities)	Approx. 103,750 m^2
- Domestic (Ancillary Staff and Student Dormitories)	Approx. 67,250 m^2
Total Site Coverage	
- Non-Domestic (School Development and Ancillary Facilities)	Approx. 30.5 %
- Domestic (Ancillary Staff and Student Dormitories)	Approx. 6.7 %
Total No. of Structures / Blocks	24
Building Height	
- No. of Storeys	Not more than 10[3]
- Height of Structures (at main roof level) (m)	Approx. 4m – 39.5 m
- Height of Structures (at main roof level) (mPD)	Approx. 18mPD – 53.5mPD[1]
Total No. of Classrooms	141 [4]
- Kindergarten	30
- Primary School	46
- Middle/ High School	65
Total No. of Units	Approx. 921
- Ancillary Student Dormitories [5]	Approx. 350
- Ancillary Staff Dormitories [6]	Approx. 571
Total No. of Students	Approx. 3,000
- Kindergarten	Approx. 600
- Primary School	Approx. 1,000
- Middle / High School	Approx. 1,400

Total No. of Teaching Staff - Kindergarten - Primary School - Middle/ High School	Approx. 443 Approx. 89 Approx. 148 Approx. 206
Total No. of Non-Teaching Staff	Approx. 190
Average Unit Size - Ancillary Student Dormitories - Ancillary Staff Dormitories	 Approx. 60m^2 Approx. 25-80m^2
Private Open Space	No less than 1m^2 per person
Greenery Coverage	Not less than 30%

[1] Site Formulation Level subject to change during detailed design stage
[2] GFA Calculation excludes carparking, E/M /Plant rooms where GFA exemption will be sought during detailed design stage
[3] No. of Storeys excluding basement level
[4] Average 25 students per classroom is anticipated
[5] Ancillary Student Dormitories with approx. 4 students per room
[6] Ancillary Staff Dormitories of varying types to be provided to suit different needs. On average, approx. 2 staff per room is anticipated.

Nature of Block(s)	No. of Block(s)	Uses	GFA	BH (in mPD)	BH (in Storeys)	No. of Classroom(s)	No. of Unit(s)
Eastern Side of Beas River							
Middle / High School Blocks	4	Classroom/Education Facilities [*1], Canteen, Ancillary Tuck Shop [*2], Car Parking and L&UL / E&M	Approx. 36,000m^2	Approx. 24.5 – 43.8 mPD	9 storeys	55	N/A
Golf Driving Range	1	Golf Driving Range	Approx. 350m^2	Approx. 18 mPD	1 storey	N/A	N/A
Sports Complex	1	Swimming Pool / Sports Hall / E&M	Approx. 7,800m^2	Approx. 41 mPD	7 storeys (including 1 basement)	N/A	N/A
Western Side of Beas River							
Kindergarten Block	1	Classroom/Education Facilities [*1]	Approx. 5,000m^2	Approx. 29.5 mPD	5 storeys	30	N/A
Primary School Block	1	Classroom/Education Facilities [*1] / Canteen / Ancillary Staff Office / Auditorium / Swimming Pool / Sports Hall / Car Parking and L&UL / E&M	Approx. 48,100m^2	Approx. 37.5 – 49.1 mPD	10 storeys	46	N/A
Educational Block (Classrooms) for All Grades	1	Classroom/Education Facilities [*1]	Approx. 6,000m^2	Approx. 34 mPD	6 storeys	10	N/A
Sports Ground	1	Sports Ground, Spectator Stand	Approx. 500m^2	Approx. 25.5 mPD	1 storey	N/A	N/A
Ancillary Staff Dormitories	11	Dormitory / Car Parking and L&UL / E&M	Approx. 32,600m^2	Approx. 28.5 -53.5 mPD	3-10 storeys	N/A	571
Ancillary Student Dormitories	3	Dormitory	Approx. 34,650m^2	Approx. 46 mPD	9 storeys	N/A	350

[*1] *Education Facilities include music classroom, art/music studio, science education facilities, etc.*
[*2] *Ancillary Tuck Shop offers a variety of products and services to support students' academic and daily needs, including stationery supplies, textbooks, reference books, technology accessibility such as laptop cases, chargers, etc.*

5.7 Conceptual Landscape Design

5.7.1 The Landscape Design of the Indicative Development Scheme will integrate the development within their future landscape and visual context, provide a synthesis between the proposed architecture and its landscape setting and provide high-quality open space in association with the development so as to create attractive and convenient outdoor landscape and open spaces which are closely coordinated with the building dispositions, taking into consideration legible pedestrian access and circulation whilst also maximising the planting of trees and/or shrubs to soften the interface with surrounding areas (***Appendix 2*** refers).

5.7.2 The objectives for the Landscape Design are to:

- Create a distinctive landscape which responds to the existing context, the architectural scheme proposals and the future user needs;
- Integrate the Indicative Development Scheme from a landscape and visual perspective with the existing and planned landscape context;
- Address issues of tree retention and greening of the site boundaries and external landscape interfaces, providing effective landscape mitigation where required;
- Provide visual integration in views of the proposed building mass from the surroundings and
- Provide vegetation screening and softening of the built-form in closer low-level views;
- Provide a quality, sustainable and accessible environment for the enjoyment of users/visitors;
- Maximise greening opportunities with planting proposals with trees, shrubs, lawn and climbing plants to enrich landscape resources and enhance landscape amenity to create sense of place and provide shades;

5.7.3 Suitable landscaping is proposed to integrate with the surrounding environment and to create visual interest. Landscaping will also be provided at the periphery of the Site to soften the edges, help the Indicative Development Scheme to smoothly integrate with the surrounding environment and enhance the overall visual quality. The Landscape Design will be in-keeping with the overall architectural design while maintaining compatibility with the surrounding setting.

5.7.4 The green coverage for the Rezoning Site will not be less than 30% in accordance with Buildings Department Practice Notes PNAP APP-152 Sustainable Building Design Guidelines and DEVB Technical Circular (Works) No. 3/2012. Furthermore, no less than 1m^2 per person of private open space will be provided for recreation and leisure (i.e. approx. 2,243m^2) based on predicated dormitory population.

5.7.5 Approx. 1,300 nos. of trees were identified within the Site, among which most are common, exotic and native tree species. No registered Old and Valuable Trees were identified within the Site.

5.7.6 The potential landscape impacts due to tree felling, mainly owing to the proposed site formation works, will be mitigated to an extent through the proposed compensatory tree plantings, shrub planting and new lawn areas. Approx. 1,150 nos. (i.e. minimum replanting ratio of 1:1) of new good quality standard and heavy standard trees, whips and large plants will be planted within the Site as far as practicable Several large native trees located along the riverside will be retained to ensure positive contribution to the future riverside campus landscape.

5.8 Road Layout Arrangement and Internal Transport Facilities

5.8.1 Upon completion of the Northern Metropolis Highway, vehicular access to the Rezoning Site will be provided at the existing local road (proposed for widening), which will be connected to the planned NM Highway – San Tin Section. A road connection is proposed between San Tin Technopole Interchange and the planned NM Highway and will be further explored in the detailed design stage. The preliminary alignment of the Northern Metropolis Highway – San Tin Section is provided in ***Figure 2.2***. The Indicative Development Scheme will also be accessible via Road D5, a district distributor in the San Tin Technopole, which branches off from Fanling Highway.

5.8.2 The Indicative Development Scheme will provide adequate internal transport provisions for the proposed school and ancillary accommodation uses in accordance with the Hong Kong Planning Standards and Guidelines ("**HKPSG**") recommendations at each respective Site. Please refer to ***Table 5.2*** below for the updated provisions which will be subject to agreement with relevant Government departments at the detailed design stage. Details of the internal transport provision are provided in ***Appendix 4***.

Table 5.2 Overall Internal Transport Provision

PARKING FOR EDUCATION FACILITIES	
Type	**Proposed Provision**
Parking Spaces	
Private Car	42
Lay-Bys	
Taxi and Private Car	51
School Bus (Coach)	25

PARKING FOR AMENITY AND ANCILLARY FACILITIES	
Type	**Proposed Provision**
Parking Spaces	
Private Car	33
Lay-Bys	
Taxi and Private Car	2
Loading/Unloading ("L/UL") Bays	
Heavy Goods Vehicles (HGV)	12

PARKING FOR ANCILLARY DORMITORIES	
Type	**Proposed Provision**
Parking Spaces	
Private Car	225 (including 25 Visitor Parking)
Loading/Unloading ("L/UL") Bays	
Heavy Goods Vehicles (HGV)	8

6 PLANNING JUSTIFICATIONS

6.1 In Line with National and Government Policy Directives

6.1.1 As demonstrated, the RR aligns with the National Goal of developing into a leading country in education in all fronts and the education focus in supporting the holistic growth of young people with the implementation of a STEAM programme and inclusion of various diverse educational facilities supporting students' all-rounded development. Furthermore, the RR is fully in line with the Government's policy initiatives to provide high-quality education and cater for location-based international school places, especially in the New Territories, in the context of the Northern Metropolis. International Schools form an integral part of the education system in Hong Kong. In order to meet the educational needs of the community, the Government supports the provision of good quality International Schools which apply a student-focused, skills-based and character-building learning approach. The RR is a direct response to CE's policy initiatives to establish quality international schools in the Northern Metropolis and encourage admission quotas with the easing of restrictions to allow for new quality international schools with student boarding facilities. The Proposed School put forth by this RR is designed to meet the needs of non-local families and respond to the Government's various talent measures initiatives in attracting and cultivating high-calibre talents and will enable a comprehensive international school campus which accommodates approx. 3,000 students of early childhood and K-12 education and provide student boarding facilities to cater for up to approx. 1,400 students in middle/high grades. The RR also supports the Education Bureau's acknowledgement of the importance of maintaining an adequate supply of international school places to serve both expatriate and local families, supporting Hong Kong's role as an international education hub.

6.1.2 Furthermore, the Education Provider/Operator of the Proposed School who also operates various international schools in the Mainland, including Shenzhen, will also complement the educational development vision in the Greater Bay Area by facilitating more cooperation and exchange among the schools in the area.

6.2 Site Suitability for GIC and Education uses synergising with Northern Metropolis

6.2.1 Located within the Northern Metropolis, the Rezoning Site in Kwu Tung South is within Kwu Tung District, which is a Government-led growth area designated for integration of housing, employment, innovation, and education. Kwu Tung is undergoing transformation in both land use and planning context in recent years. The Rezoning Site's strategic location in the "Innovation and Technology Zone" along with the San Tin Technopole, Ngau Tam Mei technology hub and the Lok Ma Chau Loop Innovation and Technology Park, and proximity to the planned Northern Metropolis Highway and Kwu Tung North New Development Area ("**KTN NDA**") harnesses its geographical advantage with a well-planned transport infrastructure and offers direct synergy with surrounding residential, commercial, innovation and educational cluster (***Diagram 6.1*** refers).

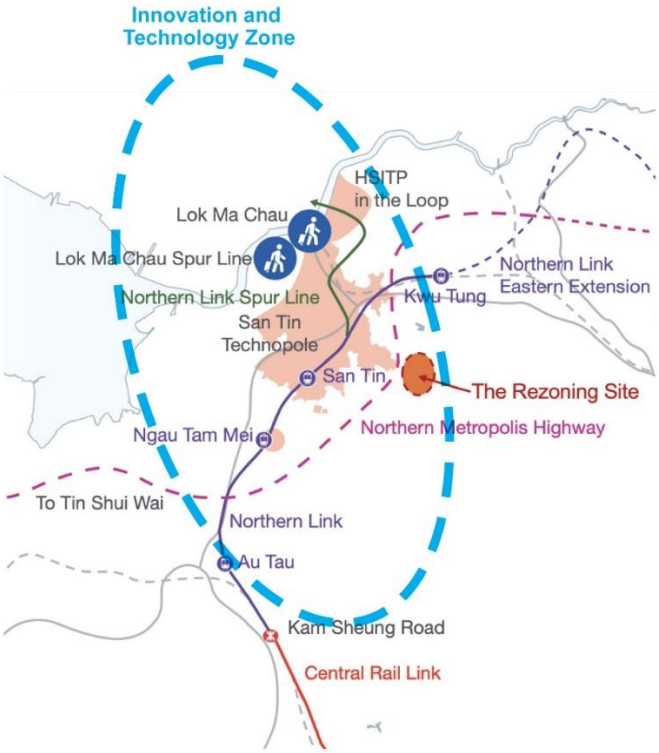


Diagram 6.1 Indicative Location of Rezoning Site within the Transport Infrastructure under "Innovation and Technology Zone" in the Northern Metropolis

6.2.2 The establishment of the Proposed School is in line with the development strategy and vision in its location of the "Innovation and Technology Zone" by complementing the potential large influx of international professionals living or working in the San Tin Technopole in the near future. The Proposed School could utilise its locational advantage near San Tin Technopole to support the future international talent community and complement to the educational resources tailored to the high-end talents. It is envisioned the Proposed School could enhance San Tin's boundary-free community environment and bring new insights into Hong Kong's future innovation and development.

6.2.3 The KTN NDA to the north of the Site is designated as the primary residential community and will be developed as a mixed development node providing medium to high-density public and private housing, commercial and research and development uses, as well as land for ecological conservation, whereas the northern part of Kwu Tung South is also gradually transforming into a medium-density residential neighbourhood. The San Tin Technopole and Ngau Tam Mei areas in the vicinity of the Site are also envisioned as I&T cluster providing research and development and as a prime site to support the Government's vision of NMUT with post-secondary institutions focusing on scientific research and collaboration.

6.2.4 The proposed "G/IC" zoning can enable an educational anchor and cater for the growing needs in a rapidly expanding urban district and harnesses its locational advantage to support the surrounding I&T and educational developments in the vicinity with flexibility, benefiting from planned infrastructure improvements such as the Northern Link railway, Northern Metropolis Highway, enhanced road connections, and integrated pedestrian and cycling networks. The Site also allows for the incorporation of sustainable design and green open spaces, aligning with the Government's vision for a liveable, people-centred Northern Metropolis.

6.3 Will Cater for Increasing Demand for International School Education

6.3.1 The Proposed School will directly respond to the likely increase in demand for international school places, particularly in the Northern Metropolis and surrounding districts. Population growth driven by new housing and employment opportunities in the region will generate strong demand for diverse, high-quality educational options. The Proposed School will offer a globally oriented curriculum that complements the Government's vision for expanding educational choice and supporting Hong Kong's competitiveness. By locating the facility within Kwu Tung South, it will relieve pressure on existing schools in other districts, like Hong Kong Island and Kowloon, while providing long-term capacity to accommodate future demographic and economic growth.

6.4 Changing Planning Circumstances of the Wider Area

6.4.1 The Rezoning Site and the surrounding areas are aptly situated in close proximity of the Northern Metropolis. In view of the Government's determination in the timely implementation of the Northern Metropolis, along with the Site's prime strategic location in the immediate vicinity of San Tin Technopole, KTN NDA and Ngau Tam Mei tech-knowledge hub, the area in the vicinity of the Rezoning Site is and will continue to undergo substantial change from its predominantly low-density and rural character to a more built-up area with medium to high density housing and other innovative educational and I&T related developments. With the shift in demographic profile and economic dynamics brought by several new development areas and influx of residents, the proposed RR will enable the development of the Proposed School that would better complement and synergise with the future development context of the wider area, to cater for the future change in planning circumstances with more educational and research resources allocated.

6.4.2 Furthermore, various infrastructural upgrades, including enhanced road networks, railway and highway connections, will bring convenient access to the Rezoning Site. For instance, the planned Kwu Tung Station on the East Rail Line and future NOL and the NM Highway – San Tin Section and associated road improvement works will allow for much greater accessibility. The Traffic Review provided at ***Appendix 4*** also demonstrates that there are no insurmountable traffic impacts from the Indicative Development Scheme.

6.5 Compatibility with Surrounding Land Use/Zoning

6.5.1 The Indicative Development Scheme will be compatible with the surrounding uses/zoning, including the New Development Areas to the north, and the surrounding Village and Residential developments. The wider Kwu Tung area has been undergoing transformation in accordance with Government planning initiatives for the Northern Metropolis, with increasing provision for residential communities, supporting facilities, and educational uses. The Rezoning Site is located in proximity to existing village clusters and planned residential developments, where a school use will serve as an appropriate community facility that complements and supports the needs of both existing and future populations.

6.5.2 The riverside campus design put forth in the Indicative Development Scheme is also compatible with the various existing and planned recreational and ecological resources in the wider area, such as Sam Po Shue Wetland Conservation Park, Long Valley Nature Park, Lam Tsuen Country Park, etc, besides the Beas River where it is located along. The Indicative Development Scheme will support the development vision of the creation of blue-green network within the San Tin Technopole to provide a quality living and working environment for the future international community.

6.5.3 Moreover, the introduction of a high-quality international school will not generate significant adverse impacts on the surrounding environment. The design and layout of the proposed development will incorporate appropriate landscaping, buffering, and traffic management measures to ensure harmony with the nearby "AGR", "GB", and "V" zones, as well as to maintain a visually compatible and environmentally sensitive setting. By providing an educational institution that integrates with the evolving land use character of Kwu Tung North, the proposal will enhance the overall planning intention for the area as a vibrant, liveable, and well-supported community.

6.6 Suitable Development Scale and Design that Incorporates Sustainable and Resilient Design

6.6.1 The Indicative Development Scheme has been refined through iterative design reviews, with careful consideration given to site constraints, the surrounding environment, and sustainable principles. The Proposed School adopts a low-density, low-impact approach that is compatible with the rural and village character of Kwu Tung South. The Indicative Development Scheme is also compatible with existing and planned development of similar nature.

6.6.2 The proposed design breaks down the massing into several blocks, avoiding a bulky appearance where possible and preserving a large central open space for outdoor learning and recreation. Building footprints are set back to respect the Beas River, while the overall disposition of blocks preserves existing tree clusters. The stepped and curvilinear building forms soften visual impact, respond to the natural topography, and integrate seamlessly with the surrounding landscape.

6.6.3 Sustainable elements are embedded in the design. Landscaped roofs and rooftop planting will contribute to visual softening, environmental quality, and provide educational opportunities for students. Native tree planting along the site periphery will enhance biodiversity and maintain the natural ambience. The use of natural building materials such as wood and stone further harmonises the school with its rural setting. Solar panels at roof level will also be considered to enhance energy efficiency.

6.6.4 Resilient design measures have also been incorporated. Recognising that parts of the site may be prone to flooding during the wet season, large open spaces will be provided and built structures have been positioned to avoid flood-prone areas near the Beas River. Additional greening, including garden spaces, ornamental planting, and rooftop greenery, will strengthen environmental performance and visual quality.

6.6.5 The Applicant intends to pursue Hong Kong Green Building certification, ensuring that the school will achieve recognised standards of sustainable building design while providing a safe, resilient, and attractive learning environment.

6.7 Better Utilisation of Scarce Land Resources

6.7.1 Recognising the land shortage problem in Hong Kong and the Government emphasis on the importance of exploring different options in increasing land supply, better utilisation of readily available land should be encouraged. Over the past years, Government has taken the initiative to rezone suitable "green" sites for development. Furthermore, one of the top objectives of the Government has been to implement the Northern Metropolis in a timely manner into a metropolitan area idea for people to live, work, and play to cater for local population growth and to meet the needs of economic development. The Rezoning Site is located in proximity to various new development areas and is a direct response to unleashing the development land resources of the Rezoning Site for supporting facilities without the need to mobilise public resources. Recognising the Rezoning Site consists of some abandoned agricultural uses and temporary structures (man-made habitat), The Proposed School presents an

alternative land use suitable for this area. The Preliminary Ecological Review has concluded that there is only low to moderate ecological value in this area.

7 TECHNICAL ASSESSMENTS

7.1 No Adverse Visual Impact

7.1.1 A Visual Impact Assessment ("**VIA**") has been prepared to assess the potential visual impact on the Indicative Development Scheme to its surrounding areas and to visualize the three-dimensional relationship of the Indicative Development Scheme with the surrounding context (***Appendix 3*** refers). A total of Eight (8) potential Viewpoints ("**VP**s") were identified with the Proposed School visible at Five (5) VPs.

7.1.2 The VIA concludes that the visual impact arising from the implementation of the Indicative Development Scheme is considered acceptable with "negligible" to "slightly to moderately adverse" visual impacts taking into consideration the visual effect three-dimensional relationship with the surrounding context.

7.2 No Adverse Landscape Impact

7.2.1 A Landscape Proposal with Broad Brush Tree Survey has been undertaken and provided at ***Appendix 2*** to illustrate the proposed landscape design and demonstrate that the Indicative Development Scheme will not result in significant adverse landscape impact to the surrounding landscape resources after the establishment of the proposed landscape scheme. The impact are considered able to be mitigated in the longer term, and with the implementation of well-designed architectural scheme and its associated landscape scheme, which emphasises the importance of maximising green coverage and creating a landscape buffer between the proposals and the surrounding village, riverside and hillside areas, will be mitigated to an extent through the proposed planting of some 1,150 nos. new trees.

7.3 No Adverse Traffic Impact

7.3.1 A Traffic Review is provided at ***Appendix 4*** which concludes that the traffic generated by the Indicative Development Scheme will not cause any significant traffic impact. The connection/access point will have the advantage of the NM Highway so that there will be little traffic on the local road network. The Traffic Review concludes that with the traffic mitigation measures in place, such as staggered operational hours and thoughtful design of pick-up/drop-off and parking locations, the Indicative Development Scheme is considered to be acceptable from the traffic engineering point of view.

7.4 No Adverse Environmental Impact

7.4.1 An Environmental Assessment ("**EA**") has been undertaken and provided in ***Appendix 5***. Potential environmental impacts, including air quality, road traffic noise, industrial noise, land contamination, water quality and waste management have been assessed. The EA concludes that no adverse environment impacts are anticipated as a result of the Indicative Development Scheme with the implementation of appropriate protective, precautionary and mitigation measures.

7.5 No Adverse Ecological Impacts

7.5.1 An Ecological Review has been undertaken and provided in ***Appendix 6***. The Indicative Development Scheme is located on both sides of the Sheung Yue River (Beas River), which is not listed as one of the ecologically important streams. Having studied the habitat plan prepared under the Landscape Master Plan at ***Appendix 2***, no Site of Special Scientific Interest ("**SSSI**") or ecological hotspot has been identified within the Site.

7.5.2 The Rezoning Site is mainly occupied by woodland with a minor portion of river and stream. The Ecological Review concludes that the ecological value of the Site is considered low to moderate and with mitigation measures in place, no significant adverse ecological impact is anticipated. The Indicative Development Scheme is considered preliminarily acceptable from an ecological perspective. A detailed Ecological Impact Assessment can be undertaken during detailed design stage should it be deemed necessary.

7.6 No Adverse Infrastructural Impact

Sewerage

7.6.1 A Sewerage Impact Assessment ("**SIA**") (***Appendix 7*** refers) was prepared, which concluded that no adverse sewerage impact is anticipated due to the Indicative Development Scheme. As there is no existing public sewerage system in the vicinity of the Site, Two (2) on-site sewage treatment plants with membrane bioreactor with ultra-filtration ("**MBR**"), generally recommended to achieve required effluent discharge standard and sludge dewatering system, were proposed to treat the sewage discharge generated from the Indicative Development Scheme and the treated effluent will be discharged to Sheung Yue River (Beas River) through the proposed storm drain to ensure no contamination will be made.

Drainage

7.6.2 A Drainage Impact Assessment ("**DIA**") (***Appendix 8*** refers) was prepared which assessed the drainage provisions within the Rezoning Site and reviewed the public drainage system in the vicinity, concluding that no adverse drainage impact to the existing public drainage system is anticipated.

Water Supply

7.6.3 A Water Supply Impact Assessment ("**WSIA**") (***Appendix 9*** refers) concludes that the Indicative Development Scheme is technically feasible, and no insurmountable impacts will be aroused to the existing freshwater supply system from the Indicative Development Scheme.

7.7 No Adverse Air Ventilation Impact

7.7.1 An Air Ventilation Review has been undertaken to assess the ventilation performance of the Indicative Development Scheme against the Existing Condition (***Appendix 10*** refers). The Air Ventilation Review concludes that the Indicative Development Scheme will not lead to significant adverse impact on the surrounding environment.

8 CONCLUSION

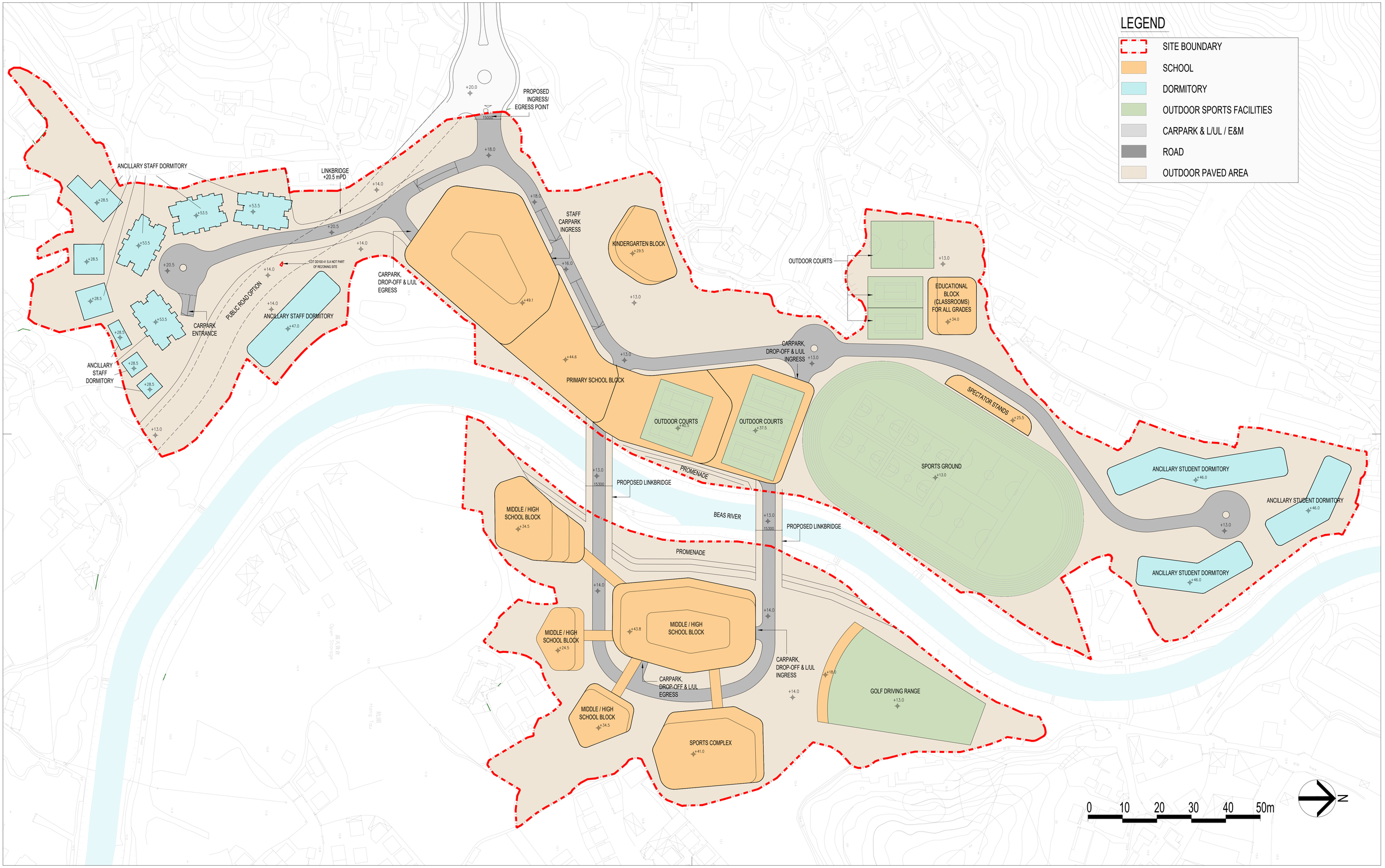
8.1 This Section 12A Planning Application seeks to amend the Approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22 to rezone the Rezoning Site at various lots in D.D. 94, 98, and 100 and adjoining Government Land, Kwu Tung South, New Territories from "AGR" zone and "GB" zone to "G/IC" zone to facilitate the implementation of a proposed international school development. The Proposed School is a unique project in response to the current Government Policy Initiatives to promote quality international education in the Northern Metropolis and is justified on the following grounds:

- The RR is fully in line with the with Government's current Policy Directives on education, promoting diversified learning opportunities and STEAM education in the Northern Metropolis, supporting community needs and Hong Kong's role as an international hub;
- The Rezoning Site is strategically located within the Northern Metropolis in proximity to the KTN NDA, San Tin Technopole and Ngau Tam Mei areas and the Proposed School can serve as a sustainable educational anchor for the evolving community;
- The Proposed School will meet rising demand for international education, offering a globally oriented curriculum, alleviating pressure on existing schools, and supporting long-term population and economic growth;
- The RR will better complement and synergise with the future development context of the wider area, to cater for the future changes in planning circumstances brought by the Northern Metropolis, with more educational and research resources allocated.
- A proposed international school at the Rezoning Site will be compatible with surrounding village, and residential uses;
- The development scale and design of the Indicative Development Scheme are appropriate, integrating sensitively with the surrounding environment;
- Sustainable and resilient design principles are incorporated, including natural ventilation, daylighting, rooftop greening, and energy-efficient systems;
- The Proposed School delivers public planning benefits by enhancing educational infrastructure, supporting Greater Bay Area development, improving local traffic and safety, integrating with a mixed-use innovation zone, promoting environmental quality, and generating employment, contributing to the social, environmental, and economic vitality of the Northern Metropolis; and
- It is anticipated that the Indicative Development Scheme will not create significant adverse ecological, environmental, landscape, visual, traffic, drainage, sewerage, and water supplies Impacts.

8.2 In light of the justifications and planning merits put forth in this SPS, we sincerely request the BOARD to give favourable consideration to this RR.

Reviewed &
Edited by: Vincent Lau
Prepared by: Janice Wong

Date: 23 October 2025
File Ref: SYRKTS



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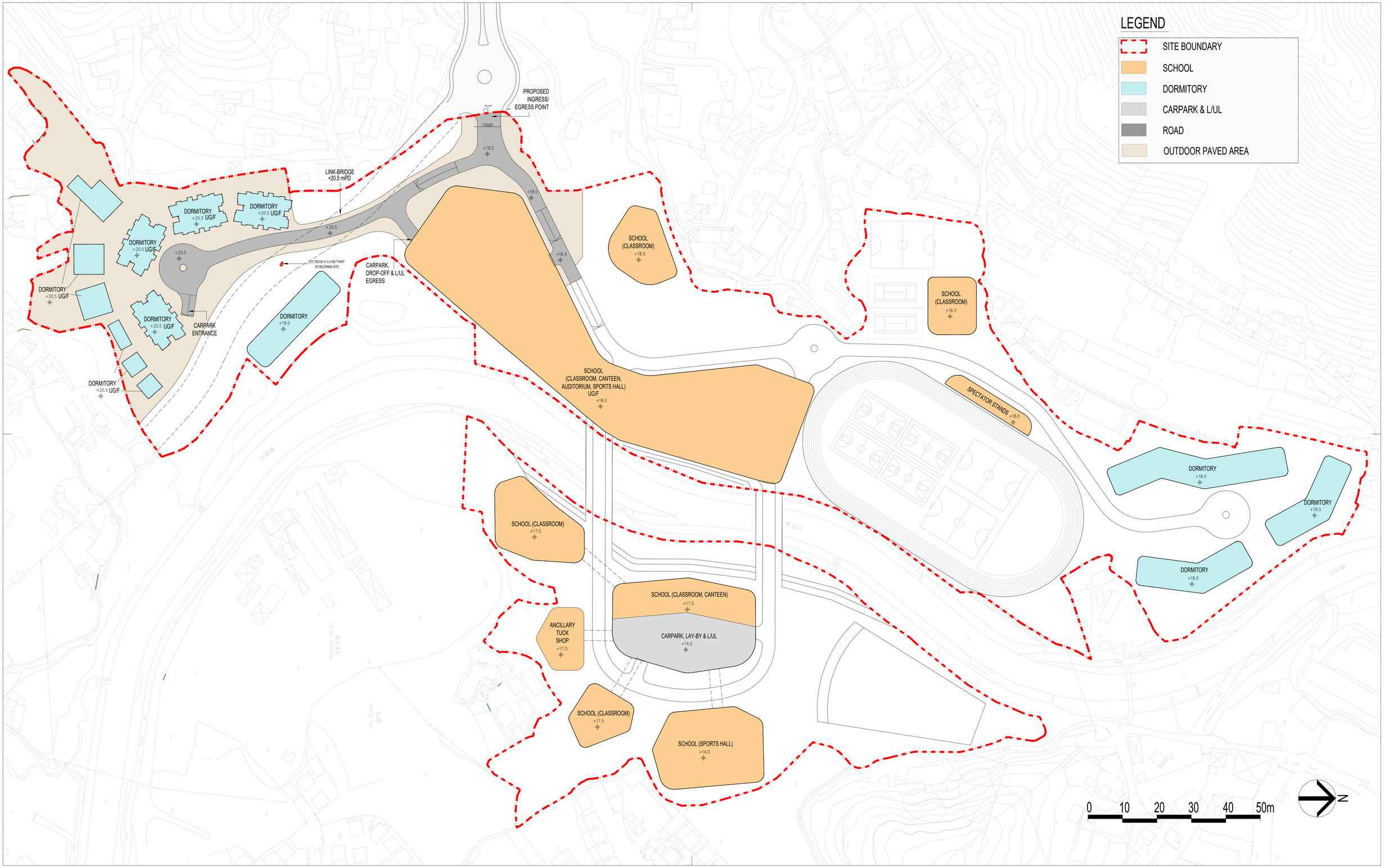
Project Title
PROPOSED INTERNATIONAL SCHOOL DEVELOPMENT AT KWU TUNG SOUTH

Drawing Title
FULL PHASE – MASTER LAYOUT PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_01_

Drawing Purpose



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Project Title

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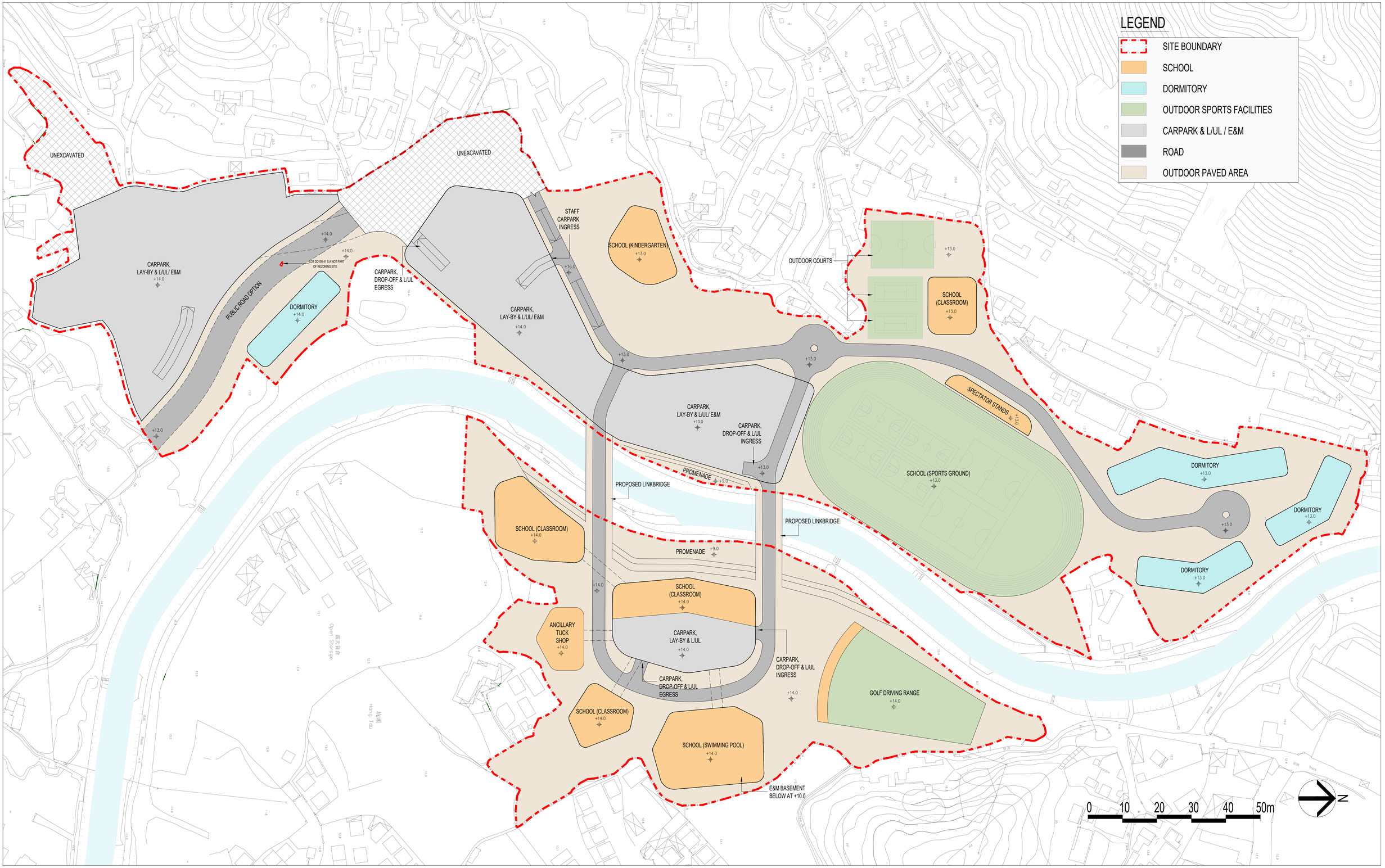
FULL PHASE –
FIRST FLOOR PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_03

Drawing Purpose



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Project Title

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GROUND FLOOR PLAN

Project No. 25018NT
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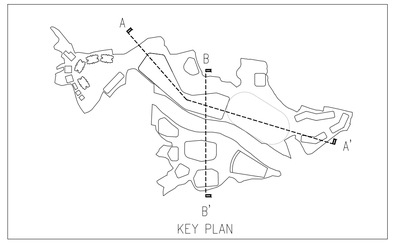
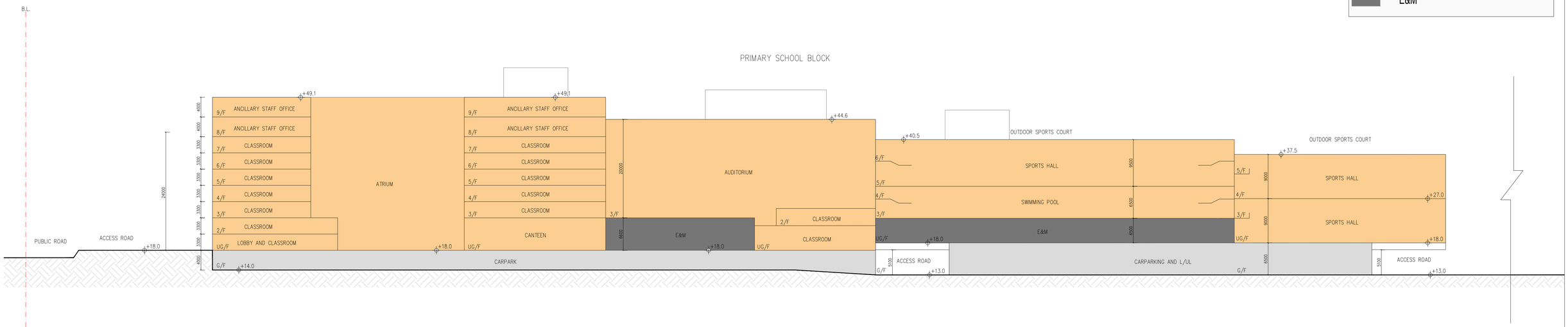


KEY PLAN

LEGEND

- SITE BOUNDARY
- SCHOOL
- DORMITORY
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



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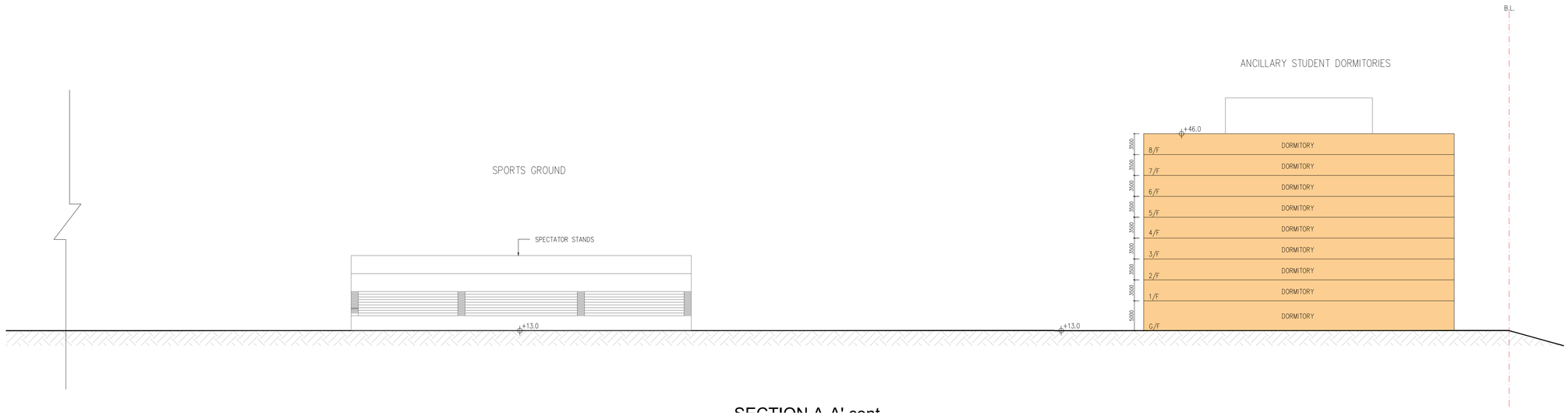

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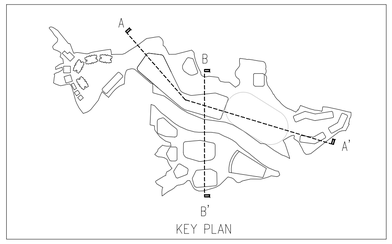

KEY PLAN

LEGEND

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- DORMITORY
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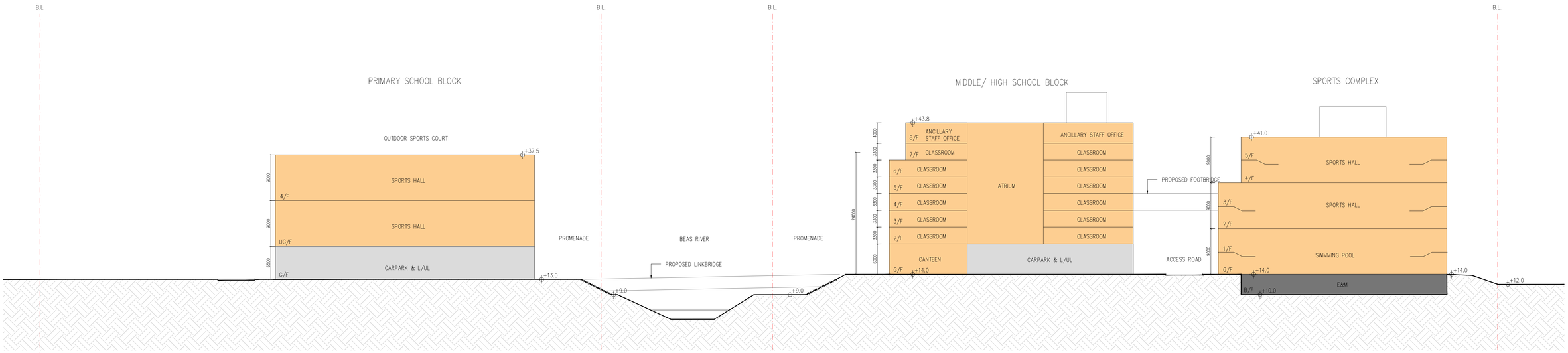
- CARPARK & L/UL
- E&M



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Project Title

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SECTION B-B

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Drawing Purpose

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Landscape Proposal

17th October 2025

Prepared By:

SCENIC Landscape Studio Limited

Project Title	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories
Report Title	**Landscape Proposal**

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H	20251017	Various	J Charters	Chris Foot	Final to Client

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1.0 Introduction

1.1 SCENIC Landscape Studio Limited have been commissioned to prepare a Landscape Proposal for a planning application for a Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories (hereafter referred to as the Application Site).

1.2 This application proposes the establishment of a new international school at Ki Lun Tsuen, strategically positioned adjacent to the emerging San Tin Technopole. The San Tin Technopole is envisioned as a critical node for the city's future growth, designed to attract local and international technology enterprises, start-ups, and research talent from across the globe. The school site has a unique setting that balances environmental serenity with accessibility to these cutting-edge industries. As the development of San Tin Technopole accelerates, the provision of a quality international school will enhance the attractiveness of San Tin as a family-friendly destination for tech professionals and contribute to the sustainable, vibrant growth of the Northern Metropolis.

1.3 This report seeks to present the landscape design proposal. It will outline the landscape design objectives and landscape treatment for each component of the proposed Development Site. This report has been prepared in accordance with Buildings Department, Lands Department and Planning Department Joint Practice Note No. 3 concerning the Re-engineering of Approval Process for Land and Building Developments and adheres to the requirements of Buildings Department Practice Notes PNAP APP-152 Sustainable Building Design Guidelines for the calculation of the green coverage.

1.4 The Landscape Master Plan is presented as **Figures 5.1 to 5.5** and sections through the landscape as **Figures 5.6** to **5. 8**.

2.0 Existing Site Description

2.1 The Application Site is located to the western side of the village of Hang Tau, Tai Po, covering an area of approximately 127,000 m^2. The overall site is an irregular, elongated shape and comprised two sections located on the eastern and western sides of the Sheung Yue River / River Beas, bounded by Hang village to the east, and Ki Lun village to the west. The site area on the western side of the river generally slopes upwards with a cross fall of an east - west incline. At the southern portion existing site levels range from approximately +20.4 down to +11.2mPD near the riverside and at the central portion from around +18.8 down to +9.9mPD. At the northern portion the slopes are less pronounced, ranging between +14.4 down to +8.8mPD. On the eastern side of the river the land is generally flatter and more low lying, with levels ranging from +11.6 down to +8.8mPD.

2.2 The majority of the site is zoned as Agriculture (AGR), with a small portion at the south-west corner zoned as Green Belt (GB). The site currently contains a mix of land uses, including small holdings, orchards and wooded areas at the higher elevated parts and agricultural fields, ponds and some overgrown areas at the lower lying parts adjacent to the river. There are several existing trees on the site, with a mix of mature, native trees notable along the river corridor, but also weed trees, and tree groups comprising both native and exotic species, including several fruit trees. These existing Landscape Resources are described at **Section 4**.

3.0 Description of the Proposed Scheme

3.1 Under the current application, the proposed International School development consists of a campus set out in functional clusters of buildings and proposed land uses along an approximately 800m long section of the meandering River Beas. Land on both sides of the river is utilized, with a primary school and sport complex forming the core of a building cluster set out along the western side of the river and a middle school and departmental school buildings forming the development on the eastern side of the river. At the northern and southern ends of the site clusters of dormitory

buildings are proposed, with the southern cluster of blocks with Max. B.H. +53.5mPD and the northern area of student and staff accommodation with B.H. +46mPD.

3.2 Road access to the site is from the western side of the river, where a new public road from the San Tin Technopole Development and the Northern Metropolis Highway is proposed. The main entrance from this external public road at the central western edge of the site leads to a north to south orientated boulevard which forms a spine road connecting all the development areas on the western bank of the river. At the central section of the site, this road joins two east to west routes forming a loop road which crosses the river at two proposed bridges. These cross-river links provide convenient connections between the main school-related facilities on either side of the river at the central section of the proposed scheme.

3.3 The central portion of the scheme includes development proposals on both sides of the river. The northern section is dedicated to outdoor sports facilities, with a sports field and a running track and a sports education area on the western side of the river and a proposed golf driving range on the eastern side. To the south of these recreational spaces the main school facilities are proposed. On the eastern side of the river middle / high school blocks (B.H. +43.8mPD, +41.0mPD, +34.5mPD, and +24.5mPD) occupy the river frontage and southern part. To the west a stepped development block (B.H. +49.1mPD, B.H. +44.6mPD, B.H. +40.5mPD -and +37.5mPD) are proposed.

3.4 The development is set back from the river edge to create a riverside park and continuous waterfront greenery, open space and pedestrian connections from north to south, through the centre of the campus. The disposition of the proposed buildings across the site includes a variety of heights and building forms, reflecting the different building typologies required for the campus area. The main development blocks on the western side of the river are set against the wooded valley side slopes, with clustering of different building typologies to create an interesting development form which responds to the surrounding terrain and meandering river frontage. The forms of several blocks also step down towards the riverside to create a more subtle transition between the existing landscape and the development proposals.

4.0 Landscape Impact Assessment

Existing Landscape Resources

4.1 There are eight Landscape Resources (LRs) within the Application Site which are potentially affected by the Proposed Scheme. **Figure 4.1** maps the LRs within the Application Site, and **Figures 4.2** to **4.5** provide photographs of these LRs.

LR1 Secondary Woodland and Tree Groups

4.2 This LR covers an area of approximately 36,000m^2 within the Application Site. LR1 is characterised by clusters of woodland, including some mature, native trees, but also weed trees, and tree groups comprising both native and exotic species, including several fruit trees. Owing to mixed composition, overall LR1 is considered to have a medium sensitivity to change.

LR2 Rivers and Streams

4.3 A small stream flows towards the Sheung Yue River at the north western periphery of the Application Site. This small stream course covers an area of approximately 1,000m^2 of the Application Site. Although following a sinuous course at some areas, the stream course appears to have been modified to facilitate agricultural use of the valley floor. The stream edges are lined by a combination of trees and shrubs. Owing to the modified nature of the watercourse LR2 is considered to have a medium sensitivity to change.

LR3 Ponds and Marshy Ground

4.4 Remnant meanders of the Sheung Yue River, associated marshy ground and agricultural irrigation ponds flank the Sheung Yue River channel at the central part of the Application Site, covering an area of approximately 12,000m^2. The agricultural ponds are well maintained, however the meanders and marshy ground appear unmanaged and overgrown, with self sown species such as *Macaranga* and *Leuceana* in evidence. Owing to the modified and overgrown nature of these waterbodies, LR3 is considered to have a medium sensitivity to change.

LR4 Open Grass Areas

4.5 This LR is located at open areas at the north and south of the site, with a combined area of approximately 22,000m^2. These areas appear to have been formed by recent vegetation clearance to create mown, grassy fields with occasional single trees. Owing to its recent, man-made origin LR4 is considered to have a medium sensitivity to change.

LR5 Scrub and Waste Ground

4.6 LR5 covers and area of approximately 14,000m^2 of the Application Site. This LR is characterised by disturbed and unmaintained, weed-infested land punctuated by occasional scrubby trees, including weed trees. Owing to its disturbed nature this area is not considered to be sensitive to change.

LR6 Agricultural Land

4.7 This LR covers an area of approximately 15,000m^2 within the Application Site. LR6 is characterised by agricultural land including orderly areas of crops such as bananas, as well as less intensively managed and overgrown areas of vegetation and orchards, all located on the fertile flood plain areas of the valley floor. Owing to the transient nature of the vegetation in such cultivated areas this LR is considered to have a medium sensitivity to change.

LR7 Workshops and Storage Yard

4.8 LR7 is located at the western side of Application Site with and area of approximately 5,000m^2. This LR is characterised by light industrial, storage and workshop concerns with a series of shed-like

structures with areas of hardstanding. These are punctuated by occasional fruit trees and self sown tree groups. Owing to its disturbed nature this area is not considered to be sensitive to change.

LR8 Houses and Small Holdings

4.9 The more elevated areas of the site include small holdings and single residences, typically shack-like buildings and associated garden areas punctuated by garden planting, fruit trees and small tree groups. This LR covers an areas of approximately 22,000m^2. Owing to the developed and sometime ramshackle nature of LR8, this area is not considered to be sensitive to change.

Landscape Impact Assessment

This section of the report describes the residual landscape impacts for the identified LRs following the implementation of the proposed landscape measures.

LR1 Secondary Woodland and Tree Groups

4.10 Approximately 35,200m^2 (98%) of this LR will be affected by the Proposed Scheme. The Master Plan for the site aims to create a riverside parkland along the river, with the opportunity to maintain some of the existing riverside trees, whilst some areas of existing trees may also be preserved at peripheral boundary areas. However the requirements for site formation to facilate the development require most of this LR to be removed at other areas of the site. This is mitigated to some extent by the fact that some of the larger native trees are located at the preserved areas at the riverside and near the site boundary.

LR2 Rivers and Streams

4.11 Approximately 1,000m^2 (100%) of this LR will be affected by the Proposed Scheme, however given the modified nature of the watercourse and the small proportion of the site this LR occupies it is considered that the impacts will not be significant.

LR3 Ponds and Marshy Ground

4.12 Approximately 12,000m^2 (100%) of this LR will be affected by the Proposed Scheme. The requirements for site formation to facilate the development require landfilling, affecting the viability of LR3. It is noted that there are some smaller ponds in the existing landscape areas to the immediate soutrh of the site. The overgrown and unmaintained nature of the existing landscape also reduces the significance of this loss to some extent.

LR4 Open Grass Areas

4.13 Approximately 22,000m^2 (100%) of this LR will be affected by the Proposed Scheme. However given the recent, manmade origins of the existing landscape and the potential to recreate this LR within the landscape of the new development the impacts are not considered to be significant.

LR5 Scrub and Waste Ground

4.14 Approximately 14,000m^2 (100%) of this LR will be affected by the Proposed Scheme. However given the disturbed nature of the existing landscape it is considered that the impacts will not be significant.

LR6 Agricultural Land

4.15 Approximately 15,000m^2 (100%) of this LR within the Application site will be affected by the Proposed Scheme. Noting the transient nature of this LR and that there are similar landscape areas to the immediate south of the site, associated with the Lohas Organic Farm, it is considered that the impacts will not be significant, after implemenation of the new landscape scheme.

LR7 Workshops and Storage Yards

4.16 Approximately 5,000m^2 (100%) of this LR will be affected by the Proposed Scheme. However given the disturbed nature of the existing landscape it is considered that the impacts will not be significant and infact may be beneficial after implemenation of the new landscape scheme.

LR8 Houses and Small Holdings

4.17 Approximately 22,000m^2 (100%) of this LR will be affected by the Proposed Scheme. However given the ramshakle nature of the existing landscape it is considered that the impacts will not be significant and infact may be beneficial after implemenation of the new landscape scheme.

4.18 The predicted impacts on the existing LR1 to LR8 within the Application Site boundary will be mitigated to an extent through the proposed planting of some 1,150 nos. new trees, approximately 28,000m^2 of shrubs and 11,000m^2 of new lawn areas within the Application Site, as illustrated on the Landscape Master Plan (**Figure 5.1**).

4.19 The existing landscape, will be replaced with a well-designed architectural scheme and its associated well-maintained landscape which emphasises the importance of maximising green coverage and creating a landscape buffer between the proposals and the surrounding village, riverside and hillside areas. This includes provision of Improved access to the riverside and creation of a continuous parkland setting for this meadering watercourse as it passes through the proposed campus area, with the preservation of existing mature, riverside trees, where feasible.

Existing Trees

4.20 A total of up to 1,300 nos. trees were identified in fifty six tree groups and 55 individual trees were surveyed within the Application Site boundary and areas immediately adjacent to the site. The Broad-brush Tree survey to capture this survey data was undertaken in August 2025. **Appendix A** - Tree Treatment Schedule provides an identification of approximate numbers of tree species within each group, an indication of their size and recommendations for the treatment of the trees and **Appendix B** –Photographic Record of existing Tree Groups provides a visual reference of the surveyed trees.

4.21 The group / broadbrush survey identifies a range of species at different parts of the site. Fruit tree species such as *Litchi chinensis*, *Artocarpus heterophyllus* and *Dimocarpus longan* are noted, particularly in association with gardens and existing small holding areas. Of the larger trees surveyed, native species including *Ficus microcarpa*, *Cinamomum camphora* and *Celtis sinensis* are identified. Exotic, decorative species of a large size are also noted in localised parts of the site, including *Corymbia citiodora, Auracaria columnaris* and *Calistemon viminalis.* There are also *Macaranga tanarius* var. *tomentosa* and the undesirable weed species *Leucaena leucocephala* in the more overgrown parts of the site.

4.22 Overall, majority of the existing trees are common, exotic and native tree species. There are no trees within the Application Site registered as Old and Valuable Trees (DEVB TC(W) No. 5/2020 Registration of Old and Valuable Trees (OVT) and Guidelines for their Preservation). However, some larger existing, native and amenity trees have been identified within the tree survey area, and these trees have been photographed individually, with survey results provided at **Appendices A** and **B.**

4.23 Some individual specimens of *Michelia x alba* (6nos.) and *Pterocarpus indicus* (4nos.) were located on site within Tree Groups TG02, TG05, TG06, TG17B, TG26, TG28, TG33, TG34 and T53. Although relatively common in Hong Kong, these species are protected under Cap.96 and Cap.586 respectively. Based on their growing location these trees appear to have been planted for amenity of other purposes.

4.24 Some of the surveyed trees within the Application Site appear to have a DBH of larger than 500mm and are potentially Trees of Particular Interest' (TPI) in accordance with para. 2.6.1 of the Guidelines for Tree Risk Assessment and Management Arrangement promulgated by DEVB. Some of these larger trees are shorter lived fruit tree species such as *Dimocarpus longan* and *Magnifiera indica*, however there are also amenity and native trees of this larger stature which are further illustrated at **Appendices A** and **B,** for reference**.**

Impacts on Existing Trees

4.25 The proposals have sought to minimise impacts on the existing trees as far as possible within the Application Site, however, owing to the proposed site formation works associated with the development scheme the majority of the existing tree groups shall need to be removed. As the majority of these trees are assessed as not being suitable for transplanting, they are recommended for felling. Some of the larger individually surveyed trees are located in the riverside area where the development proposals have been set back in order to create a riverside park. As illustrated on the landscape Master Plan at **Figure 5.1** and shown in sections on **Figure 5.5, 5.6** and **5.7**, these mature trees can therefore be preserved, where they can contribute to the future character of the campus landscape.

4.26 Whilst the majority of the up to 1,300 trees in the tree groups shall need to be removed, up to 189 nos. of these existing trees are the weed tree species (*Leucaena leucocephala)* for which compensatory tree planting is not strictly required. Taking these into consideration, up to approximately 1,150 nos. of the individually surveyed trees and trees in tree groups shall need to be removed to facilitate the development, as illustrated on the Tree recommendation Plan at **Appendix C**. New tree planting proposal shall compensate for the trees affected by the proposal with the planting of at least 1,150 nos. of good quality standard and heavy standard trees and large palms, representing a replanting ratio of **1 : 1** (new trees planted : trees felled) inside the Application Site.

4.27 At a later stage a detailed tree preservation and removal proposal and new tree planting proposal will also be submitted in accordance with DEVB TC(W) No. 04/2020 'Tree Preservation'.

5.0 Landscape Design Proposal

5.1 The concept underpinning the Landscape Master Plan for the Scheme, presented as **Figures 5.1** is to integrate the proposals within their future landscape and visual context; provide a synthesis between the proposed architecture and its landscape setting and provide high quality open space in association with the development. The proposals have sought to create an attractive and convenient outdoor landscape and open spaces and provide legible external pedestrian access and circulation whilst also maximising the planting of trees and shrubs.

5.2 The landscape design proposal is described in terms of the main design objectives, followed by a description of the key landscape components, and finally the landscape elements including the proposed hard and soft landscape, which form the palette of materials.

5.3 The design objectives for the Master Landscape Plan are to:

- Create a distinctive landscape which responds to the existing context, the architectural scheme proposals and the future resident and visitor needs;
- Integrate the proposed development from a landscape and visual perspective with the existing and planned landscape context;
- Provide visual integration in views of the proposed building mass from the surroundings and provide vegetation screening and softening of the built-form in closer low-level views;
- Provide a quality, sustainable and accessible living environment for the enjoyment of the residents and visitors;
- Provide recreation spaces for the future residents; and
  Maximise opportunities for greening measures utilising tree and shrub planting and lawn and climbing plants within the new landscape.

6.0 Open Space Proposals

6.1 Whilst the majority of the site is of an institutional nature, dormitory areas are provided for both students and staff within the overall Master Plan for the site. These components of the Proposed Scheme will be provided with adequate open space (1m^2 per person based on the predicted future dormitory population) in accordance with the requirements of the Hong Kong Planning Standards and Guidelines (HKPSG). The design of the open space is based on the objective of providing high quality active and passive recreational facilities and features that will satisfy the needs of the future students and staff occupying the dormitories.

6.2 The Proposed Scheme will include not less than 2,243 m^2 of uncovered open space in total in close proximity to the designated dormatory areas. As shown on **Figure 6.1**, since the current planned total dormitory population of the project is approximately 2,243 persons (1,400 students and 843 staff and household members), the proposals adequately satisfy the requirements for 1m^2 per person based on the predicted future population in accordance with the HKPSG.

6.3 Subject to its location, all of the open space within the Application Site boundary would be constructed, managed and maintained by the developer and relevant authorities after the completion of Defect Liability Period and Establishment Period.

7.0 Green Coverage

7.1 The green coverage for the Application Site will not be less than 30% in accordance with Buildings Department Practice Notes PNAP APP-152 Sustainable Building Design Guidelines and DEVB Technical Circular (Works) No. 3/2012. The proposals have sought to maximise the green area and tree planting opportunities. Given the future functional requirement of the Development scheme, particularly with requirements for traffic and pedestrian circulation and EVA access at ground level, it is considered that the proposal has maximized the utilisation of the available greening opportunities.

8.0 Landscape Design Components

8.1 The following description seeks to establish some general principles that are important in realising the landscape design as part of the general mitigation for the development and ensure its feasibility. As such the design of the landscape will evolve during the detailed design stage and this will be reflected in the Landscape Master Plan Submission. **Figures 5.1** to **5.4** show the Landscape Master Plan and **Figures 5.5** to **5.7** provide sections showing the character and structure of the landscape.

8.2 The landscape seeks to create an attractive external area to the development, coordinating paving and planting design for building entrances and open spaces with internal streetscape design to provide a unified contemporary appearance within a naturalistic setting to the immediate landscape surroundings. The design also aims to create a vibrant internal landscape area with attractive park and garden spaces and a range of active and passive recreational opportunities connected by a network of circulation paths. The boundary, arrival and leisure landscapes include the campus areas and the landscape and open space frameworks of the proposed development.

The Boundary Landscape

Landscape Screen Planting – Hillsides and Villages

8.3 The western and eastern edges of the site abut wooded areas and areas of existing small holdings. The proposed development is set along these margins to allow the establishment of buffer planting strips which will function to help integrate the development with its surroundings. Due to site formation requirements these buffers are mainly composed of new tree planting, typically standard and heavy standard trees, but also areas of mass woodland planting of whips where space allows. Small pockets of existing trees are also proposed to be preserved at the south western boundary and adjacent to the proposed football field at the eatern side of the site and integrated with the new buffer planting. Site formation requirements will result in some remodelling of the existing site levels although level changes at the periphery of the site will be accommodated through the use of localised graded earth slopes.

Set backs for Riverside Park

8.4 The development is set back along both sides of the river to provide space for a waterfront park. The park area is focused on the central area of the site, between the two proposed bridges. Existing riverside trees outside the site boundary and the preservation of large existing trees inside the site will contribute to a verdrant character in this proposed open space area. Although the building platform is formed at a higher level than the existing riverside, stepping and grading of this level change will help integrate the riverside areas. In the northern and southern areas the site boundary deviated from the riverside at some locations. At these areas the planting will be denser and layered in order to provide screening to adjecent lots.

The Arrival and Circulation Landscapes

8.5 The landscape design for should provide an enjoyable entrance and access experience, which can be termed the Arrival Landscape. This is a sequence of experiences as one moves through composed moments in the landscape, which include the following key areas:

Main Entrance

8.6 The planned access into the site is located at the central western part of the site, leading from a roundabout which forms part of the proposed public road outside the site. The public road will continue via a second exist at the roundabout, to provide public access to the south of the Beas River Valley. This public road will however be grade seperated from the proposed dormatory areas at the southern part of the site, forming a lower landscaped road corridor. The main entrance to the site, accessed from the roundabout, defines the address of the development and establishes its character and quality at the point of entry. It will be designed to provide an attractive entry threshold experience, incorporating feature walls and accent planting.

Central Loop Road

8.7 The Central Loop Road is the main vehicular circulation route within the site, comprising two east-west roads leading from the main north south spine road to the river bridges and then connecting on the eastern side of the river. On the western side of the river, the loop road extends below the sports complex buildings where a bus interchange is located, providing quick and convenient access major facilities at the centre of the site. On the eastern riverside the loop road encircles the middle school development, becoming the main thoroughfare at the heart of the campus. All roads would be designed with roadside footpaths and landscaping to ensure that greenery is a prominent part of the entry expeirence to the site.

River Bridges

8.8 The two bridges (north and south) crossing the river provide essential connectivity but also provide an important part of the entry experience, revealing the riverside setting and the open parkland landscape at the centre of the campus. Whilst the bridges should be low profile, they shall provide sufficient headroom to allow the riverside park to extend below. The bridges will be designed as attractive elements suited to their riverside context, with pedestrian sidewalks affording views over the campus.

Streetscape Promenade

8.9 The north south spine road leading north from the Central Loop Road and south the entrance roundabout are not through roads and so are likely to be relatively less trafficked on a day-to-day basis. As such these can be considered as shared surfaces including facilities for pedestrians and cyclists. These Streetscape Promenades would be planted with street trees and animated with attractive lighting, incidental seating spaces and visual features in order to enhance the internal street experience.

Turn around Piazzas

8.10 The turnarounds at the end of the streetscape promenades provide the vehicular drop-off for the dormitory areas of the campus. As noted, as they are likely to be relatively less trafficked on a day-to-day basis they are design as shared surfaces, with paving and tree planting providing more of a piazza-like character. This design approach would be taken at the turn around at the northern area, where the Academic's Piazza would be formed at the turn around for the Dormintory development. Similarly the Scholar's piazza would be formed at the dormitory area at the south of the site.

Pedestrian Green Connectors

8.11 The pedestrian green connectors are envisaged as vehicular free landscape corridors connecting the various elements of the open space and the streetscape promenades. These include the Elevated Link bridges at the southern area of the site and routes through the central riverside park, which provide traffic free alternative routes for pedestrian circulation of the campus.

<u>The Leisure Landscape - Primary spaces</u>

8.12 The landscape should also function as a leisure experience for students, visitors and residents, with things to see and do in the outdoor environment that provide for social interaction and brings people closer to nature. The development proposal provides opportunities for some significant open space areas largely associated with the riverside areas of the development which are fully connected by the framework of pedestrian circulation. Key aspects of the spatial planning and features of the proposed primary leisure landscape are described as follows:

Central Riverside Park

8.13 The Riverside Parkland is designed to encourage a healthy, outdoor lifestyle and forms part of an interconnected network of open space within a comprehensive landscape framework for the site. It is connected via footpaths to the other open spaces along the eastern riverside including the Central Garden Terraces to the north and the Colour Garden to the south. The design is based on a

hierarchy of activities leading from public areas such as the Central Terrace gathering space to more private, intimate areas along this tree lined river corridor.

School Block Atriums

8.14 Both the Primary School and Middle School have internal atriums with the proposed built form which will function to bring light into the internal spaces and provide flexible space at the centre of these buildings. Feature tree planting is proposed in order to enliven the spaces and provide views of greenery from surrounding classrooms.

Beas River Walk

8.15 The course of the Sheung Yue River / River Beas flows through the centre of the Application Site creating an attractive landscape feature. The Proposed Scheme incorporates setbacks from the banks of the river which can also be utilised as part of the proposed recreational framework. This river corridor area will include preserved mature trees interspersed with more open meadow like areas connected by a winding, low-key foot path with the occasional seating benches, where student can enjoy the beauty of the riverside.

Gateway Plaza

8.16 Next to the main entrance to the site a plaza space is envisaged, in association with the primary school building. The plaza would serve as a key social and gathering space at the centre of the development as part of the life of the future campus.

Central Sports Arena

8.17 The sports arena is located on western side of the campus, with an adjacent Golf Driving range on the eastern side provide a complimentary open space facility. The main arena, has sports courts, and grassy exercise contained by a perimeter running track, providing a recreational centre piece to the development. This large open space may also serves as a venue for community functions, Sunday markets, festivities and events organized by the school. The lawn areas provide flexible spaces for the relaxation of student, impromptu family occasions including picnics, sporting activities and community events. In addition to the main sports pitch and running track the peripheral areas provide activities including sports courts, outdoor gym, children's play areas, and informal sitting-out areas.

School Compound Landscapes

8.18 The school buidlings for kindergarten, primary and middle school aged students are located at the central portions of the site. Whilst the campus is design as open and connected, some degree of seperation is required at the school premises for security and management purposes. Each school would be designed as gated compound with soft landscape to soften the building margins. Connections to riverside and garden outdooor learning spaces would however be provided to support the educational related spaces within each school compound.

<u>The Leisure Landscape - Secondary spaces</u>

8.19 The leisure landscape also extends to smaller everyday spaces and local pocket gardens which function to enrich the landscape experience within areas of the campus. These include the following:

Pocket Gardens

8.20 Configured as outdoor rooms these smaller, incidental open spaces are located strategically throughout the Application Site. The spaces will include seating which utilises a combination of tree planting and small trellis structures to provide for the thermal comfort of open space users.

Children's Play Areas

8.21 Incidental children's play areas are located at decks throughout the Application Site and a larger facility is located adjacent to the student shop, providing a range of play equipment for various

age groups. These facilities are set within a landscape framework of trees and shrubs, whilst ample seating and gathering areas would be provided in order to encourage a lively, participatory atmosphere.

Exercise Garden

8.22 The fitness corner is located to the west of the southern student dormitory and provides an enclosed space with a short jogging circuit and fitness stations located within the ribbon like corridor adjacent to the western boundary of the Application Site. The proposed jogging trail extends around a central lawn and provides a secure and monitorable environment for student use.

Tranquillity Garden

8.23 Located at the northern end of the Riverside, the Tranquillity Garden provides contemporary space for personal quietude and activities such as yoga and ti-chi. The open lawn and riverside deck area are surrounded by calming tree and shrub planting creating a quiter spot overlooking the river.

Nature Garden

8.24 The Nature garden is situated on the eastern riverside adjacent to the proposed golf driving range. The garden comprises of an area of native tree and shrub planting forming a Nature Walk along an organically shaped footpath through the buffer planting surrounding the golfing facility.

Blossom Walk

8.25 The blossom walk provides a landscape garden running parrallel to the Central Loop Road along at the central portion of the western side of the Application Site. It is envisaged that broad swathes of flowering shrubs would provide a bold design statement which evolves through the year with seasonally flowering species.

Art and Performance Garden

8.26 Located adjacent to the southern riverside this secluded space would provide outdoor performance and exhibition space for the art and music school which could alos provide a setting for outdoor classes and learning exhibits.

Discovery Sculpture Garden

8.27 Located in the south eastern portion of the Application Site this space will be configured as a series of small outdoor rooms which provide a setting for sculptures and learning exhibits to support the function of the nearby innovation and science building. The footpath network and the adjacent tree planting provide a stage for the sculptures which will be strategically placed to create focal points for student discovery and wonder.

Colour Garden

8.28 The colour garden is located at the terraced landscape area on the south-eastern side of the riverside park. The landscape proposals for this area include the planting of flowering shrub species which provide an all year round effect with different species flowering at different times of the year and providing visual interest when viewed from the main areas of the park on the western riverside.

9.0 Landscape Design Elements

Soft Landscape Design Approach

9.1 The basis for the proposed planting scheme would be to provide a green and comfortable environment for the future resident's recreational needs. Shade trees with a dense canopy and flowering shrubs in addition to the use of hard landscape treatments would be used to emphasise the character of each of the landscape spaces described above. The spaces will be characterised by the use of tree, shrub and groundcover species selected to provide a lush landscaped area whilst responding to the character of the architecture that embraces it.

9.2 These soft landscape measures will ensure that the hard lines of the built form are visually softened in views from without the proposed development and in elevated views from surrounding hillside areas. The tree planting is designed to create a sense of enclosure, provide a human scale and enhance thermal comfort. In order to achieve this objective at an early stage large sized trees will be used.

9.3 The planting design will contribute to the overall character of the proposed development providing colour throughout the year with seasonal variations providing an evolving tableau. This will be achieved through the selection of species with an interesting form, colour and texture of their foliage and through the use of flowering species to provide accent highlights.

9.4 The species listed in **Table 9.1** will form the basis of the planting design proposals (planting list subject to the detailed landscape design proposals).

Table 9.1: Planting Species for Amenity Planting Areas

Botanical Name	Stock Size / Size (mm)	Spacing (mm)
Tree Species		
Acronychia pedunculata	Heavy standard	As shown (min 4m centres)
Alangium chinense	Heavy standard	As shown (min 4m centres)
Alstonia scholaris	Heavy standard	As shown (min 4m centres)
Bauhinia blakeana	Heavy standard	As shown (min 4m centres)
Bischofia javanica	Heavy standard	As shown (min 4m centres)
Celtis sinensis	Heavy standard	As shown (min 4m centres)
Cinnamomum burmannii	Heavy standard	As shown (min 4m centres)
Cinnamomum camphora	Heavy standard	As shown (min 4m centres)
Cratoxylum cochinchinense	Heavy standard	As shown (min 4m centres)
Creteva unilocularis	Heavy standard	As shown (min 4m centres)
Liquidambar formosana	Heavy standard	As shown (min 4m centres)
Litsea glutinosa	Heavy standard	As shown (min 4m centres)
Magnolia × soulangeana	Heavy standard	As shown (min 4m centres)
Mallotus paniculatus	Heavy standard	As shown (min 4m centres)
Michelia alba	Heavy standard	As shown (min 4m centres)
Melia azadarach	Heavy standard	As shown (min 4m centres)
Melaleuca cajuputi subsp. Cumingianaas	Heavy standard	At the same centres as the existing street trees
Phyllanthus emblica	Heavy standard	As shown (min 4m centres)
Plumeria rubra	Heavy standard	As shown (min 4m centres)
Schefflera heptaphylla	Heavy standard	As shown (min 4m centres)

Botanical Name	Stock Size / Size (mm)	Spacing (mm)
Spathodea campanulata	Heavy standard	As shown (min 4m centres)
Syzygium levinei	Heavy standard	As shown (min 4m centres)
Tabebuia chrysotricha	Heavy standard	As shown (min 4m centres)
Washingtonia robusta	Large palm	As shown (min 4m centres)
Shrub Species		
Bougainvillea sp. 'Mary Palmer'	600 x 600	500
Cordyline terminalis	700 x 500	400
Duranta repens 'Golden Leaves'	300 x 300	250
Ficus microcarpa 'Golden Leaves'	500 x 500	400
Hibiscus rosa sinensis	500 x 500	400
Ixora coccinea 'Sunkist'	250 x 250	200
Pittosporum tobira	600 x 500	400
Rhaphis excelsa	600 x 500	400
Rhododendron mucronatum	300 x 300	200
Rhododendron pulchrum	300 x 300	200
Rhododendron simsii	300 x 300	200
Schefflera arboricola	600 x 600	500
Strelitzia reginae	600 x 600	500
Groundcover Species		
Asparagus densiflorus 'Sprengeri'	300 x 300	250
Cuphea hyssopifolia	250 x 300	250
Hymenocallis americana	300 x 500	400
Iris spp.	150 x 150	100
Lantana montevidensis	300 x 300	200
Nephrolepis exaltata	250 x 400	250
Ophiopogon japonicus	250 x 300	200
Philodendron selloum	700 x 700	500
Phyllanthus myrtifolius	300 x 300	250
Scindapsus aureus	300 x 300	250
Spathiphyllum floribundum	400 x 400	300
Bamboo		
Bambusa textilis	2000-3000 Ht.	250
Pseudosasa japonica	1000-2000 Ht.	250
Lawn		
Axonopus compressus		

Note: The plant species listed above provide an indication of the future character of the proposed landscape areas however the design will be subject to review during the detailed design stage of the project. These changes will be reflected in the Landscape Master Plan Submission.

Soil Depth for Planting Areas

9.5 In order to ensure that the planting proposals are feasible, it is proposed that an adequate planting medium be incorporated into the design of the soft landscape areas. All planting areas allow a minimum soil depth of 1200mm facilitating the planting of trees whilst shrub and lawn areas will incorporate a minimum soil depth of 600mm and 300mm respectively, as illustrated in **Figure 9.1**.

Irrigation and Drainage

9.6 The proposed irrigation system will utilise a manual system with lockable water points at 40m centres throughout the entire site. The proposed source of water supply will be subject to final approval from the Water Services Department. Sub-soil drainage shall be provided for all planting areas with a cellular drainage system such as "Mira-drain" or an approved equivalent.

Feature Paving

9.7 The paving will be an important element of the landscape design both in terms of its aesthetic appearance and in terms of producing a hardwearing landscape for usage by the future users. The design of the proposed paving will highlight entrance areas and major pedestrian routes through the site providing a hierarchy for pedestrian movement and help to define the spatial configuration of the landscape. It would be constructed of quality materials in feature patterns creating a distinct identity for each of the key landscape zones responding to the architectural design and function of each. Colour changes within the patterns would be used to break the linearity of the spaces and establish a theme across the development.

9.8 The use of a similar material palette for the vehicular and pedestrian areas is designed to blur the distinction between the two and create the appearance of a shared surface.

9.9 Non-slip paving materials will be utilised throughout the site and the proposed finishes and materials are summarized below:

- Internal access roads, EVA and pedestrian pavements: Subtle shades of natural granite and concrete pavers designed to create visual continuity with the adjacent pedestrian pavement whilst also creating a distinct identity at the threshold of the development.

- Riverside Park and Gardens: Combination of natural granite, homogeneous tile and concrete paving using both formal paving and naturalistic paving for the horizontal surfaces building on the design theme for the architectural and landscape schemes.

9.10 Wherever possible all landscape areas will cater for multiple use needs including people with impaired ability and access for the disabled in accordance with Building Department's Design Manual on 'Barrier Free Access (DMBFA), 2008'.

Lighting

9.11 The lighting design concept for the landscaped areas should be designed to contribute to the quality of the development in nocturnal views providing an aesthetically pleasing landscape through the highlighting of landscape elements. All of the landscape areas will be provided with sufficient illumination to meet the required lighting standards, particularly for the entrance areas and pedestrian access paths. The lighting concept will include three types of lighting which are as follows:

- Amenity lighting highlighting feature trees, walls, sculptures and planting through the use of spotlights and up-lighting;

- Area lighting involving the use of low-level lighting sources such as lighting bollards and recessed wall lights for sitting areas and main landscape spaces designed to avoid glare / light spillage to adjacent properties; and

- General safety lighting with the minimum lux level which will last between midnight and early morning.

Site Furniture

9.12 The landscape design would include the provision of site furniture including seating, which in addition to its functional attributes would also contribute to the perceived quality of the landscape.

Safety Requirements

9.13 All outdoor facilities (e.g. water feature) will be designed, constructed and operated in full compliance with relevant safety standards and guidelines.

10.0 Landscape Management and Maintenance

10.1 Upon completion of the construction works, a 12-months defect liability period will be implemented applying to both the hard and soft landscaping works. The specialist hard and soft landscape contractors will be responsible for the maintenance of planting during this first year. Ultimately the property owner will be responsible for arrangements to take care of all landscape areas including hard and soft landscape works as described below:

Hard Landscape Elements

A - Routine Maintenance (Daily – Weekly)

a. Rubbish and litter removal;
b. Sweeping and cleaning;
c. Water feature cleaning; and
d. Damage inspection, repair of site furniture and light bulb replacement.

B – Annual / Long-term Maintenance

a. Repainting;
b. Resurfacing of worn paving;
c. Replacing worn parts of site furniture, lighting fixtures and other facilities; and
d. Replacement of damaged landscape furniture.

Soft Landscape Elements

10.2 Similarly the softworks contractor will be responsible for a 12-month Establishment Period (EP) for the planting after practical completion. This allows a period of time for proper establishment of the plants and the replacement of any losses. Table 10.1 (overleaf) provides the maintenance schedule for the soft landscape.

10.3 At the end of the 12-month DLP / EP, subject to the location of the landscape will be managed and maintained by relevant authorities and/or private property owners. This includes general tree care and proper tree maintenance in accordance with relevant guidelines promulgated by DEVB.

Tree Risk Assessment

10.4 A tree risk assessment for the target area shall be conducted annually in accordance with the 'Handbook on Tree Management' promulgated by the GLTM Section of DEVB.

Table 10.1 Landscape Maintenance Schedule

Item	Maintenance Operation	Frequency	J	F	M	A	M	J	J	A	S	O	N	D
1.1	Watering	280 days	■	■	■	■	■	■	■	■	■	■	■	■
1.2	Litter Collection	Daily	■	■	■	■	■	■	■	■	■	■	■	■
1.3	Weed Control	16/ year	■	■	■	■	■	■	■	■	■	■	■	■
1.4	Pruning of Shrubs	As required	■	■	■	■	■	■	■	■	■	■	■	■
1.5	Pruning of Trees	As required	■	■	■	■	■	■	■	■	■	■	■	■
1.6	Fertiliser Application	Twice/year			■						■			
1.7	Top-up Mulch	Twice/year			■						■			
1.8	Pest Control	As required	■	■	■	■	■	■	■	■	■	■	■	■
1.9	Replacement planting - Permanent planters	As required	■	■	■	■	■	■	■	■	■	■	■	■
1.10	Tree Support Inspection/ Adjustment	Once/month	■	■	■	■	■	■	■	■	■	■	■	■
1.11	Checking After Exceptional Weather	As required	■	■	■	■	■	■	■	■	■	■	■	■
1.12	Grass Cutting	14 times / year	■	■	■	■	■	■	■	■	■	■	■	■
1.13	Periodic Inspection by User and Horticultural Maintenance Contractor is recommended	Four/year				■		■		■			■	
1.14	Tree Risk Assessment in accordance with DEVB methodology	Once/year				■								

Landscape Figures

PROJECT TITLE	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories		
		SCALE	1:2500 @ A3
		DATE	15/10/2025
		CHECKED	JBC
		DRAWN	JH
LANDSCAPE RESOURCES		DRAWING NO	HLDP071-Figure 4.1
		REV	B

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LR1
Secondary Woodland and Tree Groups

LR1
Secondary Woodland and Tree Groups

LR2
Rivers and Streams

LR2
Rivers and Streams

PROJECT TITLE	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories	SCALE	1:1200 @ A3	DATE 15/10/2025
		CHECKED	JBC	DRAWN DN
LANDSCAPE RESOURCES PHOTOGRAPHS		DRAWING NO	HLDP071-Figure 4.2	REV -

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LR3
Ponds and Marshy Ground

LR3
Ponds and Marshy Ground

LR4
Open Grass Areas

LR4
Open Grass Areas

PROJECT TITLE	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories	SCALE	1:1200 @ A3	DATE 15/10/2025
		CHECKED	JBC	DRAWN DN
LANDSCAPE RESOURCES PHOTOGRAPHS		DRAWING NO	HLDP071-Figure 4.3	REV -

SCENIC landscape studio limited
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Sheung Wan, Hong Kong
Telephone: +852 2468 2422 Fax: +852 3016 2422
Email: scenic@studioscenic.com

LR5
Scrub and Waste Ground

LR5
Scrub and Waste Ground

LR6
Agricultural Land

LR6
Agricultural Land

PROJECT TITLE	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories	SCALE	1:1200 @ A3	DATE 15/10/2025
		CHECKED	JBC	DRAWN DN
LANDSCAPE RESOURCES PHOTOGRAPHS		DRAWING NO	HLDP071-Figure 4.4	REV -

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Email: scenic@studioscenic.com

LR7
Workshops and Storage Yards

LR7
Workshops and Storage Yards

LR8
Houses and Small Holdings

LR8
Houses and Small Holdings

PROJECT TITLE	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories	SCALE	1:1200 @ A3	DATE 15/10/2025
		CHECKED	JBC	DRAWN DN
LANDSCAPE RESOURCES PHOTOGRAPHS		DRAWING NO	HLDP071-Figure 4.5	REV -

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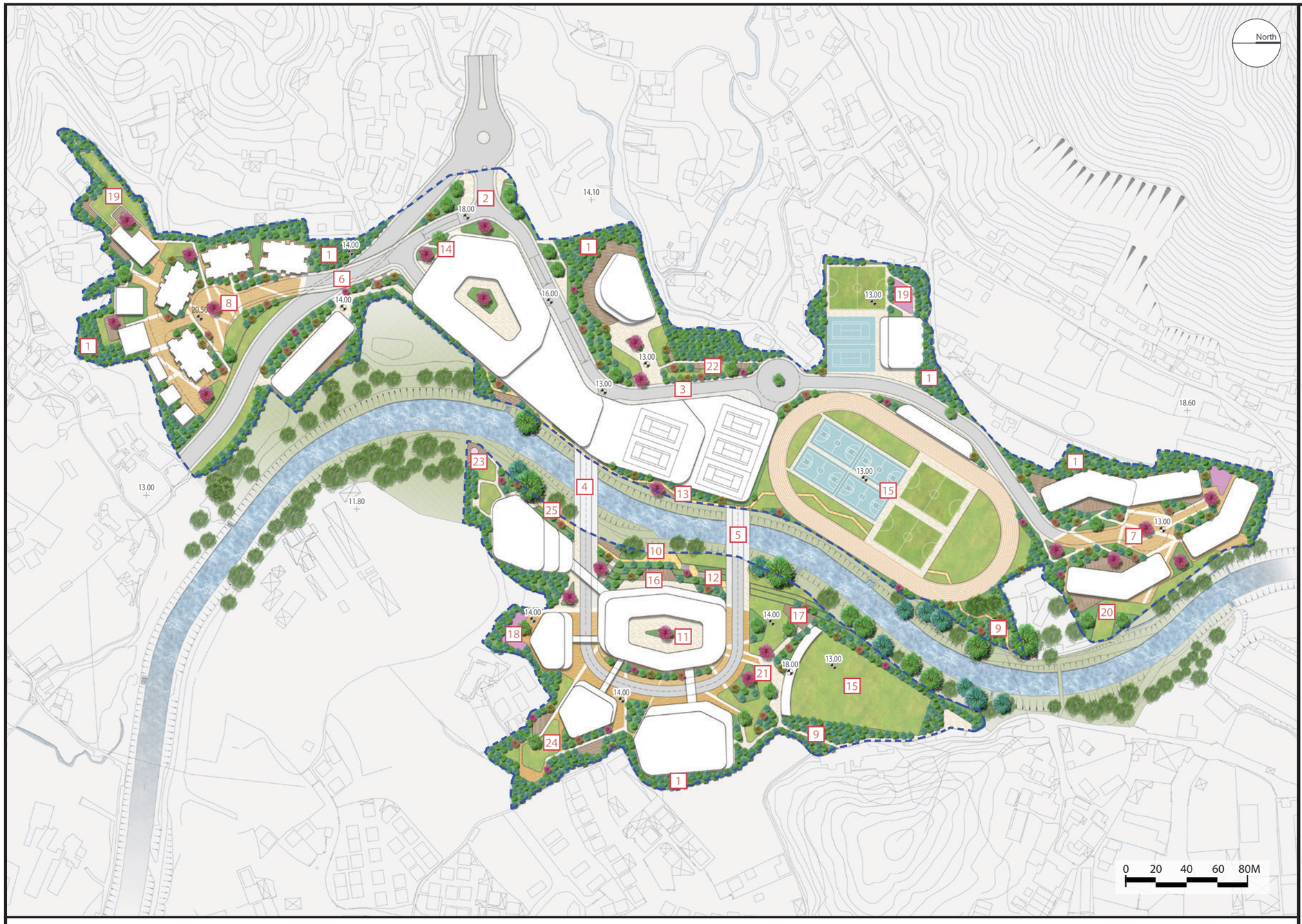

LEGEND

- Application Site Boundary
- xx.xx — Existing Levels
- xx.xx — Proposed Levels
- Proposed Architectural Scheme
- Proposed New Tree Planting
- Proposed Retained Trees
- Proposed Feature Tree Planting
- Proposed Lawn
- Proposed Paving
- Proposed Timber Deck

LANDSCAPE COMPONENTS

1. Landscape Screen Planting
2. Main Entrances
3. Central Loop Road
4. South Bridge
5. North Bridge
6. Streetscape Promenade
7. Academic's Plazza
8. Scholar's Plazza
9. Pedestrian Green Connector
10. Central Riverside Park
11. School Block Atriums
12. Central Garden Terraces
13. Besa River Walk
14. Gateway Plaza
15. Central Sports Arena
16. School Compound Landscape
17. Pocket Gardens
18. Children's Play Areas
19. Exercise Garden
20. Tranquillity Garden
21. Natural Garden
22. Blossom Walk
23. Art and Performance Garden
24. Discovery Sculpture Garden
25. Colour Garden

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Landscape Master Plan - All Areas

SCALE	A.S.	DATE	SEP 2025
CHECKED	JBC	DRAWN	DN/JH
FIGURE NO.	Figure 5.1	REV	A

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Facsimile: 3016 2422
Website: scenic@studioscenic.com

LEGEND

- Application Site Boundary
- xx.xx Existing Levels
- xx.xx Proposed Levels
- Proposed Architectural Scheme
- Proposed New Tree Planting
- Proposed Retained Trees
- Proposed Feature Tree Planting
- Proposed Lawn
- Proposed Paving
- Proposed Timber Deck

LANDSCAPE COMPONENTS

1. Landscape Screen Planting
2. Main Entrances
3. Central Loop Road
4. South Bridge
5. North Bridge
6. Streetscape Promenade
9. Pedestrian Green Connector
10. Central Riverside Park
11. School Block Atriums
12. Central Garden Terraces
13. Besa River Walk
14. Gateway Plaza
15. Central Sports Arena
17. Pocket Gardens
18. Children's Play Areas
21. Natural Garden
22. Blossom Walk
23. Art and Performance Garden
24. Discovery Sculpture Garden
25. Colour Garden

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Landscape Master Plan - Enlargement (Central)

SCALE	A.S.	DATE	SEP 2025
CHECKED	JBC	DRAWN	DN/JH
FIGURE NO.	Figure 5.2	REV	A

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LEGEND

- Application Site Boundary
- xx.xx Existing Levels
- xx.xx Proposed Levels
- Proposed Architectural Scheme
- Proposed New Tree Planting
- Proposed Retained Trees
- Proposed Feature Tree Planting
- Proposed Lawn
- Proposed Paving
- Proposed Timber Deck

LANDSCAPE COMPONENTS

1. Landscape Screen Planting
3. Central Loop Road
5. North Bridge
7. Academic's Plazza
9. Pedestrian Green Connector
12. Central Garden Terraces
15. Central Sports Arena
17. Pocket Gardens
19. Exercise Garden
20. Tranquillity Garden
21. Natural Garden
22. Blossom Walk

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Landscape Master Plan - Enlargement (North)

SCALE	A.S.	DATE	SEP 2025
CHECKED	JBC	DRAWN	DN/JH
FIGURE NO.	Figure 5.3	REV	A

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LEGEND

- Application Site Boundary
- xx.xx Existing Levels
- xx.xx Proposed Levels
- Proposed Architectural Scheme
- Proposed New Tree Planting
- Proposed Retained Trees
- Proposed Feature Tree Planting
- Proposed Lawn
- Proposed Paving
- Proposed Timber Deck

LANDSCAPE COMPONENTS

1. Landscape Screen Planting
2. Main Entrances
4. South Bridge
6. Streetscape Promenade
8. Scholar's Plazza
14. Gateway Plaza
18. Children's Play Areas
19. Exercise Garden
23. Art and Performance Garden
24. Discovery Sculpture Garden
25. Colour Garden

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Landscape Master Plan - Enlargement (South)

SCALE	A.S.	DATE	SEP 2025
CHECKED	JBC	DRAWN	DN/JH
FIGURE NO.	Figure 5.4	REV	A

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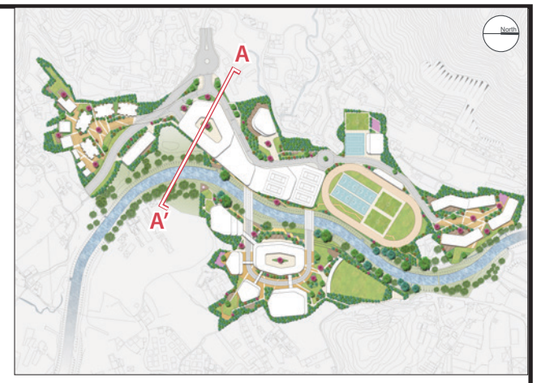
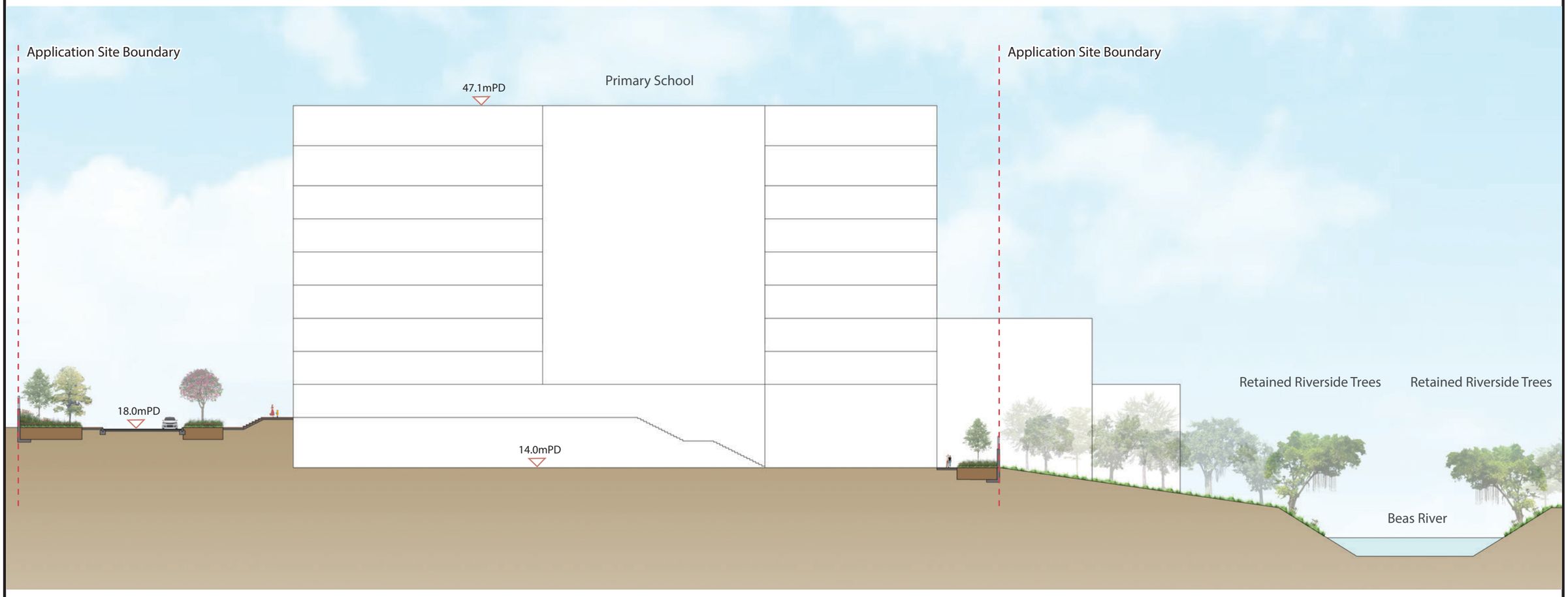
Website: scenic@studioscenic.com





Section A-A'

0 5 10 15 20M

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Landscape Section A-A'

SCALE	A.S.	DATE	SEP 2025
CHECKED	JBC	DRAWN	DN/ JH
FIGURE NO.	Figure 5.5	REV	A

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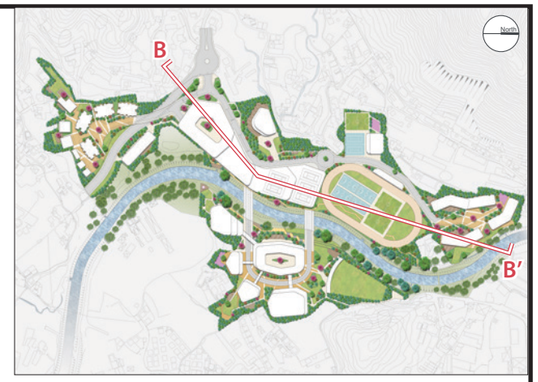

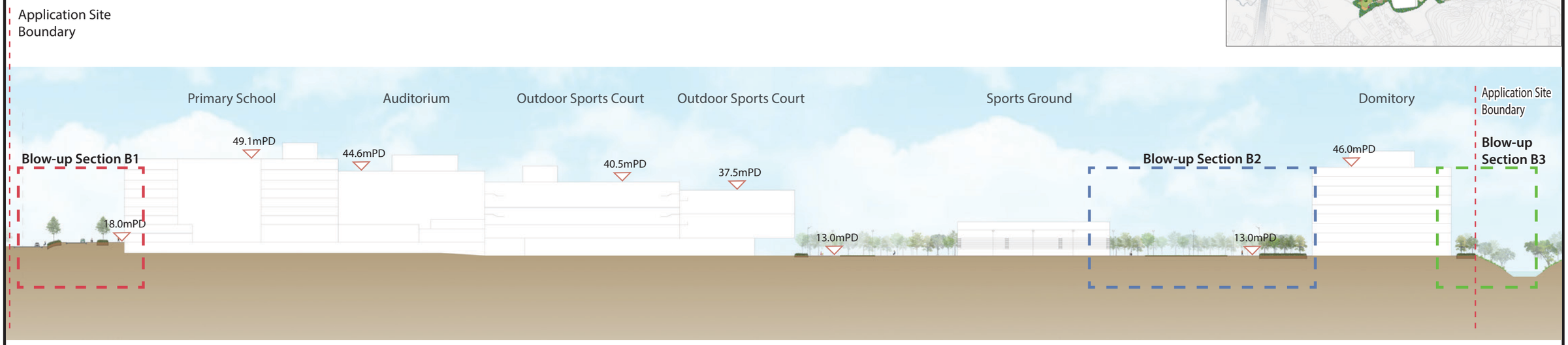

Section B-B'

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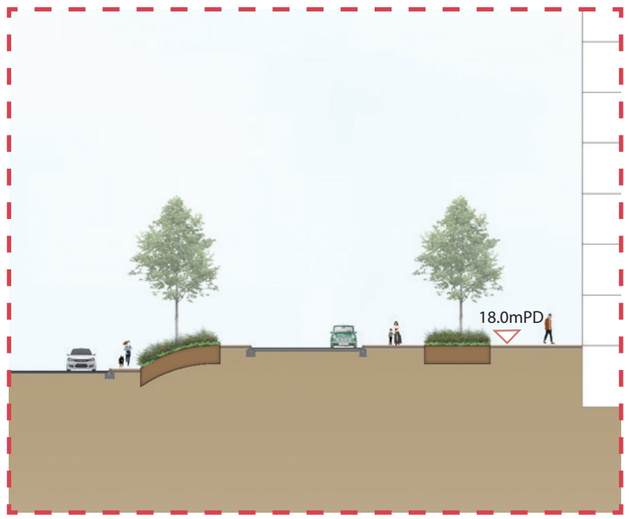
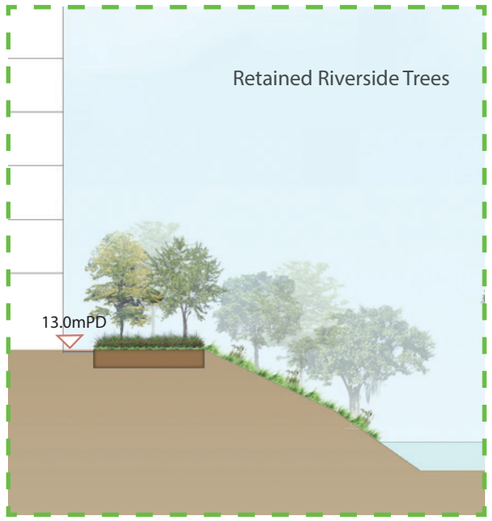


Section B1

0 4 8 12 16M

Section B2

0 4 8 12 16M



Section B3

0 4 8 12 16M

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Landscape Section B-B'

SCALE	A.S.	DATE	SEP 2025
CHECKED	JBC	DRAWN	DN/ JH

FIGURE NO. Figure 5.6

REV B

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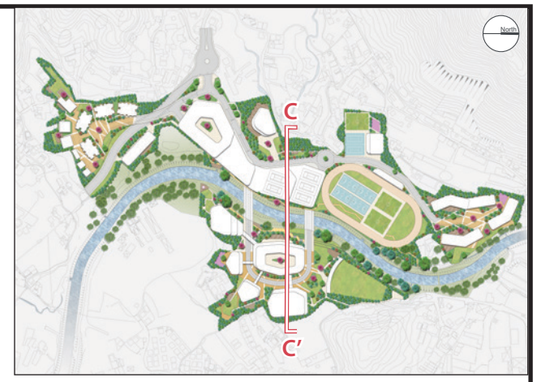
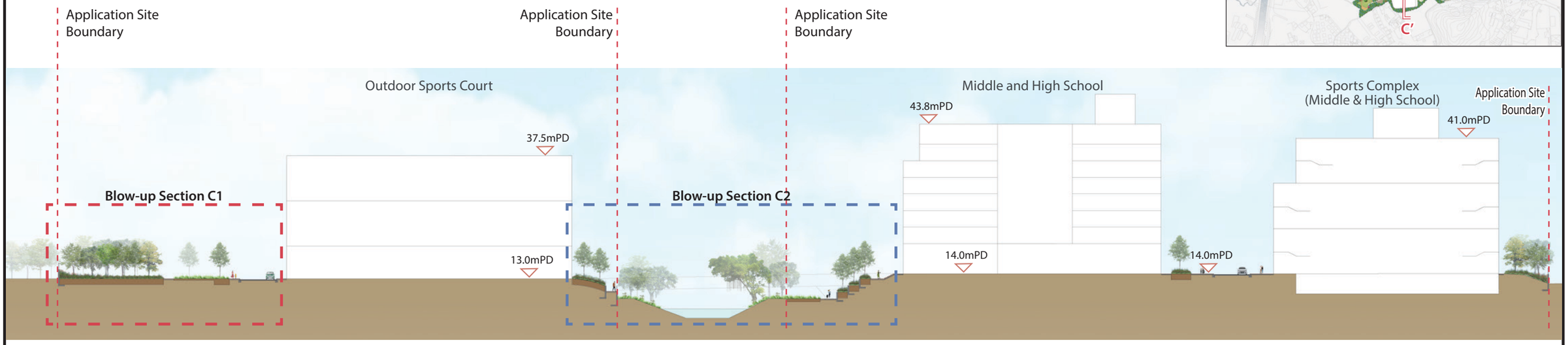
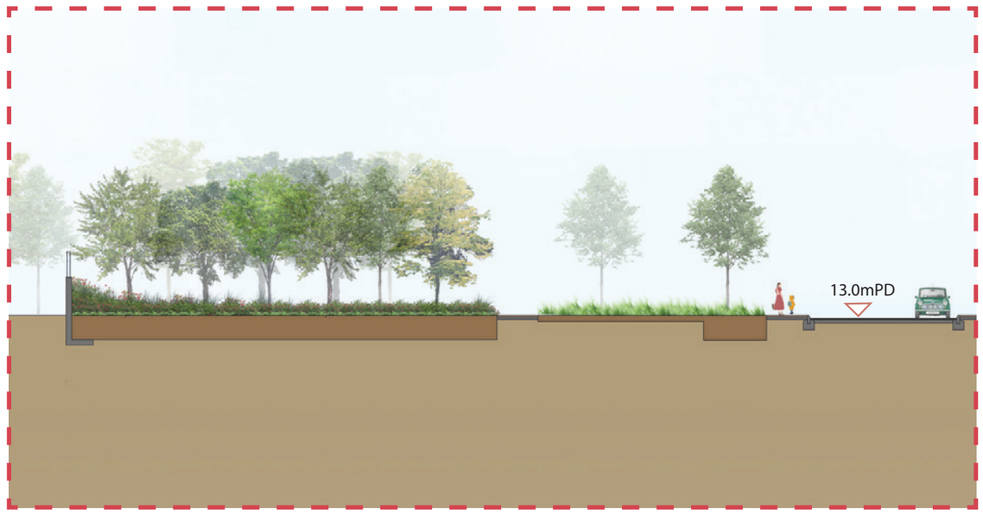




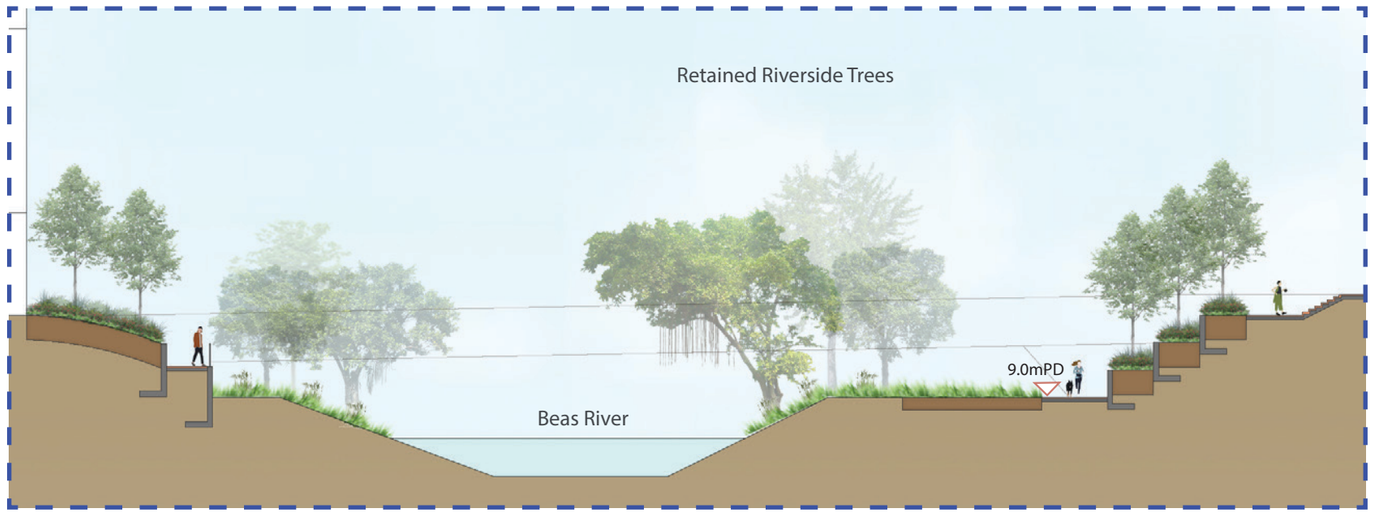
Section C-C'

0 10 15 20 25M



Section C1

0 3 6 9 12M



Section C2

0 3 6 9 12M

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Landscape Section C-C'

SCALE	A.S.	DATE	SEP 2025
CHECKED	JBC	DRAWN	DN/ JH
FIGURE NO. Figure 5.7		REV	B

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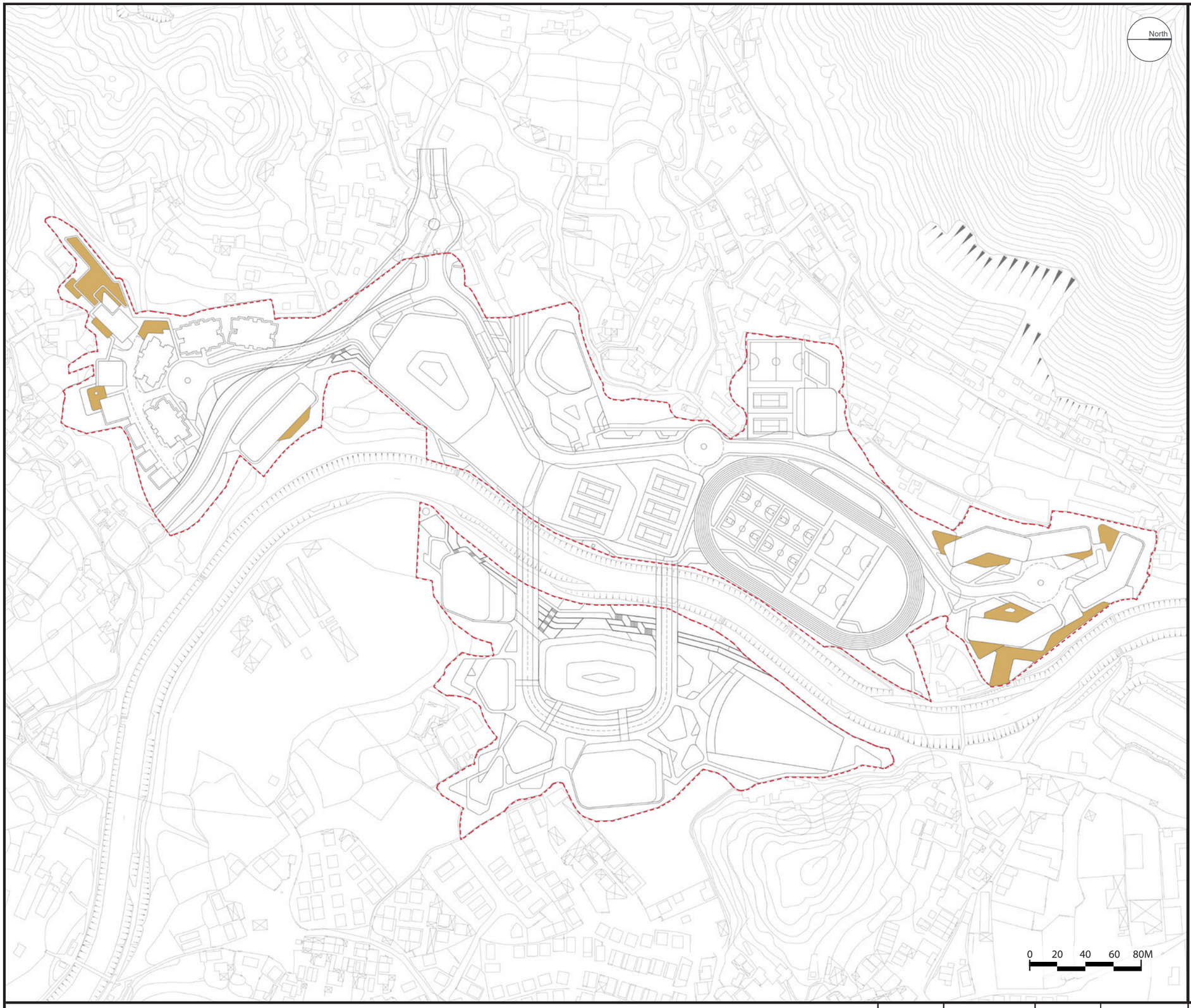

LEGEND

Application Site Boundary

Private Open Space
(Passive Use)

Private Open Space:

Application Site
not less than 2,243 m²

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Open Space – All Areas

SCALE	A.S.	DATE	Oct 2025
CHECKED	JBC	DRAWN	DN / JH
FIGURE NO.	Figure 6.1	REV	C

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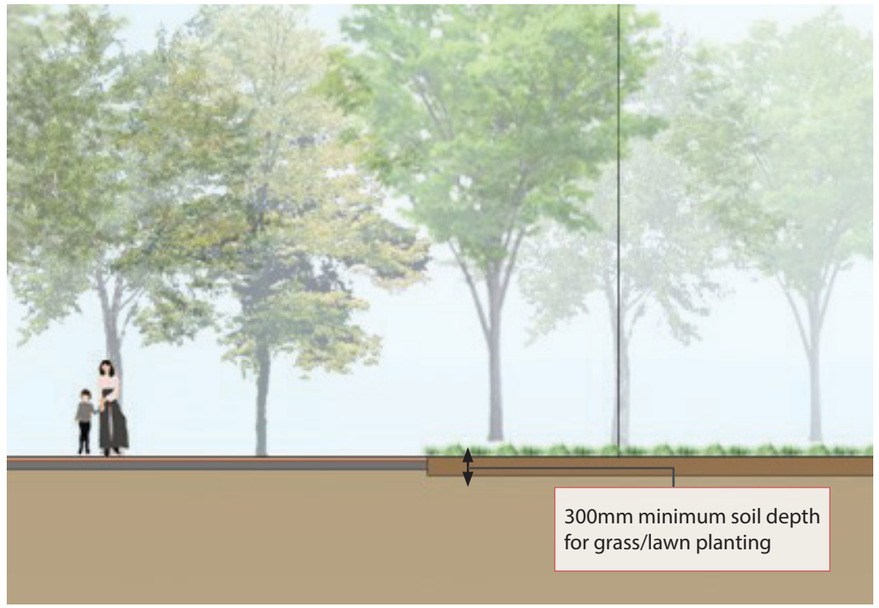
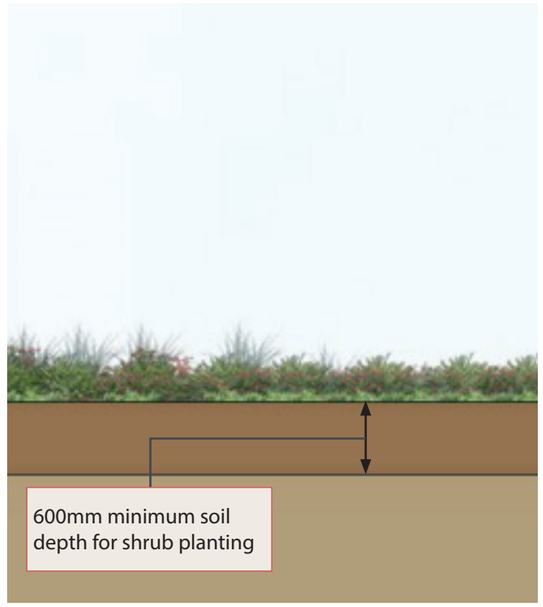
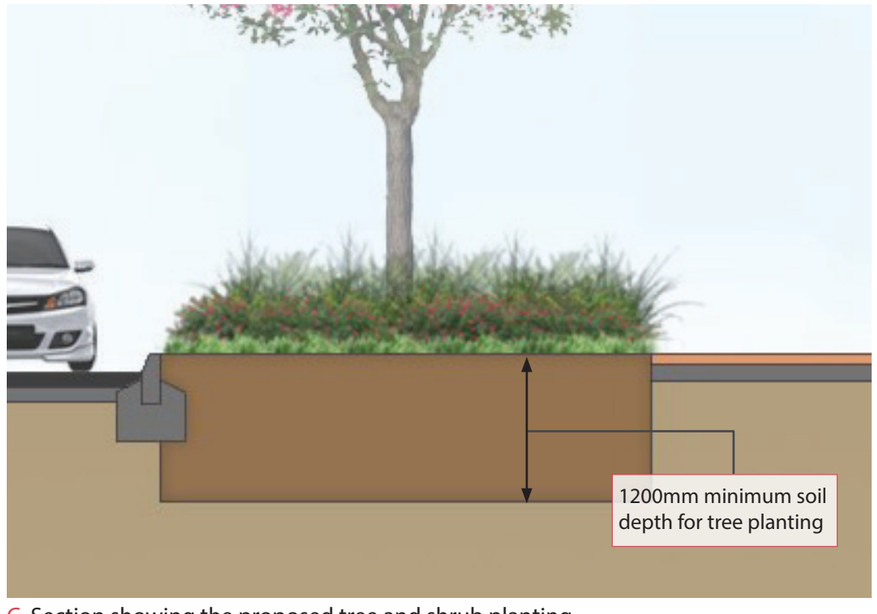


A. Section showing the proposed grass/lawn planting



B. Section showing the proposed shrub planting



C. Section showing the proposed tree and shrub planting

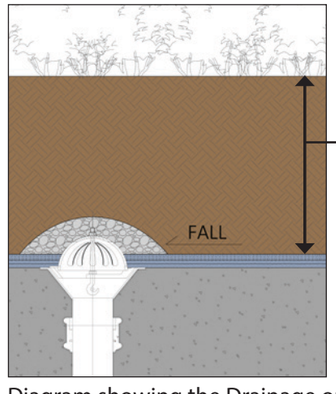
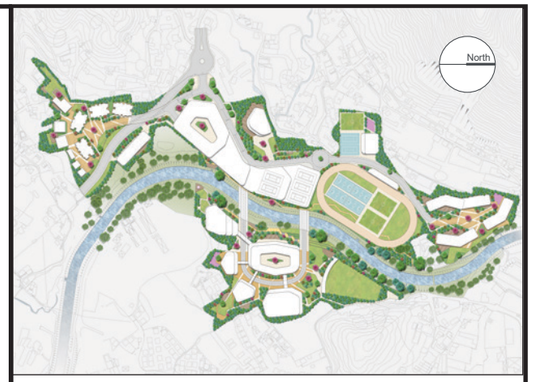


Diagram showing the Drainage outlet detail



LEGEND

- xx.xx — Typical Levels
- Soil Mix
- Planter Drainage Outlet to Engineering's Details
- Drainage Cell / Screed Laid to Falls
- Gravel Covered with Geotextile at Drain Outlet

Note:

- All soil depths stated exclude drainage layer.
- Yellow and light grey granite finishes for the planter walls and coping.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Typical Section showing Soil Depth

SCALE	A.S.	DATE	SEP 2025
CHECKED	JBC	DRAWN	DN/JH
FIGURE NO.	Figure 9.1	REV	-

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Appendix A: Tree Treatment Schedule

Tree Group Treatment Schedule

Address: Hang Tau Tai Po, Kwu Tung South
Prepared by Ray Luk, Certified arborist (Certification Number: HK-0662A)
Field Survey conducted in: August 2025
To be read in conjunction with drawing number: HLDP071-LP-001 to 003

Tree Group No.	Species		Estimated Numbers of Trees in Group	Tree Size			Proposed Treatment			Justification	Remarks (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
	Scientific Name	Chinese Name		DBH (m)	Height (m)	Spread (m)	Retain	Trans	Remove		
Tree Group TG01 (12 nos. of trees)											
TG01	*Leucaena leucocephala*	銀合歡	3	100-150	6-7	4-5			12	A,B,C,E,H,K	
	Artocarpus heterophyllus	菠蘿蜜	2	120	5	3					
	Mangifera indica	杧果	1	450	9	12					
	Dimocarpus longan	龍眼	1	300	8	8					
	Litchi chinensis	荔枝	1	200	7	5					
	Eriobotrya japonica	枇杷	1	200	7	6					
	Sterculia monosperma	蘋婆	1	150	6	6					
	Averrhoa carambola	楊桃	1	150	6	5					
	Clausena lansium	黃皮	1	100	4	3					
Tree Group TG02 (1 no. of trees)											
TG02	*Magnolia x alba*	白蘭	1	350	7	5			1	A,B,E,K	Cap.96
Tree Group TG03A (28 nos. of trees)											
TG03A	*Ficus hispida*	對葉榕	2	100-130	4-5	2-3			28	A,B,C,E,H	
	Celtis sinensis	朴樹	2	100-150	6	3					
	Ficus microcarpa	細葉榕	11	200-250	6	8					
	Leucaena leucocephala	銀合歡	12	100-150	6-7	4-5					
	Macaranga tanarius	血桐	1	150	5	5					
Tree Group TG03B (4-5 nos. of trees)											
TG03B	*Roystonea regia*	王棕	4-5	150-250	7-9	3-4			4-5	A,B,E,H,K	
Tree Group TG04 (5 nos. of trees)											
TG04	*Leucaena leucocephala*	銀合歡	3	100-150	6-7	2-3			5	A,B,C,E,H,K	
	Macaranga tanarius	血桐	2	100-200	4-5	4-6					
Tree Group TG05 (21 nos. of trees)											
TG05	*Leucaena leucocephala*	銀合歡	9	100-150	6-7	4-5			21	A,B,C,E,H,K	
	Macaranga tanarius	血桐	1	100-150	4-5	4-6					
	Ficus hispida	對葉榕	2	100-130	4-5	2-3					
	Bridelia tomentosa	土蜜樹	1	100	4	2					
	Ficus microcarpa	細葉榕	1	120	4	3					
	Mangifera indica	杧果	2	150	5	4					
	Artocarpus heterophyllus	菠蘿蜜	1	120	4	3					
	Magnolia x alba	白蘭	1	120	4	3					Cap.96
	Psidium guajava	番石榴	3	100	4	3					
Tree Group TG06 (50 nos. of trees)											
TG06	*Artocarpus heterophyllus*	菠蘿蜜	1	120	4	3			50	A,B,C,E,H	
	Ficus hispida	對葉榕	7	100-130	4-5	2-3					
	Macaranga tanarius	血桐	15	150-200	5-6	5-6					
	Taliparititi tiliaceum	黃槿	8	300-350	7-9	10-12					Poor condtion
	Leucaena leucocephala	銀合歡	15	100-150	6-7	4-5					
	Magnolia x alba	白蘭	1	150	6	2					Cap.96
	Dimocarpus longan	龍眼	1	250	7	5					
	Syzygium jambos	蒲桃	1	200	6	4					
	Acacia confusa	台灣相思	1	250	9	4					
Tree Group TG07 (4-6 nos. of trees)											
TG07	*Ficus hispida*	對葉榕	3-5	100-130	4-5	2-3			4-6	A,B,C,E,H,K	
	Leucaena leucocephala	銀合歡	1	120	6	2					
Tree Group TG08A (1 no. of trees)											
TG08A	*Macaranga tanarius*	血桐	1	100	4	2			1	A,B,E,H,K	
Tree Group TG08B (1 no. of trees)											
TG08B	*Mangifera indica*	杧果	1	100	4	2			1	A,B,E,H,K	

Tree Group No.	Species		Estimated Numbers of Trees in Group	Tree Size			Proposed Treatment			Justification	Remarks (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
	Scientific Name	Chinese Name		DBH (m)	Height (m)	Spread (m)	Retain	Trans	Remove		
Tree Group TG09 (12 nos. of trees)											
TG09	*Melia azedarach*	苦楝	2	250-350	8-10	6-7			12	A,B,C,E,H,K	
	Dimocarpus longan	龍眼	1	100-150	6-7	4-5					
	Leucaena leucocephala	銀合歡	3	100-150	6-7	4-5					
	Celtis sinensis	朴樹	5	100-130	4-5	2-3					
	Clausena lansium	黃皮	1	100-130	4-5	2-3					
	Taliparititi tiliaceum	黃槿	2	300-350	7-9	10-12					
	Livistona chinensis	蒲葵	1	200	5	2					
Tree Group TG10A (38 nos. of trees)											
TG10A	*Dimocarpus longan*	龍眼	15	150-600	5-12	4-14			38	A,B,E,H,K	
	Clausena lansium	黃皮	7	100-200	4-6	2-4					
	Artocarpus heterophyllus	菠蘿蜜	5	150-250	6-8	4-5					
	Macaranga tanarius	血桐	3	150	5	5					
	Caryota mitis	短穗魚尾葵	4	100-150	4-5	2					
	Mangifera indica	杧果	3	200-250	5	5					
	Ficus hispida	對葉榕	1	120	4	3					
Tree Group TG10B (19 nos. of trees)											
TG10B	*Ilex rotunda*	鐵冬青	1	100	4	2			19	A,B,E,H,K	
	Ficus hispida	對葉榕	2	120	4	3					
	Sterculia lanceolata	假蘋婆	2	150	5	2					
	Mangifera indica	杧果	1	200	5	4					
	Artocarpus heterophyllus	菠蘿蜜	2	150-250	6-8	4-5					
	Dimocarpus longan	龍眼	6	150-250	5-7	4-5					
	Macaranga tanarius	血桐	2	150	5	5					
	Clausena lansium	黃皮	3	100-200	4-6	2-4					
Tree Group TG10C (9 nos. of trees)											
TG10C	*Dracontomelon duperreanum*	人面子	1	300	12	5			9	A,B,E,H,K	
	Macaranga tanarius	血桐	2	150	5	5					
	Sterculia lanceolata	假蘋婆	2	200-250	8	5					
	Dimocarpus longan	龍眼	2	150-250	5-7	4-5					
	Syzygium jambos	蒲桃	1	100-200	4-6	2-4					
	Celtis sinensis	朴樹	1	350	9	13					
Tree Group TG11 (28 nos. of trees)											
TG11	*Cinnamomum camphora*	樟	9	150-300	7-9	4-5			28	A,B,E,H	
	Liquidambar formosana	楓香	8	150-300	7-9	4-5					
	Artocarpus heterophyllus	菠蘿蜜	3	150-250	6-8	4-5					
	Macaranga tanarius	血桐	3	150	5	5					
	Syzygium nervosum	水翁	1	150	6	3					
	Bischofia javanica	秋楓	1	250	9	5					
	Celtis sinensis	朴樹	3	250-350	7-9	6-8					
Tree Group TG12 (3 nos. of trees)											
TG12	*Dimocarpus longan*	龍眼	1	250	9	6			3	A,B,E,H,K	
	Clausena lansium	黃皮	1	150	7	3					
	Melia azedarach	苦楝	1	150	9	6					
Tree Group TG13 (25 nos. of trees)											
TG13	*Leucaena leucocephala*	銀合歡	6	100-150	6-7	4-5			25	A,B,C,E,H,K	
	Dimocarpus longan	龍眼	14	150-300	5-7	5-7					
	Celtis sinensis	朴樹	1	100	4	2					
	Clausena lansium	黃皮	3	100	4	3					
	Psidium guajava	番石榴	1	100	3	3					

Tree Group No.	Species		Estimated Numbers of Trees in Group	Tree Size			Proposed Treatment			Justification	Remarks (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
	Scientific Name	Chinese Name		DBH (m)	Height (m)	Spread (m)	Retain	Trans	Remove		
Tree Group TG14 (35 nos. of trees)											
TG14	*Leucaena leucocephala*	銀合歡	4	100-150	6-7	4-5			35	A,B,C,E,H	
	Celtis sinensis	朴樹	3	250-350	7-9	6-8					
	Dimocarpus longan	龍眼	6	150-250	5-7	4-5					
	Melia azedarach	苦楝	5	250-350	8-11	6-8					
	Macaranga tanarius	血桐	8	100-200	6-8	4-5					
	Taliparititi tiliaceum	黃槿	2	300-350	7-9	10-12					
	Artocarpus heterophyllus	菠蘿蜜	2	150-200	5-7	3-4					
	Claoxylon indicum	白桐	1	150	7	3					
	Pongamia pinnata	水黃皮	1	150	7	3					
	Sterculia lanceolata	假蘋婆	1	150	7	3					
	Ficus hispida	對葉榕	2	100-130	4-5	2-3					
Tree Group TG15 (12-21 nos. of trees)											
TG15	*Dimocarpus longan*	龍眼	5-10	150-300	5-7	4-8			12-21	A,B,E,H,K	
	Clausena lansium	黃皮	3-5	100-200	4-6	2-4					
	Artocarpus heterophyllus	菠蘿蜜	3-5	150-250	6-8	4-5					
	Celtis sinensis	朴樹	1	150	6	3					
Tree Group TG16A (5 nos. of trees)											
TG16A	*Artocarpus heterophyllus*	菠蘿蜜	1	350	7	4			5	A,B,E,H,K	Poor condition
	Dimocarpus longan	龍眼	2	150-200	4	4					
	Litchi chinensis	荔枝	1	150	4	4					
	Mangifera indica	杧果	1	150	5	5					
Tree Group TG16B (1 no. of trees)											
TG16B	*Macaranga tanarius*	血桐	1	150	5	5			1	A,B,E,H	
Tree Group TG17A (11 nos. of trees)											
TG17A	*Dimocarpus longan*	龍眼	5	150-200	5	4			11	A,B,E,H,K	
	Averrhoa carambola	楊桃	2	100-130	4-5	2-3					
	Clausena lansium	黃皮	2	100-130	4-5	2-3					
	Mangifera indica	杧果	1	150	5	4					
	Livistona chinensis	蒲葵	1	200	5	2					
Tree Group TG17B (50 nos. of trees)											
TG17B	*Macaranga tanarius*	血桐	15	100-200	4-6	4-6			50	A,B,C,E,H,K	
	Artocarpus heterophyllus	菠蘿蜜	3	100-130	4-5	2-3					
	Ficus hispida	對葉榕	3	100-130	4-5	2-3					
	Schefflera heptaphylla	鴨腳木	1	100	4	2					
	Celtis sinensis	朴樹	2	100-350	5-9	4-6					
	Aporosa octandra	銀柴	1	120	5	2					
	Terminalia mantaly	細葉欖仁	2	150-180	6-7	4-5					
	Magnolia x alba	白蘭	1	120	5	2					Cap.96
	Ficus microcarpa	細葉榕	1	250	7	8					
	Corymbia citriodora	檸檬桉	6	150-300	10-13	4-7					
	Sterculia nobilis	蘋婆	3	150-200	5	4					
	Melia azedarach	苦楝	4	100-130	4-5	2-3					
	Trema tomentosa	山黃麻	3	100	4	2					
	Leucaena leucocephala	銀合歡	5	100-130	4-5	2-3					
Tree Group TG17C (6 nos. of trees)											
TG17C	*Dimocarpus longan*	龍眼	3	150-200	5	4			6	A,B,E,H,K	
	Mangifera indica	杧果	2	150-200	5	4					
	Corymbia citriodora	檸檬桉	1	250	12	5					
Tree Group TG17D (11 nos. of trees)											
TG17D	*Sterculia nobilis*	蘋婆	2	100-130	4-5	2-3			11	A,B,E,H,K	
	Macaranga tanarius	血桐	6	150	5	4					
	Dimocarpus longan	龍眼	3	150-200	5	4					

Tree Group No.	Species		Estimated Numbers of Trees in Group	Tree Size			Proposed Treatment			Justification	Remarks (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
	Scientific Name	Chinese Name		DBH (m)	Height (m)	Spread (m)	Retain	Trans	Remove		
Tree Group TG18A (39 nos. of trees)											
TG18A	*Bridelia tomentosa*	土蜜樹	1	100	4	2			39	A,B,C,E,H	
	Celtis sinensis	朴樹	6	100-300	5-8	4-5					
	Melia azedarach	苦楝	2	100-300	5-8	4-5					
	Dimocarpus longan	龍眼	11	150-250	5-7	4-5					
	Macaranga tanarius	血桐	7	150-250	5-8	4-7					
	Ficus hispida	對葉榕	5	100-130	4-5	2-3					
	Mangifera indica	杧果	2	150-200	5	4					
	Litchi chinensis	荔枝	2	150-200	5	4					
	Leucaena leucocephala	銀合歡	3	100-150	6-7	4-5					
Tree Group TG18B (5 nos. of trees)											
TG18B	*Macaranga tanarius*	血桐	2	150-250	5-8	4-7			5	A,B,C,E,H	
	Ficus hispida	對葉榕	2	100-130	4-5	2-3					
	Leucaena leucocephala	銀合歡	1	100	6	4					
Tree Group TG19A (58 nos. of trees)											
TG19A	*Ficus hispida*	對葉榕	2	100-130	4-5	2-3			58	A,B,E,H,K	
	Macaranga tanarius	血桐	24	150-250	5-8	4-7					
	Ficus microcarpa	細葉榕	1	350	10	6					
	Triadica sebifera	烏桕	1	100	5	3					
	Dimocarpus longan	龍眼	5	100-400	5-9	4-7					
	Machilus chinensis	香港楠	5	100-150	4-6	3-4					
	Cinnamomum camphora	樟	1	450	10	9					
	Scolopia saeva	廣東刺柊	1	120	6	2					
	Sterculia lanceolata	假蘋婆	3	120	6	2					
	Celtis sinensis	朴樹	4	250-450	7-12	6-9					
	Microcos paniculata	布渣葉	1	150	6	4					
	Ficus variegata	青果榕	2	150-200	7	3					
	Ligustrum sinense	山指甲	2	150	6	3					
	Syzygium jambos	蒲桃	3	100	4	2					
	Aporosa octandra	銀柴	1	150	6	3					
	Syzygium cumini	海南蒲桃	1	200	8	3					
	Caryota mitis	短穗魚尾葵	1	100	5	2					
Tree Group TG19B (19 nos. of trees)											
TG19B	*Macaranga tanarius*	血桐	8	150-250	5-8	4-7			19	A,B,E,H,K	
	Ficus hispida	對葉榕	1	150	6	4					
	Cinnamomum camphora	樟	1	150	7	5					
	Dimocarpus longan	龍眼	2	300	9	6					
	Microcos paniculata	布渣葉	1	150	6	3					
	Celtis sinensis	朴樹	4	300-450	9-12	6-8					
	Litsea monopetala	假柿木薑子	1	150	8	3					
	Syzygium jambos	蒲桃	1	150	7	5					
Tree Group TG20A (63 nos. of trees)											
TG20A	*Dimocarpus longan*	龍眼	26	100-400	5-9	4-7			63	A,B,E,H,K	
	Macaranga tanarius	血桐	16	150-250	5-8	4-7					
	Celtis sinensis	朴樹	1	300	9	5					
	Artocarpus heterophyllus	菠蘿蜜	1	330	7	5					
	Ficus hispida	對葉榕	3	100-200	4-6	4-6					
	Microcos paniculata	布渣葉	1	250	7	6					
	Machilus chinensis	香港楠	12	200-250	7-8	5-6					
	Clausena lansium	黃皮	3	100-300	4-8	3-8					
Tree Group TG20B (34 nos. of trees)											
TG20B	*Araucaria columnaris*	柱狀南洋杉	10	200-350	5-15	2-3			34	A,B,C,E,H,K	
	Archontophoenix alexandrae	假檳榔	3	100-120	5-6	2					
	Caryota mitis	短穗魚尾葵	8	100-150	4-5	2					
	Litsea glutinosa	潺槁樹	1	100	4	2					
	Leucaena leucocephala	銀合歡	1	150	6	4					
	Macaranga tanarius	血桐	10	100-120	5-6	3-4					
	Bridelia tomentosa	土蜜樹	1	100	4	2					

Tree Group No.	Species		Estimated Numbers of Trees in Group	Tree Size			Proposed Treatment			Justification	Remarks (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
	Scientific Name	Chinese Name		DBH (m)	Height (m)	Spread (m)	Retain	Trans	Remove		
Tree Group TG21 (27 nos. of trees)											
TG21	*Dimocarpus longan*	龍眼	6	100-300	5-7	3-7			27	A,B,E,H,K	
	Clausena lansium	黃皮	4	100-200	4-5	3-4					
	Macaranga tanarius	血桐	3	100-200	4-5	4-5					
	Sterculia nobilis	蘋婆	4	100-150	5-6	4-6					
	Artocarpus heterophyllus	菠蘿蜜	8	100-200	6-7	4-5					
	Mangifera indica	杧果	1	200	6	3					
	Morus alba	桑	1	120	5	4					
Tree Group TG22 (43 nos. of trees)											
TG22	*Roystonea regia*	王棕	30	200-400	10-13	3-4			43	A,B,C,E,H,K	
	Archontophoenix alexandrae	假檳榔	5	150-200	8-10	2-3					
	Araucaria columnaris	柱狀南洋杉	3	200-250	8-12	2-3					
	Leucaena leucocephala	銀合歡	3	100-150	6-7	4-5					
	Artocarpus heterophyllus	菠蘿蜜	2	100-120	4-5	2-3					
Tree Group TG23A (17 nos. of trees)											
TG23A	*Melia azedarach*	苦楝	7	250-450	9-12	5-7			17	A,B,E,H,K	
	Celtis sinensis	朴樹	3	200-300	5-7	5-9					
	Dimocarpus longan	龍眼	2	150-350	5-10	4-7					
	Macaranga tanarius	血桐	5	100-200	4-5	4-5					
Tree Group TG23B (7 nos. of trees)											
TG23B	*Leucaena leucocephala*	銀合歡	5	100-200	6-8	4-6			7	A,B,C,E,H,K	
	Ficus hispida	對葉榕	2	100-120	3-4	2-3					
Tree Group TG23C (1 no. of trees)											
TG23C	*Melia azedarach*	苦楝	1	300	10	8			1	A,B,E,H,K	
Tree Group TG23D (1 no. of trees)											
TG23D	*Ficus hispida*	對葉榕	1	100	4	3			1	A,B,E,H,K	
Tree Group TG24 (34 nos. of trees)											
TG24	*Dimocarpus longan*	龍眼	7	150-350	5-10	4-8			34	A,B,E,H,K	
	Celtis sinensis	朴樹	1	300	9	7					
	Macaranga tanarius	血桐	6	100-200	4-5	4-5					
	Artocarpus heterophyllus	菠蘿蜜	5	100-200	6-7	4-5					
	Ficus hispida	對葉榕	4	100-130	4-5	2-3					
	Clausena lansium	黃皮	7	100-150	4-6	2-4					
	Ficus variegata	青果榕	1	330	10	4					
	Melia azedarach	苦楝	3	150-200	6-9	4-6					
Tree Group TG25 (17 nos. of trees)											
TG25	*Celtis sinensis*	朴樹	5	150-300	6-8	5-7			17	A,B,E,H,K	
	Microcos paniculata	布渣葉	4	150-200	6-7	4-6					
	Dimocarpus longan	龍眼	3	150-250	5-7	4-6					
	Macaranga tanarius	血桐	2	100-200	4-5	4-5					
	Ficus variegata	青果榕	2	150-200	6-7	3-4					
	Syzygium nervosum	水翁	1	200	7	5					
Tree Group TG25A (7 nos. of trees)											
TG25A	*Cinnamomum camphora*	樟樹	3	465-850	9-10	4-18			7	A,B,E,H	
	Syzygium jambos	蒲桃	1	634	9	12					
	Cleistocalyx nervosum	水翁	2	480-523	7-10	9-11					
	Celtis sinensis	朴樹	1	930	8	7					
Tree Group TG26 (6 nos. of trees)											
TG26	*Magnolia x alba*	白蘭	1	250	8	4			6	A,B,E,H,K	Cap.96
	Syzygium samarangense	洋蒲桃	1	120	4	2					
	Litchi chinensis	荔枝	1	150	5	3					
	Dimocarpus longan	龍眼	2	150	5	3					
	Mangifera indica	杧果	1	450	12	12					
Tree Group TG27 (14 nos. of trees)											
TG27	*Leucaena leucocephala*	銀合歡	8	100-150	4-5	2-3			14	A,B,C,E,H,K	
	Taliparitі tiliaceum	黃槿	6	300-450	7-9	10-14					

Tree Group No.	Species		Estimated Numbers of Trees in Group	Tree Size			Proposed Treatment			Justification	Remarks (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
	Scientific Name	Chinese Name		DBH (m)	Height (m)	Spread (m)	Retain	Trans	Remove		
Tree Group TG28 (12 nos. of trees)											
TG28	*Bischofia javanica*	秋楓	1	250	9	5			12	A,B,E,H,K	
	Magnolia x alba	白蘭	1	120	5	3					Cap.96
	Podocarpus macrophyllus	羅漢松	2	120-150	4	2-3					
	Artocarpus heterophyllus	菠蘿蜜	1	120	5	2					
	Plumeria rubra	雞蛋花	1	120	3	3					
	Diospyros kaki	柿	1	100	3	3					
	Pourthiaea benthamiana	閩粵石楠	5	100-150	4-5	2-3					
Tree Group TG29 (9 nos. of trees)											
TG29	*Liquidambar formosana*	楓香	1	200	12	3			9	A,B,C,E,H	
	Sterculia nobilis	蘋婆	1	200	5	5					
	Taliparitі tiliaceum	黃槿	3	300-450	7-9	10-14					
	Syzygium nervosum	水翁	1	300	10	8					
	Leucaena leucocephala	銀合歡	3	100-200	6-8	4-6					
Tree Group TG30 (19 nos. of trees)											
TG30	*Macaranga tanarius*	血桐	14	100-200	4-5	4-5			19	A,B,C,E,H,K	
	Ficus hispida	對葉榕	1	100-130	4-5	2-3					
	Leucaena leucocephala	銀合歡	3	100-150	4-5	2-3					
	Ficus variegata	青果榕	1	350	9	6					
Tree Group TG31 (24 nos. of trees)											
TG31	*Leucaena leucocephala*	銀合歡	12	100-200	6-9	4-6			24	A,B,C,E,H,K	
	Macaranga tanarius	血桐	11	100-200	4-6	4-5					
	Cinnamomum burmanni	陰香	1	120	5	2					
Tree Group TG32 (42 nos. of trees)											
TG32	*Leucaena leucocephala*	銀合歡	20	100-200	6-8	4-6			42	A,B,C,E,H,K	Poor condition
	Pourthiaea benthamiana	閩粵石楠	7	100-200	5-8	3-5					
	Ficus hispida	對葉榕	1	100-130	4-5	2-3					
	Ficus microcarpa	細葉榕	2	300-350	9-11	7-9					
	Liquidambar formosana	楓香	1	200	8	4					
	Ilex rotunda	鐵冬青	3	200-300	7-9	5-7					
	Taliparitі tiliaceum	黃槿	2	200-300	6-8	6-8					Poor condition
	Celtis sinensis	朴樹	3	150-250	5-7	5-7					
	Syzygium nervosum	水翁	1	200	8	4					
	Ficus virens	大葉榕	2	350-400	10-12	7-9					
Tree Group TG33 (88 nos. of trees)											
TG33	*Bischofia javanica*	秋楓	5	250	12	5			88	A,B,C,E,H,K	
	Ilex rotunda	鐵冬青	2	100-150	7-9	4-5					
	Liquidambar formosana	楓香	1	200	14	4					
	Celtis sinensis	朴樹	5	150-250	7-9	5-8					
	Syzygium nervosum	水翁	6	200-300	8-10	7-9					
	Ficus microcarpa	細葉榕	8	300-480	10-12	8-12					
	Macaranga tanarius	血桐	30	100-300	4-7	4-9					
	Leucaena leucocephala	銀合歡	8	100-450	6-14	4-10					
	Ficus hispida	對葉榕	6	100-130	4-5	2-3					
	Schima superba	木荷	6	150-300	8-10	4-7					
	Chukrasia tabularis	麻楝	7	250-300	10-15	5-8					
	Cinnamomum camphora	樟	1	250	15	4					
	Pterocarpus indicus	紫檀	1	250	10	5					
	Dracontomelon duperreanum	人面子	1	200	9	3					
	Pourthiaea benthamiana	閩粵石楠	1	100-200	5-8	3-5					

Tree Group No.	Species		Estimated Numbers of Trees in Group	Tree Size			Proposed Treatment			Justification	Remarks (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
	Scientific Name	Chinese Name		DBH (m)	Height (m)	Spread (m)	Retain	Trans	Remove		
Tree Group TG34 (71 nos. of trees)											
TG34	*Syzygium nervosum*	水翁	4	200-300	8-10	6-8			71	A,B,C,E,H,K	
	Pourthiaea benthamiana	闊粵石楠	6	100-200	5-8	3-5					
	Ficus microcarpa	細葉榕	6	300-400	9-12	7-9					
	Celtis sinensis	朴樹	2	150-250	5-7	5-7					
	Dracontomelon duperreanum	人面子	1	200	9	3					
	Pterocarpus indicus	紫檀	2	250-280	9-10	4-6					
	Liquidambar formosana	楓香	3	150-250	9	3					
	Ficus virens	大葉榕	2	350-400	10-12	7-9					
	Chukrasia tabularis	麻楝	1	250	9	3					
	Leucaena leucocephala	銀合歡	17	100-300	6-10	4-6					
	Macaranga tanarius	血桐	19	100-300	4-7	4-9					
	Ficus hispida	對葉榕	5	100-130	4-5	2-3					
	Litsea monopetala	假柿樹	1	200	9	5					
	Cinnamomum camphora	樟	1	250	9	5					
	Bischofia javanica	秋楓	1	250	9	5					
Tree Group TG35 (11 nos. of trees)											
TG35	*Macaranga tanarius*	血桐	3	100-200	4-6	3-6			11	A,B,E,H	
	Mangifera indica	杧果	1	200	5	4					
	Artocarpus heterophyllus	菠蘿蜜	1	120	5	2					
	Dimocarpus longan	龍眼	4	150-250	4-6	5-7					
	Callistemon viminalis	串錢柳	1	300	7	3					
	Psidium guajava	番石榴	1	100	3	3					
Tree Group TG36 (66 nos. of trees)											
TG36	*Macaranga tanarius*	血桐	34	100-300	4-7	4-9			66	A,B,C,E,H,K	
	Ficus hispida	對葉榕	3	100-130	4-5	2-3					
	Leucaena leucocephala	銀合歡	15	100-300	6-10	4-6					
	Sterculia lanceolata	假蘋婆	1	150	6	3					
	Dimocarpus longan	龍眼	6	150-350	5-10	4-8					
	Mangifera indica	杧果	1	150	6	3					
	Cinnamomum burmanni	陰香	1	150	6	3					
	Claoxylon indicum	白桐	1	150	6	3					
	Clausena lansium	黃皮	2	120	5	3					
	Morus alba	桑	1	150	5	3					
	Alangium chinense	八角楓	1	150	7	3					
Tree Group TG37 (107 nos. of trees)											
TG37	*Macaranga tanarius*	血桐	85	100-250	4-7	3-6			107	A,B,C,E,H	
	Leucaena leucocephala	銀合歡	15	100-250	5-9	3-6					
	Ficus subpisocarpa	筆管榕	1	150	6	3					
	Ficus hispida	對葉榕	4	100-130	4-5	2-3					
	Sterculia lanceolata	假蘋婆	1	150	6	3					
	Celtis sinensis	朴樹	1	150	6	3					
Tree Group TG38 (7-17 nos. of trees)											
TG38	*Macaranga tanarius*	血桐	4-10	100-200	6-7	4-5			7-17	A,B,C,E,H,K	
	Leucaena leucocephala	銀合歡	2-5	100-200	6-7	4-5					
	Ficus hispida	對葉榕	1-2	100-130	4-5	2-3					
Tree Group TG39 (5-17 nos. of trees)											
TG39	*Macaranga tanarius*	血桐	2-10	100-200	6-7	4-5			5-17	A,B,C,E,H,K	
	Leucaena leucocephala	銀合歡	2-5	100-200	6-7	4-5					
	Dimocarpus longan	龍眼	1-2	100-200	6-7	4-5					

Tree Group No.	Species		Estimated Numbers of Trees in Group	Tree Size			Proposed Treatment			Justification	Remarks (Old and Valuable Tree (OVT), potentially registrable OVT, rare species, protected species, ecological and historical significance, etc.)
	Scientific Name	Chinese Name		DBH (m)	Height (m)	Spread (m)	Retain	Trans	Remove		
Tree Group TG40 (11 nos. of trees)											
TG40	*Leucaena leucocephala*	銀合歡	2	100-120	5-6	2-3			11	A,B,C,E,H,K	
	Litchi chinensis	荔枝	7	100-150	3	4					
	Mangifera indica	杧果	2	150	4-5	4-5					
Tree Group TG41 (10 nos. of trees)											
TG41	*Leucaena leucocephala*	銀合歡	2	100	5	2			10	A,B,C,E,H	
	Ficus hispida	對葉榕	4	100	4	3					
	Macaranga tanarius	血桐	1	100	4	3					
	Bridelia tomentosa	土蜜樹	1	100	4	2					
	Celtis sinensis	朴樹	1	100	4	3					
	Ficus variegata	青果榕	1	270	8	4					
							Retain	**Trans**	**Fell**		
							0	**0**	**1250-1300**		**Total: Approx. 1250-1300 Trees**

Legend

Tree Trunk Diameter at Breast Height (DBH)

* Diameter of tree trunk measured at breast height (i.e. measured at 1.3m above ground level)

** Diameter at Breast Height (DBH) of multi-stem trees (i.e. trees with multi-stems were all measured seperately at 1m above ground level). The collective girth was then calculated using the methodology set out in Nature Conservation Practice Note No. 02/2003, Measurement of Diameter at Breast Height (DBH).

Conservation Status

Conservation status (indicates rarity and protection status under relevant ordinances of a species in Hong Kong. References such as Rare and Precious Plants of Hong Kong, the IUCN Red List of Threatened Species and the Forests and Countryside Ordinance (Cap. 96) are used.) and ETWB TCW No. 29/2004 Registration of Old and Valuable Trees (OVT), and Guidelines for their preservation.

Justification for Tree Felling

A Tree is in direct conflict with the proposed works.

B Preparation of intact and sufficient-sized root ball not practical due to the topography (e.g. on rock, steep slope, shallow substratum, structures). Close proximity to other trees - roots intertwinned.

C Undesirable species, weedy species without special ecological significance or species creating maintenance problem.

D Tree with poor health, structure or form (e.g. imbalanced form, leaning, with major cavity/cracks/splits).

E Lack of access for transplantation machinery or vehicle.

F Species with low survival rate after transplanting.

G Tree has structural problem and may create hazard to public during root ball preparation and/or after transplantation, while auxiliary suprootingport will not be sufficient / practical.

H Irrecoverable form after transplanting (e.g. if substantial crown and root pruning are necessary to facilitate the transplanting).

I Low amenity value.

J Tree with evidence of over-maturity and onset of senescence.

K Very large size (unless the feasibility to transplant has been considered financially reasonably and technically feasible).

Tree Treatment Schedule

Address: Hang Tau Tai Po, Kwu Tung South
Prepared by Ray Luk, Certified arborist (Certification Number: HK-0662A)
Field Survey conducted in: August 2025
To be read in conjunction with drawing number: HLDP071-LP-001 to 003

Tree No.	Species		DBH1 (mm)	DBH2 (mm)	DBH3 (mm)	DBH4 (mm)	Tree Size			Form			Health Condition				Structural Condition			Conservation Status	Amenity Value			Suitability for Transplanting			Proposed Treatment			Remarks
	Scientific Name	Chinese Name					DBH (mm)	Height (m)	Spread (m)	G	A	P	G	A	P	D	G	A	P		H	M	L	H	M	L	Retain	Transplant	Remove	
T01	*Cinnamomum camphora*	樟樹					1200	14	20		1			1				1		Common	1					1	1			
T02	*Cinnamomum camphora*	樟樹					1350	9	11		1			1				1		Common	1					1	1			
T03	*Ilex rotunda*	鐵冬青					660	11	15		1			1				1		Common	1					1	1			
T04	*Celtis sinensis*	朴樹					850	9	13		1			1				1		Common	1					1			1	
T05	*Cleistocalyx nervosum*	水翁					730	10	13		1			1				1		Common	1					1	1			
T06	*Cinnamomum camphora*	樟樹	820	590			1010	10	12		1			1				1		Common	1					1			1	
T07	*Ficus virens*	大葉榕					830	13	15		1			1				1		Common	1					1	1			
T08	*Ficus virens*	大葉榕					860	13	15		1			1				1		Common	1					1	1			
T09	*Chorisia speciosa*	絲木棉					620	10	8		1			1				1		Common	1					1			1	
T10	*Celtis sinensis*	朴樹					540	8	10		1			1				1		Common	1					1			1	
T11	*Ficus microcarpa*	細葉榕					950	13	18		1			1				1		Common	1					1	1			
T12	*Dracontomelon duperreanum*	人面子					950	14	12		1			1				1		Common	1					1			1	
T13	*Cinnamomum camphora*	樟樹					1030	14	12		1			1				1		Common	1					1			1	
T14	*Cinnamomum camphora*	樟樹					950	10	16		1			1				1		Common	1					1			1	
T15	*Celtis sinensis*	朴樹					860	10	12		1			1				1		Common	1					1			1	
T16	*Cinnamomum camphora*	樟樹					850	9	18		1			1				1		Common	1					1			1	
T17	*Syzygium jambos*	蒲桃	430	405	230		634	9	12		1			1				1		Common	1					1			1	
T18	*Cleistocalyx nervosum*	水翁	370	370			523	10	9		1			1				1		Common	1					1			1	
T19	*Celtis sinensis*	朴樹					930	8	7		1			1				1		Common	1					1			1	
T20	*Cleistocalyx nervosum*	水翁					480	7	11		1			1				1		Common	1					1			1	
T21	*Cinnamomum camphora*	樟樹	570	450			726	8	14		1			1				1		Common	1					1			1	
T22	*Cinnamomum camphora*	樟樹					465	10	4		1			1				1		Common	1					1			1	
T23	*Cinnamomum camphora*	樟樹					500	9	13		1			1				1		Common	1					1			1	
T24	*Ficus virens*	大葉榕					960	13	15		1			1				1		Common	1					1	1			
T25	*Ficus virens*	大葉榕	760	390			854	15	15		1			1				1		Common	1					1	1			
T26	*Ficus virens*	大葉榕					760	14	12		1			1				1		Common	1					1	1			
T27	*Celtis sinensis*	朴樹					600	13	12		1			1				1		Common	1					1			1	
T28	*Celtis sinensis*	朴樹					850	8	16		1			1				1		Common	1					1			1	
T29	*Celtis sinensis*	朴樹					590	14	10		1			1				1		Common	1					1			1	
T30	*Ficus microcarpa*	細葉榕					860	12	18		1			1				1		Common	1					1	1			
T31	*Ficus virens*	大葉榕					730	18	8		1			1				1		Common	1					1			1	
T32	*Ficus microcarpa*	細葉榕					600	12	10		1			1				1		Common	1					1	1			
T33	*Ficus virens*	大葉榕					730	14	14		1			1				1		Common	1					1			1	
T34	*Ficus virens*	大葉榕					630	14	16		1			1				1		Common	1					1			1	
T35	*Ficus microcarpa*	細葉榕					620	11	10		1			1				1		Common	1					1			1	
T36	*Ficus virens*	大葉榕					500	16	10		1			1				1		Common	1					1			1	
T37	*Ficus microcarpa*	細葉榕					600	11	9		1			1				1		Common	1					1			1	
T38	*Ficus virens*	大葉榕					740	17	15		1			1				1		Common	1					1			1	
T39	*Ficus microcarpa*	細葉榕					590	13	17		1			1				1		Common	1					1			1	
T40	*Ficus virens*	大葉榕					780	15	14		1			1				1		Common	1					1	1			
T41	*Ficus microcarpa*	細葉榕					690	15	15		1			1				1		Common	1					1			1	
T42	*Ficus virens*	大葉榕					990	18	15		1			1				1		Common	1					1			1	
T43	*Ficus microcarpa*	細葉榕					650	13	15		1			1				1		Common	1					1			1	
T44	*Ficus microcarpa*	細葉榕					530	13	9		1			1				1		Common	1					1			1	
T45	*Ficus virens*	大葉榕					700	15	10		1			1				1		Common	1					1			1	
T46	*Ficus virens*	大葉榕					580	18	10		1			1				1		Common	1					1			1	
T47	*Ficus microcarpa*	細葉榕					600	13	14		1			1				1		Common	1					1			1	
T48	*Ficus virens*	大葉榕					540	13	12		1			1				1		Common	1					1			1	
T49	*Ficus virens*	大葉榕					740	14	13		1			1				1		Common	1					1			1	
T50	*Ficus microcarpa*	細葉榕					1000	14	20		1			1				1		Common	1					1	1			
T51	*Ficus virens*	大葉榕					780	17	14		1			1				1		Common	1					1			1	
T52	*Ficus virens*	大葉榕					990	18	14		1			1				1		Common	1					1			1	
T53	*Pterocarpus indicus*	紫檀					590	17	12		1			1				1		Common	1					1			1	
T54	*Dracontomelon duperreanum*	人面子	470	415			627	14	16		1			1				1		Common	1					1	1			
T55	*Ilex rotunda*	鐵冬青	350	270			442	10	10		1			1				1		Common	1					1	1			
										0	55	0	0	55	0	0	0	55	0		55	0	0	0	0	55	16	0	39	
										G	A	P	G	A	P	D	G	A	P	Conservation Status	H	M	L	H	M	L	Retain	Trans	Fell	

Legend

Tree Health Condition

G	Good
A	Average
P	Poor
D	Dead

Tree Form / Structural Condition

G	Good
A	Average
P	Poor

Suitability for Transplantation

H: High Survival Rate expected after transplantation
M:Medium Survival Rate expected after transplantation
L: Low Survival Rate expected after transplantation

Amenity Value

H	High	Common species and good health, good condition and good form.
M	Medium	Common species and average health, average condition and average form.
L	Low	Common species and little or no functional or visual value and poor health, poor condition and poor form.

Conservation Status

Conservation status (indicates rarity and protection status under relevant ordinances of a species in Hong Kong. References such as Rare and Precious Plants of Hong Kong, the IUCN Red List of Threatened Species and the Forests and Countryside Ordinance (Cap. 96) are used.) and ETWB TCW No. 29/2004 Registration of Old and Valuable Trees (OVT), and Guidelines for their preservation.

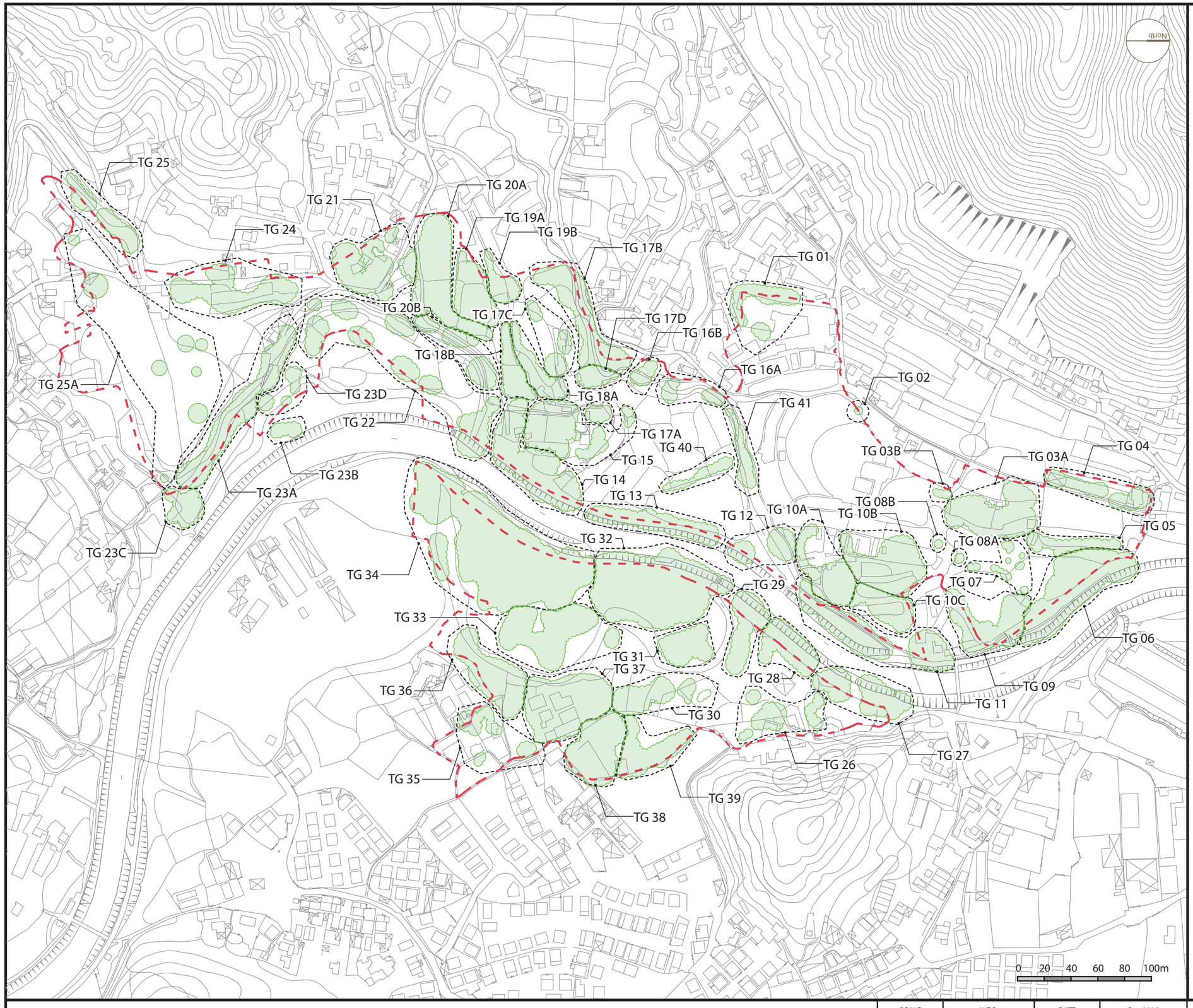
Justification for Tree Felling

A	Tree is in direct conflict with the proposed works.
B	Prevention of intact and sufficient-sized root ball not practical due to the topped trunkography (e.g. on rock, steep slope, shallow substratum, structures). Close proximity to other trees - roots intertwinned.
C	Undesirable species, weedy species without special ecological significance or species creating maintenance problem.
D	Tree with poor health, structure or form (e.g. imbalanced form, leaning, with major cavity/cracks/splits).
E	Lack of access for transplantation machinery or vehicle.
F	Species with low survival rate after transplanting.
G	Tree has structural problem and may create hazard to public during root ball previnedtion and/or after transplantation, while auxiliary support will not be sufficient / practical.
H	Irestricted rootsecoverable form after transplanting (e.g. if substantial crown and root pruning are necessary to facilitate the transplanting).
I	Low amenity value.
J	Tree with evidence of over-maturity and onset of senescence.
K	Very large size (unless the feasibility to transplant has been considered financially reasonably and technically feasible).
L	Tree exhibits significant typhoon damage (unlikley to recover healthy / structurally safe form)

Tree Trunk Diameter at Breast Height (DBH)

*	Diameter of tree trunk measured at breast height (i.e. measured at 1.3m above ground level)
**	Diameter at Breast Height (DBH) of multi-stem trees (i.e. trees with multi-stems were all measured seperately at 1m above ground level). The collective girth was then calculated using the methodology set out in Nature Conservation Practice Note No. 02/2003, Measurement of Diameter at Breast Height (DBH).

Appendix B: Photographic Record of Existing Tree Groups



LEGEND

- Application Site Boundary
- Existing Tree Group
- Existing Tree Group Boundary

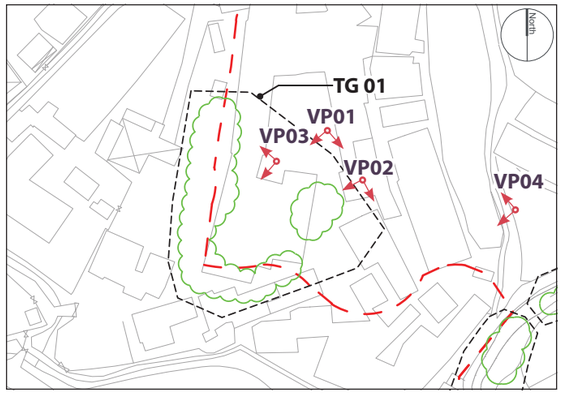
FIGURE TITLE

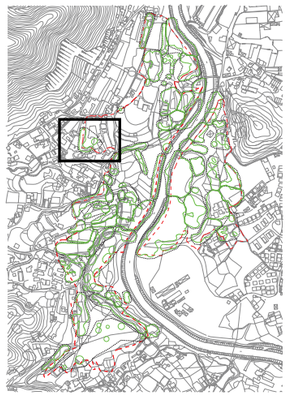
Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Tree Group Location Plan

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - T - TG	REV	-

SCENIC Landscape Studio Limited
LANDSCAPE ARCHITECTURE, LANDSCAPE PLANNING & ASSESSMENT
12/F So Hong Commercial Building, 41-47 Jervois Street, Sheung Wan, Hong Kong
Telephone: 2468 2422
Facsimile: 3016 2422
Website: scenic@studioscenic.com





LEGEND

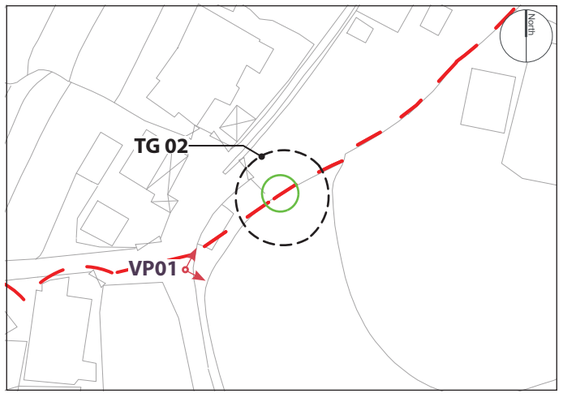
0 15 30 45 60m

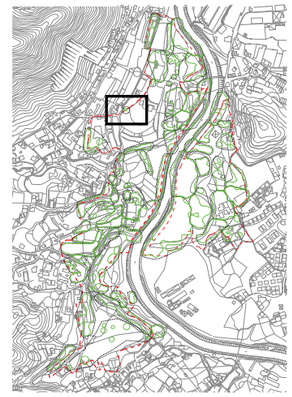
Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary





LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

Photo no. TG01-1: Tree Group 01

Photo no. TG01-2: Tree Group 01

Photo no. TG02-1: Tree Group 02

Photo no. TG01-3: Tree Group 01

Photo no. TG01-4: Tree Group 01

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG01-TG02

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO. HLDP071 - TG01-TG02		REV	-

SCENIC Landscape Studio Limited
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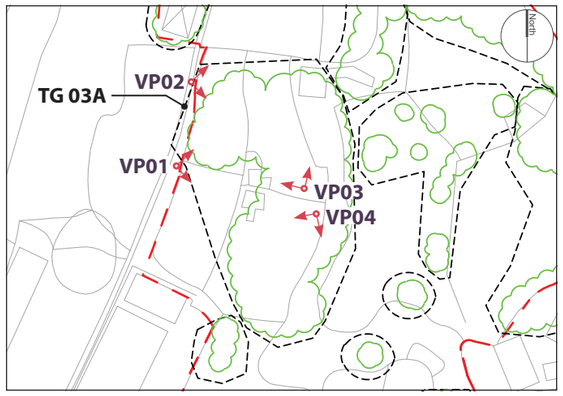
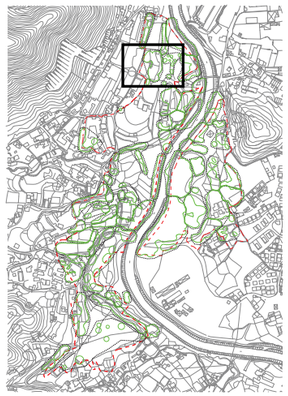


LEGEND

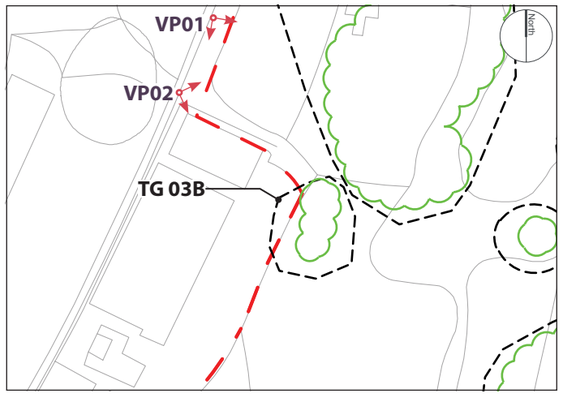
Existing Tree Group

Existing Tree Group Boundary



Site location plan

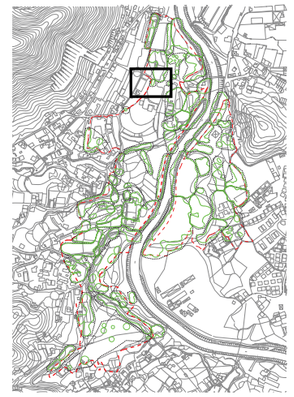
Application Site Boundary



LEGEND

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG03A-1: Tree Group 03A

Photo no. TG03A-2: Tree Group 03A

Photo no. TG03B-1: Tree Group 03B

Photo no. TG03B-2: Tree Group 03B

Photo no. TG03A-3: Tree Group 03A

Photo no. TG03A-4: Tree Group 03A

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG03A-TG03B

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG03A-TG03B	REV	-

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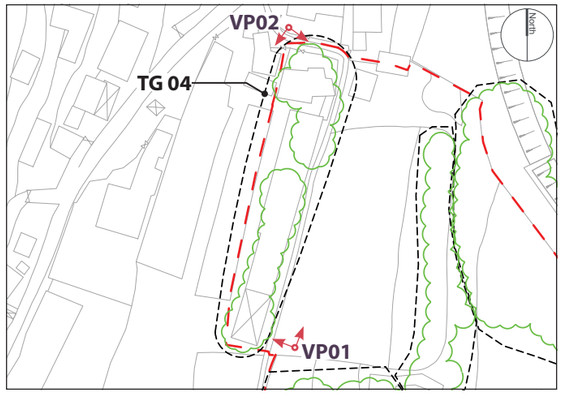
Website: scenic@studioscenic.com



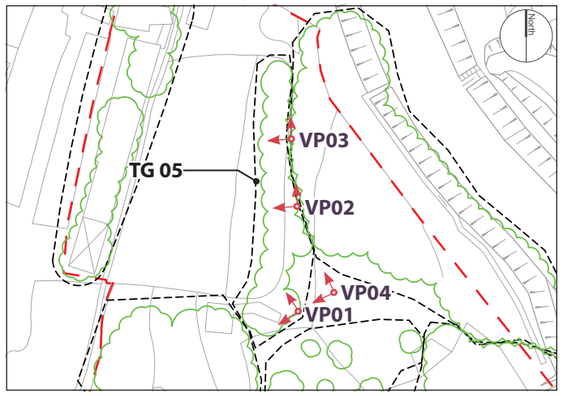
LEGEND

Existing Tree Group

Existing Tree Group Boundary

Site location plan

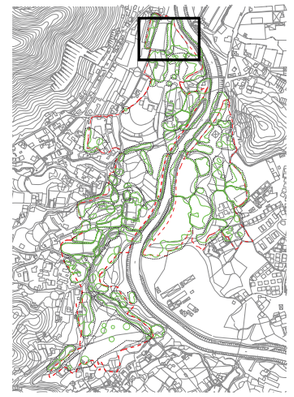
Application Site Boundary



LEGEND

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG04-1: Tree Group 04

Photo no. TG04-2: Tree Group 04

Photo no. TG05-1: Tree Group 05

Photo no. TG05-2: Tree Group 05

Photo no. TG05-3: Tree Group 05

Photo no. TG05-4: Tree Group 05

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG04-TG05

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG04-TG05	REV	-

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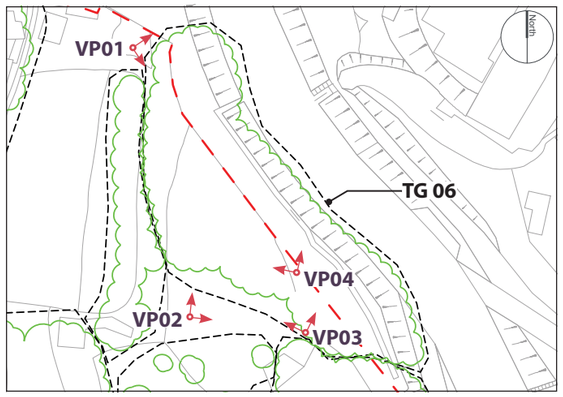
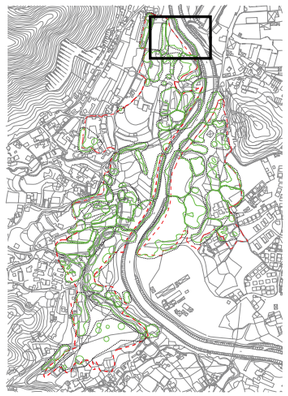
Website: scenic@studioscenic.com



LEGEND

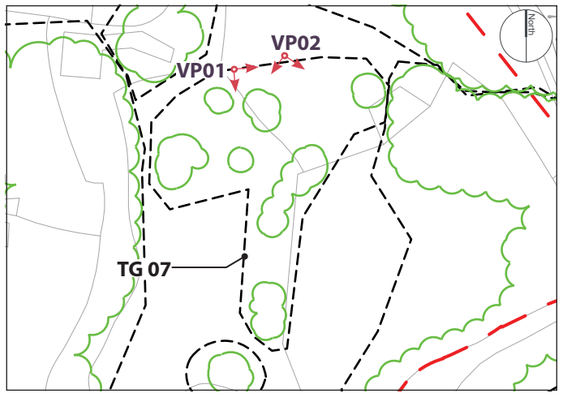
Existing Tree Group

Existing Tree Group Boundary



Site location plan

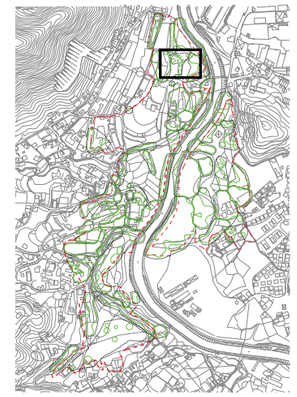
Application Site Boundary



LEGEND

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG06-1: Tree Group 06

Photo no. TG06-2: Tree Group 06

Photo no. TG06-3: Tree Group 06

Photo no. TG06-4: Tree Group 06

Photo no. TG07-1: Tree Group 07

Photo no. TG07-2: Tree Group 07

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG06-TG07

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO. HLDP071 - TG06-TG07		REV	-

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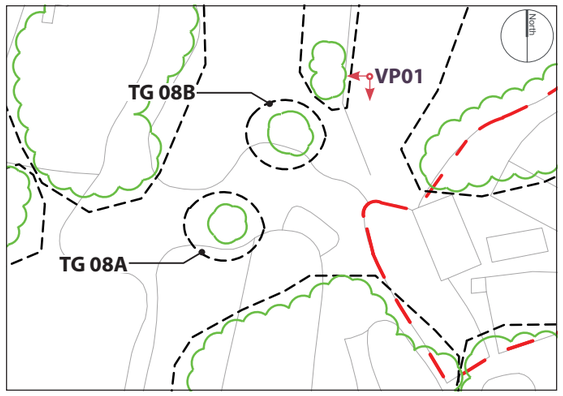
Website: scenic@studioscenic.com



LEGEND

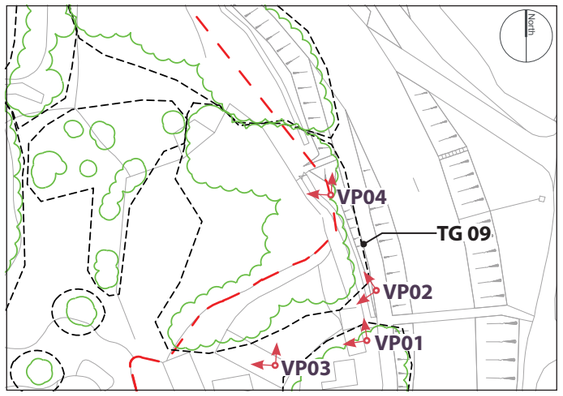
0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

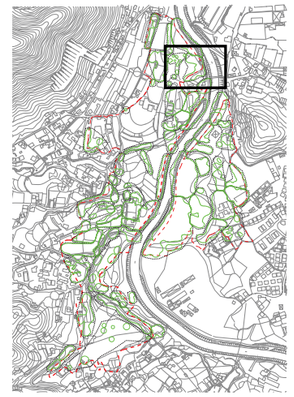


LEGEND

0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG08-1: Tree Group 08

Photo no. TG09-1: Tree Group 09

Photo no. TG09-2: Tree Group 09

Photo no. TG09-3: Tree Group 09

Photo no. TG09-4: Tree Group 09

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG08-TG09

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG08-TG09	REV	-

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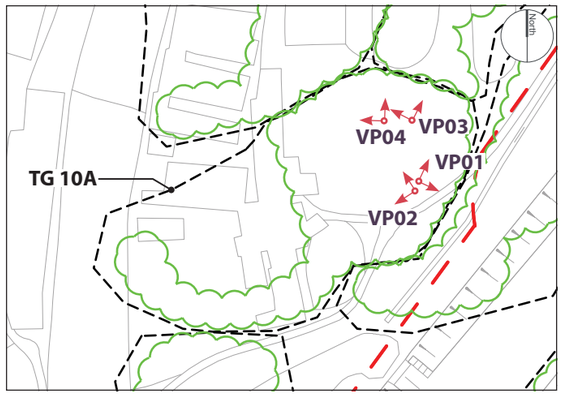
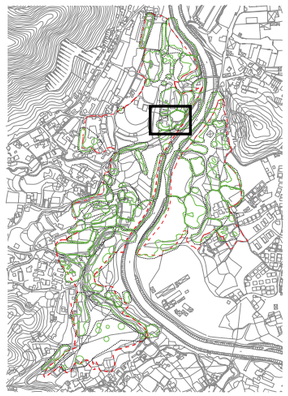
Website: scenic@studioscenic.com





LEGEND

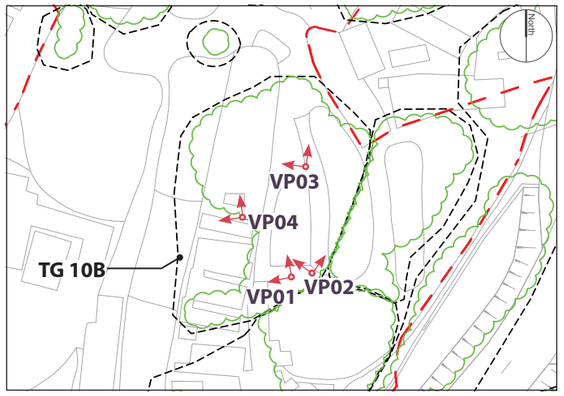
0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

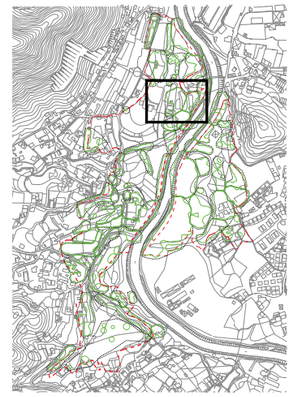


LEGEND

0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG10A-1: Tree Group 10A

Photo no. TG10A-2: Tree Group 10A

Photo no. TG10B-1: Tree Group 10B

Photo no. TG10B-2: Tree Group 10B

Photo no. TG10A-3: Tree Group 10A

Photo no. TG10A-4: Tree Group 10A

Photo no. TG10B-3: Tree Group 10B

Photo no. TG10B-4: Tree Group 10B

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG10A-TG10B

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG10A-TG10B	REV	-

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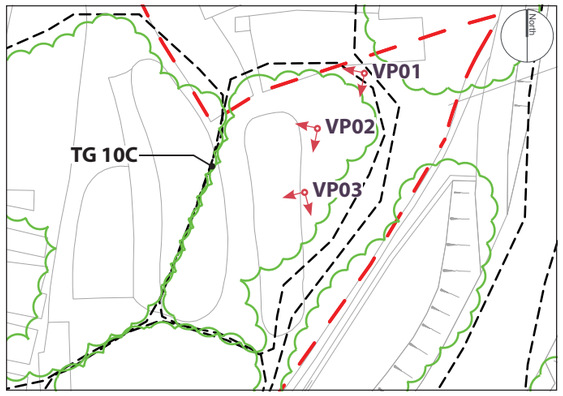
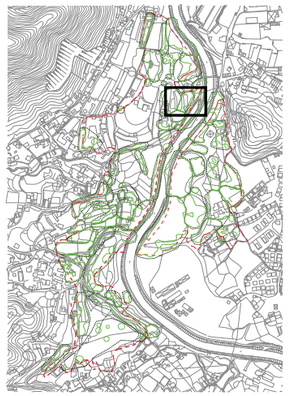
Website: scenic@studioscenic.com





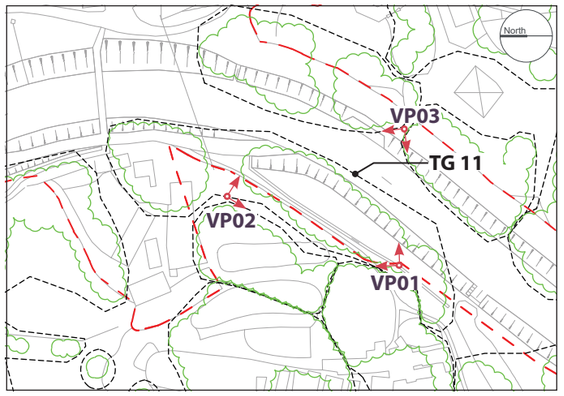
LEGEND

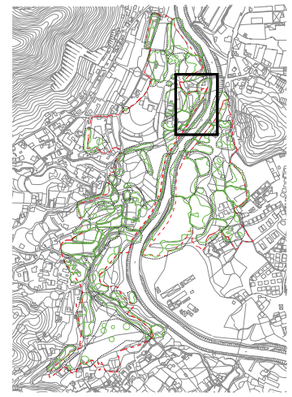
Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary





LEGEND

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

Photo no. TG10C-1: Tree Group 10C

Photo no. TG10C-2: Tree Group 10C

Photo no. TG11-1: Tree Group 11

Photo no. TG11-2: Tree Group 11

Photo no. TG10C-3: Tree Group 10C

Photo no. TG11-3: Tree Group 11

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG10C-TG11

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG10C-TG11	REV	-

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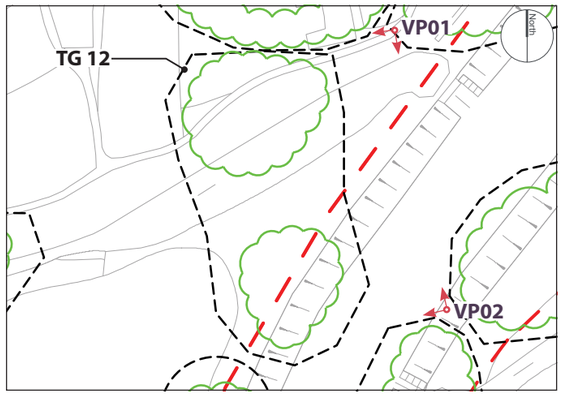


LEGEND

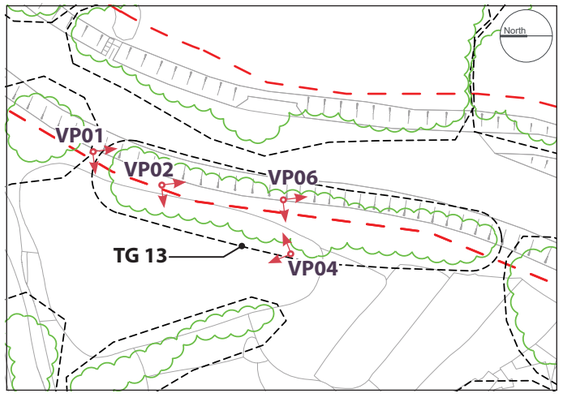
0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

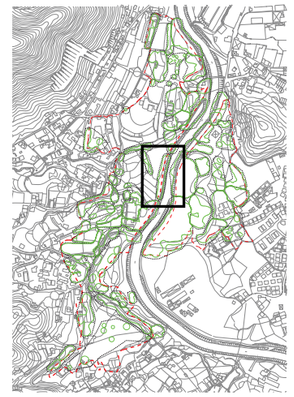


LEGEND

0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG12-1: Tree Group 12

Photo no. TG12-2: Tree Group 12

Photo no. TG13-1: Tree Group 13

Photo no. TG13-2: Tree Group 13

Photo no. TG13-3: Tree Group 13

Photo no. TG13-4: Tree Group 13

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG12-TG13

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG12-TG13	REV	-

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12/F So Hong Commercial Building, 41-47 Jervois Street, Sheung Wan, Hong Kong
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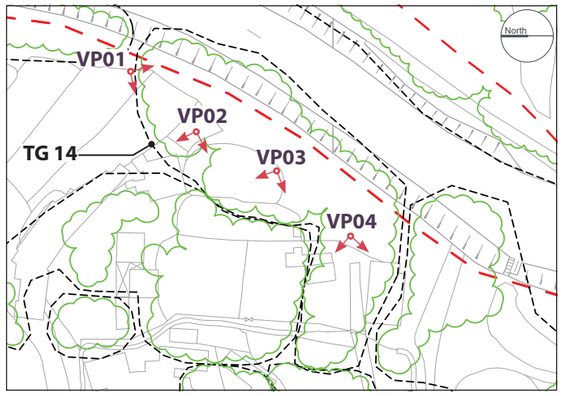
Website: scenic@studioscenic.com

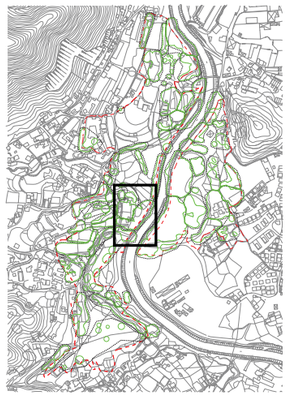


LEGEND

0 15 30 45 60m

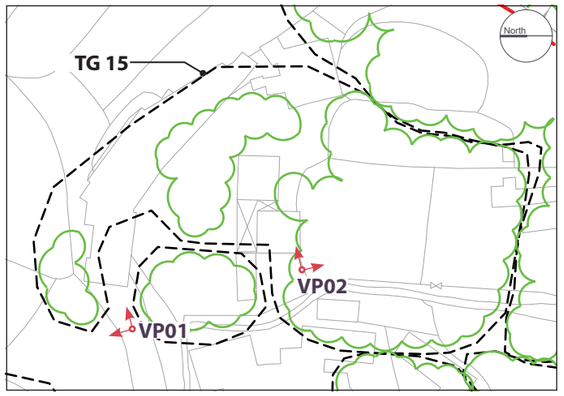
Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

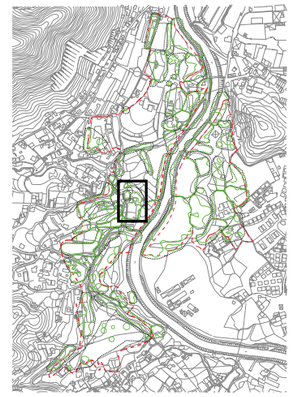


LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG14-1: Tree Group 14

Photo no. TG14-2: Tree Group 14

Photo no. TG15-1: Tree Group 15

Photo no. TG15-2: Tree Group 15

Photo no. TG14-3: Tree Group 14

Photo no. TG14-4: Tree Group 14

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG14-TG15

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO. HLDP071 - TG14-TG15			REV -

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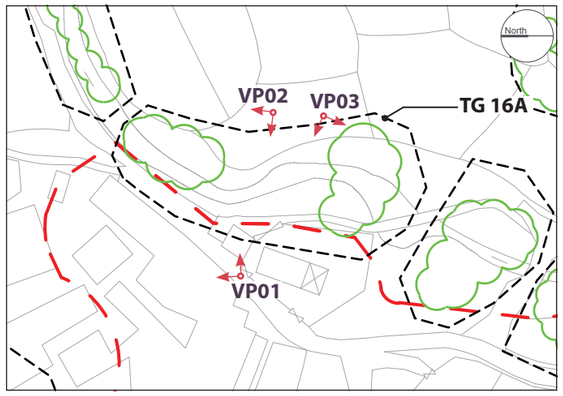
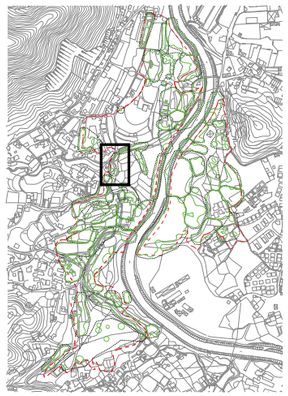




LEGEND

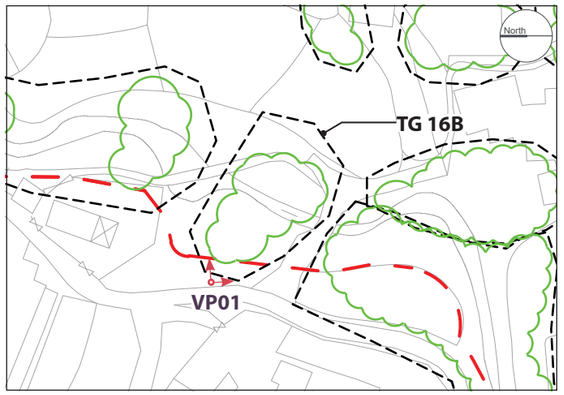
0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

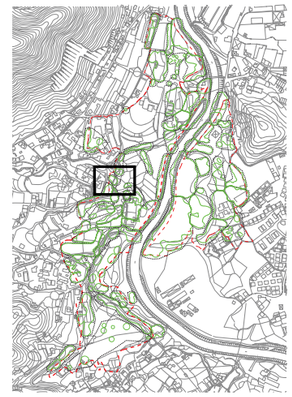


LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG16A-1: Tree Group 16A

Photo no. TG16A-2: Tree Group 16A

Photo no. TG16B-1: Tree Group 16B

Photo no. TG16-3: Tree Group 16

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG16-TG16B

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG16-TG16B	REV	-

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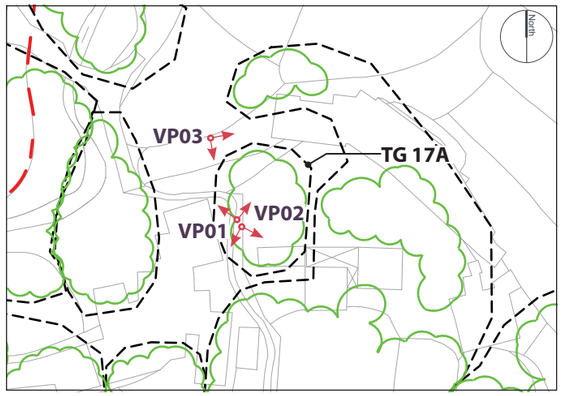


LEGEND

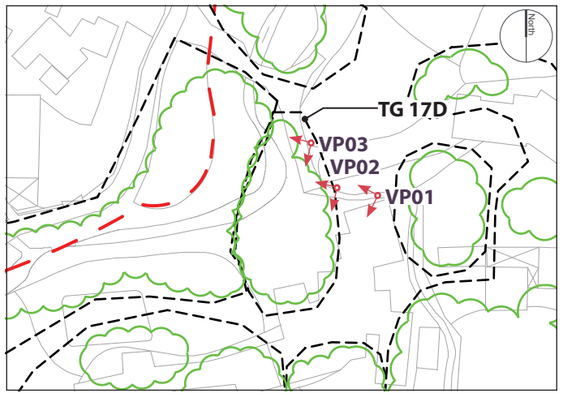
0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary



LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

Photo no. TG17A-1: Tree Group 17A

Photo no. TG17A-2: Tree Group 17A

Photo no. TG17D-1: Tree Group 17D

Photo no. TG17D-2: Tree Group 17D

Photo no. TG17A-3: Tree Group 17A

Photo no. TG17D-3: Tree Group 17D

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG17A-TG17D

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG17A-TG17D	REV	-

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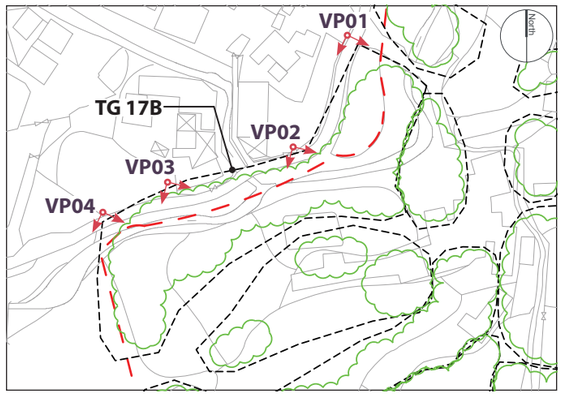
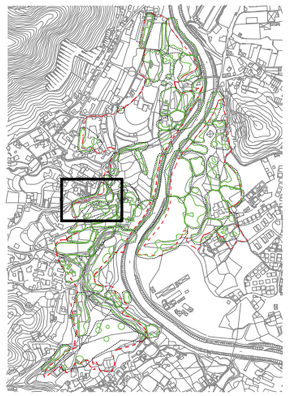


LEGEND

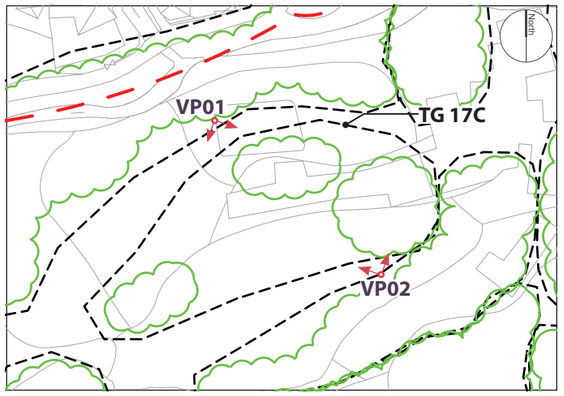
Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary



LEGEND

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

Photo no. TG17B-1: Tree Group 17B

Photo no. TG17B-2: Tree Group 17B

Photo no. TG17C-1: Tree Group 17C

Photo no. TG17C-2: Tree Group 17C

Photo no. TG17B-3: Tree Group 17B

Photo no. TG17B-4: Tree Group 17B

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG17B-TG17C

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG17B-TG17C	REV	-

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Facsimile: 3016 2422
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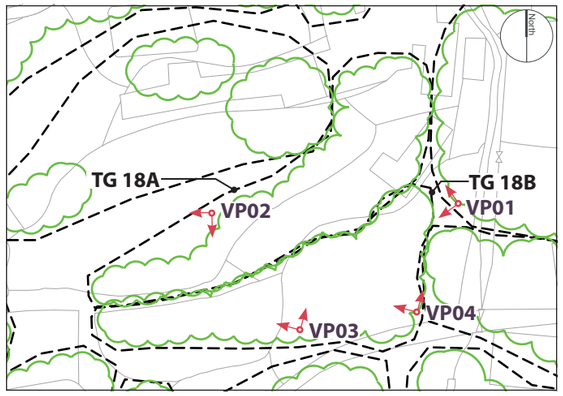


LEGEND

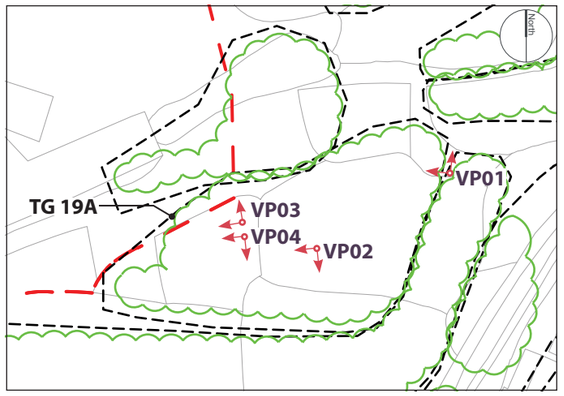
0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

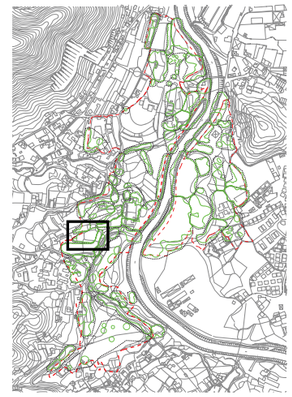


LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG18-1: Tree Group 18

Photo no. TG18-2: Tree Group 18

Photo no. TG19A-1: Tree Group 19A

Photo no. TG19A-2: Tree Group 19A

Photo no. TG18-3: Tree Group 18

Photo no. TG18-4: Tree Group 18

Photo no. TG19A-3: Tree Group 19A

Photo no. TG19A-4: Tree Group 19A

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG18-TG19A

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG18-TG19A	REV	-

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Telephone: 2468 2422
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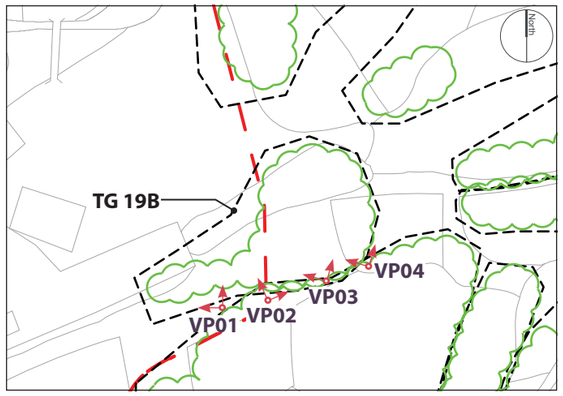


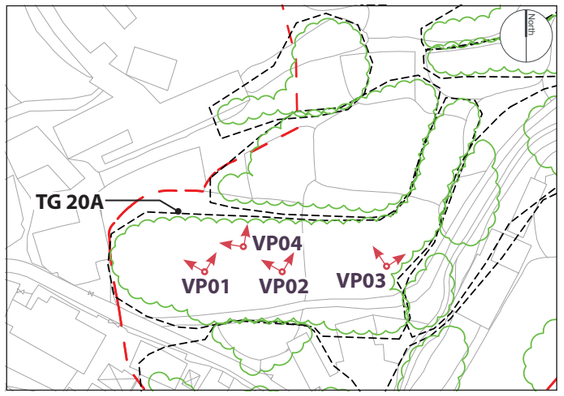
LEGEND

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary



LEGEND

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

Photo no. TG19B-1: Tree Group 19B

Photo no. TG19B-2: Tree Group 19B

Photo no. TG20A-1: Tree Group 20A

Photo no. TG20A-2: Tree Group 20A

Photo no. TG19B-3: Tree Group 19B

Photo no. TG19B-4: Tree Group 19B

Photo no. TG20A-3: Tree Group 20A

Photo no. TG20A-4: Tree Group 20A

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG19B-TG20A

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG19B-TG20A	REV	-

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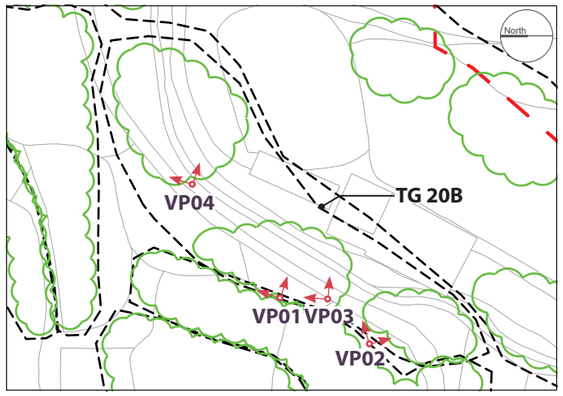
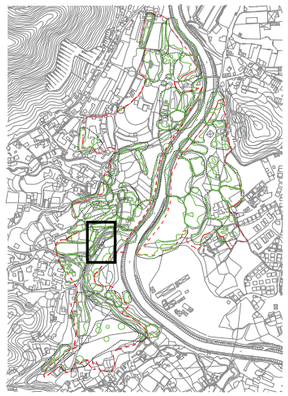


LEGEND

0 10 20 30 40m

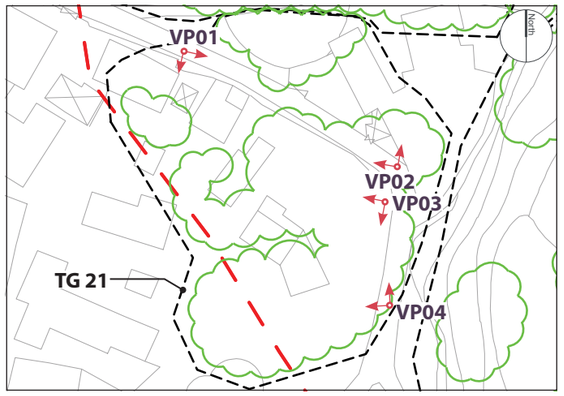
Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

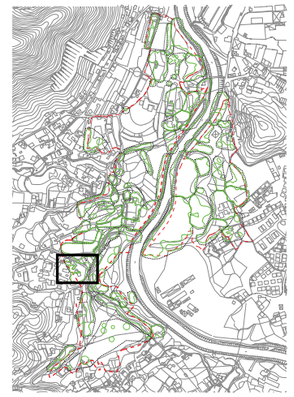


LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG20B-1: Tree Group 20B

Photo no. TG20B-2: Tree Group 20B

Photo no. TG21-1: Tree Group 21

Photo no. TG21-2: Tree Group 21

Photo no. TG20B-3: Tree Group 20B

Photo no. TG20B-4: Tree Group 20B

Photo no. TG21-3: Tree Group 21

Photo no. TG21-4: Tree Group 21

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG20B-TG21

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG20B-TG21	REV	-

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Telephone: 2468 2422
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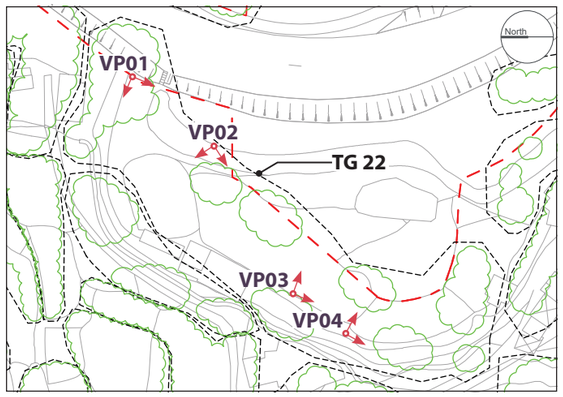
Website: scenic@studioscenic.com

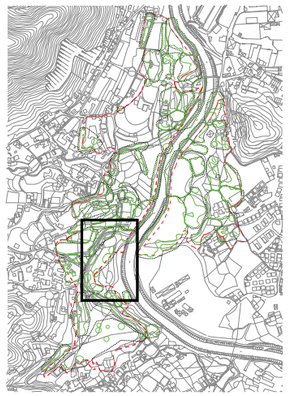


LEGEND

0 20 40 60 80m

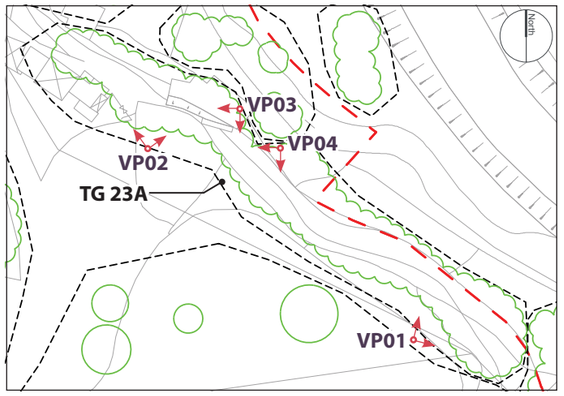
Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

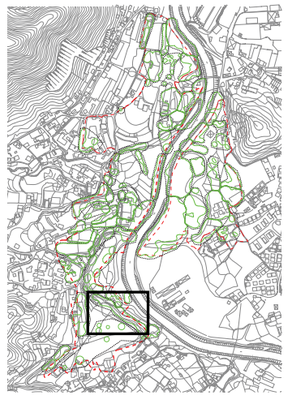


LEGEND

0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG22-1: Tree Group 22

Photo no. TG22-2: Tree Group 22

Photo no. TG23A-1: Tree Group 23A

Photo no. TG23A-2: Tree Group 23A

Photo no. TG22-3: Tree Group 22

Photo no. TG22-4: Tree Group 22

Photo no. TG23A-3: Tree Group 23A

Photo no. TG23A-4: Tree Group 23A

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG22-TG23A

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG22-TG23A	REV	-

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Telephone: 2468 2422
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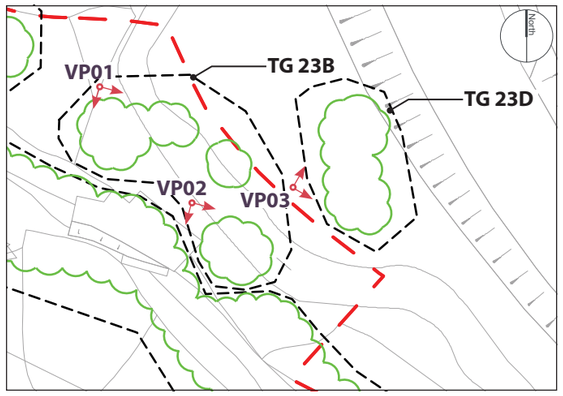
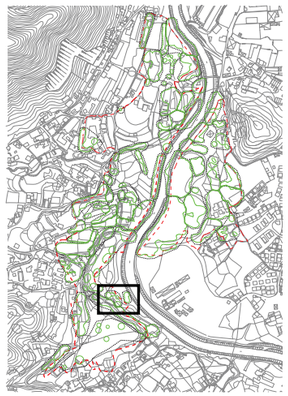
Website: scenic@studioscenic.com



LEGEND

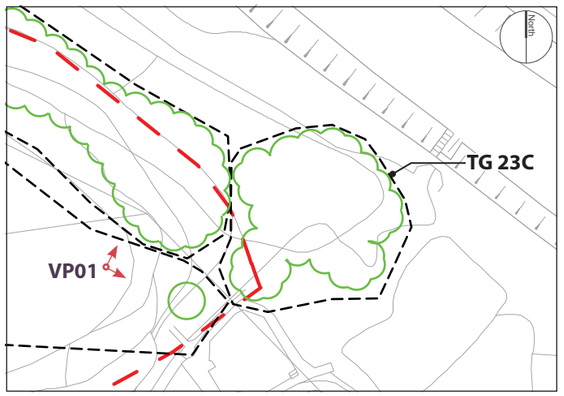
Existing Tree Group

Existing Tree Group Boundary



Site location plan

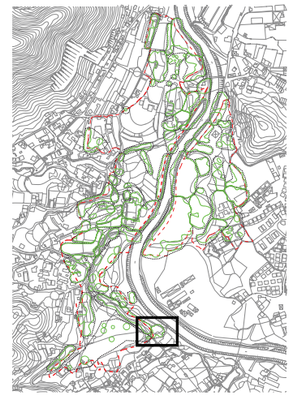
Application Site Boundary



LEGEND

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG23B-1: Tree Group 23B

Photo no. TG23B-2: Tree Group 23B

Photo no. TG23C-1: Tree Group 23C

Photo no. TG23D-3: Tree Group 23D

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG23B-TG23C

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH

FIGURE NO. HLDP071 - TG23B-TG23D

REV -

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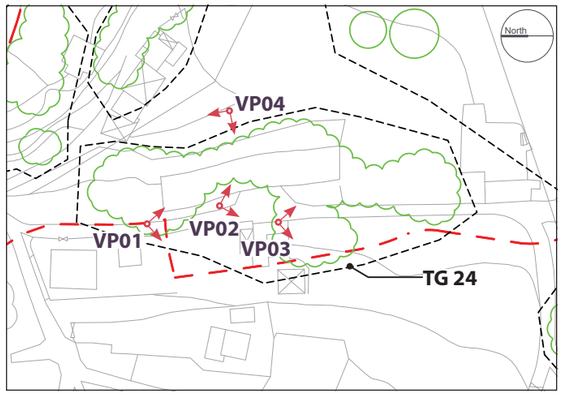
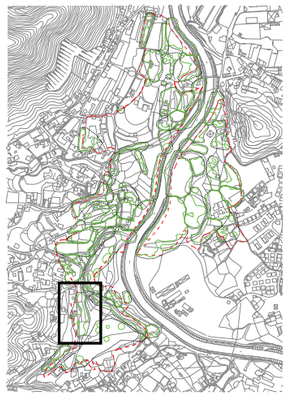
Facsimile: 3016 2422
Website: scenic@studioscenic.com





LEGEND

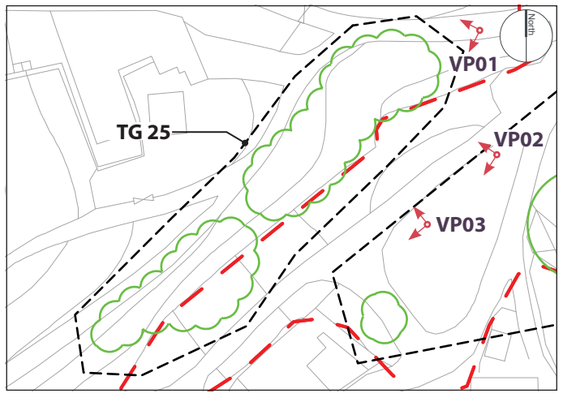
0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

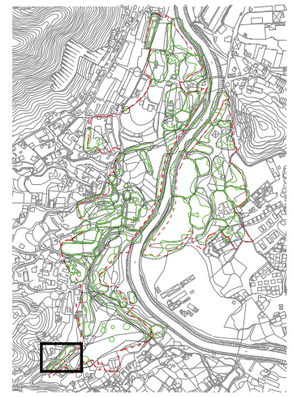


LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG24-1: Tree Group 24

Photo no. TG24-2: Tree Group 24

Photo no. TG25-1: Tree Group 25

Photo no. TG25-2: Tree Group 25

Photo no. TG24-3: Tree Group 24

Photo no. TG24-4: Tree Group 24

Photo no. TG25-3: Tree Group 25

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG24-TG25

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG24-TG25	REV	-

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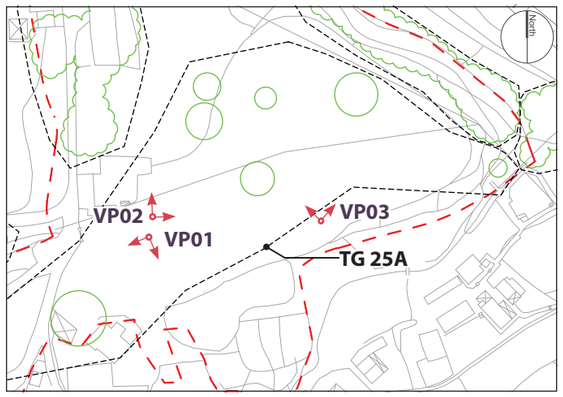
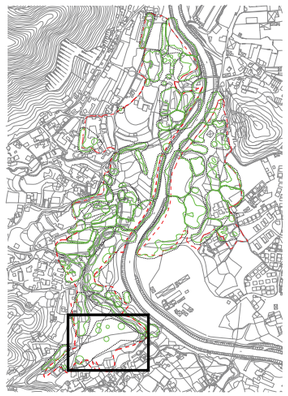




LEGEND

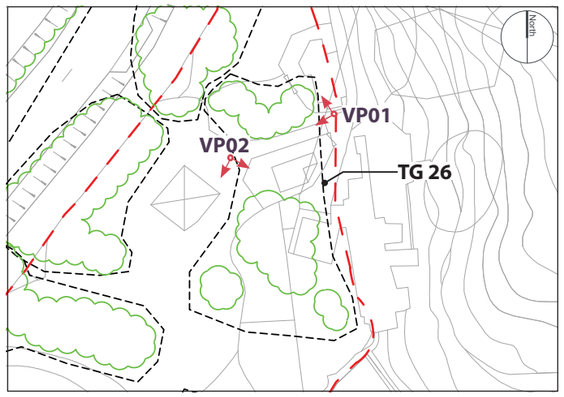
0 20 40 60 80m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

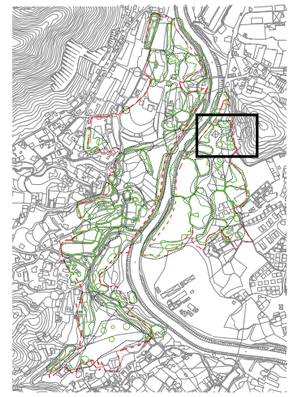


LEGEND

0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG25A-1: Tree Group 25A

Photo no. TG25A-2: Tree Group 25A

Photo no. TG25A-3: Tree Group 25A

Photo no. TG26-1: Tree Group 26

Photo no. TG26-2: Tree Group 26

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG25A-TG26

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG25A-TG26	REV	-

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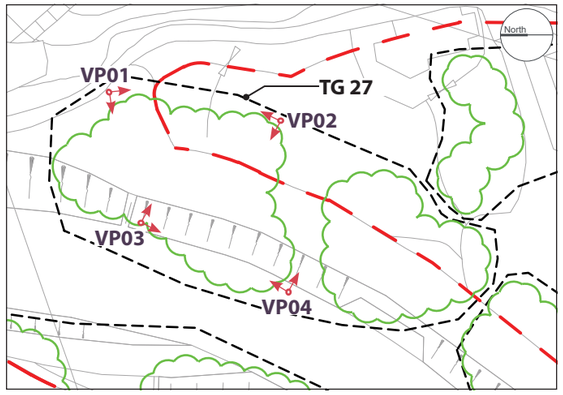
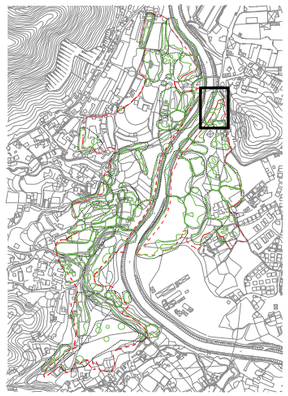




LEGEND

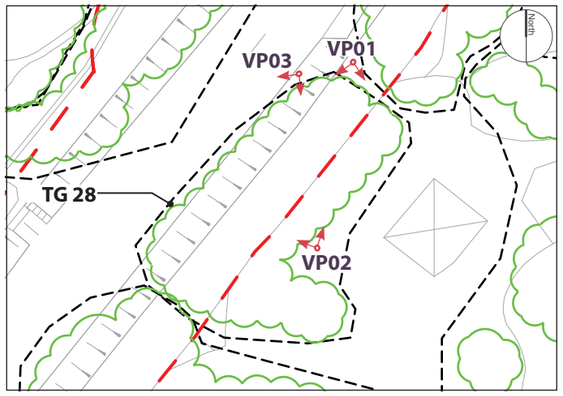
0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

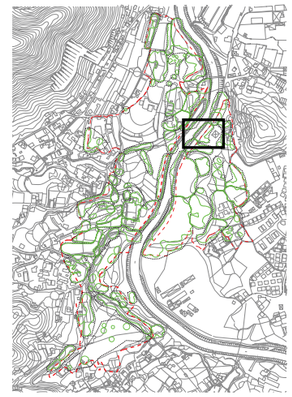


LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG27-1: Tree Group 27

Photo no. TG27-2: Tree Group 27

Photo no. TG28-1: Tree Group 28

Photo no. TG28-2: Tree Group 28

Photo no. TG27-3: Tree Group 27

Photo no. TG27-4: Tree Group 27

Photo no. TG28-3: Tree Group 28

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG27-TG28

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG27-TG28	REV	-

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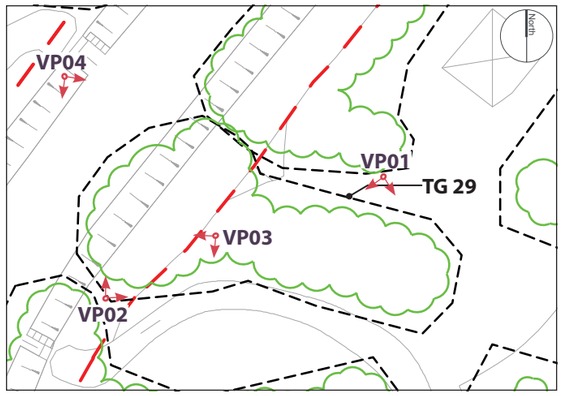
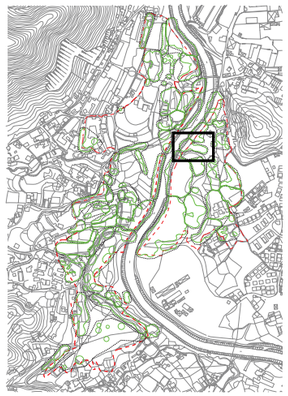


LEGEND

0 10 20 30 40m

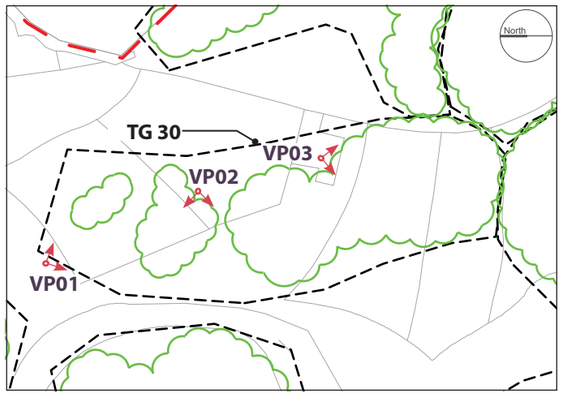
Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

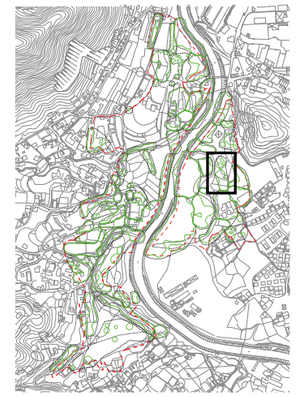


LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG29-1: Tree Group 29

Photo no. TG29-2: Tree Group 29

Photo no. TG30-1: Tree Group 30

Photo no. TG30-2: Tree Group 30

Photo no. TG29-3: Tree Group 29

Photo no. TG29-4: Tree Group 29

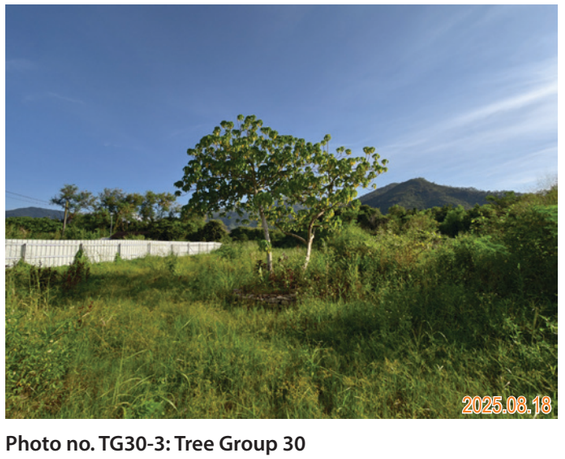


Photo no. TG30-3: Tree Group 30

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG29-TG30

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG29-TG30	REV	-

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Telephone: 2468 2422
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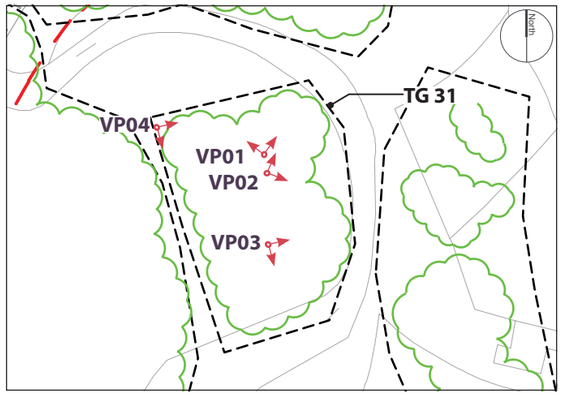
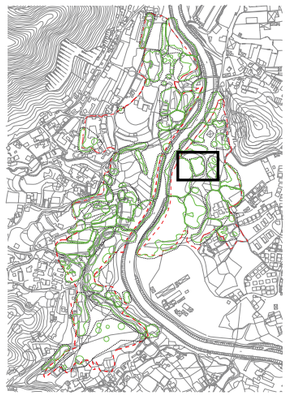
Website: scenic@studioscenic.com





Site location plan

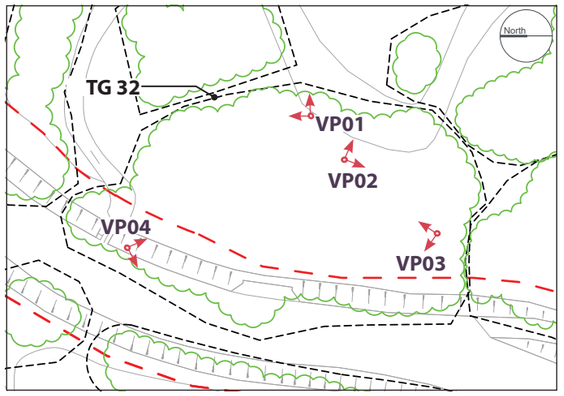
LEGEND

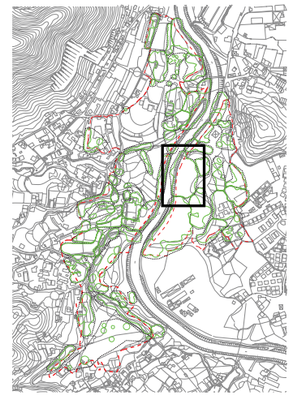
0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary

Application Site Boundary





Site location plan

LEGEND

0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary

Application Site Boundary

Photo no. TG31-1: Tree Group 31

Photo no. TG31-2: Tree Group 31

Photo no. TG32-1: Tree Group 32

Photo no. TG32-2: Tree Group 32

Photo no. TG31-3: Tree Group 31

Photo no. TG31-4: Tree Group 31

Photo no. TG32-3: Tree Group 32

Photo no. TG32-4: Tree Group 32

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG31-TG32

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG31-TG32	REV	-

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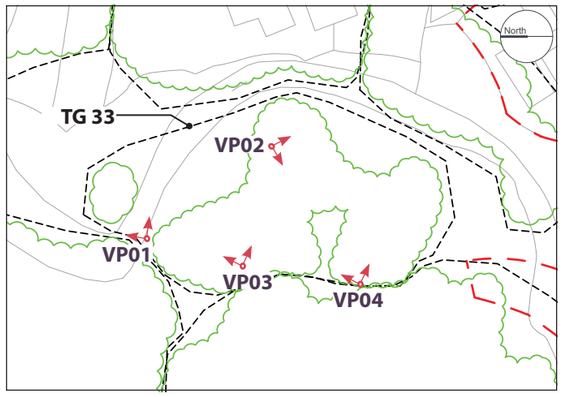


Site location plan

LEGEND

0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary

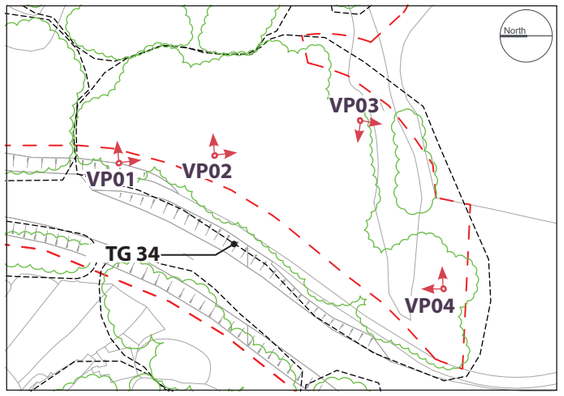
Application Site Boundary

Photo no. TG33-1: Tree Group 33

Photo no. TG33-2: Tree Group 33

Photo no. TG33-3: Tree Group 33

Photo no. TG33-4: Tree Group 33



Site location plan

LEGEND

0 20 40 60 80m

Existing Tree Group

Existing Tree Group Boundary

Application Site Boundary

Photo no. TG34-1: Tree Group 34

Photo no. TG34-2: Tree Group 34

Photo no. TG34-3: Tree Group 34

Photo no. TG34-4: Tree Group 34

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG33-TG34

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG33-TG34	REV	-

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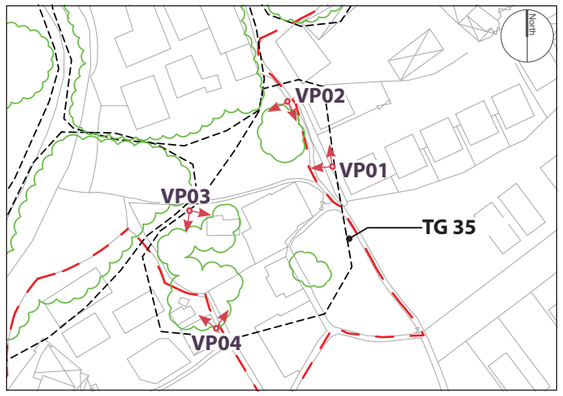


LEGEND

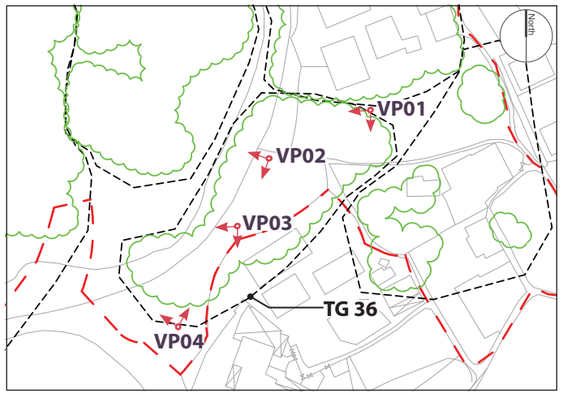
0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

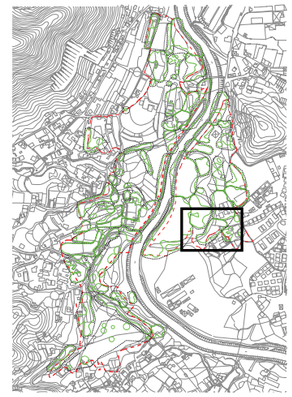


LEGEND

0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG35-1: Tree Group 35

Photo no. TG35-2: Tree Group 35

Photo no. TG36-1: Tree Group 36

Photo no. TG36-2: Tree Group 36

Photo no. TG35-3: Tree Group 35

Photo no. TG35-4: Tree Group 35

Photo no. TG36-3: Tree Group 36

Photo no. TG36-4: Tree Group 36

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG35-TG36

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG35-TG36	REV	-

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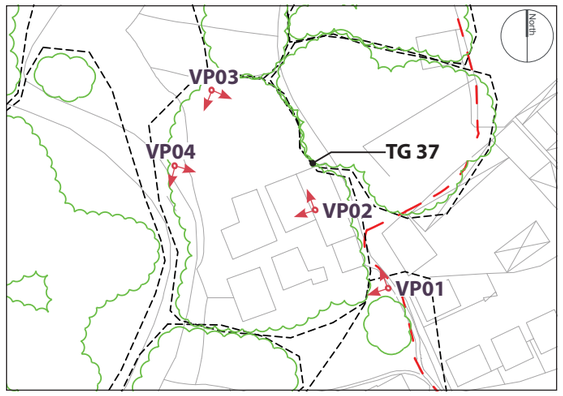


LEGEND

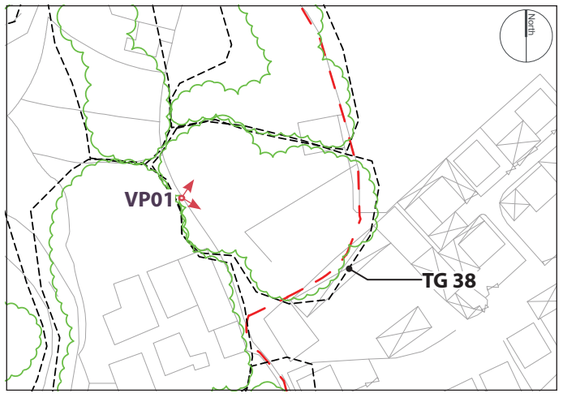
0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary



LEGEND

0 15 30 45 60m

Existing Tree Group

Existing Tree Group Boundary

Site location plan

Application Site Boundary

Photo no. TG37-1: Tree Group 37

Photo no. TG37-2: Tree Group 37

Photo no. TG38-1: Tree Group 38

Photo no. TG37-3: Tree Group 37

Photo no. TG37-4: Tree Group 37

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG37-TG38

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG37-TG38	REV	-

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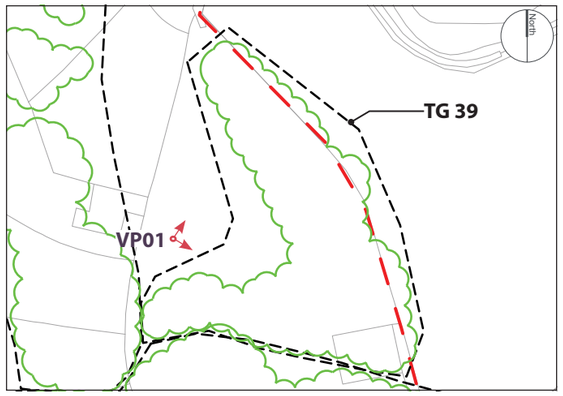
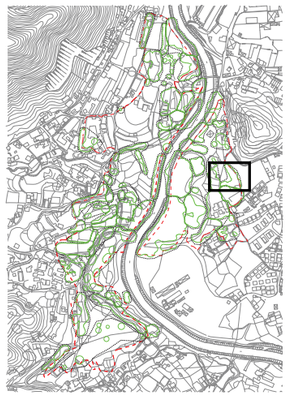


LEGEND

Existing Tree Group

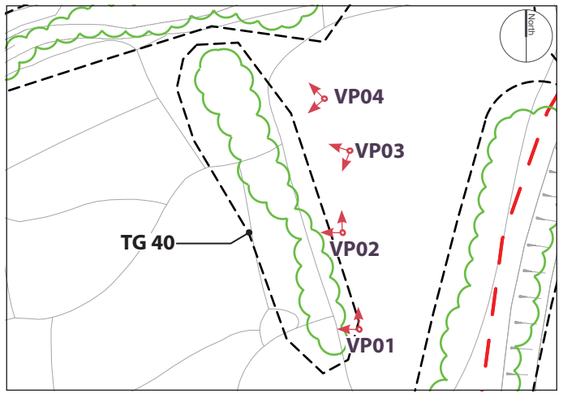
Existing Tree Group Boundary



Site location plan

Application Site Boundary

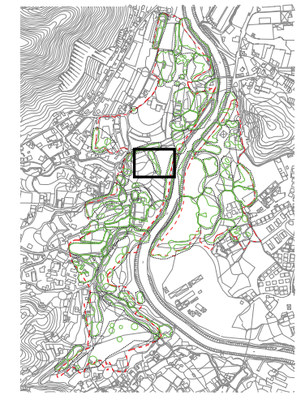
Photo no. TG39-1: Tree Group 39



LEGEND

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG40-1: Tree Group 40

Photo no. TG40-2: Tree Group 40

Photo no. TG40-3: Tree Group 40

Photo no. TG40-4: Tree Group 40

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG39-TG40

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG39-TG40	REV	-

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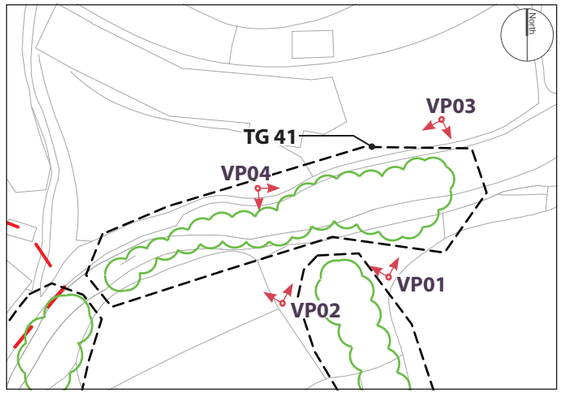
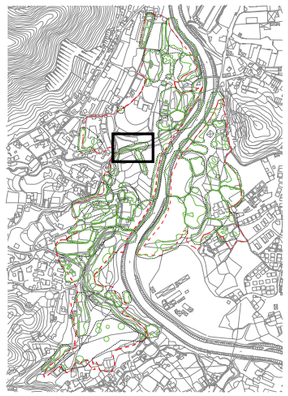


LEGEND

0 10 20 30 40m

Existing Tree Group

Existing Tree Group Boundary



Site location plan

Application Site Boundary

Photo no. TG41-1: Tree Group 41

Photo no. TG41-2: Tree Group 41

Photo no. TG41-3: Tree Group 41

Photo no. TG41-4: Tree Group 41

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Tree Group - No. TG41

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - TG41	REV	-

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North

T16 T15 T14 T17 T18 T20 T19 T21 T22 T10 T09 T11 T27 T50 T48 T47 T49 T40 T52 T36 T34 T33 T32 T30 T06 T13 T12 T04 T51 T46 T39 T41 T26 T05 T54 T55 T01 T28 T53 T45 T44 T42 T43 T35 T37 T38 T31 T03 T08 T07 T02 T29 T25 T24 T23

0 20 40 60 80m

LEGEND

- Application Site Boundary
- Existing Individual Tree

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Individual Tree Location Plan

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - IN - TL	REV	-

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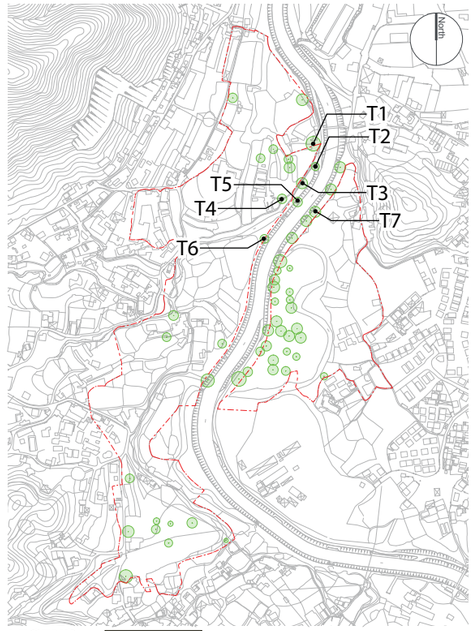
T1
Photograph showing the overall form of the tree.

T2
Photograph showing the overall form of the tree.

T3
Photograph showing the overall form of the tree.



LEGEND

Application Site Boundary

Individual Tree

T4
Photograph showing the overall form of the tree.

T5
Photograph showing the overall form of the tree.

T6
Photograph showing the overall form of the tree.

T7
Photograph showing the overall form of the tree.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Individual Tree

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - T1-T7	REV	-

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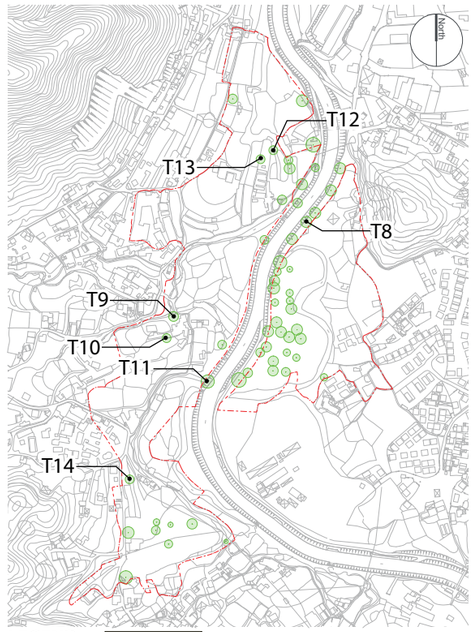
T8
Photograph showing the overall form of the tree.

T9
Photograph showing the overall form of the tree.

T10
Photograph showing the overall form of the tree.



LEGEND

Application Site Boundary

Individual Tree

T11
Photograph showing the overall form of the tree.

T12
Photograph showing the overall form of the tree.

T13
Photograph showing the overall form of the tree.

T14
Photograph showing the overall form of the tree.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Individual Tree

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - T8-T14	REV	-

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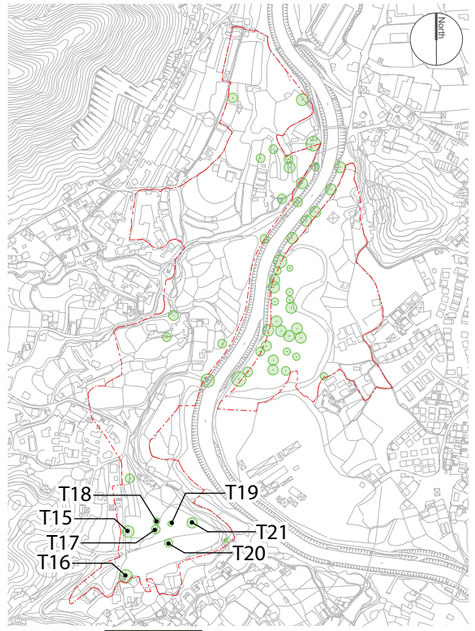
T15
Photograph showing the overall form of the tree.

T16
Photograph showing the overall form of the tree.

T17
Photograph showing the overall form of the tree.



LEGEND
Application Site Boundary
Individual Tree

T18
Photograph showing the overall form of the tree.

T19
Photograph showing the overall form of the tree.

T20
Photograph showing the overall form of the tree.

T21
Photograph showing the overall form of the tree.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Individual Tree

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - T15-T21	REV	-

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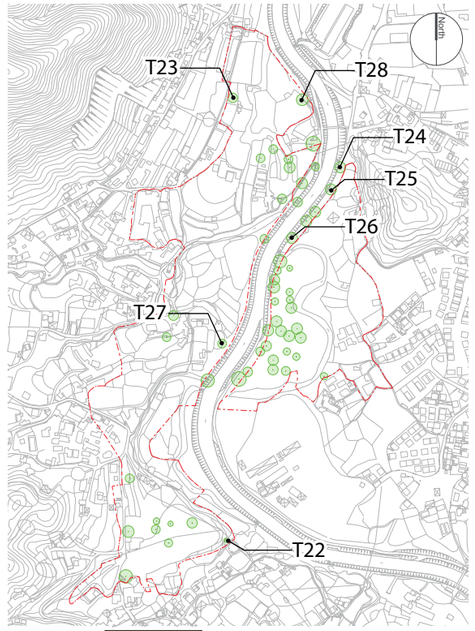
T22
Photograph showing the overall form of the tree.

T23
Photograph showing the overall form of the tree.

T24
Photograph showing the overall form of the tree.



LEGEND

Application Site Boundary

Individual Tree

T25
Photograph showing the overall form of the tree.

T26
Photograph showing the overall form of the tree.

T27
Photograph showing the overall form of the tree.

T28
Photograph showing the overall form of the tree.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Individual Tree

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO. HLDP071 - T22-T28		REV	-

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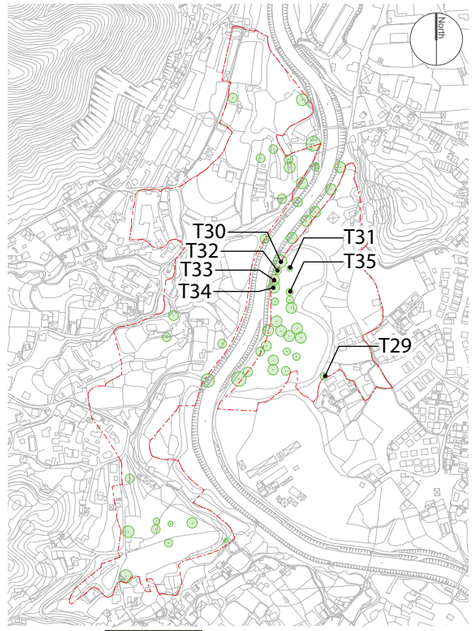
T29
Photograph showing the overall form of the tree.

T30
Photograph showing the overall form of the tree.

T31
Photograph showing the overall form of the tree.



LEGEND

Application Site Boundary

Individual Tree

T32
Photograph showing the overall form of the tree.

T33
Photograph showing the overall form of the tree.

T34
Photograph showing the overall form of the tree.

T35
Photograph showing the overall form of the tree.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Individual Tree

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	HLDP071 - T29-T35	REV	-

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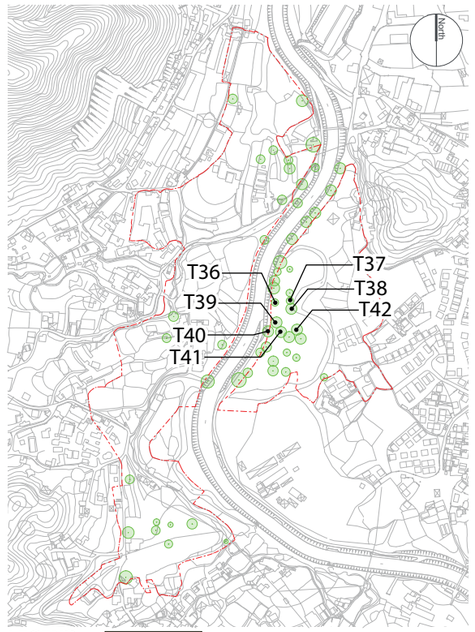
T36
Photograph showing the overall form of the tree.

T37
Photograph showing the overall form of the tree.

T38
Photograph showing the overall form of the tree.



LEGEND

Application Site Boundary

Individual Tree

T39
Photograph showing the overall form of the tree.

T40
Photograph showing the overall form of the tree.

T41
Photograph showing the overall form of the tree.

T42
Photograph showing the overall form of the tree.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Individual Tree

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO. HLDP071 - T36-T42		REV	-

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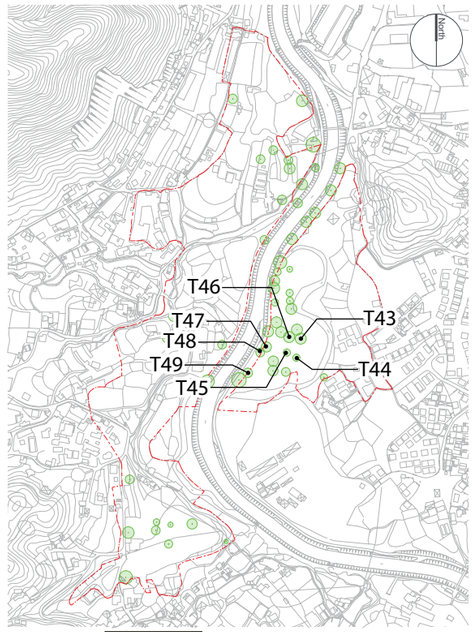
T43
Photograph showing the overall form of the tree.

T44
Photograph showing the overall form of the tree.

T45
Photograph showing the overall form of the tree.



LEGEND

Application Site Boundary

Individual Tree

T46
Photograph showing the overall form of the tree.

T47
Photograph showing the overall form of the tree.

T48
Photograph showing the overall form of the tree.

T49
Photograph showing the overall form of the tree.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Individual Tree

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO. HLDP071 - T43-T49		REV	-

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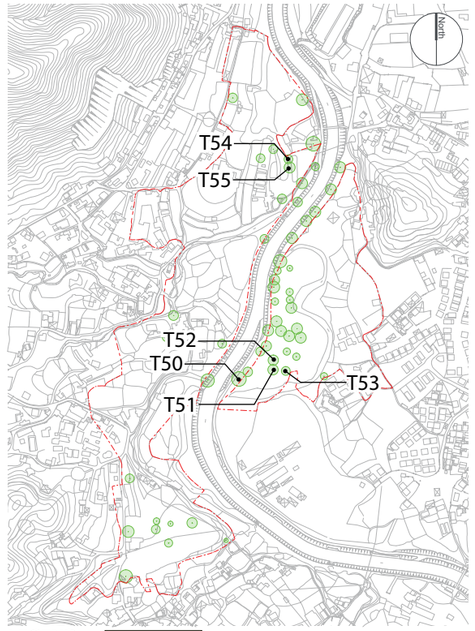
T50
Photograph showing the overall form of the tree.

T51
Photograph showing the overall form of the tree.

T52
Photograph showing the overall form of the tree.



LEGEND

Application Site Boundary

Individual Tree

T53
Photograph showing the overall form of the tree.

T54
Photograph showing the overall form of the tree.

T55
Photograph showing the overall form of the tree.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Photographic Record of Existing Individual Tree

SCALE	N.T.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO. HLDP071 - T50-T55		REV	-

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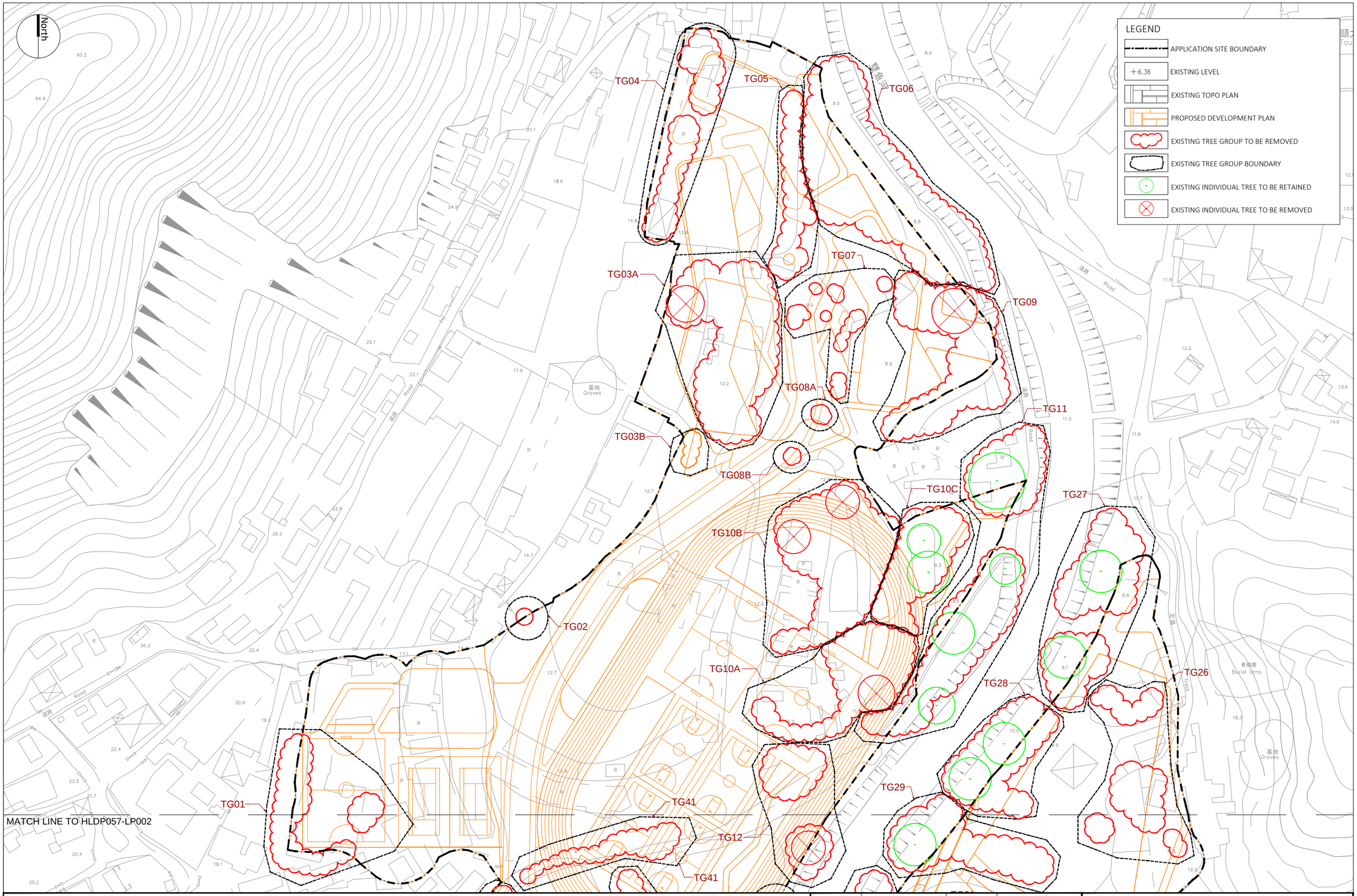
Appendix C: Tree Recommendation Plan



PROJECT TITLE Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories	SCALE	1:1200 @ A3	DATE	15/10/2025
	CHECKED	JBC	DRAWN	JH
TREE GROUP RECOMMENDATION PLAN (SHEET 1)	DRAWING NO	HLDP071-LP-001	REV	B

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North

MATCH LINE TO HLDP057-LP001

TG12
TG41
TG32
TG31
TG30
TG13
TG16A
TG40
TG39
TG16B
TG17B
TG15
TG33
TG37
TG38
TG17D
TG17A
TG14
TG18A
TG34
TG35
TG17C
TG19B
TG18B
TG20B
TG19A
MATCH LINE TO HLDP057-LP003
TG36
TG20A
TG22
TG34
TG21

LEGEND

- APPLICATION SITE BOUNDARY
- +6.36 EXISTING LEVEL
- EXISTING TOPO PLAN
- PROPOSED DEVELOPMENT PLAN
- EXISTING TREE GROUP TO BE REMOVED
- EXISTING TREE GROUP BOUNDARY
- EXISTING INDIVIDUAL TREE TO BE RETAINED
- EXISTING INDIVIDUAL TREE TO BE REMOVED

PROJECT TITLE	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories		
		SCALE	1:1200 @ A3
		DATE	15/10/2025
		CHECKED	JBC
		DRAWN	JH
TREE GROUP RECOMMENDATION PLAN (SHEET 2)		DRAWING NO	HLDP071-LP-002
		REV	B

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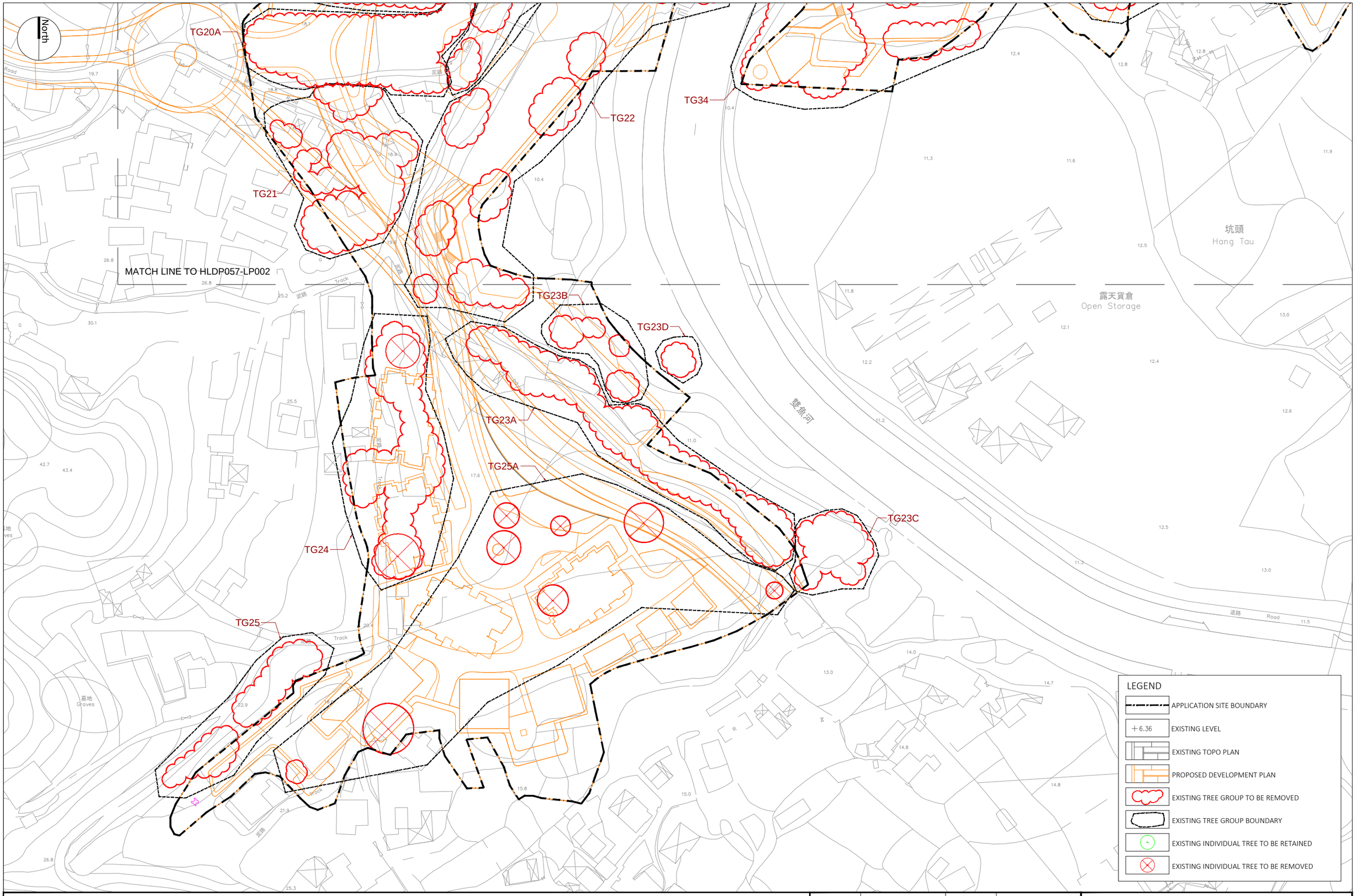

PROJECT TITLE	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories	SCALE	1:1200 @ A3	DATE 15/10/2025
		CHECKED	JBC	DRAWN JH
TREE GROUP RECOMMENDATION PLAN (SHEET 3)		DRAWING NO	HLDP071-LP-003	REV B

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Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment

15th October 2025

Prepared By:

SCENIC Landscape Studio Limited

Project Title	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories
Report Title	**Visual Impact Assessment**

Revision	Date	Complied by:	Checked by:	Approved by:	Description
-	20250825	Various	J Charters	Chris Foot	Draft to Client
A	20250922	Various	J Charters	Chris Foot	Draft to Client
B	20250925	Various	J Charters	Chris Foot	Draft to Client
C	20250929	Various	J Charters	Chris Foot	Draft to Client
D	20251015	Various	J Charters	Chris Foot	Final to Client

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1.0 Introduction

1.1 SCENIC Landscape Studio Limited have been commissioned to undertake a Visual Impact Assessment ("VIA") for a planning application for a Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories (hereafter referred to as the Application Site).

1.2 This application proposes the establishment of a new international school at Ki Lun Tsuen, strategically positioned adjacent to the emerging San Tin Technopole. The San Tin Technopole is envisioned as a critical node for the city's future growth, designed to attract local and international technology enterprises, start-ups, and research talent from across the globe. The school site has a unique setting that balances environmental serenity with accessibility to these cutting-edge industries. As the development of San Tin Technopole accelerates, the provision of a quality international school will enhance the attractiveness of San Tin as a family-friendly destination for tech professionals and contribute to the sustainable, vibrant growth of the Northern Metropolis.

1.3 The visual impact assessment (VIA) aims to assess the potential visual impacts of the proposed scheme under application. This report will demonstrate that the proposals can be accommodated within the existing landscape and visual context without generating significant adverse visual impacts on this part of the Sheung Yue River / River Beas Valley.

1.4 The VIA assesses the source and magnitude of the proposed development on the existing visual character and amenity within the context of the site and its environs. The report concludes by making specific recommendations for alleviating any potential visual impact caused by the proposed development. The report is prepared in accordance with TPB PG-No. 41 'Guidelines on submissions of Visual Impact Assessment for Planning Applications to the Town Planning Board'.

2.0 Existing Site Description

2.1 The Application Site is located to the western side of the village of Hang Tau, Tai Po covering an area of approximately 127,000 m^2. The overall site is an irregular, elongated shape and comprised two sections located on the eastern and western sides of the Sheung Yue River / River Beas, bounded by Hang village to the east, and Ki Lun village to the west. The site area on the western side of the river generally slopes upwards with a cross fall of an east - west incline. At the southern portion existing site levels range from approximately +20.4 down to +11.2mPD near the riverside and at the central portion from around +18.8 down to +9.9mPD. At the northern portion the slopes are less pronounced, ranging between +14.4 down to +8.8mPD. On the eastern side of the river the land is generally flatter and more low lying, with levels ranging from +11.6 down to +8.8mPD.

2.2 The majority of the site is zoned as Agriculture (AGR), with a small portion at the south-west corner zoned as Green Belt (GB). The site currently contains a mix of land uses, including small holdings, orchards and wooded areas at the higher elevated parts and agricultural fields, ponds and some overgrown areas at the lower lying parts adjacent to the river. There are several existing trees on the site, with a mix of mature, native trees notable along the river corridor, but also weed trees, and tree groups comprising both native and exotic species, including several fruit trees.

3.0 Description of the Proposed Scheme

3.1 Under the current application, the proposed International School development consists of a campus set out in functional clusters of buildings and proposed land uses along an approximately 800m long section of the meandering River Beas. Land on both sides of the river is utilized, with a primary school and sport complex forming the core of a building cluster set out along the western side of the river and a middle school and departmental school buildings forming part of the development on the eastern side of the river. At the northern and southern ends of the site clusters

of dormitory buildings are proposed, with the southern cluster of blocks with Max. B.H. +53.5mPD and the northern area of student and staff accommodation with B.H. +46mPD.

3.2 Road access to the site is from the western side of the river, where a new public road from the San Tin Technopole Development and the Northern Metropolis Highway is proposed. The main entrance from this external public road at the central western edge of the site leads to a north to south orientated boulevard which forms a spine road connecting all the development areas on the western bank of the river. At the central section of the site, this road joins two east to west routes forming a loop road which crosses the river at two proposed bridges. These cross-river links provide convenient connections between the main school-related facilities on either side of the river at the central section of the proposed scheme.

3.3 The central portion of the scheme includes development proposals on both sides of the river. The northern section is dedicated to outdoor sports facilities, with a sports field and a running track and a sports education area on the western side of the river and a proposed golf driving range on the eastern side. To the south of these recreational spaces the main school facilities are proposed. On the eastern side of the river middle / high school blocks (B.H. +43.8mPD, +41.0mPD, +34.5mPD, and +24.5mPD) occupy the river frontage and southern part. To the west a stepped development block (B.H. +49.1mPD, B.H. +44.6mPD, B.H. +40.5mPD -and +37.5mPD) are proposed.

3.4 The development is set back from the river edge to create a riverside park and continuous waterfront greenery, open space and pedestrian connections from north to south, through the centre of the campus. The disposition of the proposed buildings across the site includes a variety of heights and building forms, reflecting the different building typologies required for the campus area. The main development blocks on the western side of the river are set against the wooded valley side slopes, with clustering of different building typologies to create an interesting development form which responds to the surrounding terrain and meandering river frontage. The forms of several blocks also step down towards the riverside to create a more subtle transition between the existing landscape and the development proposals.

3.5 The urban design considerations for the proposed scheme are shown in **Figures 3.1**. and **3.2**.

4.0 Baseline Conditions

Visual Envelope

4.1 To identify the visual impacts of the Proposed Development, it is necessary to establish the existing baseline visual conditions of the surrounding environment. For these purposes, the project Study Area / assessment area is defined with reference to the project's Visual Envelope (VE). The Initial Assessment Area Boundary for the VIA is normally delineated according to TPB PG NO. 41, as being around three times the overall BH of the Proposed Development Scheme. The overall VE is then determined with regard to the size of the proposed development, the distance of the development and its potential visibility from the selected viewing points, and the actual site and surrounding topographical conditions. The visual envelope covers the fields of views from all sensitive viewers in direct sight of the proposed development. The visual assessment area of the Project is identified through a combination of detailed field surveys, desktop study and review of aerial photographs.

4.1 The visual envelope (VE), the area from which the proposed development would be seen at this locality, is shaped by a combination of adjacent lowland rural landscape, vegetation alongside the River Beas and the surrounding low-rise residential / village settlements and proposed approved medium and high -rise development in the vicinity. The extent of the VE is presented as **Figure 4.4** and **Figure 4.5** – Visual Envelope and Visually Sensitive Receivers. In addition to the requirements under TPB PG NO. 41, Zones of Visual Influence (ZVI) have also been mapped, with the objective of illustrating the degree of visibility of the Proposed Scheme and the nature of views within the boundary of the visual envelope.

4.2 To the east the VE is contained initially by wooded knolls and existing development and vegetation at the western edge of Hang Tau Village. Isolated views from elevated areas from the far east from the ridges of Kei Lak Tsai (+256 mPD) are also noted, although due to the distance the proposed development would comprise a very small component of the view.

4.3 To the south the immediate VE is contained by the edges of small holdings and vegetation on the valley floor, where intermittent vegetation and village type development filters views towards the site. Wooded knolls to the south of Hang Tau Village also play a role in limiting views from a south-easterly direction. Vegetation and development on the valley floor also filter more distant views towards the site. Further south the VE extends to the uplands associated with the peaks of Kai Kung Leng (+572 mPD) and Pak Tai To Yan (+566 mPD) within Lam Tsuen Country Park. Owing to the distance and panoramic nature of these elevated views the proposed scheme would comprise a very small component of the view.

4.4 To the west and north-west the VE is formed by a combination of the existing landform and vegetation associated with the foothills of Hadden Hill (+222 mPD) and ridges surrounding Kwu Tung Reservoir which define the western extent of the Sheung Yue River / River Beas Valley. The VE is contained by scattered development of Ki Lun Tsuen to the west of the Beas River Channel and associated trees and property boundaries on the lower slopes of the valley side.

4.5 To the north views are contained by development on the valley sides, including low rise Private Residential developments such a Goodwood Park and future development under Planning Approval Y/NE-KTS/13 to the north east of the site and by scattered development including warehouses and light industrial land uses to the immediate east of the River Beas Channel, Views are also filtered by existing mature vegetation aligned to roads and the riverside areas that pass through the Beas River valley.

4.6 Within the VE (defined in accordance TPB PG NO. 41), it is also considered instructive to further discern Zones of Visual Influence (ZVIs), which represent areas from which there are different degrees of visibility of the proposals. These are as follows:

- Primary Zone of Visual Influence – Area from which the majority of the development can be seen is largely contained within the Application Site boundary and the immediate margins of of the river corridor and village roads and footpaths surrounding the site, owing to property boundary structures, mature tree growth and elements of built development.

- Secondary Zone of Visual Influence – Area with more limited visibility of the Proposed Scheme due to intervening obstacles. As such the visible part of the Proposed Scheme is largely limited to glimpsed views of the upper portions of the proposed buildings at the site. For the most part views of the Proposed Scheme are obscured or screened by intervening landform, mature tree growth and built development including industrial concerns and village houses.

- Tertiary Zone of Visual Influence – Area with elevated, long distance, partial and glimpsed views of the Proposed Scheme, mainly from the uplands to the west and south. The visible part of the Proposed Scheme will range from being fragmentary views to being more widespread open views however from these locations the proposals form a small part of a large, panoramic view. The degree of visibility of the Proposed Scheme is determined by the elevation of the viewing position and the viewing angle.

4.8 The importance of identifying the ZVIs is that this provides a clearer picture of the actual visibility of the Proposed Scheme and demonstrates that given the nature of the existing landscape there are few locations where the whole development would be visible and for the most part views are limited to the upper sections and roofs of the proposed buildings. The extent of the VE and the ZVIs are presented as **Figures 4.4** to **4.5 – Visual Envelope and Visually Sensitive Receivers**

Visual Elements

4.9 **Figures 4.1** to **4.3** show the visual elements which shape the visual outlook and amenity of the area. These include attractors such as the Sheung Yue River / River Beas and its valley setting, the mature tree growth associated with wooded knolls within the valley and the grassy hill slopes and mountainous terrain to the west and south of the Application site. Recreational Landscapes such as the Fanling Golf Course and the Jockey Club Beas River Country Club are also noted.

4.10 Visually detracting elements include the scattered elements of small-scale industrial development on the fringes of village areas, particularly to the west of the Application Site. Other prominent built elements within the landscape include the Fanling Highway and high-rise development at Sheng Shui New Town.

4.11 An important consideration in determining the potential visual impacts is the degree of visibility and as has been described above this is largely controlled by visual obstacles within the valley and immediately adjacent to the Application Site boundary. Whilst the site occupies a portion of the open valley floor this area is punctuated by a number of wooded knolls which have an influence on the extent of the visual envelope of the proposed development. Low-level views from within the Beas River Valley are often obscured by the existing landform, mature vegetation and scattered development. There are several areas of low-rise development, including the village of Hang Tau, Tai Po to the east and large private residential estates such as the Valais development to the north where the close-nit nature of the housing screens views from within these built-up areas. Where there are views from the adjacent villages, owing the density of the development these are often limited to the dwellings at the periphery of the settlement and interrupted by adjacent tree growth.

4.12 The ability of the local landscape to accommodate development and obscure views is an important consideration in assessing the potential impacts of the Proposed Scheme and its effect (if any) on the local landscape and visual context

Other Planned and Committed Developments

San Tin Technopole Development

4.13 The planned San Tin Technopole Development is located due west of the Application site. Whilst the site and this major development are separated by the uplands of Ngau Tam Shan (+337 mPD) and Ki Lun Shan / Hadden Hill (+222mPD), the low point between these peaks (Saddle Pass / Ki Lun Shan Au) is located adjacent to the Application Site. Owing to the high-rise nature of the Technopole Development, with building heights up to +200mPD, some visibility of Technopole from the Sheung Yue River / River Beas Valley is anticipated.

4.14 The planning of the San Tin Technopole Development will strike a balance between development and nature conservation. The development area comprises mainly the I&T Park and the San Tin Town Centre for providing diverse employment opportunities and various types of housing, as well as commercial uses, open space and community and infrastructural facilities. Major planning themes of the Technopole include:

- Developing a World Class I&T Hub - Together with the HSITP at the Lok Ma Chau Loop, the Technopole will supply about 300 ha of information and technology (I&T) uses;
- Ecological Conservation – The proposals include the establishment of the Sam Po Shue Wetland Conservation Park (SPS WCP). The park is located along the core section of the flight path for migratory birds, in close proximity to the Mai Po Nature Reserve and other wetlands and has large areas of productive fishponds. Within the proposed area, 328 ha will be used for the implementation of ecological and fisheries enhancement measures for the development at STLMC area of the Technopole, while the remaining 10 ha is tentatively reserved for eco-education, eco-recreation and eco-tourism facilities. The proposals will enhance the ecological function and capacity of 288 ha of wetlands and fisheries resources of 40 ha of fishponds with active conservation management and modernised aquaculture to compensate for the loss of wetland habitats and fisheries resources arising from the development of the Technopole.
- Balanced, Vibrant and Liveable Community – The area will provide about 50,000 to 54,000 new flats of different housing to help address the housing shortage in the territory. The proposals also include provisions of land for government, institution and community (GIC) facilities and open space have adopted the ratio of 3.5m^2 per person

4.15 The building layout for the San Tin Technopole Development is based on the Landscape Master Plan contained in the approved EIA for Agreement No. CE 20/2021 (CE) First Phase Development of the New Territories North – San Tin / Lok Ma Chau Development Node – Investigation and the Building Heights from the Draft San Tin Technopole Outline Zoning Plan (S/STT/1) dated 8th March 2024.

Kwu Tung North NDA

4.16 The Kwu Tung North (KTN) New Development Area (NDA) is located to the north of the Application Site and forms a component part of the future Northern Metropolis. The NDA is planned as a mixed-use development node with a focus on residential, commercial, research and development (R&D), and agricultural uses. It will also incorporate retail and service facilities, community and government spaces, and land for ecological conservation. The KTN NDA is located northwest of Fanling/Sheung Shui New Town and is designed to integrate with the existing area to form a larger FL/SS/KT New Town. The KTN NDA has a comprehensive network of recreation and green spaces comprising regional, district and local open spaces. The ecologically important Long Valley area (about 37 ha) is planned as "Long Valley Nature Park" (LVNP) which will be a "green lung" contributing to a quality living environment for the NDA. Apart from the LVNP, which showcases the harmonious blending of farming activities with nature conservation, about 45 ha of land to the north and south of the LVNP is also retained for agricultural uses.

4.17 The KTN NDA is located to the north of the Fanling Highway and is not considered a major visual consideration in the current assessment, in relation to the selected Vantage Points. The KTN NDA development is therefore not modelled for the purpose of representing a base case for the assessment, which is largely based on future approved developments to the south of the Fanling Highway.

Northern Metropolis Highway

4.18 The approximately 23-km Northern Metropolis Highway consists of four sections, namely the Tin Shui Wai Section, San Tin Section, Kwu Tung Section and the New Territories North (NTN) New Town Section, from west to east, linking the development nodes of the Northern Metropolis (including Ngau Tam Mei, San Tin Technopole, Kwu Tung North/Fanling North and New Territories North (NTN) New Town). The NMH will enhance accessibility to the new development areas and further enhance cross-boundary road connections for passengers and goods, enabling members of the public and visitors to travel conveniently to and from various major land boundary control points in the Northern Metropolis.

4.19 The Application site is adjacent to the San Tin section of the Highway, which is scheduled for completion in or before 2036, at which point it will form the major access route to the site. Prior to this, upgrading of the existing road network shall be undertaken to facilitate access to the proposed initial phases of the development.

Agricultural Park in Kwu Tung South

4.20 This proposed development is located to the south of the Application Site and aims to promote the modernisation and sustainable development of local agriculture. The development proposals comprise the construction of related infrastructure (such as irrigation, permanent basic lodging and storage facilities) and access roads including two vehicular bridges connecting with the existing Tsiu Keng Road. Most of the Agri-Park area will be used for agricultural activities, while the remaining part will be used for building infrastructural facilities and roads for supporting the Agri-Park. Considering its proposed scale, the Agri-Park is planned to be implemented in two phases. Phase 1 will be developed in a relatively small-scale (with an area of about 11 ha), with a view to enabling commissioning for use as early as possible.

4.21 The Agri-Park aims to help nurture agro-technology and knowledge on modern farm management through leasing farmland and providing associated agricultural facilities for farmers to conduct commercial farming. The establishment of a visitor centre is also proposed and there would appear to be some potential educational synergies with the proposed school campus at the Application Site.

Proposed Residential Developments

4.22 The future landscape and visual setting for the proposed Scheme will also include a number of planned and committed private residential developments in the River Beas valley to the south of the Fanling Highway. These including the following:

- Approved private housing developments (Application No. Y/NE-KTS/506, Application No. Y/NE-KTS/12) and Application No. Y/NE-KTS/14) with maximum BH +75 mPD.
- Approved private housing development (Application No. Y/NE-KTS/15) with maximum BH +70 mPD.
- Approved private housing development (Application No. Y/NE-KTS/13) with maximum BH +40.3 mPD.
- Approved private housing development (Application No. Y/NE-KTS/525) with maximum BH +22.5 mPD.

Vantage Points

4.23 The Vantage Points (VPs) are identified as views from key strategic and popular local vantage points, as well as viewing locations from the village areas adjacent to the Application Site. For the purposes of this assessment and in accordance with current approaches the VPs are based on publicly accessible and popular locations. Priority is given during the selection to public viewpoints, open spaces and key pedestrian routes.

4.24 Based on the targeting of publicly accessible locations the representative VPs are listed below with a brief description of the existing view and their locations presented as **Figure 7.1 Location of Photomontage Vantage Points**.

- **Vantage Point 01**: View looking West from Hang Tau Tsuen Hall;
- **Vantage Point 02**: View looking southwest from roadside public footpath along Hang Tau Road, opposite Hang Tau Road Public Toilets;
- **Vantage Point 03:** View looking southeast from Kwu Tung Hang Village Rest Area;
- **Vantage Point 04**: View looking east from Ki Lun Tsuen Playground;
- **Vantage Point 05**: View looking northwest from a riverside footpath next to Sheung Shui Hang Tau Village Sitting Out Area;
- **Vantage Point 06**: View looking south from Kwu Tung Road South;
- **Vantage Point 07**: View looking southeast towards the site from Hadden Hill;
- **Vantage Point 8**: View looking northwest from Cheung Lek Sitting Out Area;

4.25 Some of these locations are over a relatively short distance from the Application Site owing to the screening effect of the existing development, landform and mature vegetation in the immediate surroundings. More distant vantage points from popular public areas are also illustrated to help define the nature of impacts (if any) on the wider visual context of the site.

5.0 Visual Impact Assessment

Sources of Visual Impact

5.1 The primary source of visual impact will be due to the introduction of a new development within a sub-urban location.

5.2 The key issues to be addressed by the visual impact assessment will include:

- The introduction of new development within a valley landscape.
- Development of a responsive architectural design and the associated mitigation measures to minimise potential visual impacts as far as possible which responds to both the existing context and the future planning context. This includes the creation of setbacks and buffer areas along key facades of the development, visual corridors and building separations, and the adoption of stepped height profiles to respond to the visual context.
- Landscape and visual mitigation for the identified public vantage points.
- Sensitive design of the site formation works particularly and design of structures and levels along the site boundary adjacent to the Sheung Yue River / River Beas.

5.3 The predicted visual impact for each of the VPs is described in section 7.0 together with the proposed mitigation measures in accordance with PG-No. 41.

6.0 Visual Mitigation Measures

6.1 The proposed mitigation measures during the construction and operational phases of the project are described below and shown on **Figure 3.1 – Proposed Scheme: Urban Design Considerations**.

6.2 Landscape and visual mitigation measures include two key levels of approach, the primary and secondary mitigation. The primary mitigation measures are based on the design, disposition, orientation and overall form of the proposed development whilst the secondary mitigation measures look to how the proposed development can be treated to mitigate any potential impacts. It is the primary mitigation measures which shape the form of the architectural scheme and have the biggest effect on the mitigation of the potential visual impacts. The proposed mitigation measures include the following:

Primary Mitigation Measures

- Incorporation of a sensitive architectural layout which seeks to maximise setbacks from the riverside and other boundary areas of the site.
- Adoption of stepped height principle with stepping down of building blocks towards the riverside and in response to the ridgeline to create a more subtle transition between the existing landscape and the development proposals.
- Introduction of visual corridors through the site on an east to west axis and incorporation of building separations which serve to break up the combined development frontage along the western bank of the River Beas and avoid a potential wall effect;
- Planning of this elongated site as a series of uses, clustered as different building typologies, thereby avoiding a monotonous linear appearance and creating a more interesting development form which responds to the surrounding terrain and meandering river path.
- Introduction of articulated building facades to further break-up the visual mass of the individual blocks through the manipulation of architectural form; and the creation of areas of light and shade;
- Setting back the buildings from the site boundary to allow for road access and retention of existing trees, and where this is not possible, the planting of a new tree buffer;

- Building setbacks along the riverside margins of the site to allow retention of existing mature trees, and the creation of a riverside park and open space winding through the centre of the development; and
- Creation of a responsive development platform design which follows the existing site contours and steps down towards the river corridor to ensure better integration with the immediate landscape and visual context.

Secondary Mitigation Measures

- Other measures include the use of colour and finishes for the architectural façade for the structures to minimise the prominence of the scheme. This includes the use of colour blocking working with the massing and articulation of the structures.
- Landscaping including tree planting for the Application Site particularly at its periphery to create landscape buffers planted with trees and shrubs which serves to screen views of the proposals as far as possible while also serving soften the architectural form of the visible portions of the Proposed Scheme. The measures also serve to enhance the sense of visual and landscape integration with its immediate riverside and valley context.
- Utilisation of a combination of heavy standard trees and palms creating a more mature landscape with an immediate effect.
- Introduction of comprehensive urban design parameters as part of the detailed design stage of the project to establish the future character of the development from an architectural and landscape perspective. This includes the use of high quality hard and soft landscape measures including tree planting, site furniture, lighting and seating.

6.3 It should be noted that the final architectural design and the appearance of the buildings is subject to detailed design stage of the project.

7.0 Appraisal of Visual Changes

7.1 The visual change is defined as the impact remaining after all practical methods of mitigation have been implemented. A series of computer-generated images or photomontages from the vantage points indicated on **Figure 7.1** are presented as **Figures 7.2** to **7.12**. The locations have been selected to demonstrate the range of viewing angles and viewing distances in relation to identified VPs, demonstrate the schemes 'fit' into the existing and future sub-urban context; and also demonstrate the degree of visibility from surrounding locations.

7.2 The photomontages show the existing situation, the baseline scheme (as per approved S12A) and the Proposed Scheme following the implementation of the proposed mitigation measures. Where the proposals are not visible, or views partially obscured a red dashed line is used to indicate their approximate location.

7.3 The text below provides a brief description of each of the views selected for the photomontages and provides an appraisal of visual changes (visual composition, visual obstruction, the effect on public viewers and the effect on visual resources) in accordance with TPB PG-No. 41.

- **Vantage Point 01**: View looking West from Hang Tau Tsuen Hall;
- **Vantage Point 02**: View looking southwest from roadside public footpath along Hang Tau Road, opposite Hang Tau Road Public Toilets;
- **Vantage Point 03:** View looking southeast from Kwu Tung Hang Village Rest Area;
- **Vantage Point 04**: View looking east from Ki Lun Tsuen Playground;
- **Vantage Point 05**: View looking northwest from a riverside footpath next to Sheung Shui Hang Tau Village Sitting Out Area;
- **Vantage Point 06**: View looking south from Kwu Tung Road South;
- **Vantage Point 07**: View looking southeast towards the site from Hadden Hill;
- **Vantage Point 8**: View looking northwest from Cheung Lek Sitting Out Area;

7.4 **Vantage Point 01: View looking west from Hang Tau Tsuen Hall** (**Figures 7.2** refers). At an elevation of approximately +15.5mPD and at a distance of 220m, this vantage point represents views from village areas to the east of the Application Site, with reference to the public facility of the Village Hall at the centre of Hang Tau Tsuen. As described previously, owing to the density of the development, views from within such village areas are often limited to the dwellings at the periphery of the settlement. The view illustrates this point, where the dense housing development within the village largely screens views to the proposed development beyond. In this view the tight cluster of three storey houses effectively screens views towards most of the Application site.

7.5 *Sensitivity of Public Viewers: Low*
Whilst Hang Tau Road is the main transport artery through the village and the Village Hall is an important public node within the settlement, the nature of the view is highly developed and urban; with the view dominated by hard elements and minimal greenery and planting. As such the visual sensitivity of this VP is considered to be low.

7.6 *Visual Composition*: Not entirely apparent
The visual composition of the Proposed Scheme would not be entirely apparent from this location owing to the screening effect of existing village development. A very small part of the upper floors of the proposed sport complex is visible through gaps in the housed, with the majority of the development screened from view.

7.7 *Visual Obstruction*: Slight
Only a small portion of the development is glimpsed through the foreground development and obstructs a small part of the open sky.

7.8 *Effect on Public Viewers*: Slight
The proposed development is largely screened from view, where the scene is dominated by the enclosing, close-nit village housing and largely unencumbered by views of development, with only a glimpsed view through to the upper portion of the proposed sports complex at the eastern edge of the site.

7.9 *Effect on Visual Resources*: Slight
As noted above, from this vantage point the proposed development obstructs a small part of the open sky which is considered an insignificant impact on these visual resources within the context of the overall view.

7.10 *Overall Visual Impact*: Slightly Adverse
The overall visual impact at the vantage point is slightly adverse, as only a small part of the development is glimpsed through a gap between the existing housing development, and the scene is dominated by the village environs.

7.11 **Vantage Point 02: View looking southwest from roadside public footpath along Hang Tau Road, opposite Hang Tau Road Public Toilets** (**Figures 7.3** and **7.4** refer). This view looks south-west towards the site from Hang Tau Road, across the northern part of Hang Tau Village, at a distance of approximately 500m from the Application Site. In this view, the scheme is set against the backdrop of the ridgeline formed by Ngau Tam Shan (+337 mPD) and Ki Lun Shan / Hadden Hill (+222mPD) to the west of the Sheung Yue River / River Beas. This view is currently one of the few locations along Hang Tau Road (north of Hang Tau Village) where existing development and vegetation along the road corridor open up sufficiently to allow longer views across the landscape. However, owing to intervening landform, vegetation and existing low-rise development, the scheme proposed at the application site would be largely screened from this vantage point. It should also be noted that on implementation of the approved residential development under Application No. Y/NE-KTS/13, views towards the site will be screened by new medium-rise buildings adjacent to Hang Tau Road (**Figure 7.4** refers). The impacts are therefore assessed relative to this base case scenario.

7.12 *Sensitivity of Public Viewers:* Medium
This vantage point is available to residents and travellers along Hang Tau Road. The existing tree lined setting with a mountain backdrop is an attractive scene, however existing roadside shacks and structures lower the quality of the view such that the sensitivity would be considered medium.

7.13 *Visual Composition*: Not apparent
In the existing situation a small portion of the upper floors of the northern part of the scheme would be visible above the existing tree line. However, relative to the base case, with the implementation of approved development under Application No. Y/NE-KTS/13, this portion of the scheme would be screened by the approved development set in the foreground of the view.

7.14 *Visual Obstruction*: None
Under the base case scenario, the proposed development will not be visible from this location and therefore there will be no visual obstruction. Relative to the existing situation the visual obstruction would be rates as slight.

7.15 *Effect on Public Viewers*: Negligible
With the implementation of the proposed development under the base case scenario there will be no impact on public viewers.

7.16 *Effect on Visual Resources*: None
Under the base case scenario, the visual resources apparent in this view will not be affected by the proposals. Relative to the existing situation the effect on visual resources would be rated as slight.

7.17 *Overall visual Impact*: Negligible
Due to the screening effect of the existing vegetation and landform and low-rise development and the implementation of future approved development in the foreground of this view, there will be no overall visual impact on this vantage point.

7.18 **Vantage Point 03: View looking south-east from Kwu Tung Hang Village Rest Area (Figures 7.5 refers)** This vantage point, at an elevation of approximately +12.0mPD and located at a distance of approximately 380m, is available to residents and the public using the rest area facilities and travelers on the riverside access road on the western bank of the Sheung Yue River / River Beas. The view is selected to illustrate that the proposed development would be screened by existing vegetation and landform along the riverside and illustrates that the proposed project would have limited visibility in for public viewers moving along the attractive river corridor, until relatively close to the site. The existing view is relatively enclosed by riverside vegetation, with glimpsed views of the backdrop of mountain peaks including Tai To Yan (+566mPD) and Kai Keng Leng (+584mPD) and the spurs and ridgelines associated with these upland formations.

7.19 *Sensitivity of Public Viewers:* Medium
This vantage point is available to residents and users of this riverside access road. The existing riverside setting with a mountain backdrop is an attractive composition. The degree of visibility towards the Application Site is screened and there are alternative views along the river channel to the north and south and as such the sensitivity would be considered medium.

7.20 *Visual Composition*: Not entirely apparent
The visual composition of the Proposed Scheme would not be entirely apparent from this location owing to the screening effect of intervening landform, hillside vegetation and mature trees along the riverside. A very small part of the upper floors of the northern part of the development may be visible above the treetops, with the majority of the development screened from view.

7.21 *Visual Obstruction*: Slight
Only a small portion of the development is glimpsed through the trees and obstructs a small part of the hillside backdrop of the view.

7.22 *Effect on Public Viewers*: Slight
The proposed development is largely screened from view, where the scene is dominated by the enclosing greenery and largely unencumbered by views of development, with only glimpsed views through vegetation to the northern part of the development.

7.23 *Effect on Visual Resources*: Slight
As noted above, from this vantage point the proposed development obstructs a small part of the hillside backdrop, without breaking the ridgeline. This is considered to have a slight impact on visual resources within the context of the overall view.

7.24 *Overall Visual Impact*: Slightly Adverse
Only the upper portions of the development at the northern end of the site would be visible along the river corridor but owing to the relatively small area visible and the distance of the view this does not significantly detract from the quality of the scene, which remains dominated by the riverside and its greenery with some filtered views of existing development. There are also alternative views along the river channel to the north, and the overall impact of the proposed school development is judged to be Slightly Adverse.

Vantage Point 04: View looking east from Ki Lun Tsuen Playground (Figures 7.6 refers) This vantage point, at an elevation of approximately +30.0mPD and located at approximately 250m, is available to residents and the public using the playground facilities. The view is selected to illustrate that the proposed development would be largely screened by existing vegetation and village development at Ki Lun Tsuen and illustrates that the proposed project would have very limited

visibility in public views from this local amenity. The existing view is relatively enclosed by hillside vegetation and tree planting at property boundaries, with views above the treetops to the open sky.

7.25 *Sensitivity of Public Viewers:* Medium
The existing playground has an attractive setting of greenery. The degree of visibility towards the Application Site is partial / glimpsed and there are alternative views towards the west.

7.26 *Visual Composition*: Not entirely apparent
The visual composition of the Proposed Scheme would not be entirely apparent from this location owing to the screening effect of existing trees. A very small part of the upper floors of the northern part of the development may be visible above the treetops, with the majority of the development screened from view.

7.27 *Visual Obstruction*: Slight
Only a small portion of the development is glimpsed through the trees and obstructs a small part of the open sky and a distant residential tower near Sheng Shui.

7.28 *Effect on Public Viewers*: Negligible
The proposed development is largely screened from view, where the scene is dominated by the enclosing greenery and largely unencumbered by views of development, with only glimpsed views through vegetation to the northern part of the development.

7.29 *Effect on Visual Resources*: Slight
As noted above, from this vantage point the proposed development obstructs a small part of the open sky and a distant residential tower near Sheng Shui, which are considered an insignificant impact on these visual resources within the context of the overall view.

7.30 *Overall Visual Impact*: Negligible
The overall visual impact at the vantage point is insignificant, as only a very small part of the development is glimpsed through the existing tree belt and the scene is dominated by the village edge and its greenery and largely unencumbered by views of the proposed development. The change is therefore considered to have negligible impact in comparison to the existing situation.

7.31 **Vantage Point 05: View looking northwest from a riverside footpath next to Sheung Shui Hang Tau Village Sitting Out Area** (**Figures 7.7** and **7.8** refers). This vantage point at an elevation of approximately +14mPD is located to the south-west of the site at a viewing distance of around 270m. The view is available to users of the seating out area and pedestrians approaching a bridge crossing over the River Beas. The view is selected to illustrate that despite the proximity of the vantage point; the proposed development would be largely screened by existing vegetation and development along the riverside. The scale of the visible part of the development at the southern end of the site would also be compatible with other built elements in the view, which are also set within the wooded fabric of the valley floor. The existing view is a little enclosed by riverside vegetation, with framed views along the river channel to the backdrop of the foothills of Ki Lun Shan and Ngau Tam Shan, framing the low point of the ridge at Saddle Pass. The base case scenario for the assessment includes the proposed development of the San Tin Technopole on the other side of Saddle Pass, a major technology related development with a range of proposed land-uses. The zoning nearest the site includes future Logistic Storage and Workshops and Innovation and Technology related development, with a maximum building height of +170mPD.

7.32 *Sensitivity of Public Viewers: Medium*
This vantage point is available to users of riverside footpaths. The existing riverside setting with a mountain backdrop is an attractive composition. The degree of visibility towards the Application Site is limited by intervening vegetation and built development and there are alternative views along the river channel to the north and south and as such the sensitivity would be considered medium.

7.33 *Visual Composition*: Not entirely apparent
The visual composition of the Proposed Scheme would not be entirely apparent from this location owing to the screening effect of the existing riverside tree belts on the eastern side of the Beas River. The measures adopted to minimize the visual impact such as building separations are evident in views from this vantage and help reduce the scale of the development relative to existing built structures visible in the view.

7.34 *Visual Obstruction*: Medium
The southern end of the development will be visible above the riverside tree belt from this vantage point and the proposed building obstructs views to the wooded hillside and open sky. The development also marginally breaches the ridgeline at the low point of the mountain backdrop at Saddle Pass. Noting that relative to the base case, the more distant high-rise development at San Tin Technopole only effect the open sky view, the visual obstruction is rated as Medium.

7.35 *Effect on Public Viewers*: Slight
Whilst the scene comprises several attractive elements including the riverside and its greenery and views to the foothills of Hadden Hill and Ngau Tam Shan, there are also glimpsed views through the vegetation on the east side of the river towards some low-rise storage sheds and other riverside development. Only the middle and upper floors of the southern end of the development would be visible in this view. When the base case scenario, including the backdrop of the San Tin Technopole Development is considered, the cumulative effect of the development on public viewers is considered slight.

7.36 *Effect on Visual Resources*: Slight
As noted above, from this vantage point the proposed building obstructs views to the wooded hillside and open sky and marginally breaches the ridgeline at the low point of the mountain backdrop at Saddle Pass. However, these are a relatively small proportion of these resources available in this view and therefore the effect on Visual Resources is Slight.

7.37 *Overall Visual Impact*: Slightly/Moderately Adverse
Only the middle and upper portions of the development at the southern end of the site would be visible along the river corridor but owing to the relatively small scale of the buildings and the impact of mitigation measures this does not significantly detract from the quality of the scene, which remains dominated by the riverside and its greenery with some filtered views of existing development. There are also alternative views along the river channel to the south. When assessed against the base case scenario, the high-rise development at San Tin Technopole, although more distant, does impart a cumulative developed character to the view, relative to which the additional impact of the proposed school development is judged to be Slightly / Moderately Adverse.

7.38 **Vantage Point 06: View looking south from Kwu Tung South Road** (**Figures 7.9** refers). This vantage point is at an elevation of approximately +23.0mPD and located at approximately 650m from the proposed development. The view is selected to illustrate that views from the north of proposed development at this distance are screened by the foothills of Ki Lun Shan / Hadden Hill, with the ridgeline elevation of around +84.5mPD and associated woodland vegetation eliminating any visual impact from the vantage point of this public road. The existing view is along the road corridor and is framed by roadside vegetation and low-rise structures associated with existing small holdings.

7.39 *Sensitivity of Public Viewers: Medium*
This vantage point is available to local residents and travellers on Kwu Tung South Road. Existing views along the road are largely contained within the road corridor due to roadside vegetation and roadside development. Whilst some of the roadside development is rather ramshackle the outlook is generally wooded and there are distant views towards the ridgeline of Pak Tai To Yan (+480mPD) and Tai To Yan (+566mPD). The sensitivity would therefore be considered medium.

7.40 *Visual Composition*: Not apparent
Views of the proposed development from this location will be obscured by intervening low rise roadside development and the wooded slopes of hills surrounding Kwu Tung Reservoir.

7.41 *Visual Obstruction*: None
The proposed development will not be visible from this location and therefore there will be no visual obstruction.

7.42 *Effect on Public Viewers*: Negligible
With the implementation of the proposed development there will be no impact on public viewers.

7.43 *Effect on Visual Resources*: None
The visual resources apparent in this view will not be affected by the proposals.

7.44 *Overall visual Impact*: Negligible
Due to the screening effect of the existing landform and vegetation there will be no impact on this view.

7.45 **Vantage Point 07: View looking southeast towards the site from Hadden Hill** (**Figures 7.10** and **7.11** refer). At an elevation of approximately +166mPD and at a distance of about 650m hikers using a seasonal trail to summit of Hadden Hill enjoy panorama views over the south of the Beas River valley and east towards Sheng Shui. Whilst this view is likely to be experienced by a limited number of members of the public, the elevated and panoramic view over this area provides a good overview of the development context of the current proposals. Whilst the Beas River Valley has moments of tranquil and natural quality the view of the valley from this elevated vantage point also illustrates that this is a developed landscape near the existing high rise urban centre of Sheng Shui and Fanling. The development of Kwu Tung North and Fanling North NDA's will add to the density of this distant development in the future. To the South of the Fanling Highway the approved development under s12A Applications No.Y/NE-KTS/12, No.Y/NE-KTS/14 and No.Y/NE-KTS/15 (up to +75mPD) and No.Y/NE-KTS/13 (up to +40.3mPD) will add to the extent of prominent development within the landscape and will form the base case scenario for the assessment. The full extent of the school proposal is blocked by foothills along most of this trail, however development at the southern end of the site is evident in views over the valley landscape.

7.46 *Sensitivity of Public Viewers: Medium*
Whilst the surrounding mountain scenery is an attractive element of the view there is already significant development in the lowland areas, although less so towards the south. There would be some change in the visual character of this part of the valley environment owing to the introduction of new middle rise development on the eastern margins of the river corridor. There are alternative panoramic views to the east and northeast. Given the availability to relatively few hikers the visual sensitivity of this VP is considered to be Medium.

7.47 *Visual Obstruction*: Small blockage of view
The panoramic view over the valley would be partially affected by the imposition of this development on the valley floor some distance away from this elevated vantage point. The visible southern section of the development proposals would obscure views of a large light industrial / storage yard on the eastern bank of the river but also obscure areas of small holdings and tree planting to the south of the Application Site.

7.48 *Effect on Public Viewers*: Moderate
Noting that there is limited dense village development nor any medium rise development in the southern portion of the valley, there would be change in the visual character of the valley environment owing to the introduction of new mid-rise development on the western side of the River Beas. It should be noted that this elevated view from a remote hillside overlooking the valley would be experienced by a relatively few public viewers. Given the panoramic nature of the view the development would have a limited effect on the sense of openness, however the more rural

character of the southern portion of the valley would be disturbed. The proposed Agricultural Park in Kwu Tung South would be visible in this view, however built development associated with these proposals are small scale and in-keeping with the existing rural character.

7.49 *Effect on Visual Resources*: Small
The implementation of the Proposed Scheme would obscure views of a large light industrial / storage yard on the eastern bank of the river and a small portion of the lightly developed and vegetated valley floor. However, a similar landscape extends across much of the southern part of the valley, so this loss is not considered significant. Owing to the small scale of potential impact relative to the overall extent of such visual resources in this wide, panoramic view, the effect on existing visual resources is considered small.

7.50 *Overall Visual Impact*: Slightly / Moderately Adverse
The visible portion of the scheme is a small component of the view, however it is viewed against a backdrop of the southern part of the Sheung Yue River / River Beas Valley, which is currently lightly developed and has a wooded, rural appearance. When considering the base case, the development is not unprecedented, but will in effect add to the increase in building scale within the valley as represented by the approved developments under Applications Nos. Y/NE-KTS/12, Y/NE-KTS/14, Y/NE-KTS/15 and Y/NE-KTS/13 located to the northern and central part of the view. The adoption of articulated building forms and stepped height profiles help to mitigate such scale effects, however the character of the view towards the south will be impacted and so the overall impact is assessed to be Slightly/Moderately Adverse.

7.51 **Vantage Point 08: View looking northwest from Cheung Lek Sitting Out Area** (**Figures 7.12** refers). This vantage point is at an elevation of approximately +16.5mPD and located at a distance of approximately 550m from the proposed development. The view is selected to illustrate that views of proposed development from the south down the Sheung Yue River / River Beas Valley are screened at this distance by existing landform and woodland vegetation and illustrates that the proposed project would have no impact on public views from the sitting out area and adjacent riverside footpath. The existing view looks north, adjacent to the course of the Beas River with glimpsed views over tree canopies to the backdrop of mountain peaks.

7.52 *Sensitivity of Public Viewers: Medium*
This vantage point is available to local residents and public using the sitting out area. The sensitivity of public viewers in this location is considered to be medium. Whilst the view demonstrates an attractive natural quality the view towards the Application Site is screened by intervening landform and vegetation and there are alternative views to the west and east.

7.53 *Visual Composition*: Not apparent
Views of the proposed development from this location will be obscured by intervening riverside tree planting, landform and vegetation.

7.54 *Visual Obstruction*: None
The proposed development will not be visible from this location and therefore there will be no visual obstruction.

7.55 *Effect on Public Viewers*: Negligible
With the implementation of the proposed development there will be no impact on public viewers.

7.56 *Effect on Visual Resources*: None
The visual resources apparent in this view will not be affected by the proposals.

7.57 *Overall visual Impact*: Negligible
Due to the screening effect of the existing landform and vegetation there will be no impact on this view.

8.0 Conclusion

8.1 In general, the existing landscape and visual amenity is characterised by a sub-urban context of the valley floor, active and abandoned agricultural land, occasional wooded knolls, and light industrial uses bounded by 3-storey village development and some private residential developments. A detailed review of the Application Site and its immediate context has revealed that the visual envelope and the primary and secondary zones of visual influence are largely contained near the Application Site. This is due to the low-lying nature of the valley floor, and a combination of the existing landform, the presence of wooded knolls and the density of the existing mature tree growth and the proximity of existing village development which serve to contain and, in some locations, obscure views.

8.2 The proposed School development consists of a campus set out in functional clusters of buildings and proposed land uses along an approximately 800m long section of the River Beas. The development is set back from the river edge to create a continuous riverside park with extensive greenery, open space and pedestrian connections from north to south, through the centre of the campus. The disposition of the proposed buildings across the site includes a variety of heights and building forms, reflecting the different building typologies required for the campus area. The eastern side of the river is lightly developed, with the central area occupied by a sports field and a running track. The western side, set against the wooded valley side slopes, is more densely developed, with clustering of different building typologies to create an interesting development form which responds to the surrounding terrain and meandering river frontage. The forms of the various blocks also step down towards the riverside to create a more subtle transition between the existing landscape and the development proposals.

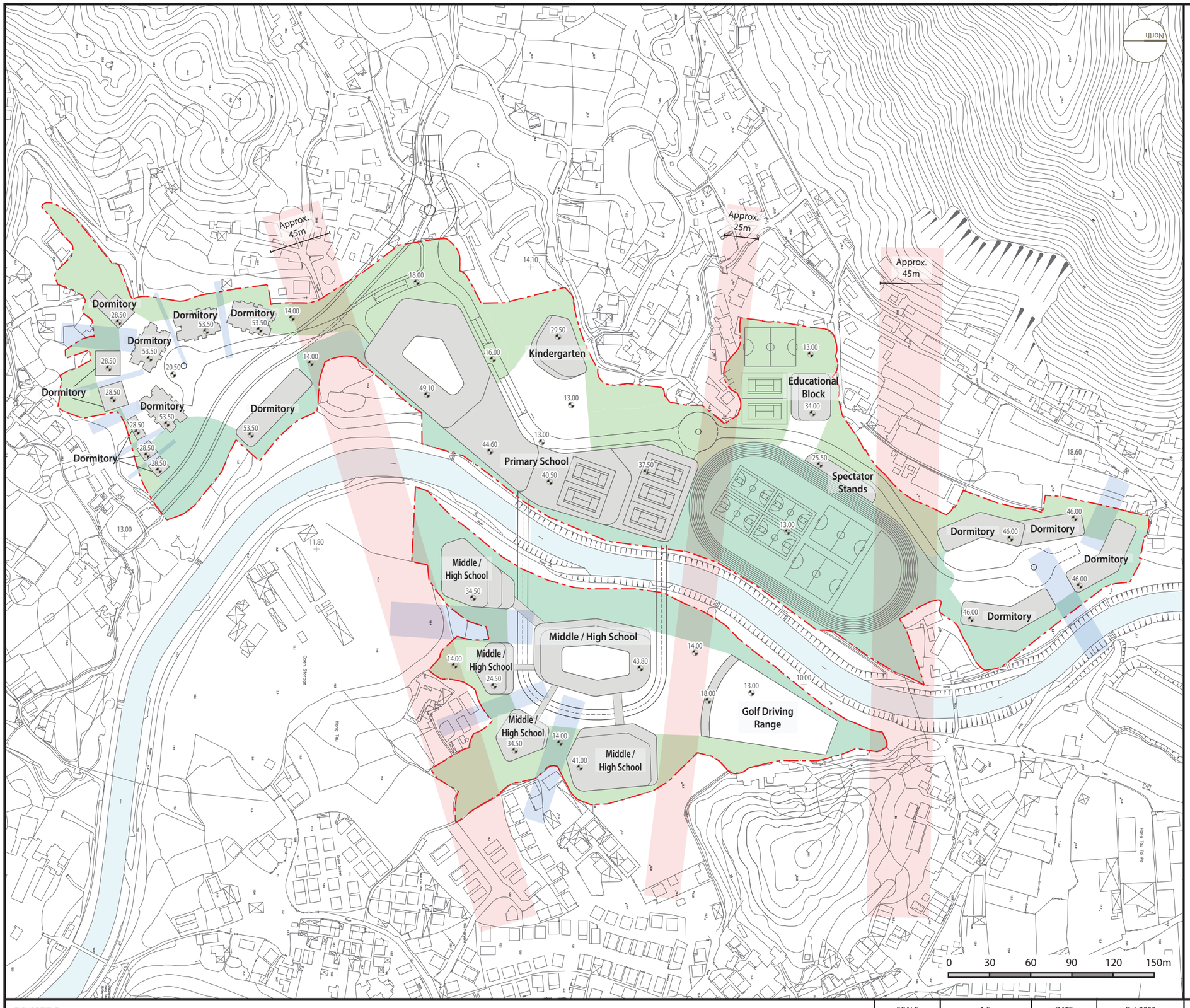
8.3 The selection of vantage points has been comprehensive covering all the potential viewing angles from publicly accessible locations. As is clearly demonstrated by the photomontages there are few locations from where the Proposed Scheme can be seen in its entirety. In most locations views of the proposals are largely obscured by intervening landform, mature vegetation and built structures. In the few locations where there will be views of the proposals these are largely partial or glimpsed with a small part of the scheme being visible.

8.4 The photomontages show a scheme which although located within a sub-urban environment fits comfortably within its context. This 'comfortable fit' is in part due to the architectural enhancement measures designed into the Proposed Scheme which have been described above and partly due to its setting and the lack of visual access. It would be unrealistic to think that there would be no adverse impacts however this must also be considered in terms of the nature and extent of existing and future views.

8.5 The assessment makes a comparison with a base case scenario, which includes approved but yet to be implemented developments within the local areas. For half of the selected public vantage points the predicted visual impacts will represent no or negligible impact, as the development is fully or almost fully screened by a combination of existing landform and vegetation, existing and future development. However, the relative assessed impacts from four of the eight vantage points, in close proximity to the site, are considered to be slightly adverse (two VPs) and slightly / moderately adverse (two VPs), in comparative terms.

8.6 Given the factors described above together with the adoption of a responsive architectural design the implementation of the Proposed Scheme would not significantly detract from the existing landscape and visual amenity of the local area. Given the factors described above the proposals are considered to be visually compatible with their future context.

Visual Impact Assessment Figures



LEGEND

- Application Site Boundary
- xx.xx — Existing Levels (+mPD)
- xx.xx — Proposed Levels (+mPD)
- Proposed Building
- Proposed Visual Corridor
- Proposed Building Separation
- Proposed Building Setback (Riverside)
- Proposed Building Setback (Hillside)

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Proposed Scheme: Urban Design Considerations

SCALE	A.S.	DATE	Oct 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 3.1	REV	C

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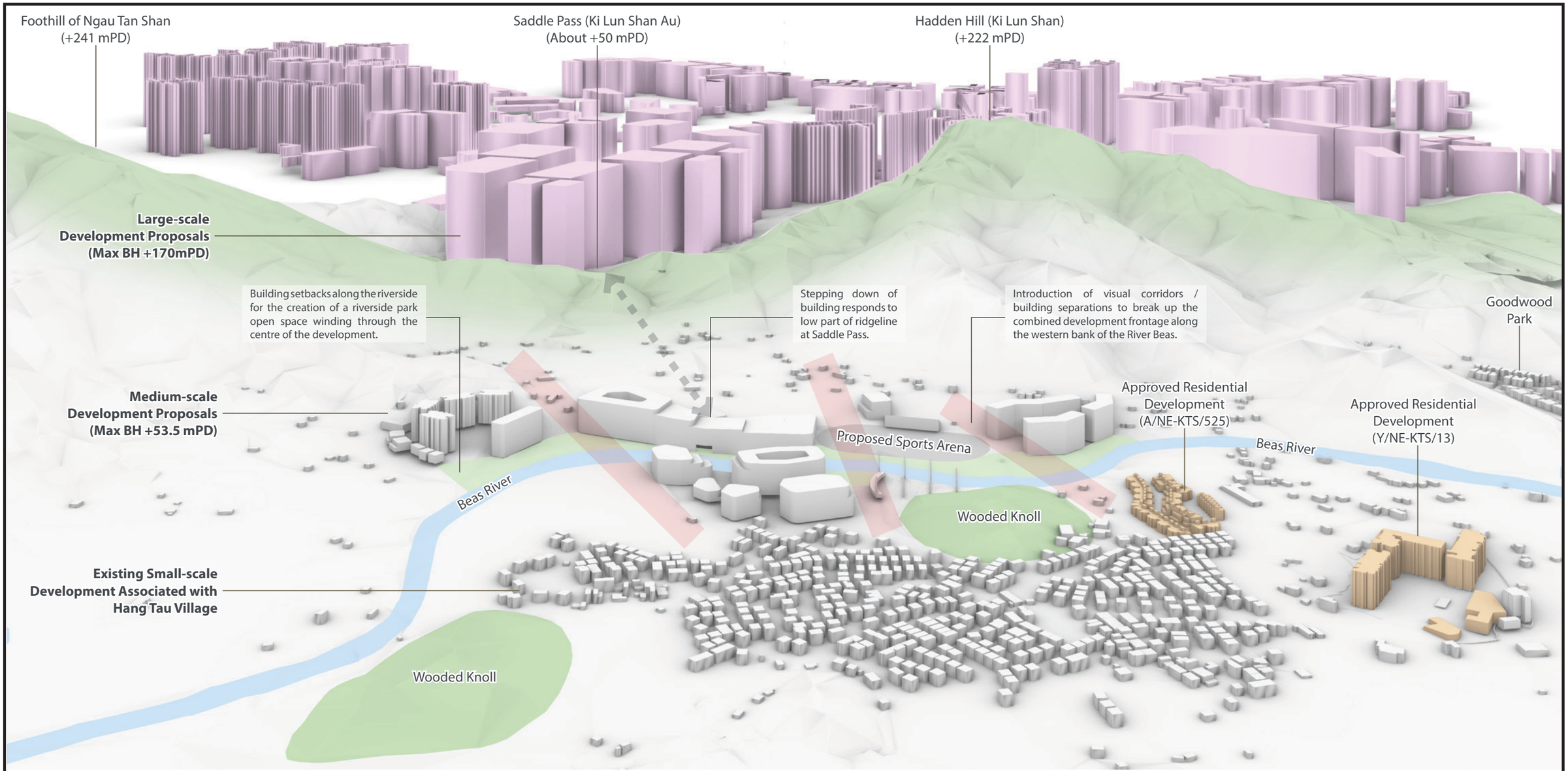

Urban Design Considerations

- The development proposals respond to the future planning context, with medium scale development mediating between the small-scale village type development to the east and the large scale planned development (San Tin Technopole) to the west. A sports arena and other lower density uses are planned for the site areas adjacent to the village, whilst the main building blocks are planned on the western side of the River Beas, set against the backdrop of existing wooded hills.
- The development proposals respond to the existing landscape and visual context. When viewed from the east the site is framed by two wooded knolls, between which the development is set out along the meandering path of the river Beas, which becomes a key feature of the future campus. The ridge line to the immediate west of the site extends from Hadden Hill in the North to Ngau Tam Shan in the south with the low point of the ridge at Saddle Path, adjacent to the site.
- The elongated site is planned as clusters as different building typologies, thereby creating a more interesting development form which responds to the surrounding terrain and meandering river path. The articulated building facades function to break up the visual mass of the individual blocks through the manipulation of architectural form and create setback for the integration of open space along the riverside.

LEGEND

- Existing Developments
- Beas River
- Wooded Knoll
- San Tin Technopole Development
- Approved Development

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Proposed Scheme: Urban Design Considerations

SCALE	A.S.	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 3.2	REV	A

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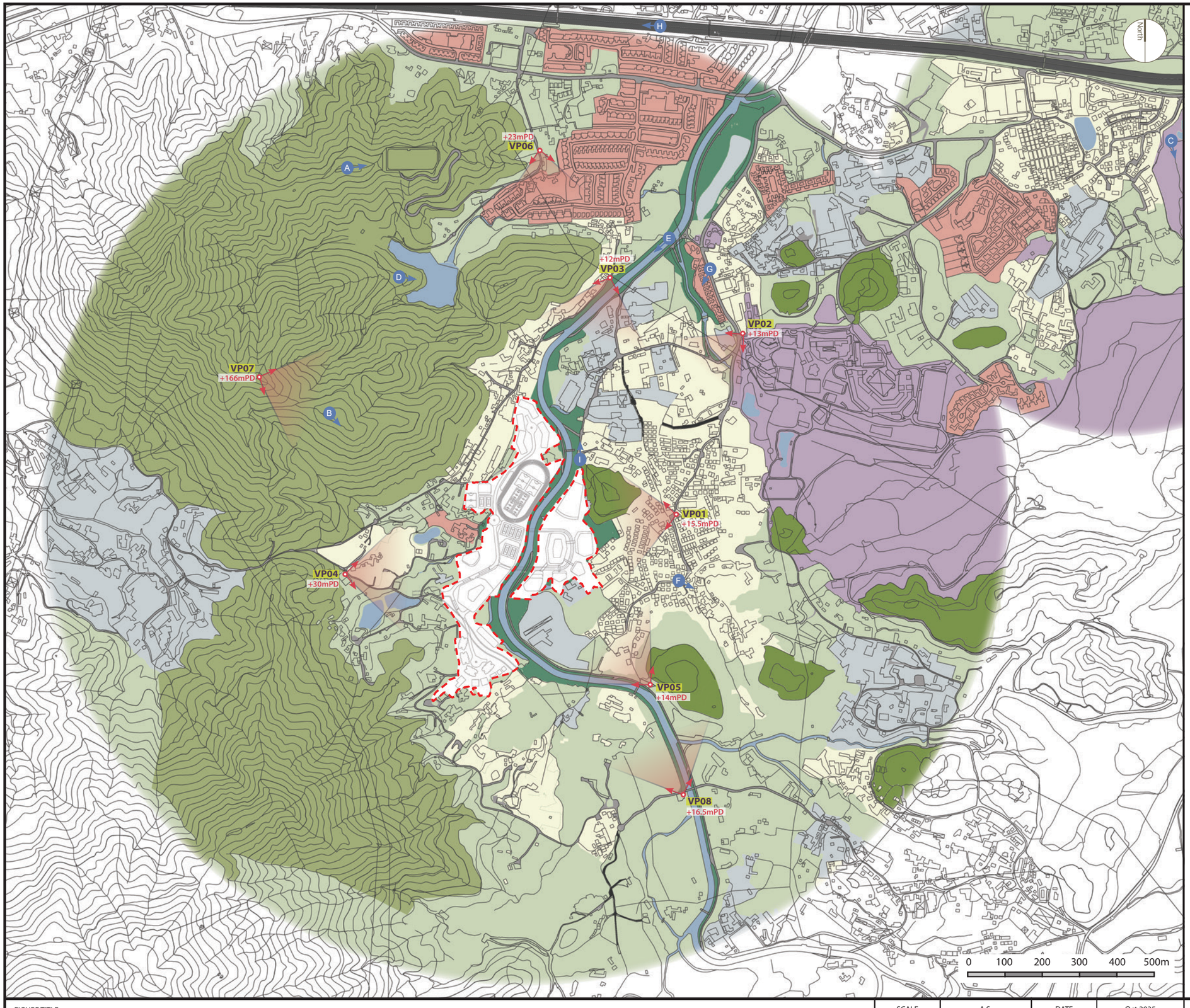

LEGEND

- Application Site Boundary
- Proposed Scheme
- Fields of View towards the Proposed Development
- VP — Key Public Vantage Points
- +5.4mPD — Approximate Height in mPD
- A — Location of photographs of Visual Elements
- Fanling Highway
- Village Type Development
- Private Residential Development
- Grassy Hillsides
- Valley floor Open Land Uses (Agricultural / Plantation)
- Riverside Plantation
- Hillside Secondary Woodland / Wooded Knolls
- Water Course / Water Body
- Recreational Landscapes
- Open Storage / Light Industrial Area

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Elements

SCALE	A.S.	DATE	Oct 2025
CHECKED	JBC	DRAWN	JH

FIGURE NO. Figure 4.1 — REV B

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A The Beas Valley is defined by grassy hillsides including the Peaks of Kai Kung Leng (+572 mPD) and Tai To Yan (+566 mPD) within Lam Tsuen Country Park to the south and closer to the site in the west Hadden Hill (+222 mPD) and associated ridges surrounding Kwu Tung Reservoir. Although distant from the site, High rise developments of Sheng Shui and the skyline of Shenzhen are visible in elevated views down the valley.

B Whilst the site occupies a portion of the open valley floor this area is punctuated by a number of wooded knolls which have an influence on the extent of the visual envelope of the proposed development. Low-level views from within the Beas River Valley are often obscured by the existing landform, mature vegetation and scattered development.

C Recreational Landscapes are a prominent feature of the landscape, including the manicured landscapes of Fanling Golf Course and the Jockey Club Beas River Country Club

D E The Beas River and its floodplain offer tranquil moments of waterscape to be enjoyed within the landscape. The Kwu Tung Reservoir is another water element within the landscape forming an attractive upland feature within the grassy hill slopes and mountainous terrain to the west and south of the Application site.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Elements

SCALE	A.S.	DATE	Aug 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 4.2	REV	-

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F G There are several areas of low-rise development, including the village of Hang Tau, Tai Po to the south and large private residential estates including Goodwood Park to the northeast of the site and The Royal Oaks, Casa Domingo and Valais developments further to the north and north east. Typically in these settlements the close-nit nature of the housing screens views from within these built up areas. Where there are views from the adjacent villages, owing the density of the development these are often limited to the dwellings at the periphery of the settlement.

H A prominent linear built element within the landscape is the Fanling Highway.

I Visually detracting elements include the scattered elements of small-scale industrial development on the fringes of village areas, particularly to the west of the Application Site.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Elements

SCALE	A.S.	DATE	Aug 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 4.3	REV	-

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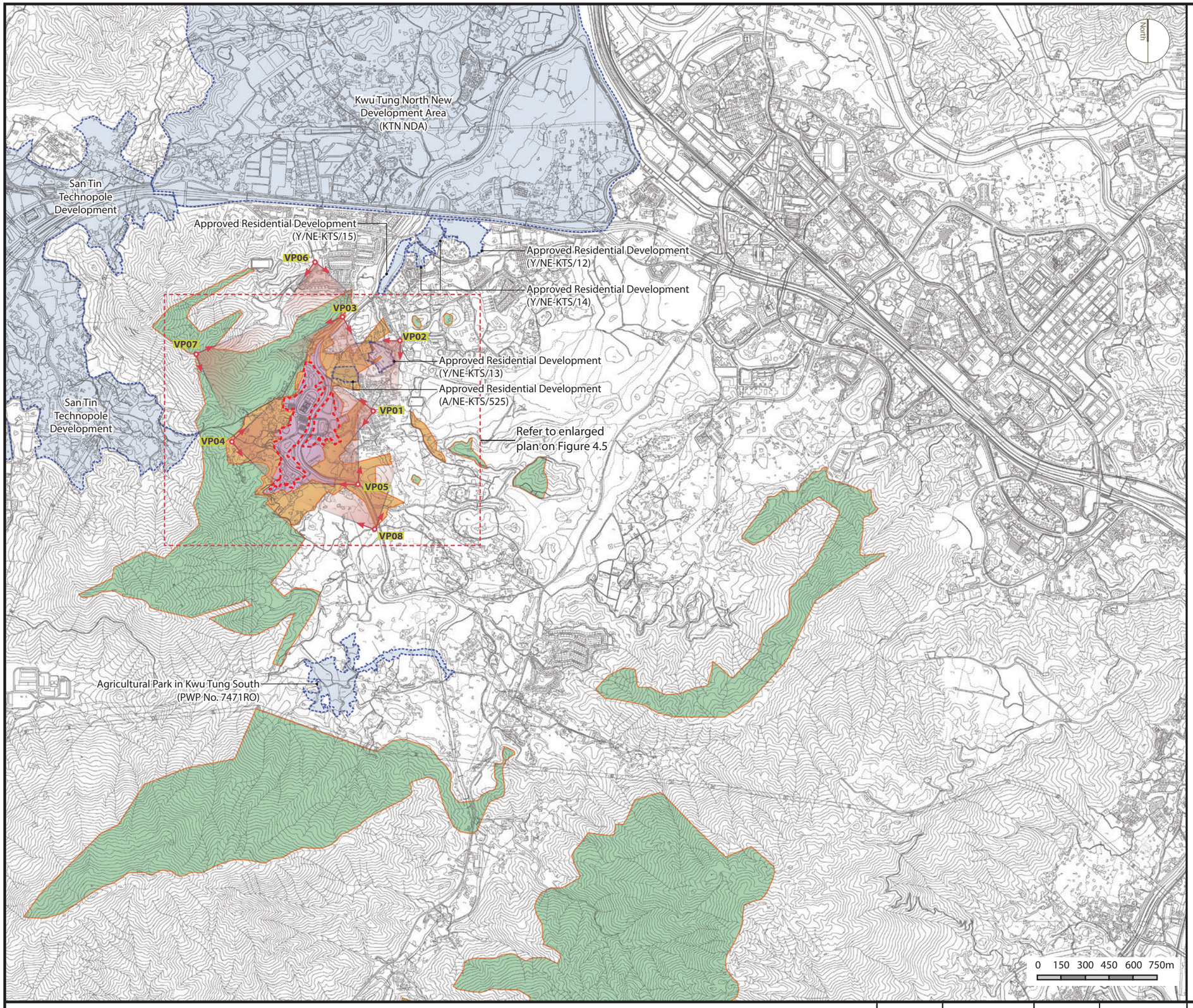

LEGEND

- Application Site Boundary
- VP — Location of Vantage Point and Angle of Main View
- Proposed Scheme (Max building height +53.50mPD)
- Proposed/Approved Development
- Zone of Visual Influence
- Primary ZVI – Area from which the majority of the development can be seen is largely contained within the Application Site boundary and the immediate margins of of the river corridor and village roads and footpaths surrounding the site, owing to property boundary structures, mature tree growth and elements of built development.
- Secondary ZVI – Area with more limited visibility of the Proposed Scheme due to intervening obstacles. As such the visible part of the Proposed Scheme is largely limited to glimpsed views of the upper portions of the proposed buildings at the site. For the most part views of the Proposed Scheme are obscured or screened by intervening landform, mature tree growth and built development including industrial concerns and village houses.
- Tertiary ZVI - Area with elevated, long distance, partial and glimpsed views of the Proposed Scheme, mainly from the uplands to the west and south. The visible part of the Proposed Scheme will range from being fragmentary views to being more widespread open views however from these locations the proposals form a small part of a large, panoramic view. The degree of visibility of the Proposed Scheme is determined by the elevation of the viewing position and the viewing angle.

Vantage Points

Vantage Point 01: View looking west from Hang Tau Tsuen Hall

Vantage Point 02: View looking south west from roadside public footpath along Hang Tau Road, opposite Hang Tau Road Public Toilets

Vantage Point 03: View looking south from Kwu Tung Hang Village Rest Area

Vantage Point 04: View looking east from Ki Lun Tsuen Playground

Vantage Point 05: View looking northwest from a riverside footpath next to Sheung Shui Hang Tau Village Sitting Out Area

Vantage Point 06: View looking south from Kwu Tung South Road

Vantage Point 07: View looking south east towards the site from Hadden Hill

Vantage Point 08: View looking north west from Cheung Lek Sitting-out Area

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Envelope and Visually Sensitive Receivers

SCALE	A.S.	DATE	Oct 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 4.4	REV	B

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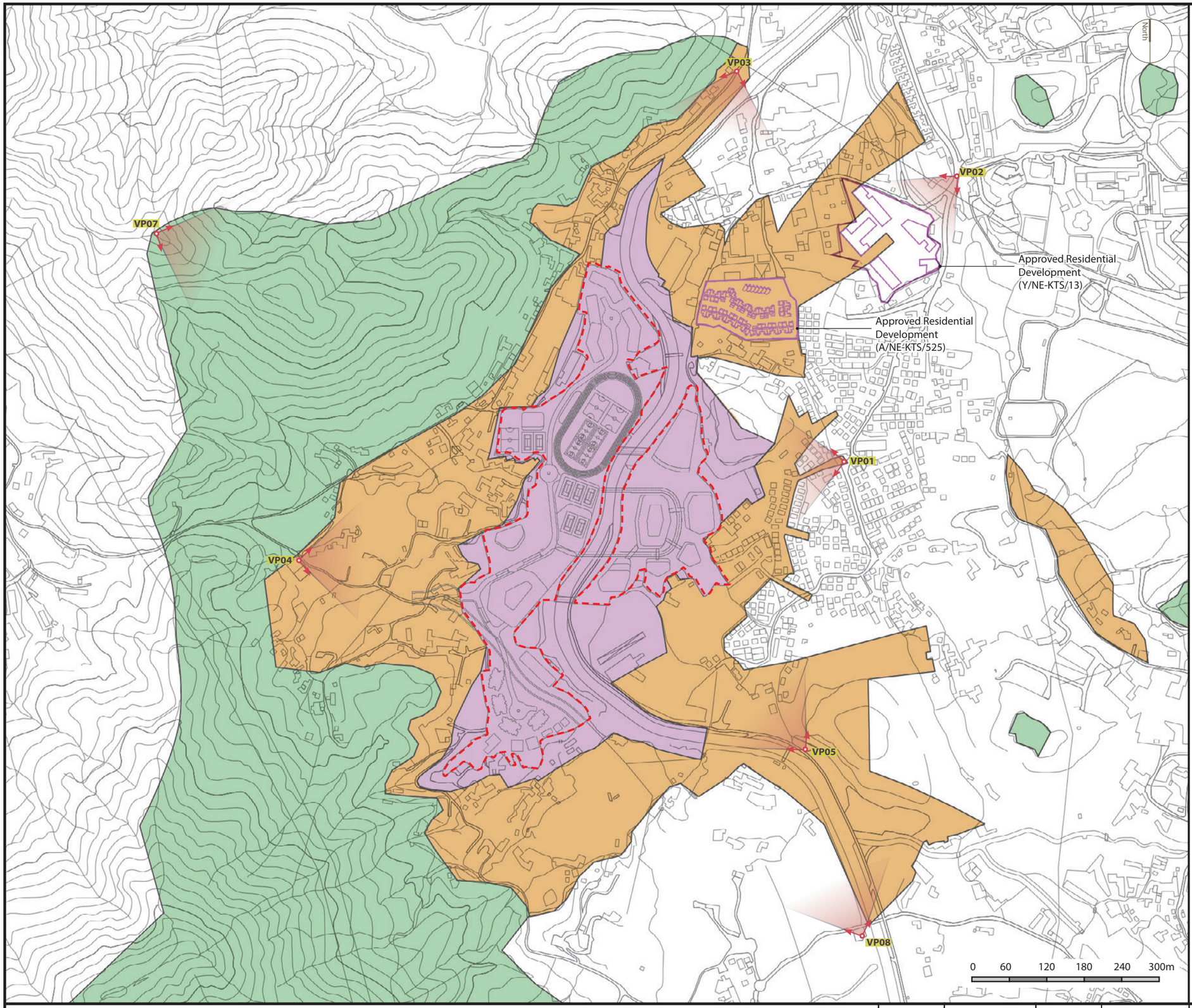

LEGEND

- Application Site Boundary
- VP — Location of Vantage Point and Angle of Main View
- Proposed Scheme (Max building height +53.50mPD)
- Proposed/Approved Development
- Zone of Visual Influence
- Primary ZVI – Area from which the majority of the development can be seen is largely contained within the Application Site boundary and the immediate margins of of the river corridor and village roads and footpaths surrounding the site, owing to property boundary structures, mature tree growth and elements of built development.
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Vantage Points

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Vantage Point 04: View looking east from Ki Lun Tsuen Playground

Vantage Point 05: View looking northwest from a riverside footpath next to Sheung Shui Hang Tau Village Sitting Out Area

Vantage Point 06: View looking south from Kwu Tung South Road

Vantage Point 07: View looking south east towards the site from Hadden Hill

Vantage Point 08: View looking north west from Cheung Lek Sitting-out Area

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Envelope and Visually Sensitive Receivers

SCALE	A.S.	DATE	Oct 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 4.5	REV	B

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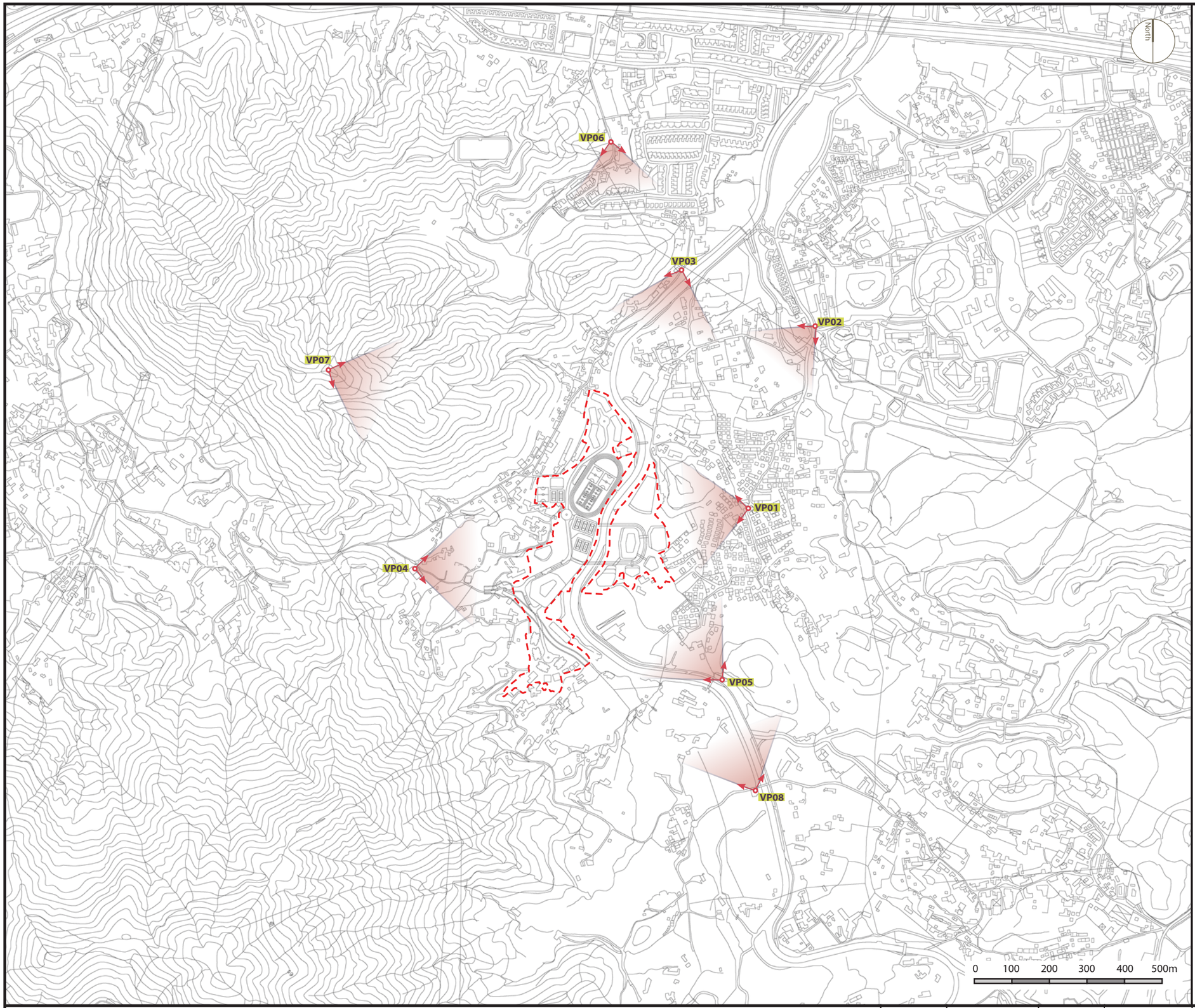

LEGEND

- Application Site Boundary
- VP — Location of Vantage Point and Angle of Main View
- Proposed Scheme (Max building height +53.50mPD)

Vantage Points

Vantage Point 01: View looking west from Hang Tau Tsuen Hall

Vantage Point 02: View looking south west from roadside public footpath along Hang Tau Road, opposite Hang Tau Road Public Toilets

Vantage Point 03: View looking south from Kwu Tung Hang Village Rest Area

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Vantage Point 08: View looking north west from Cheung Lek Sitting-out Area

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Propsoed Location of Photomontage Vantage Points

SCALE	A.S.	DATE	Oct 2025
CHECKED	JBC	DRAWN	JH

FIGURE NO. Figure 7.1 REV B

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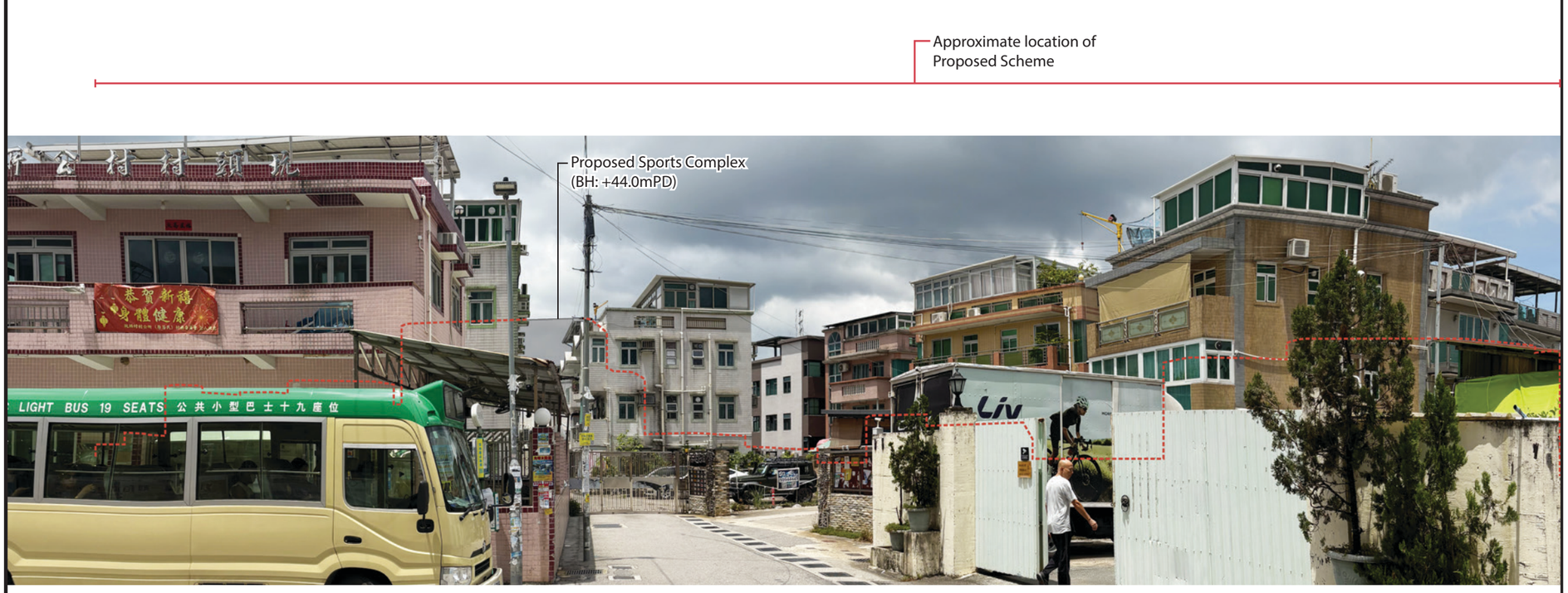
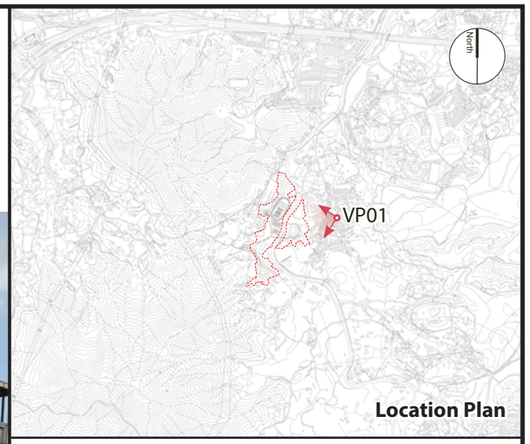
Website: scenic@studioscenic.com

Vantage Point 01: View looking west from Hang Tau Tsuen Hall (Existing Situation)



Vantage Point 01: View looking west from Hang Tau Tsuen Hall (Proposed Scheme)



Vantage Point 01 (VP01)

Vantage point elevation: About +15.5mPD
Viewing distance: About 220m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.2	REV	A

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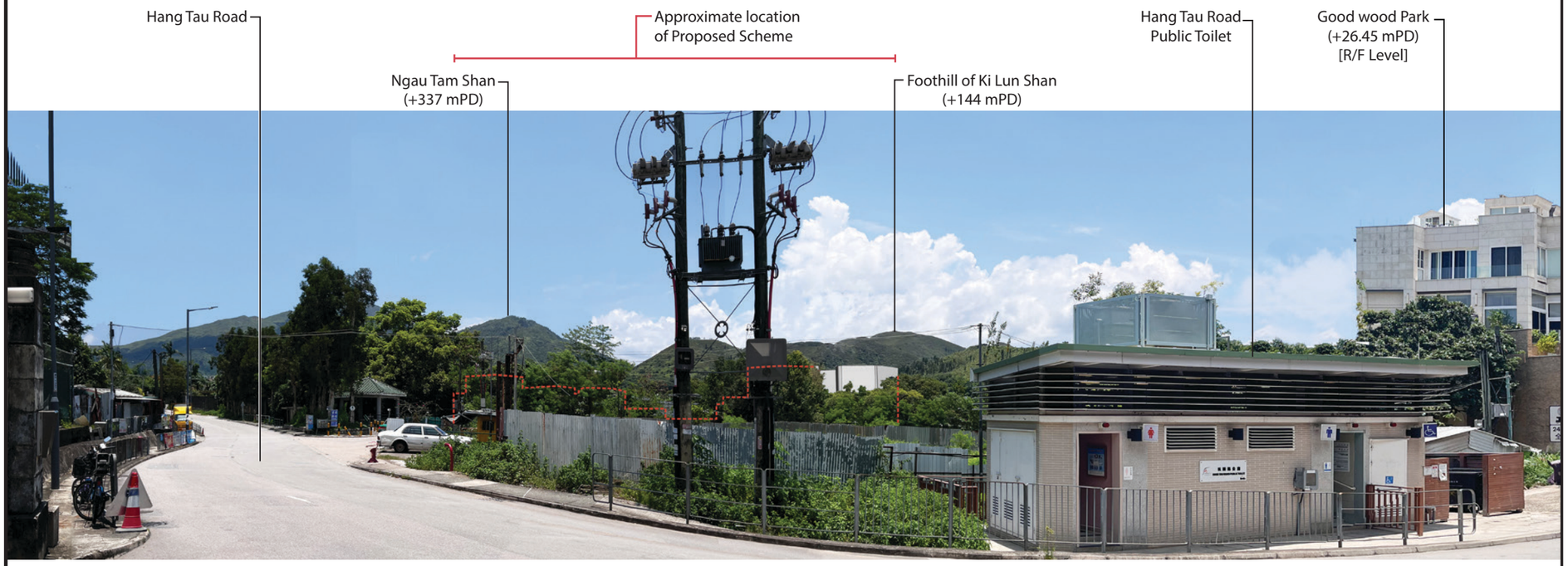
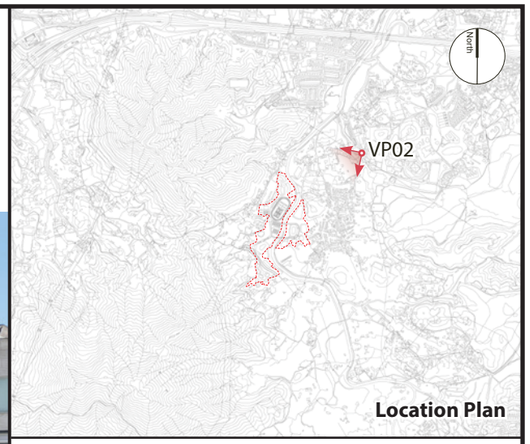
Website: scenic@studioscenic.com

Vantage Point 02: View looking south west from roadside public footpath along Hang Tau Road, opposite Hang Tau Road Public Toilets (Existing Situation)



Vantage Point 02: View looking south west from roadside public footpath along Hang Tau Road, opposite Hang Tau Road Public Toilets (Proposed Scheme)



Vantage Point 02 (VP02)

Vantage point elevation: About +13mPD
Viewing distance: About 500m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.3	REV	A

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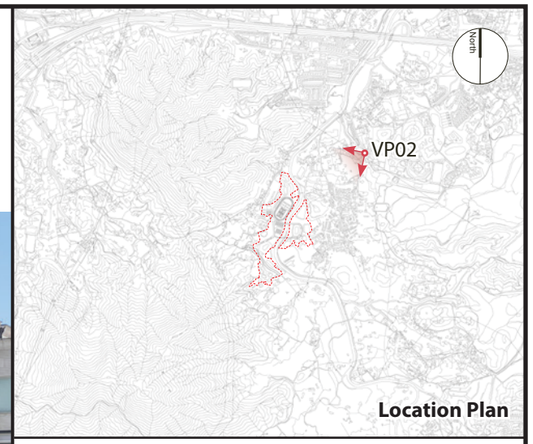
Facsimile: 3016 2422
Website: scenic@studioscenic.com

Vantage Point 02: View looking south west from roadside public footpath along Hang Tau Road, opposite Hang Tau Road Public Toilets (Base Case)

Vantage Point 02: View looking south west from roadside public footpath along Hang Tau Road, opposite Hang Tau Road Public Toilets (Proposed Scheme - Base Case)



Vantage Point 02 (VP02)

Vantage point elevation: About +13mPD
Viewing distance: About 500m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.4	REV	A

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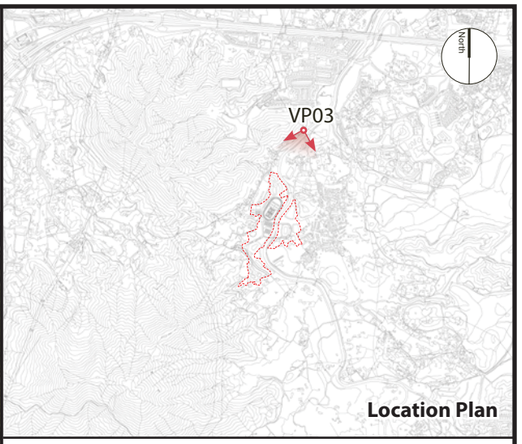
Vantage Point 03: View looking south from Kwu Tung Hang Village Rest Area (Existing Situation)



Vantage Point 03 (VP03)

Vantage point elevation: About +12mPD
Viewing distance: About 380m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Vantage Point 03: View looking south from Kwu Tung Hang Village Rest Area (Proposed Scheme)

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.5	REV	A

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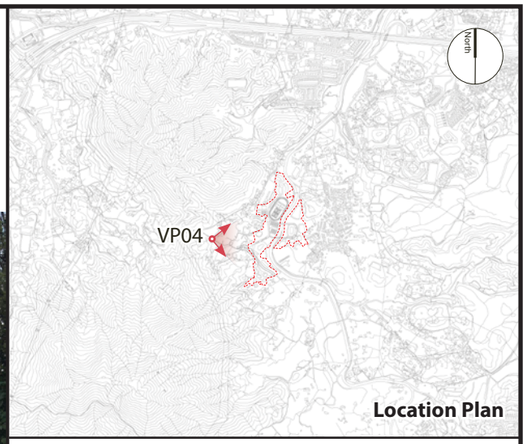
Vantage Point 04: View looking east from Ki Lun Tsuen Playground (Existing Situation)



Vantage Point 04 (VP04)

Vantage point elevation: About +30mPD
Viewing distance: About 250m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Approximate location of Proposed Scheme

Vantage Point 04: View looking east from Ki Lun Tsuen Playground (Proposed Scheme)

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.6	REV	A

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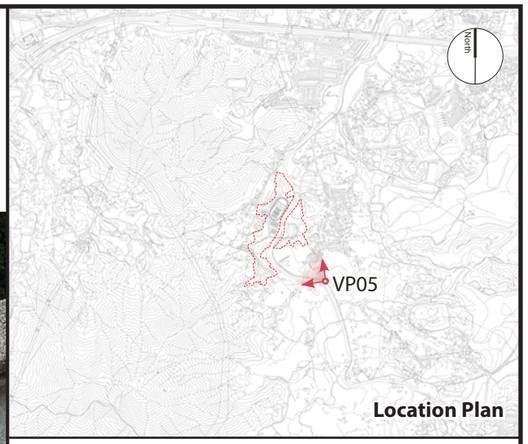
Facsimile: 3016 2422
Website: scenic@studioscenic.com

Vantage Point 05: View looking northwest from a riverside footpath next to Sheung Shui Hang Tau Village Sitting Out Area (Existing Situation)



Vantage Point 05 (VP05)

Vantage point elevation: About +14mPD
Viewing distance: About 270m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Vantage Point 05: View looking northwest from a riverside footpath next to Sheung Shui Hang Tau Village Sitting Out Area (Proposed Scheme)

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.7	REV	A

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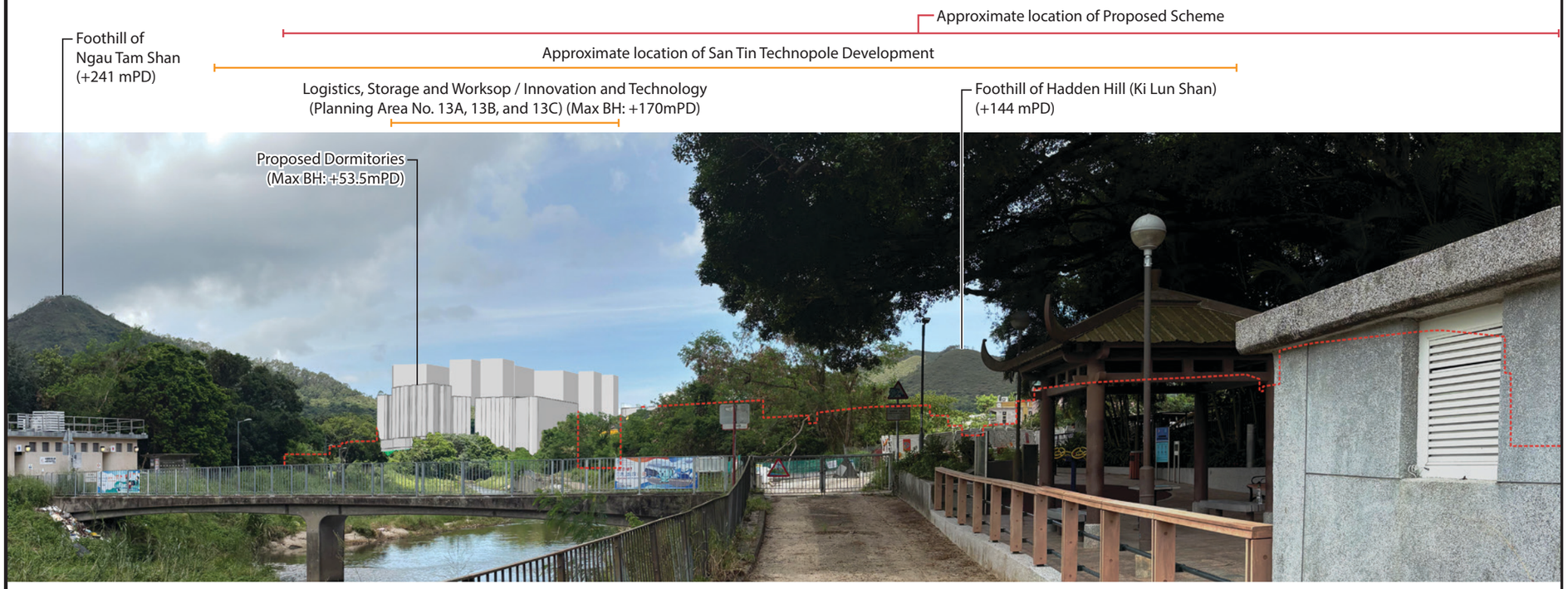
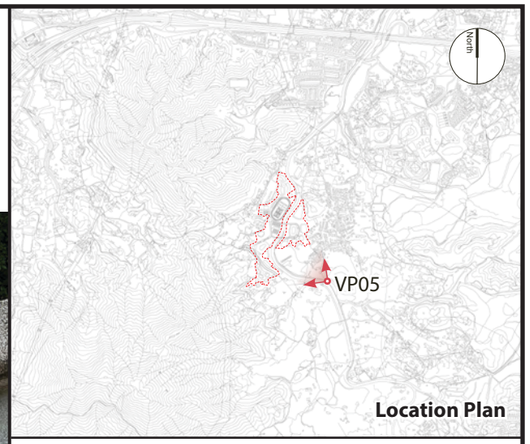
Facsimile: 3016 2422
Website: scenic@studioscenic.com

Vantage Point 05: View looking northwest from a riverside footpath next to Sheung Shui Hang Tau Village Sitting Out Area (Base Case)



Vantage Point 05: View looking northwest from a riverside footpath next to Sheung Shui Hang Tau Village Sitting Out Area (Proposed Scheme - Base Case)



Vantage Point 05 (VP05)

Vantage point elevation: About +14mPD
Viewing distance: About 270m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Note:

The building layout for the San Tin Technopole Development is based on the Landscape Master Plan contained in the approved EIA for Agreement No. CE 20/2021 (CE) First Phase Development of the New Territories North – San Tin / Lok Ma Chau Development Node – Investigation and the Building Heights from the Draft San Tin Technopole Developments Outline Zoning Plan (S/ STT/1) dated 8th March 2024.

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.8	REV	A

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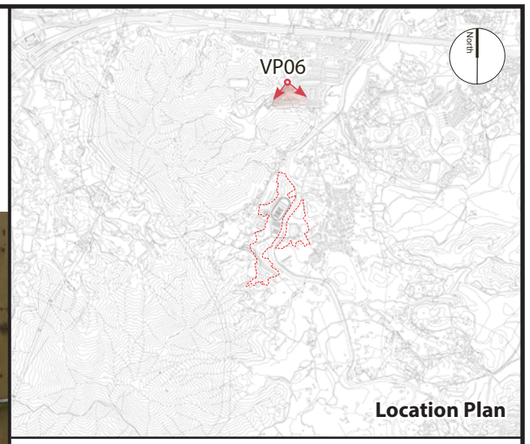
Facsimile: 3016 2422
Website: scenic@studioscenic.com

Vantage Point 06: View looking south from Kwu Tung South Road (Existing Situation)



Vantage Point 06 (VP06)

Vantage point elevation: About +23mPD
Viewing distance: About 650m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Vantage Point 06: View looking south from Kwu Tung South Road (Existing Situation)

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.9	REV	A

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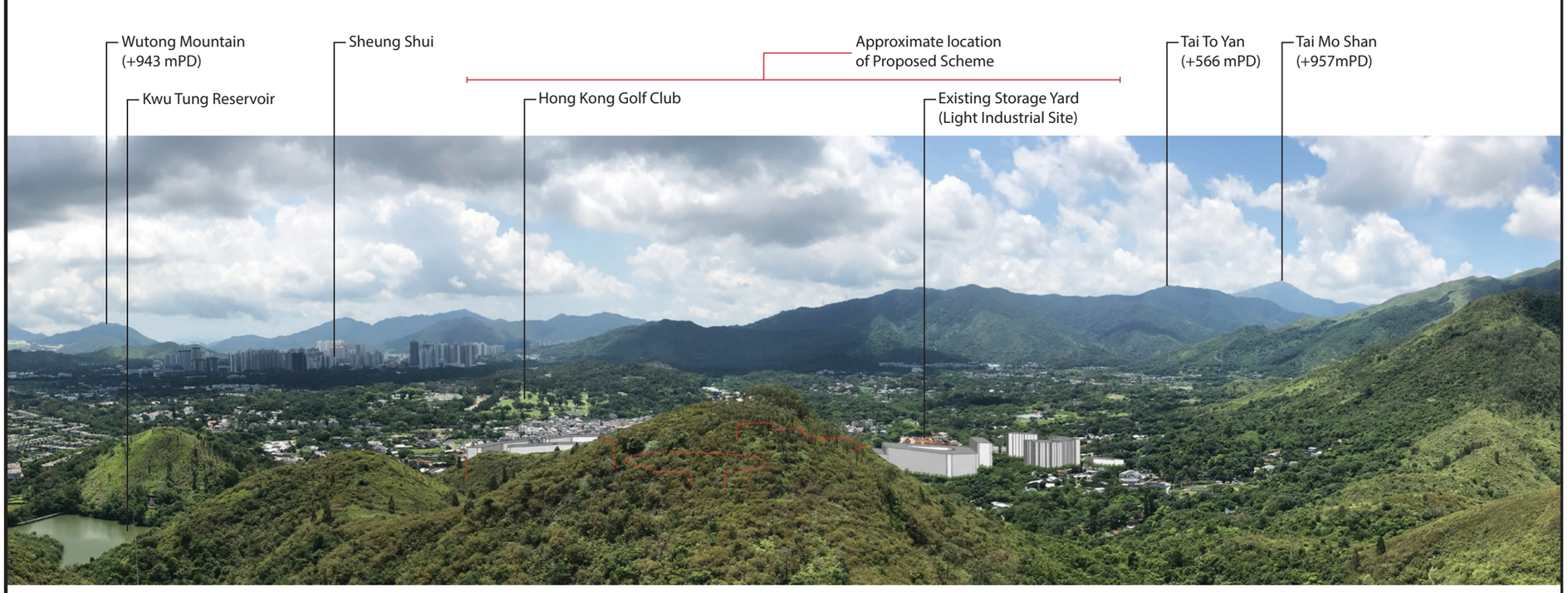
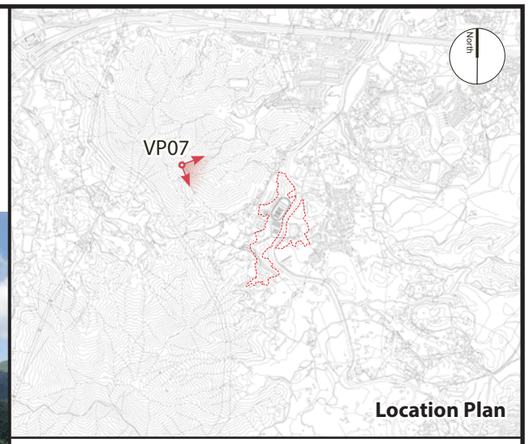
Telephone: 2468 2422
Facsimile: 3016 2422
Website: scenic@studioscenic.com

Vantage Point 07: View looking south east towards the site from Hadden Hill (Existing Situation)



Vantage Point 07: View looking south east towards the site from Hadden Hill (Proposed Scheme)



Vantage Point 07 (VP07)

Vantage point elevation: About +166mPD
Viewing distance: About 650m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.10	REV	A

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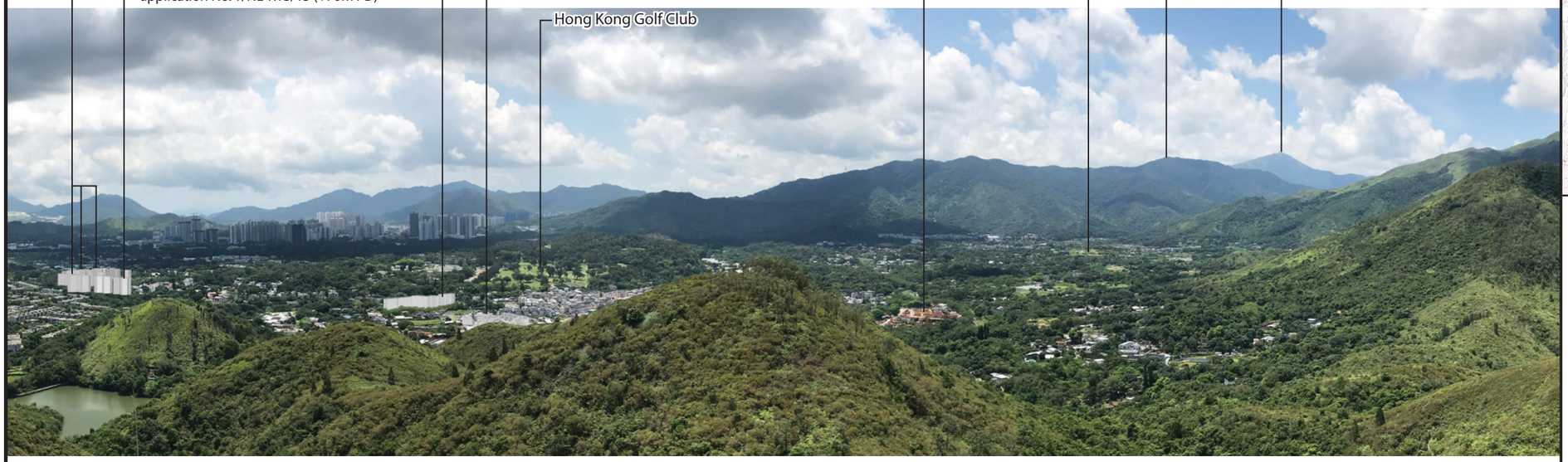
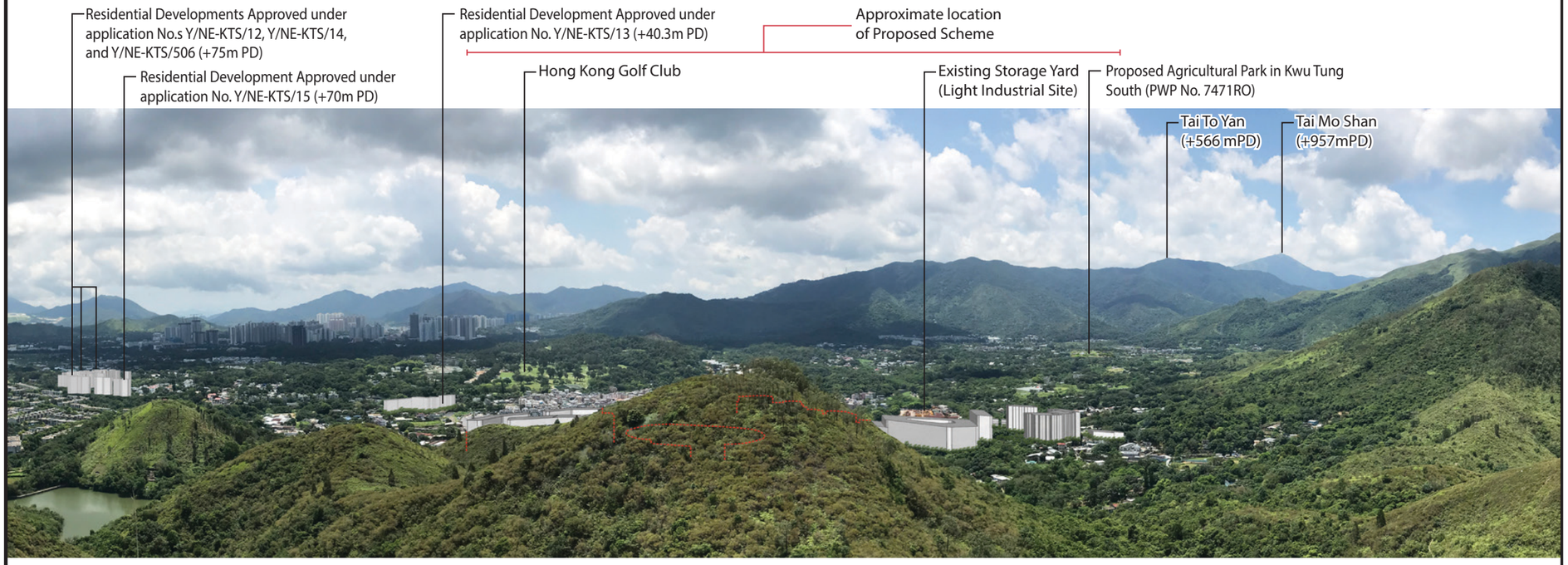
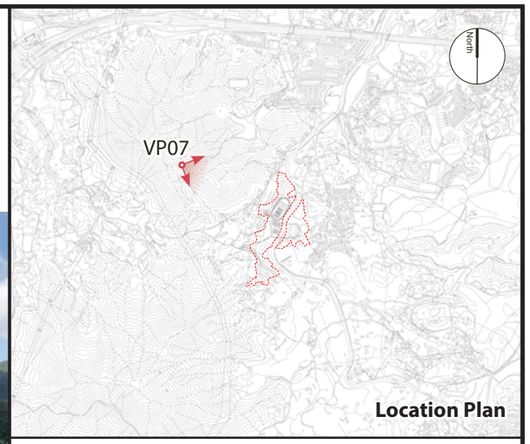


Vantage Point 07: View looking south east towards the site from Hadden Hill (Base Case)



Vantage Point 07: View looking south east towards the site from Hadden Hill (Proposed Scheme - Base Case)



Vantage Point 07 (VP07)

Vantage point elevation: About +166mPD
Viewing distance: About 650m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.11	REV	A

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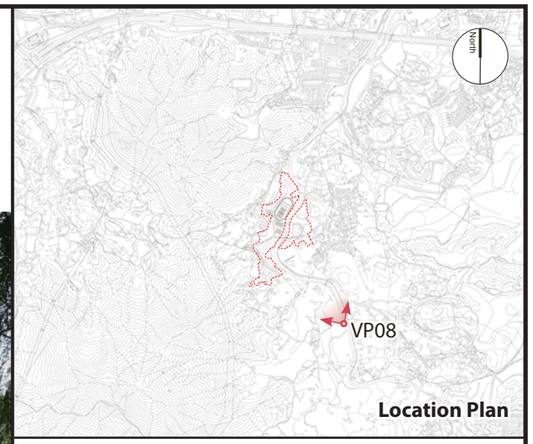
Vantage Point 08: View looking north west towards the site from Cheung Lek Sitting-out Area (Existing Situation)

Vantage Point 08: View looking north west towards the site from Cheung Lek Sitting-out Area (Proposed Scheme)



Vantage Point 08 (VP08)

Vantage point elevation: +16.5mPD
Viewing distance: About 550m
Maximum building height of Proposed Scheme: +53.50mPD at R/F

Note:

A red dashed line is used to represent the extent of the Proposed Scheme where views are obscured by intervening visual objects.

FIGURE TITLE

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Visual Impact Assessment: Photomontages

SCALE	NTS	DATE	Sep 2025
CHECKED	JBC	DRAWN	JH
FIGURE NO.	Figure 7.12	REV	A

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Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Traffic Review
Final Report

October 2025

Prepared by: CKM Asia Limited

Prepared for: Global King Investment Limited
Winpost (HK) Investment Limited
Rand Development Limited

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

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Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

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2.1 Conceptual connection between the Proposed School and the Northern Metropolis Highway

3.1 Master layout plan of the Proposed School

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1.0 INTRODUCTION

Background

1.1 The Applicant intends to build and operate an international school which is located at various lots in D.D.94, D.D.98 and D.D.100 and adjoining Government Land, in Kwu Tung South in the New Territories (the "Proposed School"). The location of the subject site is shown in Figure 1.1.

1.2 The Proposed School has the following facilities:

- Kindergarten with 30 classrooms which is for up to 600 students;
- Primary school with 46 classrooms which is for up to 1,000 students;
- Middle / high school with 65 classrooms which is for up to 1,400 boarding students;
- Student dormitory which is for the boarding middle / high school;
- Staff dormitory with 571 dwelling units;
- Auditorium with 660 seats; and
- Other ancillary facilities for the operation of the Proposed School.

1.3 CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned by the Applicant to prepare a Traffic Review in support of the Proposed School.

Scope of Study

1.4 The main objectives of this Study are as follows:

- To assess the existing traffic issues in the vicinity of the subject site;
- To provide adequate internal transport facilities for the Proposed School;
- To quantify the traffic generated by the Proposed School; and
- To examine the traffic impact of the Proposed School on the local road network.

Contents of the Report

1.5 After this introduction, the remaining chapters contain the following:

chapter two – describes the existing and future conditions;
chapter three – presents the Proposed School;
chapter four – describes the traffic impact analysis; and
chapter five – gives the overall conclusion.

2.0 EXISTING AND FUTURE CONDITION

Site Location

2.1 The subject site is located in an area flanked by Ki Lun Shan (Hadden Hill) to the west, with Hang Tau Tai Po and Hang Tau Village to the east.

2.2 At present, the subject site could only be accessed via single track village road, which is connected to Kwu Tung Road.

Planned Northern Metropolis Highway

2.3 The Northern Metropolis Highway connects the New Development Areas in the Northern Metropolis with Ping Che at the eastern end and Tin Shui Wai at the western end. This proposed highway will enhance accessibility to the New Development Areas and enhance cross-boundary road connections for passengers and goods. The investigation study of the Northern Metropolis Highway is currently in progress.

2.4 According to the preliminary alignment of the Northern Metropolis Highway published by Highways Department and the San Tin Technopole Outline Zoning Plan No. S/STT/2, the Northern Metropolis Highway will have an interchange with the San Tin Technopole (the "San Tin Technopole Interchange"). The indicative location of the San Tin Technopole Interchange is shown in Figure 2.1.

2.5 The San Tin Section of the Northern Metropolis Highway is scheduled to be commissioned in or before 2036. Since the western boundary of the subject site is some 200m to the east of the Northern Metropolis Highway, a road connection is proposed to connect the San Tin Technopole Interchange and the Proposed School.

3.0 THE PROPOSED SCHOOL

Completion Year

3.1 The Proposed School is expected to be completed in 2036, subject to the commissioning of the San Tin Section of Northern Metropolis Highway, which is in or before 2036.

Development Schedule

3.2 The development parameters of the Proposed School are presented in Table 3.1.

TABLE 3.1 DEVELOPMENT PARAMETERS

Item	School Hours (Tentative)	No. of Unit / Classroom	No. of Students / Staff / Seats
Kindergarten	1000 – 1600	30	600
Primary School	0830 – 1500	46	1,000
Middle / High School	0900 – 1630	65	1,400
Student Dormitory [(1)]		350	1,400
Staff Dormitory [(2)]		571	571
Auditorium			660

Note: [(1)] include 3 housing blocks
[(2)] include 5 housing blocks and 6 houses

Master Layout Plan

3.3 The conceptual ground floor plan is presented in Figure 3.1. The western part of the Proposed School is connected to the San Tin Technopole Interchange of the Northern Metropolis Highway. The internal roads are of single carriageway with 2 traffic lanes, say 7.3m wide, and vehicle turning facilities are provided at the cul-de-sac.

3.4 Subsequent to the approval of this planning application by the Town Planning Board, the internal transport layout including road network and car park, etc., will be submitted in the detailed design stage / General Building Plan ("GBP") submission.

3.5 It is noted that to the south of the Proposed School is the planned Agricultural Park. Hence, there is an opportunity to improve accessibility by providing a public road connecting the San Tin Technopole Interchange with the Agricultural Park. As shown in Figure 3.1, the proposed public road could be provided either within the Proposed School (Option 1) or outside the Proposed School (Option 2), and the final alignment will be determined in the detailed design stage.

Internal Transport Facilities

3.6 The internal transport facilities for the Proposed School will be provided on the following basis:

(i) Kindergarten, Primary School and Middle / High School

3.7 The internal transport facilities for Kindergarten, Primary School and Middle / High School are provided based on the **maximum** recommendations found in Chapter 8 of the Hong Kong Planning Standards and Guidelines ("HKPSG").

(ii) Staff and Student Dormitories

3.8 To operate the boarding middle / high school, residential accommodations will also be provided for teaching staff, apart from those for boarding students. To err on the high side, internal transport facilities for staff dormitory are provided as per the **maximum** HKPSG recommendation for *"Private Housing"*.

3.9 No car parking spaces will be provided for student dormitory, because students are not expected to drive. Nevertheless, goods vehicle loading / unloading bays will be provided for student dormitory, as per HKPSG recommendation for *"Private Housing"* to meet the operational needs.

(iii) Auditorium

3.10 The auditorium is an ancillary facility of the Proposed School with 660 seats which is for activities such as school assembly, performance and ceremony.

3.11 To err on the high side, additional internal transport facilities are provided for the auditorium as per the **maximum** HKPSG recommendation for *"Commercial Entertainment Facilities (e.g. cinemas, theatres)"*.

(iv) Other Ancillary Facilities

3.12 Other ancillary facilities within the Proposed School, such as music classroom, art / music studio, sport facilities and canteen, etc., are provided to support the international curriculum and to create a conducive learning environment. Additional internal transport facilities are provided based on the operational needs.

(v) Calculation of Internal Transport Facilities

3.13 Based on the above, the calculation of internal transport facilities for the Proposed School is presented in Table 3.2.

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES

Type	Use		HKPSG Recommendations	Provision
Car Parking Space	**Kindergarten**		0 – 1 space per 4 – 6 classrooms Min = 30 ÷ 6 = 5 nos. Max = 30 ÷ 4 = 8 nos.	8 nos.
	Primary School		1 space per 4 – 6 classrooms Min = 46 ÷ 6 = 8 nos. Max = 46 ÷ 4 = 12 nos.	12 nos.
	Middle / High School		1 space per 3 – 4 classrooms Min = 65 ÷ 4 = 17 nos. Max = 65 ÷ 3 = 22 nos.	22 nos.
	Staff Dormitory	**Staff**	GPS × R1 × R2 × R3, where GPS = 1 car space per 4 – 7 flats R1 = 1.2 for flat size 40 – 70m^2 7.0 for flat size > 160m^2 R2 = 1.0 for development outside a 500m-radius of rail station R3 = 1.1 for domestic plot ratio 1 – 2 Min = (571 × 1.2 + 6 × 7) ÷ 7 × 1.1 = 115 nos. Max = (571 × 1.2 + 6 × 7) ÷ 4 × 1.1 = 200 nos.	200 nos.
		Visitor	5 visitor car parking spaces for developments with more than 75 units per block 5 × 5 = 25 nos.	25 nos.
	Auditorium		0 – 1 space per 20 seats 660 ÷ 20 = 33 nos..	33 nos.
	Total		**Min = 5+8+17+115+25+33 = 203 nos.** **Max = 8+12+22+200+25+33 = 300 nos.**	**<u>300</u> nos.**[(1)]
Lay-by for Taxi and Private Car	**Kindergarten**		1 lay-by per 5 – 8 classrooms Min = 30 ÷ 8 = 4 nos. Max = 30 ÷ 5 = 6 nos.	6 nos.
	Primary School		1 lay-by per 2 – 3 classrooms Min = 46 ÷ 3 = 16 nos. Max = 46 ÷ 2 = 23 nos.	23 nos.
	Middle / High School		1 lay-by per 3 – 5 classrooms Min = 65 ÷ 5 = 13 nos. Max = 65 ÷ 3 = 22 nos.	22 nos.
	Auditorium		1 lay-by per 400 seats 660 ÷ 400 = 2 nos.	2 nos.
	Total		**Min = 4 + 16 + 13 + 2 = 35 nos.** **Max = 6 + 23 + 22 + 2 = 53 nos.**	**<u>53</u> nos.**
Lay-by for School Bus	**Kindergarten**		Minimum 2 lay-bys for kindergarten, or equivalent to 6 classrooms [(2)] 30 ÷ 6 × 2 = 10 nos.	10 nos.
	Primary School		Minimum 3 lay-bys for primary school, or equivalent to 18 – 30 classrooms [(2)] Min = 46 ÷ 30 × 3 = 5 nos. Max = 46 ÷ 18 × 3 = 8 nos.	8 nos.
	Middle / High School		Up to 3 lay-bys for secondary school, or equivalent to 30 classrooms [(2)] 65 ÷ 30 × 3 = 7 nos.	7 nos.
	Total		**Min = 10 + 5 + 7 = 22 nos.** **Max = 10 + 8 + 7 = 25 nos.**	**<u>25</u> nos.**

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES (CONT'D)

Type	Use	HKPSG Recommendations	Provision
Loading / Unloading Bay for Goods Vehicle	**Student Dormitory**	Minimum 1 bay for every 800 units or parts thereof, subject to minimum 1 bay per block	3 nos. (HGV)
	Staff Dormitory	Minimum 1 bay for every 800 units or parts thereof, subject to minimum 1 bay per block	5 nos. (HGV)
	Auditorium	1 bay for goods vehicles	1 no. (HGV)
	Other Ancillary Facilities	based on operational needs	11 nos. (HGV)
	Total	**3 + 5 + 1 + 11 = 20 nos.**	**20 nos. (HGV)**

Note: (1) According to Chapter 8 of HKPSG, 4 car parking spaces for persons with disabilities shall be provided

(2) According to Chapter 3 of HKPSG, the recommended size of a kindergarten, primary school and secondary school should be a minimum of 6 classrooms, 18 – 30 classrooms and 30 classrooms respectively

Proposed Traffic Mitigation Measures

3.14 In order to minimise the traffic generation of the Proposed School, the following traffic mitigation measures are proposed:

(i) Staggered School Hours

3.15 To avoid potential traffic congestion especially during the school start and end times, the start and end times of the kindergarten, primary school and middle / high school are staggered. For example, the kindergarten will have start and end times at 1000 and 1600 hours respectively. Whilst, the start and end times for the primary school are 0830 and 1500 hours respectively.

3.16 For the middle / high school, boarding students leave the Proposed School on Fridays, say after 1700 hours, and return to school on Sunday evening, say by 8pm, or early Monday morning, say before 0730 hours.

(ii) In-Campus Parking and Pick-up / Drop-off Activities

3.17 The kindergarten, primary school and middle / high school are located within the centre portion of the Proposed School. The internal transport facilities as shown in Table 3.2 will be located on the ground floor with separate run-in and run-out. From the pick-up / drop-off area, students would have convenient and weather-protected access to their respective buildings.

(iii) Drop-arm Barrier Away from Vehicular Access

3.18 To ensure vehicles will not tailback onto the public road, the drop-arm barrier for vehicles entering the Proposed School will be positioned at the run-in to the pick-up / drop-off area, which is around 300m from the vehicular access and with queueing capacity for some 50 vehicles.

3.19 As a traffic management measure, vehicles conducting student pick-up / drop-off are required to follow the one-way traffic routing within the Proposed School as shown in Figure 3.2. This routing could enhance traffic circulation by minimising the conflicting movements within the school campus.

(iv) Internal Transport Facilities for Staff and Student Dormitories

3.20 The staff dormitory is located in the southern part of the Proposed School and the student dormitory is located in the northern part.

3.21 In view of the above, separate parking and loading / unloading area will be provided on the ground floor of the staff dormitory. To facilitate goods delivery and pick-up / drop-off of boarding students, loading / unloading and pick-up / drop-off area will be provided at the student dormitory.

4.0 TRAFFIC IMPACT

Design Year

4.1 The Proposed School is expected to be completed in 2036, and the design years adopted for the capacity analysis is 2036 and 2041.

Traffic Generation

4.2 In view that the Transport Planning and Design Manual ("TPDM") has no trip generation rates for school, reference is made to the *"Quotation No. TD 507/2023 Base District Traffic Models for the New Territories Area (2024 Update)"* (the *"BDTM Study"*) obtained from Transport Department. The adopted trip generation rates are presented in Table 4.1.

TABLE 4.1 TRIP GENERATION RATES

Use	Unit	Trip Generation Rates			
		AM Peak		PM Peak	
		IN	OUT	IN	OUT
Kindergarten (Private) [(1)]	pcu/hr/class	6.9375	6.9375	5.4375	5.4375
Primary School (Private) [(1)]	pcu/hr/class	9.7600	9.7600	5.8273	5.8273
Secondary School (Private) [(1)]	pcu/hr/class	8.7667	7.7667	3.8000	3.9667

Note: [(1)] extract from Final Report of the BDTM Study

4.3 With the proposed staggered school hours outlined in Chapter 3, traffic generated by the kindergarten, primary school and middle / high school will not occur at the same time.

4.4 For the middle / high school, which is a boarding school, students would leave the Proposed School on Friday or Saturday and return to school on Sunday or by early Monday morning. Hence, traffic generated by the middle / high school occur during the weekend or early Monday morning.

4.5 Based on Table 4.1 and Paragraphs 4.2 – 4.3, the traffic generation is calculated and presented in Table 4.2.

TABLE 4.2 PROPOSED SCHOOL TRAFFIC GENERATION

Use	No. of Class	Traffic Generation (pcu/hr)					
		AM Peak			PM Peak		
		IN	OUT	2-way	IN	OUT	2-way
Kindergarten [a]	30	209	209	**418**	164	164	**328**
Primary School [b]	46	449	449	**898**	269	269	**538**
Middle / High School [(1)]	65	570	505	**1,075**	247	258	**505**
Maximum among [a] and [b] [(2)]		**449**	**449**	**898**	**269**	**269**	**538**

Note: [(1)] traffic generated by the boarding school occur during the weekend or early Monday morning

[(2)] traffic associated with the kindergarten and primary school do not occur at the same time

4.6 In view that traffic generated by the middle / high school occur during the weekend or early Monday morning, Table 4.2 shows that the primary school generates the highest peak hour traffic, i.e. **898 and 538 pcu (two-way)** during the AM and PM peak hours respectively.

Impact to Northern Metropolis Highway

4.7 According to the *BDTM Study*, the San Tin Section of Northern Metropolis Highway is included in the 2036 BDTM, whilst, the remaining sections, including Tin Shui Wai Section, Kwu Tung Section and New Territories North New Town Section, are only included in the 2041 BDTM. The 2036 and 2041 BDTM projected traffic flows for the Northern Metropolis Highway are used to conduct the link capacity analysis for the case without and with the Proposed School, and is presented in Table 4.3.

TABLE 4.3 LINK CAPACITY ASSESSMENT

Design Year	Road Section	Bound [3]	Northern Metropolis Highway							
			Without Proposed School				With Proposed School			
			Traffic Flows (pcu/hr)		Volume to Capacity Ratio [4]		Traffic Flows (pcu/hr)		Volume to Capacity Ratio [4]	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2036 [1]	between Fanling Highway Interchange and San Tin Technopole Interchange	NB	287	332	0.05	0.06	474	444	0.08	0.08
		SB	255	199	0.05	0.04	442	311	0.08	0.06
	between Ngau Tam Mei Interchange and San Tin Technopole Interchange	NB	750	575	0.13	0.10	1,012	732	0.18	0.13
		SB	482	518	0.09	0.09	744	675	0.13	0.12
2041 [2]	between Fanling Highway Interchange and San Tin Technopole Interchange	NB	2,810	1,752	0.50	0.31	2,997	1,864	0.53	0.33
		SB	1,967	2,074	0.35	0.37	2,154	2,186	0.38	0.39
	between Ngau Tam Mei Interchange and San Tin Technopole Interchange	NB	3,824	1,991	0.68	0.35	4,086	2,148	0.72	0.38
		SB	2,897	3,079	0.51	0.55	3,159	3,236	0.56	0.57

Note: [1] assumed completion year of the San Tin Section of Northern Metropolis Highway
[2] assumed completion year of the remaining sections of Northern Metropolis Highway
[3] NB – northbound SB – southbound
[4] With reference to the *BDTM Study*, Northern Metropolis Highway is a dual 3-lane expressway. According to the TPDM, the capacity of a dual 3-lane expressway is 4,700 veh/hr, or equivalent to 5,640 pcu/hr (assuming pcu factor of 1.2)

4.8 The results in Table 4.3 show that the Northern Metropolis Highway has sufficient capacity to accommodate the additional traffic generated by the Proposed School.

5.0 SUMMARY

5.1 The Applicant intends to build and operate an international school which is located at various lots in D.D.94, D.D.98 and D.D.100 and adjoining Government Land, in Kwu Tung South. The Proposed School comprises a kindergarten, a primary school and a boarding middle / high school and with other ancillary facilities.

5.2 Internal transport facilities will be provided in accordance with the maximum recommendations of the HKPSG and based on operational needs.

5.3 The Proposed School is connected to the San Tin Technopole Interchange of Northern Metropolis Highway which is the main access point upon commissioning in or before 2036. In addition, there is an opportunity to improve accessibility by providing a public road connecting the San Tin Technopole Interchange with the planned Agricultural Park.

5.4 Traffic mitigation measures are proposed to minimise traffic generated by the Proposed School arriving at the same time:

- The Proposed School operates with staggered hours, including (i) kindergarten from 1000 – 1600 hours; (ii) primary school from 0830 – 1500 hours; and (iii) boarding middle / high school from 0900 – 1630 hours;
- All student pick-up / drop-off activities could be confined within the Proposed School, and students would have convenient pick-up / drop-off on the ground floor which are provided close to their respective schools;
- The drop-arm barrier will be positioned around 300m from the vehicular access with queueing capacity of some 50 vehicles.; and
- Separate parking and loading / unloading area will be provided on the ground floor of the staff dormitory. Similarly, loading / unloading and pick-up / drop-off area will be provided at the student dormitory.

5.5 The 2036 and 2041 link capacity analyses were undertaken for the cases with and without the Proposed School. The analysis found that the Northern Metropolis Highway would have sufficient capacity to accommodate the traffic generated by the Proposed School.

5.6 With the completion of the San Tin Section of Northern Metropolis Highway in 2036, the Traffic Review concluded that the Proposed School will result in **no** adverse impact. From traffic engineering grounds, the Proposed School is acceptable.

Figures

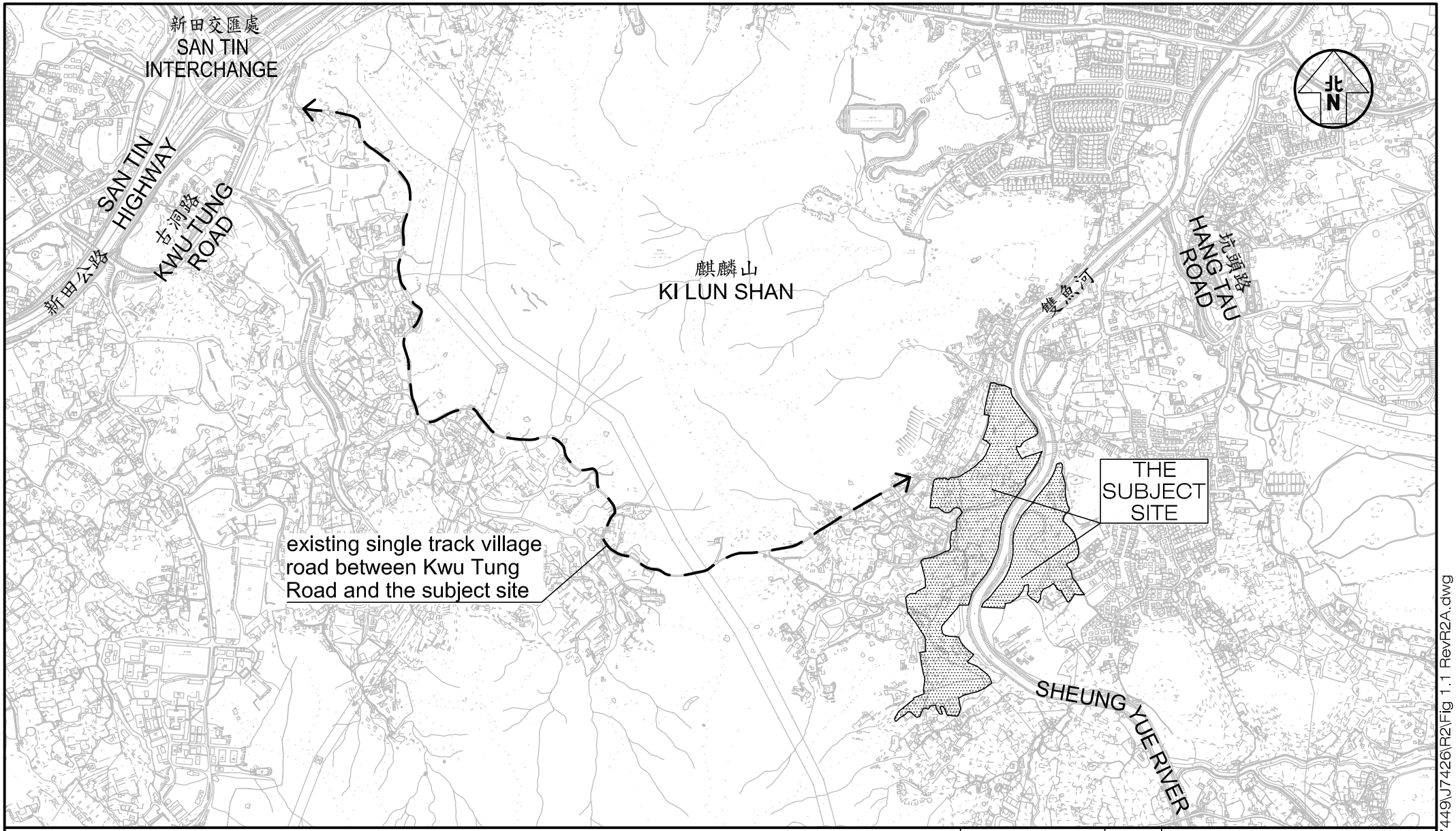

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Figure Title	LOCATION OF THE SUBJECT SITE	Designed by T H C / Drawn by C C L / Checked by K C	Scale in A4 N.T.S. / Date 16 OCT 2025

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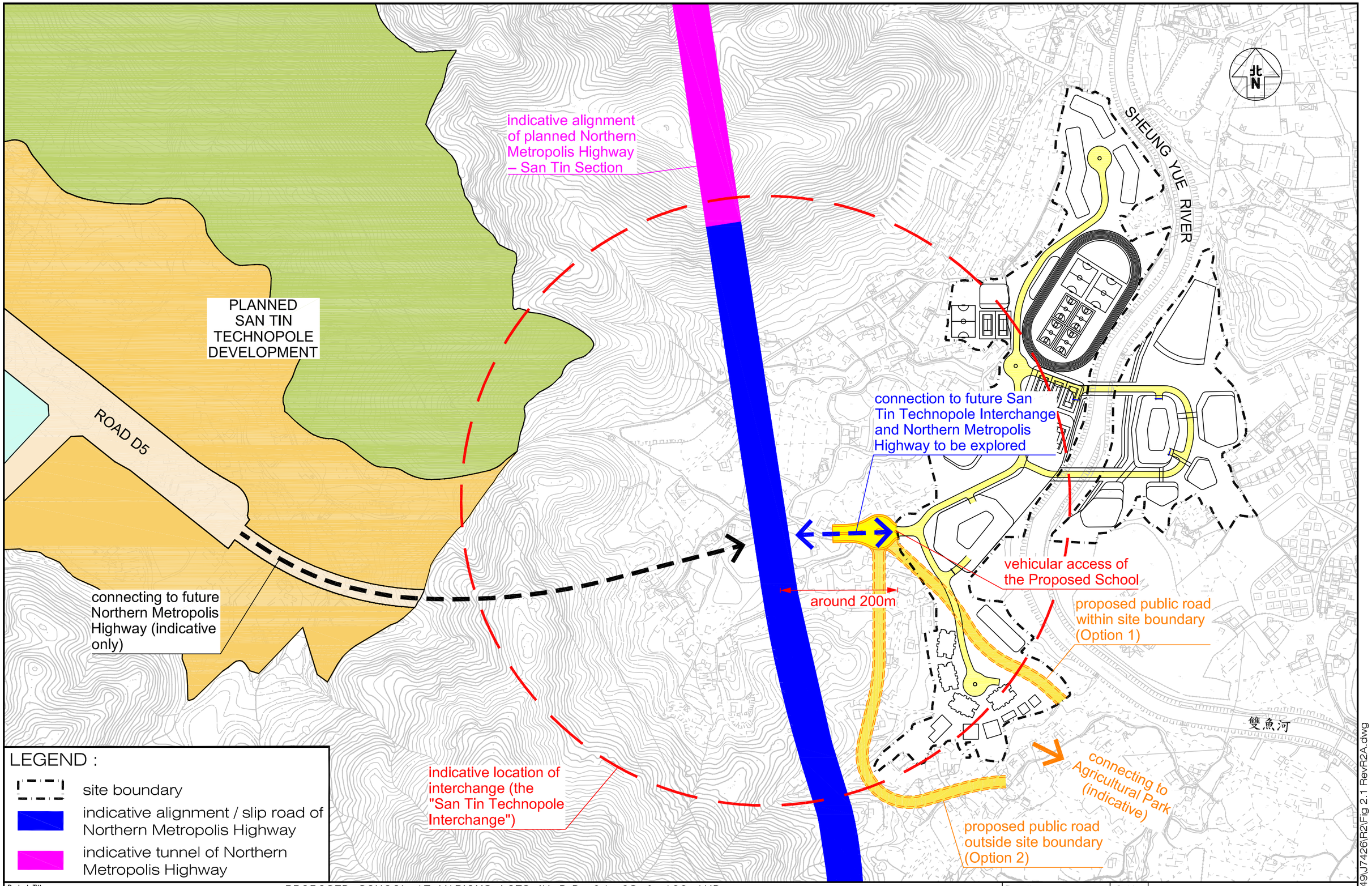

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Figure Title	CONCEPTUAL CONNECTION BETWEEN THE PROPOSED SCHOOL AND THE NORTHERN METROPOLIS HIGHWAY	Designed by T H C / Drawn by C C L / Checked by K C	Scale in A3 N.T.S. / Date 16 OCT 2025

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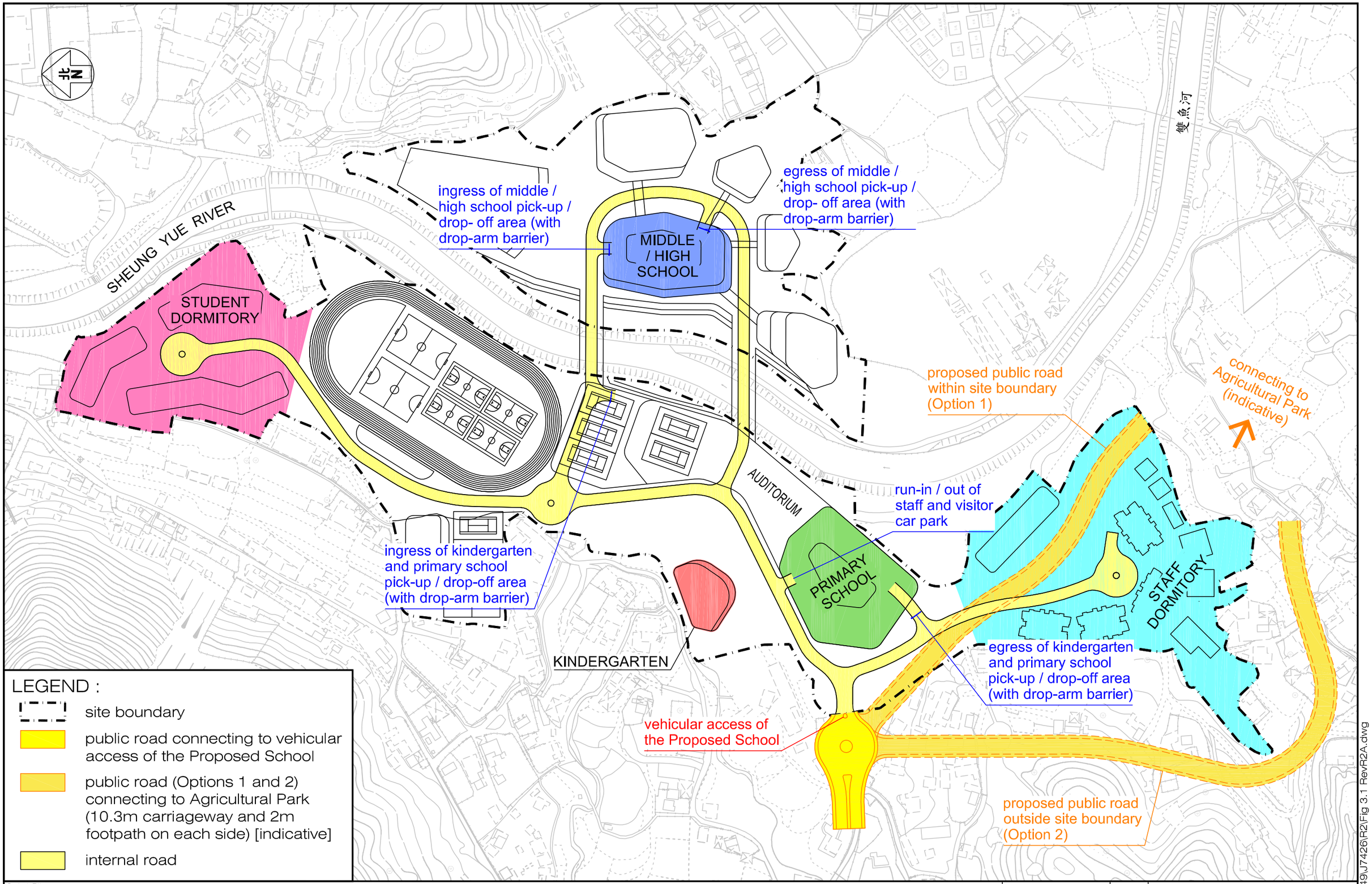

Project Title

PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

J7426

Figure Title

MASTER LAYOUT PLAN OF THE PROPOSED SCHOOL

Figure No.	Revision
3.1	R2A

Designed by	Drawn by	Checked by
T H C	C C L	K C

Scale in A3	Date
N.T.S.	16 OCT 2025

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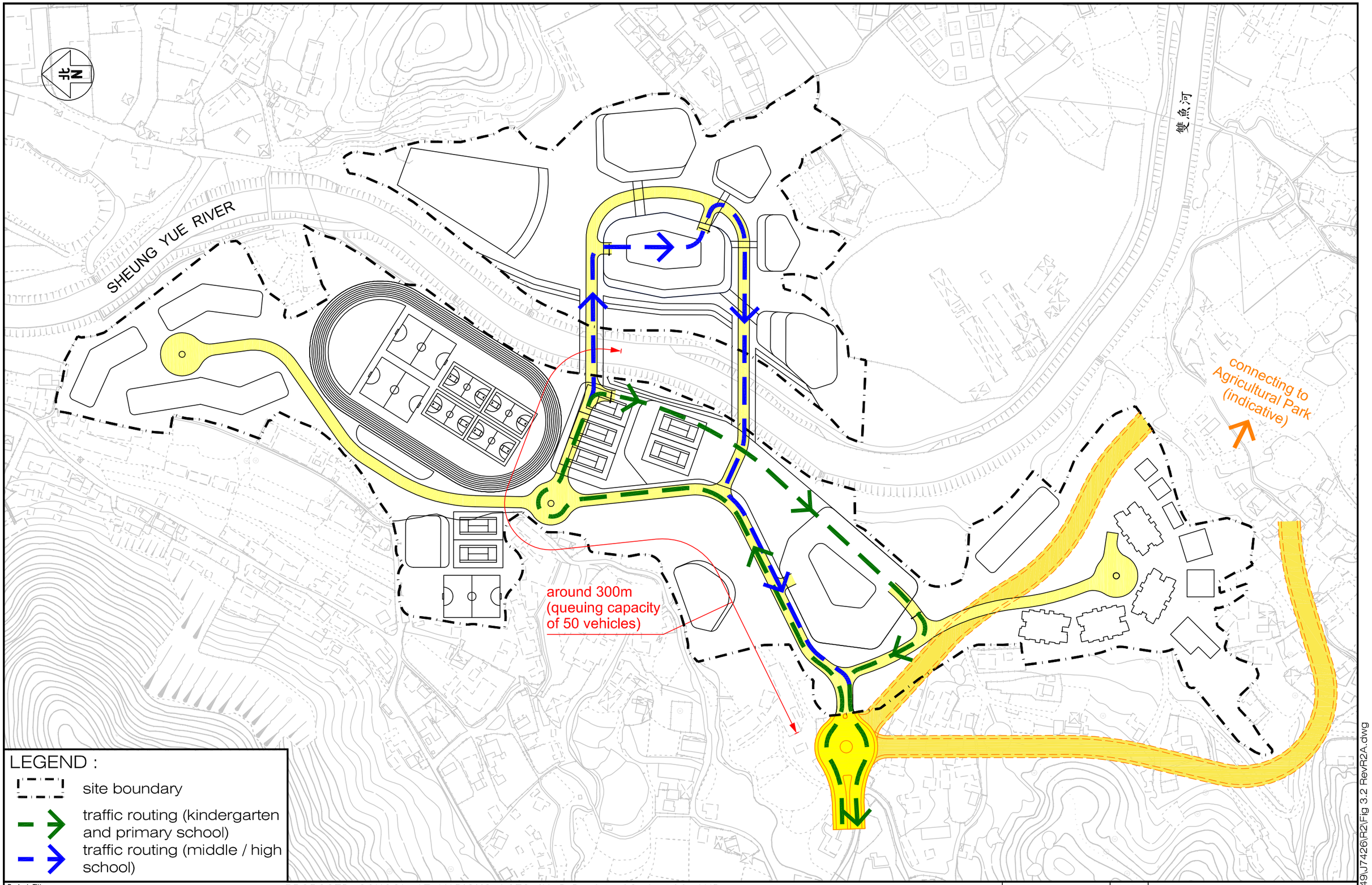

Project Title

PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

J7426

Figure Title

TRAFFIC ROUTING FOR PICK-UP / DROP-OFF OF STUDENTS

Figure No.	Revision
3.2	R2A

Designed by	Drawn by	Checked by
T H C	C C L	K C

Scale in A3	Date
N.T.S.	16 OCT 2025

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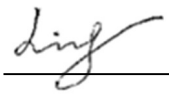
PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

ENVIRONMENTAL ASSESSMENT

Date	**15 October 2025**
Prepared by	**Tony Ling** **Environmental Consultant**
Signed	
Approved by	**Tony Cheng** **Senior Manager**
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Project Reference	**HENKTSISEI00**
Document No.	**R9855_v1.0**

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CHAPTERS

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1. INTRODUCTION

1.1 Project Background

1.1.1 The applicants, Global King Investment Limited, Winpost (HK) Investment Limited and Rand Development Limited, seek to rezone the current "Agriculture" zoning with a minor portion of "Green Belt" of the Application Site as outlined in the approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22.

1.1.2 Ramboll Hong Kong Limited is commissioned to conduct the environmental assessment based on the information regarding the proposed scheme.

1.2 Application Site and its Environs

1.2.1 The Application Site is situated along the Sheung Yue River which separate the Application Site into 2 portions (West and East Portions). It is bounded by Sheung Shui Hang Tau Village Sitting Out Area No.2 to the North and Po Shu Garden to the East.

1.2.2 **Figure 1.1** also shows the location and the environs of the Proposed Development.

1.3 Proposed Development

1.3.1 Under the current application, the Application Site is proposed for an International School development. Details of the proposed development schedule are summarised in **Table 1.1** below and the layout plan is shown in **Appendix 1.1**.

1.3.2 The buildings within Proposed Development (excepting for the student and staff dormitory) will be equipped with central ventilation system, and it will not rely on openable window for ventilation under normal circumstances. While a portion of the Proposed Development along proposed Public Road falls within the 5m buffer distance, it is confirmed by Project Architect that there will be no air sensitive uses including openable window, fresh air intake of mechanical ventilation/ centralized air-conditioning system nor outdoor recreational facilities within the buffer area. Adequate buffer distance is to be provided between the fresh air intake of the building and the kerb of the proposed Public Road.

Table 1.1 Development Schedule of the Proposed Development

Portions Located	West	East
Site Area (m^2)	~92,000	~35,000
Total GFA (m^2)	~126,850	~44,150
No. of Blocks	18	6
No. of Classrooms	76	65
No. of Students	1,600	1,400
No. of Staff (Including Teaching and Non-Teaching)	338	295
No. of Student/ Staff who can Live in the Accommodation	2,243	0

Completion Year	2036

1.4 Key Environmental Issues and Study Approach

1.4.1 Key Environmental issues and concerns as identified for the Project include:

Noise

1.4.2 This section assesses the road traffic noise and potential industrial noise impacts on the noise sensitive uses of the Proposed Development. Practical mitigation measures are proposed to mitigate the potential noise impacts, where necessary.

1.4.3 Site visit was conducted on 15 August 2025 to identify whether there is any potential industrial noise source in the vicinity (i.e. 300m) of the Application Site. No industrial activities are identified in the vicinity.

Air Quality

1.4.4 For the construction phase, the potential air quality impacts would be caused by the dust emissions generated during construction activities. For the operation phase, the potential air quality impacts arising from the vehicular emissions of the nearby roads, and the chimney emissions (if any) of the nearby industrial activities should be addressed.

Land Contamination

1.4.5 The historical landuse and existing condition have been studied for the purpose to identify if there is/was any potentially land contaminating activity held onsite, and actions recommended to be taken afterwards. A land contamination appraisal is included in Section 4.

Waste Management

1.4.6 The potential waste management issues in connection with construction and operation of the Proposed Development will be discussed at Section 5. Waste management Practices and mitigation measures will be recommended in order to alleviate the impacts, where necessary.

Water Quality

1.4.7 The potential water quality impact in connection with construction and operation of the Proposed Development will be discussed at Section 6. On-site sewage treatment plant is proposed. Water quality control measures and mitigation measures will be recommended in order to alleviate the impacts, where necessary.

2. NOISE IMPACT ASSESSMENT

2.1 Introduction

2.1.1 This section assesses the potential industrial noise and road traffic noise impacts on the noise sensitive uses of the Proposed Development. Practical mitigation measures are proposed to mitigate the potential noise impacts, where necessary.

2.2 Identification of Noise Sources

Road Traffic Noise

2.2.1 As mentioned in Section 1.2, the tentative completion year of Proposed Development is Year 2036. Meanwhile, the San Tin Section of Northern Metropolis Highway is targeted to be commissioning in or before 2036 according to the available information provided by Highway Department, location of the transport infrastructure is shown in **Figure 2.1**. In view of the abovementioned programme, the Project would be adjacent to Hang Tau Road (91m from the Application Site) and proposed San Tin Section of Northern Metropolis Highway (54m from the Application Site), which are expected to be the main noise sources.

2.2.2 Most noise sensitive uses (including classroom, office, sports complex, gymnasium, retail, clinic, student shop and club) within the Proposed Development will be centrally air-conditioned and do not require opened windows as means of ventilation under normal circumstances. As such, they should unlikely be affected by road traffic noise.

2.2.3 For noise sensitive uses like student and staff dormitory, the noise sensitive facades / location of openable windows would be designed facing away from the main noise sources as practicable as possible so that the future occupants would not be subject to adverse road traffic noise impact. In addition, detailed road traffic noise impact assessment shall be conducted in next application stage in order to avoid any road traffic noise underestimation from surrounding roads.

Industrial Noise

2.2.4 The Application Site is located at Kwu Tung South, and surrounded by temporal structures, village houses and open parking sites. Desktop studies and site visit (15 August 2025) have been conducted to identify the potential industrial noise sources within 300m assessment area, as shown in **Figure 2.2**. According to the observation during site visit, two open storage & parking sites for heavy machinery to the north and south of the site are identified, and no loading/unloading activities is found. Therefore, road traffic noise would be the major noise source after completion of the Approved Development. Nevertheless, similar with the section for road traffic noise impact assessment, detailed industrial noise impact assessment shall be conducted in next application stage in order to avoid any industrial noise underestimation from potential industrial sources.

Fixed Noise Sources within Proposed Development

2.2.5 In order to ensure that the fixed sources noise generated by the Proposed Development would not cause excessive impact to the neighbouring noise sensitive uses, the ventilation and air conditioning systems for the carpark, plant room etc. will be carefully designed and installed to comply with relevant fixed source noise standards under Chapter 9 of HKPSG.

3. AIR QUALITY IMPACT ASSESSMENT

3.1 Introduction

3.1.1 This section examines the potential air quality impacts that could arise from the construction phase and operation phase of the Project.

3.2 Environmental Legislation and Guidelines

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

- Air Pollution Control Ordinance (APCO) (Cap. 311) and the Air Quality Objectives (AQO)
- Air Pollution Control (Construction Dust) Regulation
- Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation
- Air Pollution Control (Fuel Restriction) Regulations
- Control of Air Pollution in Car Parks (ProPECC PN 2/96)

Air Pollution Control Ordinance (CAP 311)

3.2.2 A set of Air Quality Objectives (AQOs) is established under the Air Pollution Control Ordinance (Cap. 311). The current AQOs that came into effect on 11 April 2025 is presented in **Table 3.1**.

Table 3.1 Hong Kong Air Quality Objectives (AQOs)

Pollutant	Averaging time	Concentration limit [i] (μg/m³)	Number of exceedances allowed per year
SO_2	10-minute	500	3
	24-hour	40	3
RSP (PM_{10}) [ii]	24-hour	75	9
	Annual	30	Not applicable
FSP ($PM_{2.5}$) [iii]	24-hour	37.5	18
	Annual	15	Not applicable
NO_2	1-hour	200	18
	24-hour	120	9
	Annual	40	Not applicable
O_3	8-hour	160	9
	Peak season	100	Not applicable
CO	1-hour	30,000	0
	8-hour	10,000	0
	24-hour	4,000	0
Lead	Annual	0.5	Not applicable

Notes:

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

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

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

Air Pollution Control (Construction Dust) Regulation

3.2.3 Made under Section 43 of the APCO, this Regulation defines notifiable and regulatory works for achieving the purpose of dust control for a number of activities. The Regulation requires that any notifiable work shall give advance notice to EPD, and the Contractors shall ensure that the notifiable and regulatory works are carried out in accordance with the Schedule of the Regulation. Dust control and suppression measures are also provided in the Schedule.

3.2.4 The proposed construction works for the proposed Project are both regulatory and notifiable works due to activities including material stockpiling and dusty material handling as potential sources of fugitive dust emissions as detailed under Parts I to IV of the Schedule on Dust Control Requirements.

Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation

3.2.5 The Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, which aims to control emissions from non-road mobile machinery (NRMMs) to improve air quality, became effective on 1 June 2015. NRMMs include non-road vehicles, as well as mobile machines and equipment (regulated machines) such as crawler cranes, excavators and air compressors.

3.2.6 Under the regulation, regulated machines have to comply with the Stage IIIA emission standards of the European Union. It also requires all regulated machines sold or leased for use in Hong Kong to bear an approval or exemption label issued to them by the EPD, started from 1 September 2015. It restricts specified activities and locations including construction sites, designed waste disposal facilities and specified processes to use only NRMMs that bear an approval or exemption label issued to them by the EPD, with effect from 1 December 2015.

Air Pollution Control (Fuel Restriction) Regulations

3.2.7 The Air Pollution Control (Fuel Restriction) Regulation was enacted in 1990 to impose legal control on the type of fuels allowed for use and their sulphur contents in commercial and industrial processes to reduce sulphur dioxide (SO_2) emissions. The Air Pollution Control (Fuel Restriction) (Amendment) Regulation 2024 commenced on 1 April 2025. The sulphur content of liquid fuel is tightened to 0.001% by weight. The Regulation does not apply to any fuel-using equipment that is used or operated in premises used solely as a dwelling or is used or operated in or on a vessel, motor vehicle, railway locomotive or aircraft.

ProPECC PN2/96 - Control of Air Pollution in Car Parks

3.2.8 This practice notes include air quality guidelines required for the protection of public health and factors that should be considered in the design and operation of car parks in order to achieve the required air quality. The limits for air pollutants as recommended by the practice notes are summarised in **Table 3.2**.

Table 3.2 Limits of Air Pollutant Concentrations Inside Car Parks

Air Pollutant	Average Time	Maximum Concentration (µg/m3) [i]	Parts Per Million (ppm)
CO	5 minutes	115,000	100
NO_2	5 minutes	1,800	1

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

3.3 Representative Air Sensitive Receivers (ASRs)

3.3.1 There are a number of temporary structures, village houses, and low-rise residential buildings within 500m of the Proposed Development. The representative ASRs for the construction phase and operational phase were identified as given in **Table 3.3**. The relative location and distance between the representative ASRs and the Subject Site can be referred to **Figure 3.1**.

Table 3.3 Summary of Representative ASRs

ASR ID	Description	Type	Land Use	Distance from the Project Boundary
A1	Temporary Structure	Existing	Residential	~5m
A2	Temporary Structure	Existing	Residential	~50m
A3	Village House	Existing	Residential	~2m
A4	Temporary Structure	Existing	Residential	~43m
A5	Ceylon Farm Village	Existing	Residential	~2m
A6	564 HANG TAU Village House	Existing	Residential	~15m
A7	561 HANG TAU Village House	Existing	Residential	~3m
A8	Temporary Structure	Existing	Residential	~9m
A9	Temporary Structure	Existing	Residential	~16m
A10	Temporary Structure	Existing	Residential	~7m
A11	Temporary Structure	Existing	Residential	~43m
A12	Temporary Structure	Existing	Residential	~14m
A13	Temporary Structure	Existing	Residential	~4m
A14	Temporary Structure	Existing	Residential	~7m
A15	Temporary Structure	Existing	Residential	~7m
A16	Temporary Structure	Existing	Residential	~10m

3.4 Existing Air Quality in North District

3.4.1 The nearest air quality monitoring station (AQMS) to the Proposed Development is the North AQMS. The five most recent years of air quality monitoring data, 2019 to 2023, from this station are summarized in **Table 3.4**. According to the AQMS monitoring data, exceedance in O_3 is recorded.

Table 3.4 Air Quality Monitoring Data at North AQMS

Pollutant	Averaging Time	AQO	Pollutant Concentration (µg/m3)				
			2019	2020	2021	2022	2023
RSP	10th Highest 24-hour	75 (9)	-	55	62	50	57
	Annual	30	-	-	25	23	27
FSP	19th Highest 24-hour	37.5 (18)	-	29	29	28	28
	Annual	15	-	-	15	14	15
NO2	19th Highest 1-hour	200 (18)	-	112	135	115	116
	10th Highest 24-hour	120 (9)	-	54	70	58	58
	Annual	40	-	-	36	31	30
SO2	4th Highest 10-Min	500 (3)	-	19	18	27	27
	4th Highest 24-hour	40 (3)	-	8	7	7	7
O_3	10th Highest 8-hour	160 (9)	-	**166**	**187**	**197**	**164**
	Peak season	100	-	-	97	98	95
CO	1st Highest 1-hour	30000 (0)	-	1830	2150	1710	2390
	1st Highest 8-hour	10000 (0)	-	1238	1550	1304	1231
	1st Highest 24-hour	4000 (0)	-	1022	1213	994	1001

Notes:
(a) *Bolded values exceed the relevant AQO.*
(b) *Data extracted from EPD's Smart Air Modelling Platform (SAMP v2.1).*

3.4.2 Apart from the air quality monitoring data, a set of background levels from PATH v3.0 ("Pollutants in the Atmosphere and their Transport over Hong Kong") is also reviewed. As the tentative years of the completion of the Proposed Development is Year 2036, the background air quality predicted by PATH v3.0 for Year 2035 in Grid 32,52 and 33,52 is summarized in **Table 3.5**. With respect to the future background air quality predicted by PATH v3.0 in **Table 3.5**, all values are below the relevant AQOs except O_3.

Table 3.5 Year 2035 Background Annual Average Concentrations of the Air Pollutants from PATH v3.0

Pollutant	Averaging Time	AQO	Data Summary	PATH v3.0 Grid in Year 2035	
				32,52	33,52
RSP	24-hour	75 (9)	10th	54.97	55.61
			Exceedance	0	0
	Annual	30	-	20.83	21.25
FSP	24-hour	37.5 (18)	19th	31.78	33.8
			Exceedance	8	11
	Annual	15	-	12.99	13.38
NO2	1-hour	200 (18)	19th	55.02	53.02
			Exceedance	0	0
	24-hour	120 (9)	10th	19.02	19.09
			Exceedance	0	0
	Annual	40	-	10.71	11.02
SO2	10-Min	500 (3)	4th	25.38	26.3
			Exceedance	0	0
	24-hour	40 (3)	4th	6.81	6.79
			Exceedance	0	0

Pollutant	Averaging Time	AQO	Data Summary	PATH v3.0 Grid in Year 2035	
				32,52	33,52
O3	8-Hour	160 (9)	10th	177.19	174.83
			Exceedance	23	21
	Peak Season	100	-	119.89	119.73
CO	1-Hour	30000 (0)	1st	519.87	521.54
			Exceedance	0	0
	8-Hour	10000 (0)	1st	491.61	490.62
			Exceedance	0	0
	24-Hour	4000 (0)	1st	456.12	456.5
			Exceedance	0	0

Notes:
[a] *Numbers in brackets is the number of exceedances allowed per year.*
[b] *Bolded values exceed the relevant AQO.*
[c] *Data extracted from EPD's Smart Air Modelling Platform (SAMP v2.1).*

3.5 Construction Phase

Impact Brought during Construction Phase

3.5.1 Construction activities will bring potential temporary air quality impact to the surrounding area. Significant emissions are not anticipated from other criteria air pollutants - NO2, SO2, and CO, etc. as the number of on-site diesel/petroleum fuelled machinery (10-12 machineries) to be used for construction works. However, electric power supply shall be provided for on-site machinery as far as practicable and diesel generators shall be avoided to minimize the gaseous and PM emissions. Travelling of the dump trucks is another potential source of construction dust. As this planning application stage, there is no detailed information on the construction program; however, with reference to other similar scale projects, there is likely to be around 6-8 dump trucks per hour during the site formation stage of the Proposed Development. Watering the haul road and the site once per hour would be implemented to minimize the potential dust emission during the traveling of the dump trucks within the site.

3.5.2 Furthermore, there is a potential concurrent project "San Tin Section of Northern Metropolis Highway" within the 500m study area from the site boundary which would contribute to the cumulative impact during the construction phase. According to the available public information, the tentative completion year of the potential concurrent project would be 2036. Nevertheless, with the adoption of good practices, it is expected that emission of construction fugitive dust can be kept to an acceptable level. In addition, the applicant will liaise with the relevant parties of the concurrent project, if any, to avoid any heavy dusty activities to be conducted at the same time to minimize the cumulative dust impact at the area. The location of the potential concurrent project is shown in **Figure 3.2**.

General Requirements during Construction Phase

3.5.3 The assessment criteria for aerial emission is based on the Hong Kong Air Quality Objectives (AQO) for air pollutants under *APCO* and the AQOs for the pollutants relevant to the construction phase air quality impact are listed in **Table 3.1**.

Control Measures Recommended during Construction Phase

3.5.4 Appropriate dust reduction measures should be adopted as required under the Air Pollution Control (Construction Dust) Regulation. Essential dust mitigation measures must be implemented to minimize the potential dust impact. Dust impact could be effectively mitigated by inclusion of appropriate contract clauses for dust minimisation in the work contracts. Mitigation measures may include:

- dump trucks for material transport should be totally enclosed using impervious sheeting;
- any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading;
- the stockpiled malodorous materials should be removed from Application Site as soon as possible, and they should be covered entirely by plastic tarpaulin sheets;
- dusty materials remaining after a stockpile is removed should be wetted with water;
- the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with e.g. concrete, bituminous materials or hardcore or similar;
- stockpile of dusty materials to be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides; or sprayed with water so as to maintain the entire surface wet;
- all dusty materials to be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet;
- vehicle speed to be limited to 10 kph except on completed access roads;
- the portion of road leading only to a construction site that is within 30 m of a designated vehicle entrance or exit should be kept clear of dusty materials;
- every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites;
- the load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials would not leak from the vehicle;
- the working area of excavation should be sprayed with water immediately before, during and immediately after (as necessary) the operations so as to maintain the entire surface wet; and
- use of effective dust screens, sheeting or netting to be provided to enclose dry scaffolding which may be provided from the ground floor level of the building or if a canopy is provided at the first floor level, from the first floor level, up to the highest level (maximum four floors for this Project) of the scaffolding where scaffolding is erected around the perimeter of a building under construction.

3.5.5 In addition to the dust control measures described above, dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices listed below shall be carried out to further minimize construction dust impact:

- Plan site layout so that machinery and dust causing activities (e.g. haul roads and stockpiling areas) are located away from receptors as far as possible;
- Consider connecting construction plant and equipment to mains electricity supply and avoid use of diesel generators and diesel-powered equipment as far as practicable;
- Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit;
- Implement phasing of the excavation work to avoid large scale excavation at the same time in vicinity of nearby ASRs; and
- Erect solid screens or barriers around dusty activities,etc.

3.5.6 A monitoring programme (i.e. biweekly site audit) could also be instigated to monitor the construction process in order to enforce dust controls and modify methods of works to reduce the dust emission down to an acceptable level.

3.5.7 Good site management is important for reducing potential air quality impact down to an acceptable level. As a general guidance, the contractor shall maintain high standard of site management to prevent potential emission of fugitive dust emission. Loading, unloading, handling and storage of fuel, raw materials, products, wastes or by-products should also be carried out in a manner so as to minimise the release of visible dust emission.

3.5.8 A high standard of site management shall be maintained. Any piles of materials accumulated on or around the work areas shall be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas shall be carried out in a manner without generating fugitive dust emissions. The material shall be handled properly to prevent fugitive dust emission before cleaning.

3.5.9 "Recommended Pollution Control Clauses for Construction Contracts" is available on EPD website. It contains the recommended air pollution control measures to be implemented by the contractor during the construction stage.

3.6 Operational Phase

Review on Industrial Emission Impact

3.6.1 Onsite surveys were conducted on 18 August 2025 to verify the presence of chimneys. There was no chimney identified within 200m from the boundary of Proposed Development. As such, it is anticipated that the Proposed Development would not be subject to adverse industrial emission impact.

Review on Vehicular Emission Impact

3.6.2 In accordance with above table as stipulated in HKPSG, the minimum requirements on the buffer distance from Proposed Public Road, Hang Tau Road and Private Roads (P1 & P2) are >5m while the buffer distance from San Tin Section of Northern Metropolis Highway is >20m.

Table 3.6 Buffer Distances between Kerb Side of Concerned Road Links and Application Site Boundary

Road Name	Road Type	Recommended Buffer Distance (m)	Shortest Horizontal Distances Between Kerb Side of Concerned Road Links and the Application Site Boundary (m)
Proposed Public Road	Local Distributor	>5m	~0m
Private Road (P1)	Local Distributor	>5m	~17m
Private Road (P2)	Local Distributor	>5m	~128m
Hang Tau Road	Local Distributor	>5m	~91m
San Tin Section of Northern Metropolis Highway	Expressway	>20m	~54m

3.6.3 As shown in **Table 3.6** and **Figure 3.3,** the recommended buffer distance requirement for Private Roads (P1 & P2), Hang Tau Road and San Tin Section of Northern Metropolis Highway in the HKPSG would be complied. For the Proposed Public Road, a portion of the application site is within 5m buffer distance, however, no air sensitive uses (including fresh air intake, openable window, and open space for recreational use, etc.) would be located within 5m buffer distance. In conclusion, there would be no air sensitive uses within the above-mentioned 5m buffer zones. Since the recommended minimum buffer distance of the vehicular emission in the HKPSG can be met, the future residents and occupants of Proposed Development and existing air sensitive receivers will not be subjected to insurmountable vehicular emission impact.

Review on Impact from Proposed Carpark

3.6.4 Carpark has been proposed for the Proposed Development. The air quality inside the basement carpark shall satisfy the air pollutant standards as recommended by the ProPECC PN 2/96 Control of Air Pollution in Car Parks. Therefore, the mechanical ventilation system and layout the basement carpark shall be properly designed. Furthermore, the exhaust outlet of the mechanical ventilation system of the basement carpark shall also be designed by facing away from the nearest air sensitive uses as practicable as possible to ensure not to cause a nuisance to the occupants/ residents of the air sensitive uses including the surrounding developments and the Proposed Development.

4. LAND CONTAMINAION APPRAISAL

4.1 Scope of Work

4.1.1 The aim of this study is to assess the potential land contamination impact under the proposed development due to the previous land uses and/ or the existing operations.

4.2 Assessment Criteria

4.2.1 The following guidelines published by EPD have been followed:

- Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management (RBRGs), revised in April 2023;
- Guidance Note for Contaminated Land Assessment and Remediation, revised in April 2023; and
- Practice Guide for Investigation and Remediation of Contaminated Land (EPD's Practice Guide), revised in April 2023.

4.3 Review of Historical and Current Available Information

Land Uses

4.3.1 The proposed development is located at the zone labelled as "AGR"-zoning under the approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22.

4.3.2 Historical aerial photos of the Application Site have been reviewed to identify if any possible land contamination related activites or uses have been carried out. **Table 4.1** shows the description of each aerial photos. Besides, the aerial photo is presented in **Appendix 4.1**.

Table 4.1 Land Use Summary of the Application Site

Period/ Year	Photo No.	Flying Height (ft.)	Site Description	Off-site Land Use
1995	A51043	3000	The site was mainly a green land with some temporary structures observed. Sheung Yue River was observed.	North: Temporary storage was observed. East: It was mainly a green land with some village houses observed. South, West: It was mainly a green land with some temporary structures were observed.
2000	A51043	3000	Sheung Yue River was under diversion construction which led to out of the site boundary. No significant change in land use was observed in the remaining portions of the site.	North, East, South West: No significant change in land use was observed. Middle: Sheung Yue River was under diversion construction

Period/ Year	Photo No.	Flying Height (ft.)	Site Description	Off-site Land Use
2004	CW58299	2500	No significant change in land use was observed.	North, East, South West: No significant change in land use was observed. Middle: Diversion construction of Sheung Yue River was completed.
2011	CS32953	6000	No significant change in land use was observed.	North, East, South West, Middle: No significant change in land use was observed.
2015	CS59207	6000	No significant change in land use was observed.	North, East, South West, Middle: No significant change in land use was observed.
2020	E092056C	6900	No significant change in land use was observed.	North, East, South West, Middle: No significant change in land use was observed.
2024	E239765C	6900	No significant change in land use was observed.	North, East, South West, Middle: No significant change in land use was observed.
Summary Green land and temporary structures were observed from the aerial photos within the site. Although temporary structures are considered as potential land contamination land use, site walkover shall be conducted to identify whether site investigation is needed.				

Site Inspection and Observation

4.3.3 Site inspection to the Application Site was conducted in August 2025. The relevant photo record is shown in **Appendix 4.2**. The site walkover check is supplemented in **Appendix 4.3**.

4.3.4 Whole portion of the east of the Application site are currently inaccessible as it is locked (see Photo 1). Site visit shall be conducted again when it is available or in the detailed design stage. No construction work shall be carried prior to the EPD's approval of the site appraisal.

4.3.5 Within the west of the Application site, mainly trees are observed. Village, pond and farmland are observed. As no land contamination pollution is observed and trees grow in green, no land contamination is expected.

Information from Departments of the Government of the HKSAR

4.3.6 Apart from the information reviewed, the following departments of the Government of the Hong Kong Special Administration Region (HKSAR) were enquired on the

availability of landuse status and records of land contamination and/or spillage for the Application Site. The replies correspondences are shown in **Appendix 4.4**.

Table 4.2 Departmental Replies Summary

Department	Departmental Ref	Date	Summary
Environmental Protection Department	N.A. (reply through email)	27 Aug 2025	No record of reported accidents of spillage/ leakage of chemicals
Fire Services Department	Pending	Pending	Pending

Information from Departments of the Government of the HKSAR

4.3.7 The Consultants has reviewed the registry of chemical waste producers available in the Territory Control Office on 12 August 2025 for the Subject Site. No record was recorded in the Territory Control Office.

4.3.8 Hence, potential land contamination due to chemical waste is not expected within the Subject Site.

4.4 Conclusion

4.4.1 A site appraisal, in the form of desktop review and site walkover, had been carried out in August 2025 to identify the past and current potentially contaminating land uses within the Application Site. Based on the desktop study and site appraisal, there are no land contamination activities and therefore, it can be concluded that no land contamination issues are anticipated in the Application Site.

5. WASTE MANAGEMENT

5.1 Introduction

5.1.1 This section presents the management and disposal strategy of the wastes generated from the construction work and operational phase. The options for waste minimization, reuse, recycling, collection, transport and disposal of wastes arising from the construction, demolition work and operational phase have been examined. Where appropriate, procedures for waste reduction and management are considered and environmental control measures for avoiding and minimising the potential impacts are recommended.

5.2 Legislation

5.2.1 The following legislations and guidelines are relevant to the handling, treatment and disposal of waste in HKSAR and references were made in assessing the potential impacts and their avoidance or mitigation:

- *Waste Disposal Ordinance (Cap. 354);*
- *Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C);*
- *Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N); and*
- *Practice Note for Authorized Persons and Registered Structural Engineers – Construction and Demolition Waste (PNAP ADV-19, also known as PN for AR&RSE No. 243)*
- *Monitoring of Solid Waste in Hong Kong 2023*
- *Administrative Guidance – Management Framework for Construction and Demolition Waste (or any prevailing applicable guideline)*
- *Land (Miscellaneous Provisions) Ordinance (Cap 28)*
- *Code of Practices and Guidelines for Asbestos Control and Handling; and*
- *ProPECC PN2/97 Handling of Asbestos Containing Materials in Building*

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

- *Development Bureau Technical Circular (Works) No. 8/2010 - Enhanced Specification for Site Cleanliness and Tidiness;*
- *ETWB TCW No. 22/2003A - Additional Measures to Improve Site Cleanliness and Control Mosquito Breeding on Construction Sites;*
- *Development Bureau Technical Circular (Works) No. 6/2010 - Trip-ticket System for Disposal of Construction and Demolition Materials;*
- *WBTC No. 19/2001 - Metallic Site Hoardings and Signboards;*
- *Works Bureau Technical Circular No. 12/2000 - Fill Management;*
- *Works Branch Technical Circular No. 2/93 - Public Dumps;*
- *Works Branch Technical Circular No. 2/93B - Public Filling Facilities;*
- *Project Administration Handbook for Civil Engineering Works;*
- *Public Health and Municipal Services Ordinance (Cap. 132);*
- *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes; and*
- *A Guide to the Chemical Waste Control Scheme*

5.3 Assessment Methodology

5.3.1 The assessment of the potential waste management implications during the construction and operation phases of the Project has been conducted in accordance with Annexes 7 and 15 of the EIAO-TM, including the following tasks:

- Estimation of the types and quantities of the wastes generated;
- Evaluation of opportunities for waste reduction and re-use;
- Identification of disposal options for each type of wastes;
- Assessment of potential environmental impacts arising from the wastes management with respect of potential hazards, air and odour emissions, noise, wastewater discharge, and public transport; and
- Assessment of the impacts caused by handling, collection, transportation and re-use /disposal of wastes.

5.3.2 Prior to considering the disposal options for various types of waste, opportunities for reducing waste generation, on-site or off-site reuse and recycling have been evaluated. Measures which can be taken in the planning and design phases (e.g. by modifying the design approach) and in the construction phase for maximizing waste reduction have been separately considered. Practices to promote segregation of waste materials are additionally considered for advancing the waste management efficiency.

5.3.3 After considering the opportunities for reducing waste generation and maximizing reuse, the types and quantities of the waste required to be disposed of have been estimated and the disposal options for each type of waste have been described. The disposal method recommended for each type of waste has been taken into account the result of the assessment. The impacts caused by handling (including stockpiling, labelling, packaging and storage), collection and reuse / disposal of waste have been addressed and appropriate mitigation measures have been proposed.

5.4 Identification and Evaluation of Potential Impact during Construction Stage

5.4.1 The construction activities to be carried out for the proposed Project would generate a variety of wastes that can be divided into distinct categories based on their composition and ultimate method of disposal. The identified waste types include:

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

5.4.2 It is anticipated that the majority of C&D materials will be generated from the following key construction activities:

- Demolition of existing building or structures;
- Site Clearance;
- Excavation for Basement and foundation construction;
- Site formation works;
- Building construction and superstructure works

C&D Materials

5.4.3 C&D materials comprise mainly of unwanted materials, including excavation for foundation of the Proposed Development, surplus materials generated from the construction works of the Proposed Development. C&D materials may comprise different types of materials, including:

- Inert C&D materials (also known as public fill, including soil, rock debris, rubble earth, concrete, etc.) do not decompose and are suitable to reuse as filling materials for land reclamation and site formation. Inert C&D materials could be reused on-site as filling materials. For those inert C&D materials that cannot be reused on-site should be delivered to Public Fill Reception Facilities for beneficial reuse in other projects.

- Non-inert C&D materials (also known as C&D waste, including bamboo, timber, paper, metal, glass, plastic, packaging wastes, etc.). Non-inert C&D materials should be reused or recycled as far as possible. For those timber and woody materials at predominantly rural area of Application Site anticipated during site clearance, should be sent to Yard Waste Recycling Centre in Y-Park for recycling. For those non-inert C&D materials that cannot be reused or recycled, they should be disposed of at designated landfill sites as last resort.

5.4.4 The general waste management strategy is to avoid waste generation in the first place. Should it be unavoidable, reduction and segregation at-source should be exercised as far as practicable, and recycling and reuse should be adopted at the same time to salvage all the recyclable and reusable materials as much as possible.

5.4.5 Inert C&D materials should be re-used on-site (e.g for backfilling) if it is practical and/or delivered to Public Fill Reception Facilities for beneficial reuse in other projects or other CEDD designated public fill reception facilities. Non-inert C&D materials (i.e. C&D waste) should be re-used or recycled. For those that cannot be reused or recycled, they should be disposed of at designated landfill sites as last resort.

5.4.6 The Contractor(s) should be responsible for ensuring that all on-site wastes will be collected by waste collectors which successfully applied for a billing account under Construction Waste Disposal Charging Scheme and appropriate measures should be undertaken to minimise adverse impacts to the surrounding environment, such as dust generation. The Contractor(s) must also ensure that all necessary waste disposal permits have been obtained before actions.

5.4.7 Prior to disposal of non-inert C&D materials, it is recommended that wood, steel, glass and other metals will be collected separately for re-use and/or recycling and inert C&D materials utilized as fill materials to minimize the quantity of waste to be disposed of at the Public Fill Reception Facilities and landfill.

5.4.8 If the total quantity of C&D materials generated from the Project is estimated to be over 50,000 m³, a Construction and Demolition Material Management Plan (C&DMMP), including areas described in PNAP ADV-19 is required to be prepared by the Contractor. The purpose of the C&DMMP is to actively seek to minimise generation of C&D materials and to reuse inert materials generated, including rock, as far as possible. The C&DMMP shall be submitted to the Project Proponent for agreement.

Chemical Waste

5.4.9 Construction plant and equipment will require regular maintenance and servicing, which would generate waste such as solvents, lubrication oil and fuel, etc. Chemical wastes arising during the construction phase may pose serious environmental, health and safety hazards if not stored and disposed of in an appropriate manner.

5.4.10 It is difficult to quantify the amount of chemical wastes as it will solely depend on the contractor's on-site maintenance practice and the quantities of plant and vehicles utilized at the construction site. Nevertheless, it is anticipated that the quantity of chemical waste such as lubrication oil and solvent produced from equipment maintenance would be small and less than hundred litres per month.

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

5.4.12 Storage, handling, transport and disposal of chemical waste should be arranged in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste published by the EPD. Chemical wastes such as wasted solvents, lubrication oil and fuel, etc. will need special handling and storage arrangements and should be collected by licensed chemical waste collectors for subsequent disposal and appropriate treatment at licensed waste disposal facilities, for example the Chemical Waste Treatment Facility Centre (CWTC) in Tsing Yi. Mitigation and control requirements for chemical waste are provided in the "Recommended Pollution Control Clauses for Construction Contracts" available in EPD website mentioned the handling, storage and disposal of chemical wastes. With good management and site particles, adverse environmental impacts should not result.

5.4.13 The amount of chemical waste would be depended on the contractor's on-site maintenance practice and the quantities of plant and vehicles utilised at the construction site. Nevertheless, it is anticipated that the quantity of chemical waste such as lubrication oil and solvent produced from equipment maintenance would be less than hundred litres per month. The quantity of chemical waste to be generated would be quantified in the Waste Management Plan as part of the Environmental Management Plan to be prepared by the contractor.

General Refuse

5.4.14 Throughout the construction stage, the workforce would generate general refuse comprising food scraps, waste paper, empty containers, etc. Release of general refuse into watercourses or marine waters should not be permitted as introduction of these wastes is likely to have detrimental effects on water quality in the area. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into the marine environment, and odour nuisance. The work sites may also attract pests and vermin if the waste storage area is not well maintained and cleaned regularly. Disposal of refuse at sites other than approved waste transfer or disposal facilities can also result in similar impacts. The number of work force to be employed for the site is around 200. Based on the generation rate of 0.65kg/person/day, the estimated total refuse generated per day (maximum) would be about 130kg/day.

5.4.15 Food waste is the main source of generating unpleasant odour and causing environmental hygiene concerns. In order to reduce the amount of general refuse to be disposed into the landfill, the food waste would be collected separately for recycling and the recycling bins should be placed in prominent places to promote waste separation at-source.

Asbestos Containing Materials

5.4.16 Asbestos was widely used in the construction industry prior to the early 1980s for fireproofing, thermal and electrical insulation as well as in sound absorption materials. However, asbestos is currently recognized as hazardous materials, due to its etiological effects on human respiratory system.

5.4.17 As there are no buildings/ structures were built before 1980s, it can be deduced that ACM are not presented within the Application Site.

5.4.18 Preliminary quantity estimation of construction waste involved and disposal method is summarised in the **Table 5.1**.

Table 5.1 Summary of Estimated Construction Waste and Disposal Method

Waste Material Type		(a) Estimated Quantity Generated (b) Quantity to be Disposed Off-site (c) Quantity of Waste Material for On-site Reuse or Recycling	Handling Arrangement/ Disposal Destination
Inert C&D Materials	Excavation for site formation	(a) 203,200 m^3 (with 80% of site area (i.e. 101,6000 m^2) and depth of 2m for site formation) (b) ~197,100 m^3 (c) ~6,100 m^3	To be reused or recycled on site or in other projects; and delivered to Public Fill Reception Facilities for other beneficial reuse, subject to the designation by the Public Fill Committee according DEVB TC(W) No. 6/2010.
	Site clearance, site formation works, construction of new buildings and infrastructures	(a) ~59,850 m^3 (b) ~59,550 m^3 (c) ~380 m^3	
Non-inert C&D Materials	Site clearance, site formation works, construction of new buildings and infrastructures	(a) ~8,550 m^3 (b) ~5,700 m^3 (c) ~2,850 m^3	To be reused, recycled or disposed of at landfill as the last resort, subject to agreement with the relevant section of the EPD.
Chemical Waste	-	Less than hundred litres/month	For treatment at licensed facilities
General Refuse	-	130 kg/day (Assuming there are 200 workers at any one time with generation rate of 0.65 kg per worker per day)	Recyclable materials (i.e. paper, plastic bottles, aluminium cans and food waste) will be collected separately for recycling, remainders will be sent to Refuse Transfer Station for compaction and then disposed of at NENT landfill

Remark: The above estimated quantities are subject to the detailed design stage.

5.5 Waste Disposal and Mitigation Measures

5.5.1 Waste generated by construction activities should be properly sorted and certain waste management requirements must be followed to minimize the impacts arising because of the generation, storage, handling, transport and disposal of wastes. Good site management and control can prevent the generation of significant amounts of "mixed waste". For unavoidable wastes, reuse, recycling and optimal disposal are most practical when segregation occurs on the construction site, categorized as follows:

- Inert C&D materials for reuse on-site or delivering to Public Fill Reception Facilities for beneficial reuse at other projects;
- Non-inert C&D materials for reuse or recycle or disposal at landfill as last resort;
- Chemical waste for treatment at licensed facilities; and
- General refuse for disposal at landfill.

C&D Material

5.5.2 Proper storage and site practices should be adopted to minimize the damage to, or contamination of, C&D materials that may reduce their recyclability and suitability for delivered to Public Fill Reception Facilities for beneficial reuse in other projects. The inert C&D materials shall be reused in earth filling, reclamation or site formation works. The non-inert C&D materials shall be reused or recycled and, as the last resort, disposed of at landfills.

5.5.3 Appropriate measures should also be employed to minimize windblown litter and dust during transportation by either covering trucks with tarpaulin or transporting wastes in enclosed containers. Waste should only be disposed at licensed sites. Resident site staff and the contractors should develop procedures to ensure that illegal disposal of waste does not occur. In addition, waste storage areas within the Project should be well maintained and cleaned regularly to prevent cross-contamination. The delivery of inert C&D materials and non-inert C&D materials to public fill reception facilities/sorting facilities/recycling facilities respectively through a trip-ticket system, while general refuse will be disposed of at landfill.

Chemical Waste and Control

5.5.4 Chemical and oily wastes generated from the construction activities, vehicle and plant maintenance should be disposed of as chemical waste in strict compliance with the Waste Disposal (Chemical Waste) (General) Regulations.

5.5.5 During construction phase, the contractor which would regularly produce chemical waste, if any, shall register with EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The operator shall use a licensed collector to transport and dispose of the chemical wastes generated at the Chemical Waste Treatment Centre (CWTC) at Tsing Yi, or other licenced facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.

5.5.6 The Contractor shall observe and comply with the Waste Disposal (Chemical Waste) (General) Regulation.

5.5.7 The Contractor shall apply for registration as chemical waste producer under the Waste Disposal (Chemical Waste) (General) Regulation when chemical waste is produced. All

chemical waste shall be properly stored, labelled, packaged and collected in accordance with the Regulation.

General Refuse

5.5.8 For general refuse, mitigation measures should include provision of a collection area where waste can be sorted, stored and loaded prior to removal from the site during construction phase.

5.5.9 In additional, with the implementation of the recommended mitigation measures in the "Recommended Pollution Control Clauses for Construction Contracts" available in EPD website, the potential environmental impacts resulting from the storage, handling and transportation of inert C&D materials, non-inert C&D materials, chemical wastes and general site wastes would be minimal. Below are the examples of the relevant measures:-

5.5.10 Waste Minimisation

- The Contractor shall submit to the Engineer for approval a waste management plan with appropriate mitigation measures including the allocation of an area for waste segregation and shall ensure that the day-to-day site operations comply with the approved waste management plan.
- The Contractor shall minimise the generation of waste from his work. Avoidance and minimisation of waste generation can be achieved through changing or improving design and practices, careful planning and good site management.

Good Site Management

(i) Nomination of approved personnel, such as a site manager, to be responsible for good site practices, and making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility;

(ii) Training of site personnel in proper waste management and chemical waste handling procedures;

(iii) Provision of sufficient waste disposal points and regular collection for disposal;

(iv) Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;

(v) Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;

(vi) An Environmental Management Plan (EMP) which includes a Waste Management Plan (WMP) should be prepared by the Contractor in accordance with Administrative Guidance – Management Framework for Construction and Demolition Waste (or any prevailing applicable guideline) and should be submitted to the Engineer and/or Architect for approval before construction; and

(vii) A recording system for the amount of wastes generated, recycled and disposed of (including the disposal sites) should be updated on monthly basis and submitted to the Engineer for approval and record.

- The Contractor shall ensure that different types of wastes are segregated on-site and stored in different containers, skips or stockpiles to facilitate reuse/recycling of waste and, as the last resort, disposal at different outlets as appropriate.
- The reuse and recycling of waste shall be practised as far as possible.
- The Contractor shall record the amount of wastes generated, recycled and disposed of (including the disposal sites).

- The Contractor shall use a trip ticket system for the delivery of C&D materials to any designated Public Fill Reception Facilities.
- Training shall be provided for workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.
- All dump trucks engaged on-site for delivery of inert and non-inert C&D material from the site to the designated disposal location, including PFRFs, landfill etc., should be equipped with GPS or equivalent system for tracking and monitoring of their travel routings and parking locations by the Contractor to prohibit illegal dumping and landfilling of materials.
- The data collected by GPS or equivalent system should be recorded properly for checking and analysis the travel routing and parking locations of dump truck engaged on site.

Waste Nuisance Control

5.5.11 The Contractor shall not permit any sewage, waste water or effluent containing sand, cement, silt or any other suspended or dissolved material to flow from the Site onto any adjoining land or allow any waste matter (or refuse) which is not part of the final product from waste processing plants to be deposited anywhere within the Site (or onto any adjoining land). He shall arrange removal of such matter from the site (or any building erected or to be erected thereon) in a proper manner to the satisfaction of the Engineer in consultation with the Director of Environmental Protection.

5.6 Identification and Evaluation of Potential Impact during Operational Phase

5.6.1 During operational phase, since the use of the Proposed Development is educational. Disposal of chemical waste is anticipated for science laboratory lessons. Therefore, general refuse and chemical waste are the waste generated during the operation of the proposed development.

General Refuse

5.6.2 Around 1,998 kg/day for non-domestic portion (with 3,000 students and 632 staffs assumed, domestic waste amount = number of staff assumed x daily commercial & industrial waste per capita) (with the assumption based on the latest data (Year 2023) from Plate 2.7 at EPD's "Monitoring of Solid Waste in Hong Kong", at which the amount of commercial & industrial waste is 0.55 kg/person/day).

5.6.3 Release of general refuse into watercourses or marine waters should not be permitted as introduction of these wastes is likely to have detrimental effects on water quality in the area. Effective collection of site wastes is suggested to prevent waste materials being blown around by wind and odour nuisance.

5.6.4 For other general waste such as metal, paper, plastic and glass, recycling bins for each type of wastes will be placed to reduce waste disposal amount. Also, the waste collection frequency is recommended to be at least once a week to reduce chances of hygiene issue.

5.6.5 For wastes such as leftover, an adequate number of enclosed waste containers will be provided to avoid over-spillage of waste. Also, leftover will be placed in bags and stored in enclosed containers. Rather than disposing the food waste to the designated landfill directly, the project proponent is recommended to deliver the food waste to Organic Resources Recovery Centre (ORRC) to reduce the pressure on the existing landfill. Therefore, the chances of odour nuisance and hygiene issue are reduced.

Chemical Waste

5.6.6 School laboratory which would regularly produce chemical waste, if any, shall register with EPD as a Chemical Waste producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The operator shall use a licensed chemical collector to transport and dispose of the chemical wastes generated at the Chemical Waste Treatment Centre at Tsing Yi, or other licenced facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.

5.7 Conclusion

5.7.1 Waste generated during construction works and operational phase have been qualitatively evaluated. With these waste managements in place, the waste generated from the construction work and operation of the proposed development would be properly controlled and no adverse waste management impact is anticipated.

6. WATER QUALITY IMPACT ASSESSMENT

6.1 Construction Phase

6.1.1 The management and mitigation strategy of the sewage generated from the construction work of the Proposed Development would be addressed. Where appropriate, environmental control measures for avoiding and minimizing the potential impacts are recommended. **Figure 6.1** shows the water sensitive receivers (WSR) which are ponds and natural stream within the 500m study area of the Subject Site. The potential Water Quality Impact (WQI) during the construction and operation phase of the Proposed Development is addressed in the following section. The information of each WSR is also discussed in **Table 6.1**.

Table 6.1 Information of Water Sensitive Receivers

ID	Description	Type	Status
W1	Kwu Tung Reservoir	Reservoir	Active
W2	Sheung Yue River	River	Active
W3	2 Ponds	Pond	Active
W4	Tam Shui Hang	River	Active

6.2 Legislations, Standards and Guidelines

6.2.1 The key legislations, standards and guidelines applicable to construction and operation phase water quality impacts include:

- Water Pollution Control Ordinance (WPCO) (Cap. 358);
- Technical Memorandum for Effluents Discharged into Drainage and Sewerage Systems Inland and Coastal Waters (TM-DSS)
- ProPECC PN 1/23 Drainage Plans subject to Comment by the Environmental Protection Department – Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines)
- ProPECC PN 2/24 Construction Site Drainage
- ETWB Technical Circular (Works) No. 5/2005 Protection of Natural Streams/Rivers from Adverse Impacts Arising from Construction Works
- Hong Kong Planning Standards and Guidelines (HKPSG);
- Water Quality Objectives

<u>Water Pollution Control Ordinance (Cap. 358)</u>

6.2.2 The Water Pollution Control Ordinance (WPCO) (Cap. 358) provides the major statutory framework for the protection and control of water quality in Hong Kong. According to the Ordinance and its subsidiary legislation, Hong Kong waters are divided into ten Water Control Zones (WCZs). Corresponding statements of Water Quality Objectives (WQOs) are stipulated for different water regimes (marine waters, inland waters, bathing beaches subzones, secondary contact recreation subzones and fish culture subzones) in the WCZ based on their beneficial uses. The assessment area is located within Deep Bay WCZ.

Technical Memorandum

6.2.3 Besides setting the WQOs, discharge of effluents into the WCZs are subject to control under the WPCO through a licensing system. The "Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters" (TM-DSS) gives guidance on the permissible effluent discharges based on the type of receiving waters (foul sewers, stormwater drains, inland and coastal waters). The limits control the physical, chemical and microbial quality of effluents. Any sewage from the proposed construction and operation activities must comply with the required discharge standards for effluents discharged into the foul sewers, inland waters and coastal waters of Deep Bay WCZ, as given in the TM-DSS. Group D discharge standard is considered relevant to this Project.

Practice Note

6.2.4 A Professional Persons Environmental Consultative Committee Practice Note (ProPECC PN) was issued by the EPD to provide guidelines for handling and disposal of construction site discharges. The ProPECC PN 2/24 "Construction Site Drainage" provides good practice guidelines for dealing with 10 types of discharge from construction sites. These include surface run-off, groundwater, boring and drilling water, wastewater from concrete batching and/or precast concrete casting, wheel washing water, bentonite slurry, water for testing and sterilisation of water retaining structures and water pipes, wastewater from building constructions, acid cleaning, etching and pickling wastewater, and wastewater from site facilities. Practices given in the ProPECC PN 2/24 should be followed as far as possible during construction to minimise the water quality impact due to construction site drainage.

6.2.5 The ProPECC PN 1/23 "Drainage Plans subject to Comments by Environmental Protection Department" provides guidelines and practices for handling, treatment and disposal of various effluent discharges to stormwater drains and foul sewers. The design of site drainage and disposal of various site effluents generated within the new development area should follow the relevant guidelines and practices as given in the ProPECC PN 1/23.

ETWB Technical Circular (Works) No. 5/2005 Protection of Natural Streams/Rivers from Adverse Impacts Arising from Construction Works

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

Hong Kong Planning Standards and Guidelines (HKPSG)

6.2.7 Section 5 in Chapter 9 of HKPSG "Environment" provides policy objectives for planning against water pollution, guidelines for potentially water polluting uses and guidelines for water sensitive uses to achieve and maintain water bodies quality to be used for their legitimate purpose, provide adequate public sewerage, wastewater treatment and wastewater disposal facilities and aim at safeguarding community health and welfare. The guidelines given in Chapter 9 of HKPSG should be followed as far as possible to maintain water quality and against water pollution.

Water Quality Objectives

6.2.8 The Water Pollution Control Ordinance (WPCO) provides the major statutory framework for the protection and control of water quality in Hong Kong. According to the Ordinance and its subsidiary legislation, Hong Kong waters are divided into ten Water Control Zones (WCZs) and four supplementary WCZs under the Water Pollution

Control Ordinance (WPCO) (Cap. 358). Each WCZ has a designated set of statutory Water Quality Objectives (WQOs) designed to protect the inland and/or marine environment and its users. The Subject Site is located in the Deep Bay WCZ. The corresponding WQOs are summarised in the table below. Corresponding statements of Water Quality Objectives (WQOs) are stipulated for different water regimes (marine waters, inland waters, bathing beaches subzones, secondary contact recreation subzones and fish culture subzones) in each WCZ based on their beneficial uses.

Table 6.2 Water Quality Objectives for Deep Bay Water Control Zones

Parameters	Objectives	Sub-Zone
Aesthetic appearance	(a) Waste discharges shall cause no objectionable odours or discolouration of the water.	Whole zone
	(b) Tarry residues, floating wood, articles made of glass, plastic, rubber or of any other substances should be absent.	Whole zone
	(c) Mineral oil should not be visible on the surface. Surfactants should not give rise to a lasting foam.	Whole zone
	(d) There should be no recognisable sewage-derived debris.	Whole zone
	(e) Floating, submerged and semi-submerged objects of a size likely to interfere with the free movement of vessels, or cause damage to vessels, should be absent.	Whole zone
	(f) Waste discharges shall not cause the water to contain substances which settle to form objectionable deposits.	Whole zone
Bacteria	(a) The level of *Escherichia coli* should not exceed 610 per 100 mL, calculated as the geometric mean of all samples collected in one calendar year.	Secondary Contact Recreation Subzone and Mariculture Subzone (L.N. 455 of 1991)
	(b) The level of *Escherichia coli* should be zero per 100 ml, calculated as the running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days.	Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(c) The level of *Escherichia coli* should not exceed 1000 per 100 ml, calculated as the running median of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters
	(d) The level of *Escherichia coli* should not exceed 180 per 100 mL, calculated as the geometric mean of all samples collected from March to October inclusive in one calendar year. Samples should be taken at least 3 times in a calendar month at intervals of between 3 and 14 days.	Yung Long Bathing Beach Subzone (L.N. 455 of 1991)
Colour	(a) Waste discharges shall not cause the colour of water to exceed 30 Hazen units.	Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(b) Waste discharges shall not cause the colour of water to exceed 50 Hazen units.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters

Parameters	Objectives	Sub-Zone
Dissolved Oxygen	(a) Waste discharges shall not cause the level of dissolved oxygen to fall below 4 milligrams per litre for 90% of the sampling occasions during the year; values should be taken at 1 metre below surface.	Inner Marine Subzone excepting Mariculture Subzone
	(b) Waste discharges shall not cause the level of dissolved oxygen to fall below 4 milligrams per litre for 90% of the sampling occasions during the year; values should be calculated as water column average (arithmetic mean of at least 2 measurements at 1 metre below surface and 1 metre above seabed). In addition, the concentration of dissolved oxygen should not be less than 2 milligrams per litre within 2 metres of the seabed for 90% of the sampling occasions during the year.	Outer Marine Subzone excepting Mariculture Subzone
	(c) The dissolved oxygen level should not be less than 5 milligrams per litre for 90% of the sampling occasions during the year; values should be taken at 1 metre below surface.	Mariculture Subzone
	(d) Waste discharges shall not cause the level of dissolved oxygen to be less than 4 milligrams per litre.	Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Indus Subzone, Ganges Subzone, Water Gathering Ground Subzones and other inland waters of the Zone
pH	(a) The pH of the water should be within the range of 6.5-8.5 units. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.2 units.	Marine waters excepting Yung Long Bathing Beach Subzone
	(b) Waste discharges shall not cause the pH of the water to exceed the range of 6.5-8.5 units.	Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(c) The pH of the water should be within the range of 6.0-9.0 units.	Other inland waters
	(d) The pH of the water should be within the range of 6.0-9.0 units for 95% of samples. In addition, waste discharges shall not cause the natural pH range to be extended by more than 0.5 units.	Yung Long Bathing Beach Subzone
Temperature	Waste discharges shall not cause the natural daily temperature range to change by more than 2.0 degrees Celsius.	Whole Zone
Salinity	Waste discharges shall not cause the natural ambient salinity level to change by more than 10%	Whole Zone
Suspended solids	(a) Waste discharges shall neither cause the natural ambient level to be raised by 30% nor give rise to accumulation of suspended solids which may adversely affect aquatic communities.	Marine waters
	(b) Waste discharges shall not cause the annual median of suspended solids to exceed 20 milligrams per litre.	Yuen Long & Kam Tin (Upper and Lower) Subzones, Beas Subzone, Ganges Subzone, Indus

Parameters	Objectives	Sub-Zone
		Subzone, Water Gathering Ground Subzones and other inland waters
Ammonia	The un-ionized ammoniacal nitrogen level should not be more than 0.021 milligram per litre, calculated as the annual average (arithmetic mean).	Whole Zone
Nutrients	(a) Nutrients shall not be present in quantities sufficient to cause excessive or nuisance growth of algae or other aquatic plants.	Inner and Outer Marine Subzones
	(b) Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.7 milligram per litre, expressed as annual mean.	Inner Marine Subzone
	(c) Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.5 milligram per litre, expressed as annual water column average (arithmetic mean of at least 2 measurements at 1 metre below surface and 1 metre above seabed).	Outer Marine Subzone
5 day biochemical oxygen demand	(a) Waste discharges shall not cause the 5-day biochemical oxygen demand to exceed 3 milligrams per litre.	Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(b) Waste discharges shall not cause the 5-day biochemical oxygen demand to exceed 5 milligrams per litre.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters
Chemical oxygen demand	(a) Waste discharges shall not cause the chemical oxygen demand to exceed 15 milligrams per litre.	Yuen Long & Kam Tin (Upper) Subzone, Beas Subzone, Indus Subzone, Ganges Subzone and Water Gathering Ground Subzones
	(b) Waste discharges shall not cause the chemical oxygen demand to exceed 30 milligrams per litre.	Yuen Long & Kam Tin (Lower) Subzone and other inland waters
Toxins	(a) Waste discharges shall not cause the toxins in water to attain such levels as to produce significant toxic carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to toxicant interactions with each other.	Whole Zone
	(b) Waste discharges shall not cause a risk to any beneficial uses of the aquatic environment.	Whole Zone
Phenol	Phenols shall not be present in such quantities as to produce a specific odour, or in concentration greater than 0.05 milligrams per litre as C_6H_5OH.	Yung Long Bathing Beach Subzone
Turbidity	Waste discharges shall not reduce light transmission substantially from the normal level.	Yung Long Bathing Beach Subzone

6.3 Construction Phase Water Quality Impacts

6.3.1 Site construction activities will inevitably have the potential to generate wastewater. Such works should be carried out in such a manner to minimise potential impacts on the water quality. Pollution sources could include:

- General construction activities;
- Construction works in close proximity to inland watercourses;
- Construction runoff;
- Sewage effluent from the construction workforce; and
- Accidental spillage of chemicals.

General Construction Activities

6.3.2 Debris and rubbish generated on site shall be collected, handled and disposed of properly. All fuel tanks shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. Open storm water drains and culverts near the works area shall be covered to block the entrance of large debris and refuse.

Construction works in close proximity to inland watercourses

6.3.3 Construction activities such as site formation, earthwork and excavation within the Project site have the potential to impact nearby inland watercourses through the release of discharges and runoff laden with suspended solids and other pollutants. Mitigation measures should be devised and implemented for construction work that is in close proximity to natural rivers and streams, alternation or diversion of watercourses (WSR2) within or in close proximity to the project site would be conducted, in order to reduce the potential for construction site discharges polluting the receiving water quality.

Construction Runoff

6.3.4 The surface runoff from construction works areas may contain increased loads of suspended solids (SS) and contaminants. Potential sources of pollution from construction site drainage include:

- Runoff and erosion from site surfaces, drainage channels, demolition works, earth working areas and stockpiles;
- Release of any bentonite slurries, concrete washings and other grouting activities;
- Wash water from dust suppression spray facilities; and
- Fuel, oil, solvents and lubricants from maintenance of mechanical equipment.

6.3.5 Sediment laden runoff particularly from works areas subjected to excavation or earth works, if uncontrolled, may cause increased levels of suspended solids and pollutants entering the stormwater drainage system and into the marine environment.

6.3.6 Mitigation measures and good site practices outlined in ProPECC PN 1/94 should be implemented to control construction site runoff and drainage from the works area. The Contractor would also be required to apply for a discharge license under the WPCO. With implementation of the recommended mitigation measures along with compliance of the effluent standards set under TM-DSS, construction site runoff can be effectively controlled, and adverse impacts to storm drains or the marine environment is not anticipated.

Sewage effluent from the construction workforce

6.3.7 The sewage from construction workforce is expected to be handled by portable chemical toilets. To prevent additional pollution loads to the watercourse, portable chemical toilets shall be provided by licensed contractors who shall be responsible for appropriate disposal of collected sewage and maintenance of these facilities. Guidelines shall be prepared by contractor to avoid the illegal discharge of untreated sewage from the workforce. Adequate number of portable chemical toilet should be provided to ensure the sewage effluent from workforce is proper collected.

Accidental spillage of chemicals

6.3.8 All fuel tanks shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The contractors shall prepare guidelines of immediate clean-up actions for any spillage of oil, fuels and chemical. Only trained personnel with safety and protective equipment shall be allowed to handling the chemical spillage. Absorbent material for cleaning up the spills shall be disposed of as chemical waste.

6.4 Best Management Practices (BMPs) for Stormwater Discharge

General Construction Activities

6.4.1 The site practices outlined in ProPECC PN 2/24 Construction Site Drainage should be adopted as far as practicable to minimise the potential water quality impacts from various construction activities and construction site runoff. Extra attention should be paid for works areas which are in close proximity to the water sensitive receivers.

Wheel washing facilities

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

6.4.3 There will be need for the Contractor to apply to the EPD for a wastewater discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license.

Wastewater from solid waste

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

6.4.5 Rubbish and litter from construction sites should also be collected to prevent spreading of rubbish and litter from the site area. It is recommended to clean up the construction waste on a regular basis for good site practice.

Construction Runoff

6.4.6 In order to meet the requirements of the Technical Memorandum standard under the Water Pollution Control Ordinance, surface runoff from construction sites should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, and sedimentation basins.

6.4.7 Exposed slope/soil surfaces should be covered by a tarpaulin or similar material during rainstorms to prevent the washing away of construction materials into any drainage system, watercourses and inshore water. Other measures which are proposed to be implemented before, during, and after rainstorms, as appropriate, are summarized in ProPECC PN 2/24. The surface run-off from construction sites as detailed below shall also be incorporated into the construction site drainage where practicable as an integral part of good practice:

- Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/ silt removal facilities such as sand traps, and sediment basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided where necessary.
- Silt removal facilities, channels and manholes should be maintained, and the deposited silt and grit should be removed regularly.
- Construction work should be programmed to minimize soil excavation works in rainy seasons (April to September). If excavation in soil could not be avoided in these months, temporarily exposed slope surfaces should be covered, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds.
- Earthworks final surfaces should be well compacted, and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed.
- Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.
- Open stockpiles of construction materials (e.g., aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.
- Precautions should be taken at any time of year when rainstorms are likely; actions should be taken when rainstorms are imminent or forecasted, and during or after rainstorms.

6.5 Potential Operation Phase Water Quality Impacts

6.5.1 According to the major operation phase activities in the Proposed Development, the key potential water quality impact is due to the surface runoff and treated effluent discharge from the Proposed Development. Natural stream is identified along the western and southern boundary of Proposed Development, which will be maintained and undisturbed.

6.5.2 The management and mitigation strategy of the potential water quality impact is addressed below, with appropriate environmental control measures recommended.

6.5.3 Best practices as stated in ProPECC PN 1/23 "Drainage Plans Subject to Comment by the Environmental Protection Department" shall be followed. It states out the handling, treatment and disposal of various effluent discharges to stormwater drains and foul

sewers during the operation phase. Some examples of the recommendations listed in the ProPECC PN 1/23 are as below.

- Drainage in covered carparks should be connected to foul sewers via petrol interceptors.
- Disposal of commercial and industrial wastewater by injection into the ground (e.g. by soakaway pits) is normally not allowed.
- All wastewater collected from a restaurant kitchen, including that from basins, sinks and floor drains, should be discharged via a grease trap capable of providing at least 20 minutes retention during peak flow.

6.6 Surface Runoff Discharge

6.6.1 During operation, potential water quality impact would be the surface runoff during rainfall events which is known as non-point source of pollution. Substances such as vehicle dust, scraps and oil may be deposited on paved road surface. Fallen leaves, particles, litter from open areas/ landscape areas, which is a source of organic and nutrient pollutants, can be washed into the drainage system during heavy rainfall if it is not properly controlled. No fertilizers and pesticides will be routinely used for vegetation management. Pollutants contributed by non-point source are often bound or adsorbed onto particles, thus an effective storm water management system will be the removal of pollution sources prior to rainstorm and the provision of degritting/ screening facilities that collect sediment. As particles settle out, the associated pollutants will also settle out (then removed from stormwater).

6.6.2 Under normal condition, runoff carrying pollutants will not be generated in low rainfall intensity, but increased runoff may occur during heavy rainfall condition. The first flush flow would carry most of the pollutants and the subsequent overland flow generated from rainstorms is expected to be uncontaminated. Thus, prevention of "first flush" pollution in stormwater runoff will be an effective way in controlling pollution at source and to abate pollutants.

6.6.3 Relevant assessment on the total peak flow of stormwater of the Proposed Development and the capacity of proposed drainage system are provided in a separate Drainage Impact Assessment.

6.7 Treated Effluent from On-Site Sewage Treatment Plants

6.7.1 As discussed in Sewerage Impact Assessment (SIA), there is no public sewerage system at the vicinity of the Application Site. 2 sewage treatment plants are proposed to treat the sewage generated from the proposed development.

6.7.2 The exact treatment process would be subject to later detailed design and submissions. It will be necessary for the treatment facilities to achieve the necessary discharge standards, as set out in EPD's Technical Memorandum – Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters.

6.7.3 Membrane bioreactor with ultra-filtration (MBR) is generally recommended to achieve required effluent discharge standard and sludge dewatering system will be provided and designed in accordance with the requirement in the "Guidelines for the Design of Small Sewage Treatments Plants" issued by EPD.

6.7.4 Sludge storage tank with deodorisation facilities will be provided. Exhaust fan will be located and facing away from existing and planned air sensitive uses. The sludge after having been dewatered and thickened will be tanked away to the landfill for disposal subject to confirmation with future licensed collector/contractor. As good practice for sewage treatment facilities, measures will be incorporated into the design to minimize the risk of emergency overflow from the treatment plant. These measures will include standby pumps, secure power supplies and appropriate alarms, as well as

comprehensive Operation and Maintenance procedures, to keep the facilities in good working order. Holding tank for emergency storage/retention will be included with adequate capacity (e.g. to store 6-hours of ADWF discharge) to minimise need of emergency discharge. In the event of any emergency overflow, on-call crews will follow the overflow emergency response plan and proceed with the best response to correct the problem immediately. For example, the alarm system will be activated once overflow occurs. The on-call crews will provide instant response by acknowledging the alarm, to investigate the cause of overflow and correct the problem. The alarm system will repeat until it is acknowledged. In addition, the on-call crews will ensure the standby pump is switched on and contain the overflowed sewage using temporary weirs or vacuum trucks, where applicable.

6.7.5 The treated effluent from the STP will be discharged to the Sheung Yue River.

6.7.6 Apart from the WQOs, Section 21 of the WPCO also specifies the limits to control the physical, chemical and microbial parameters for effluent discharges into drainage and sewage system at both inland and coastal waters under the TM-DSS.

6.8 Conclusion

6.8.1 Water pollution sources during the construction and operational phase of the proposed development are identified.

6.8.2 With the implementation of different measures for treating stormwater, foul water and sewage effluents from the Proposed Development before discharging to the vicinity, adverse water quality impact during the construction and operation phase is not anticipated.

7. CONCLUSION

7.1.1 The key environmental issues associated with both operation and construction phase of the Application Site are qualitatively discusses in this report.

Noise

7.1.2 Most noise sensitive uses (including classroom, office, sports complex, gymnasium, retail, clinic, student shop and club) within the Proposed Development will be centrally air-conditioned and do not require opened windows as means of ventilation under normal circumstances. As such, they should unlikely be affected by road traffic noise.

7.1.3 For noise sensitive uses like student and staff dormitory, the noise sensitive facades / location of openable windows would be designed facing away from the main noise sources as practicable as possible so that the future occupants would not be subject to adverse road traffic noise impact. In addition, detailed road traffic noise impact assessment shall be conducted in next application stage in order to avoid any road traffic noise underestimation from surrounding roads.

7.1.4 According to the observation during site visit, two open storage & parking sites for heavy machinery to the north and south of the site are identified, and no loading/unloading activities is found in the parking site. Therefore, road traffic noise would be the major noise source after completion of the Approved Development. Nevertheless, similar with the section for road traffic noise impact assessment, detailed industrial noise impact assessment shall be conducted in next application stage in order to avoid any industrial noise underestimation from potential industrial sources.

7.1.5 In order to ensure that the fixed sources noise generated by the Proposed Development would not cause excessive impact to the neighbouring noise sensitive uses, the ventilation and air conditioning systems for the carpark, plant room etc. will be carefully designed and installed to comply with relevant fixed source noise standards under Chapter 9 of HKPSG

Air Quality

7.1.6 Onsite surveys were conducted on 18 August 2025 to verify the presence of chimneys. There was no chimney identified within 200m from the boundary of Proposed Development. As such, it is anticipated that the Proposed Development would not be subject to adverse industrial emission impact.

7.1.7 The recommended buffer distance requirement for Private Roads (P1 & P2), Hang Tau Road and San Tin Section of Northern Metropolis Highway in the HKPSG would be complied. For the Proposed Public Road, a portion of the application site is within 5m buffer distance, however, no air sensitive uses (including fresh air intake, openable window, and open space for recreational use, etc.) would be located within 5m buffer distance. In conclusion, there would be no air sensitive uses within the above-mentioned 5m buffer zones. Since the recommended minimum buffer distance of the vehicular emission in the HKPSG can be met, the future residents and occupants of Proposed Development and existing air sensitive receivers will not be subjected to insurmountable vehicular emission impact.

Review on Impact from Proposed Carpark

7.1.8 Carpark has been proposed for the Proposed Development. The air quality inside the basement carpark shall satisfy the air pollutant standards as recommended by the ProPECC PN 2/96 Control of Air Pollution in Car Parks. Therefore, the mechanical ventilation system and layout the basement carpark shall be properly designed. Furthermore, the exhaust outlet of the mechanical ventilation system of the basement carpark shall also be designed by facing away from the nearest air sensitive uses as

practicable as possible to ensure not to cause a nuisance to the occupants/ residents of the air sensitive uses including the surrounding developments and the Proposed Development

Land Contamination

7.1.9 4.4.1 A site appraisal, in the form of desktop review and site walkover, had been carried out in August 2025 to identify the past and current potentially contaminating land uses within the Application Site. Based on the desktop study and site appraisal, there are no land contamination activities and therefore, it can be concluded that no land contamination issues are anticipated in the Application Site.

Waste Management

7.1.10 Waste generated during construction works and operational phase have been qualitatively evaluated. With these waste managements in place, the waste generated from the construction work and operation of the proposed development would be properly controlled and no adverse waste management impact is anticipated.

Water Quality

7.1.11 Water pollution sources during the construction and operational phase of the proposed development are identified.

7.1.12 With the implementation of different measures for treating stormwater, foul water and sewage effluents from the Proposed Development before discharging to the vicinity, adverse water quality impact during the construction and operation phase is not anticipated.

Figure

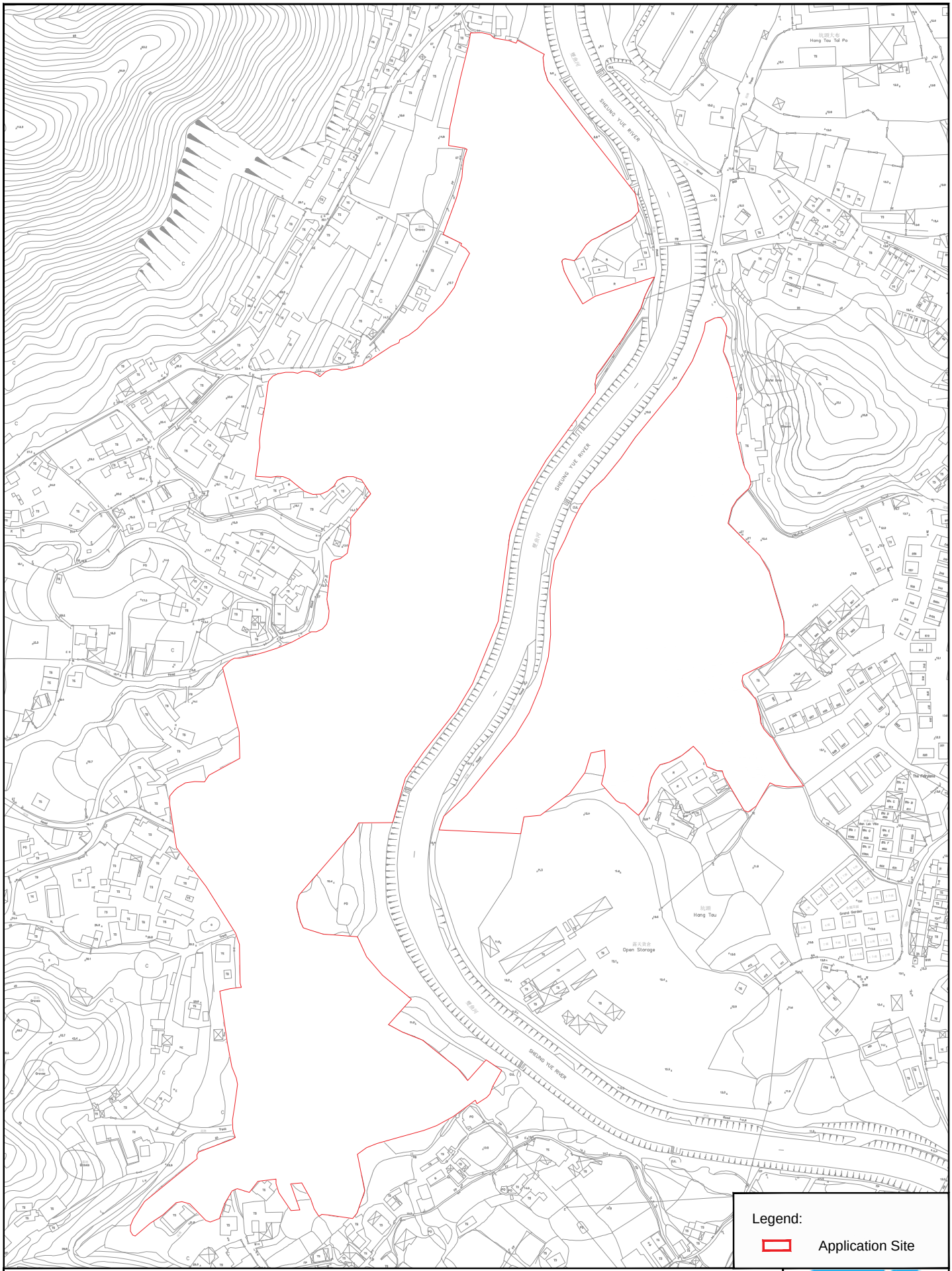

Figure: 1.1

Title: Location of the Application Site and its environs.

Project: Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

RAMBOLL

Drawn by:	TL
Checked by:	TC
Rev.:	1.0
Date:	Oct 2025

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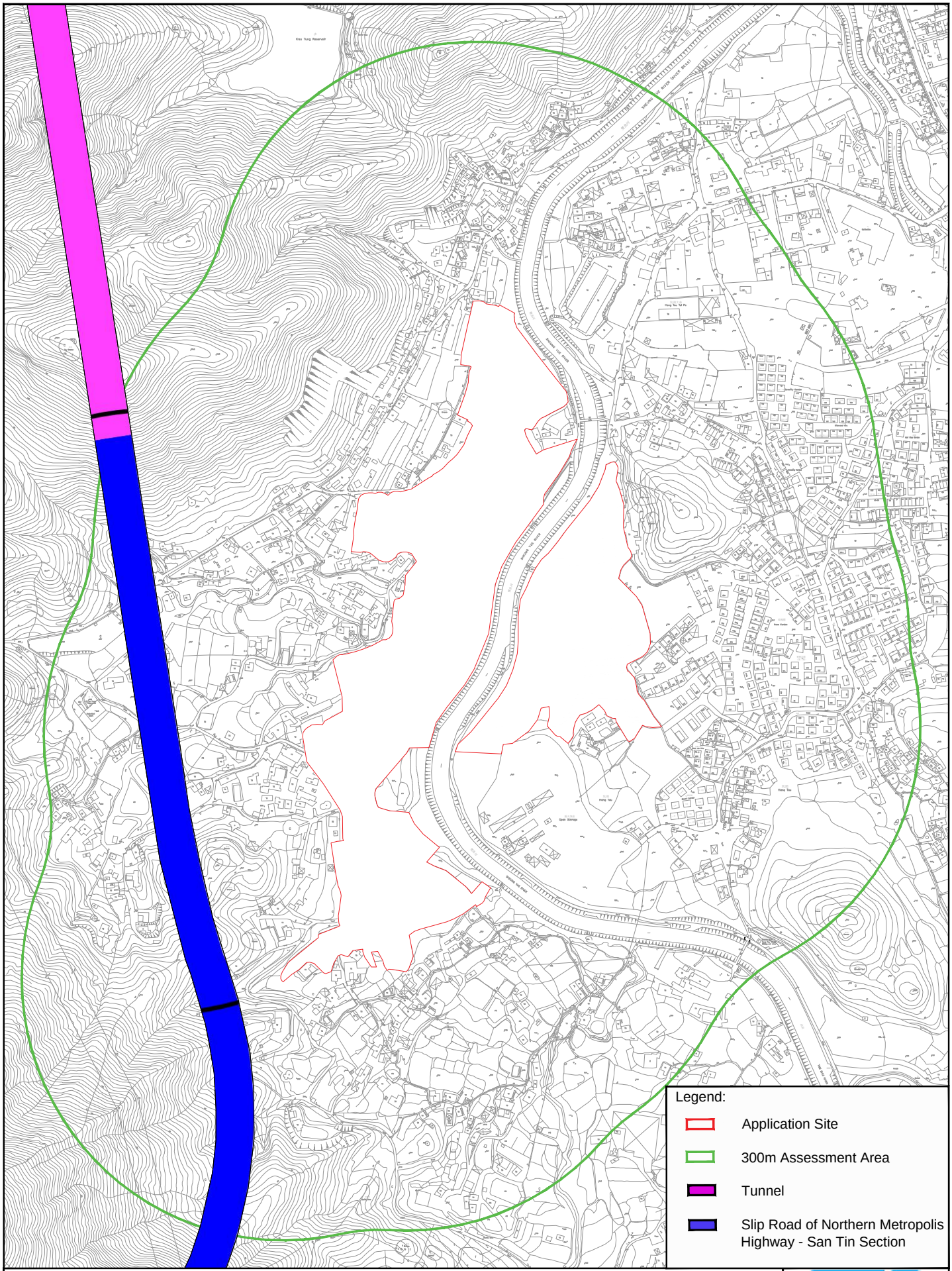

Figure:	2.1	RAMBOLL
Title:	Location of Transport Infrastructure - San Tin Section of Northern Metropolis Highway	Drawn by: TL Checked by: TC
Project:	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories	Rev.: 1.0 Date: Oct 2025

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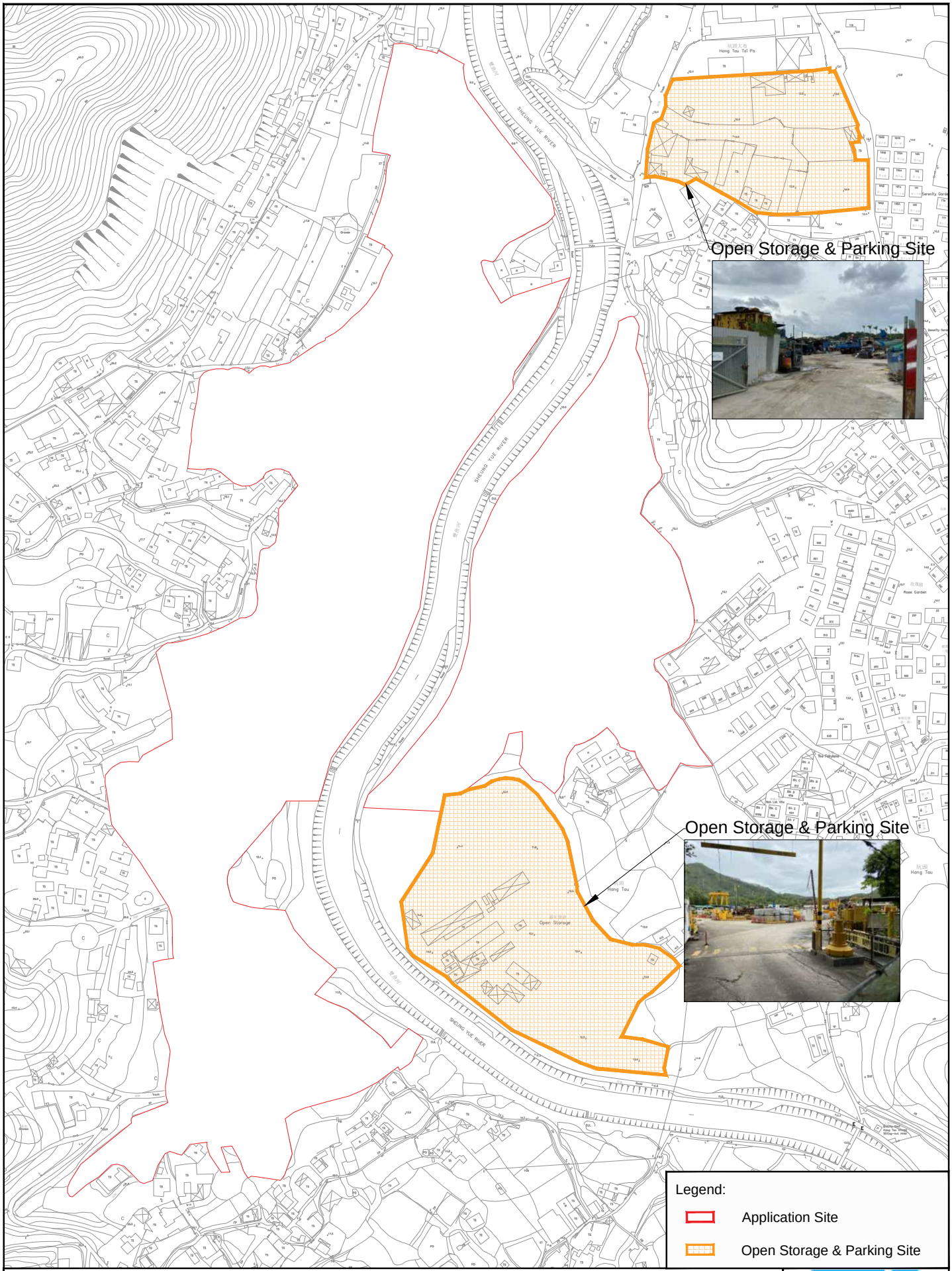

Figure:	2.2	RAMBOLL
Title:	Location of Potential Industrial Sources - Open Storage & Parking Sites	Drawn by: TL
		Checked by: TC
Project:	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories	Rev.: 1.0
		Date: Oct 2025

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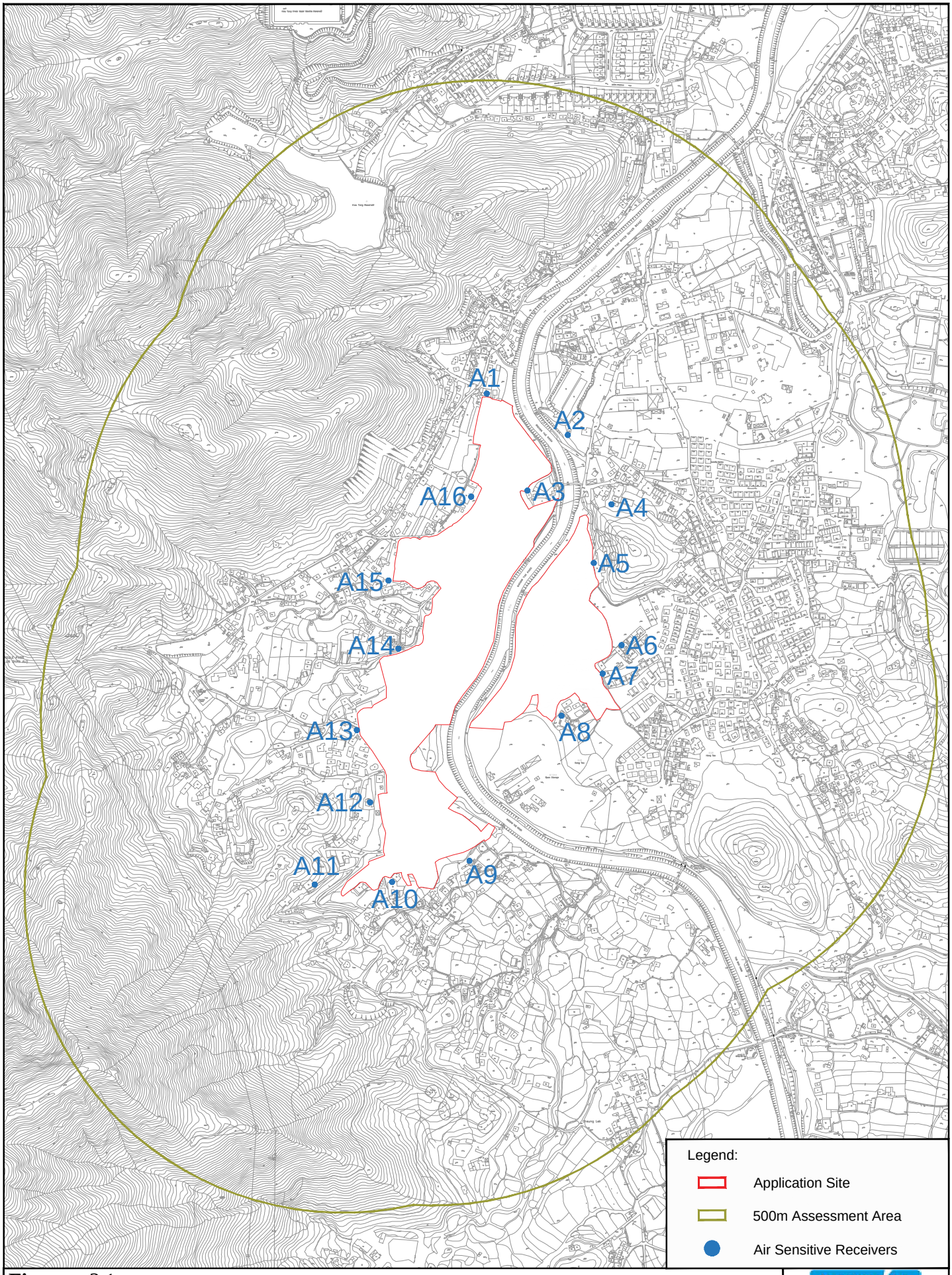

Figure: 3.1		RAMBOLL
Title: Location of Representative Air Sensitive Receivers		Drawn by: TL
		Checked by: TC
Project: Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories		Rev.: 1.0
		Date: Oct 2025

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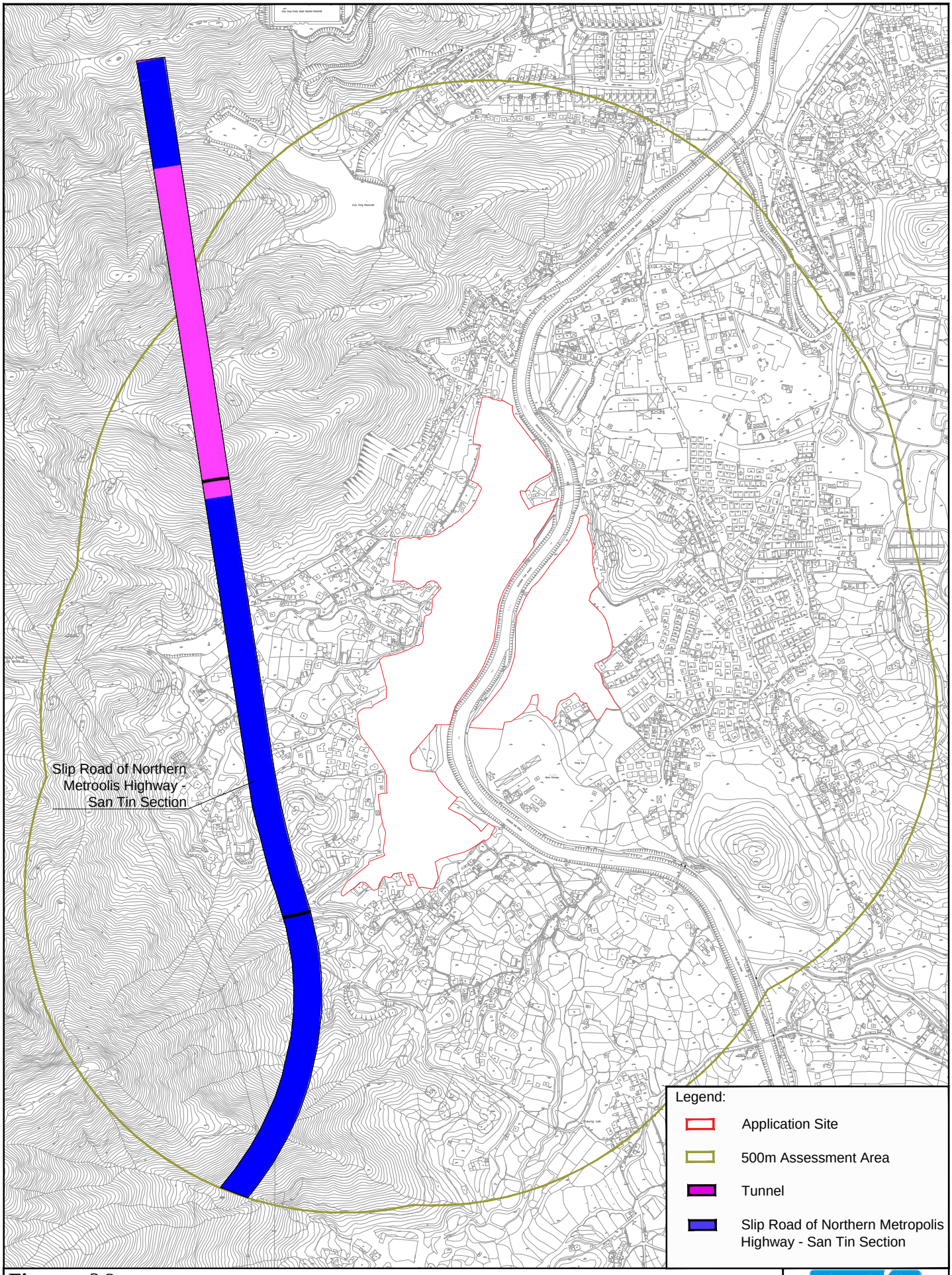

Figure: 3.2

Title: Location of the Potential Concurrent Project

Project: Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

RAMBOLL

Drawn by: TL

Checked by: TC

Rev.: 1.0

Date: Oct 2025

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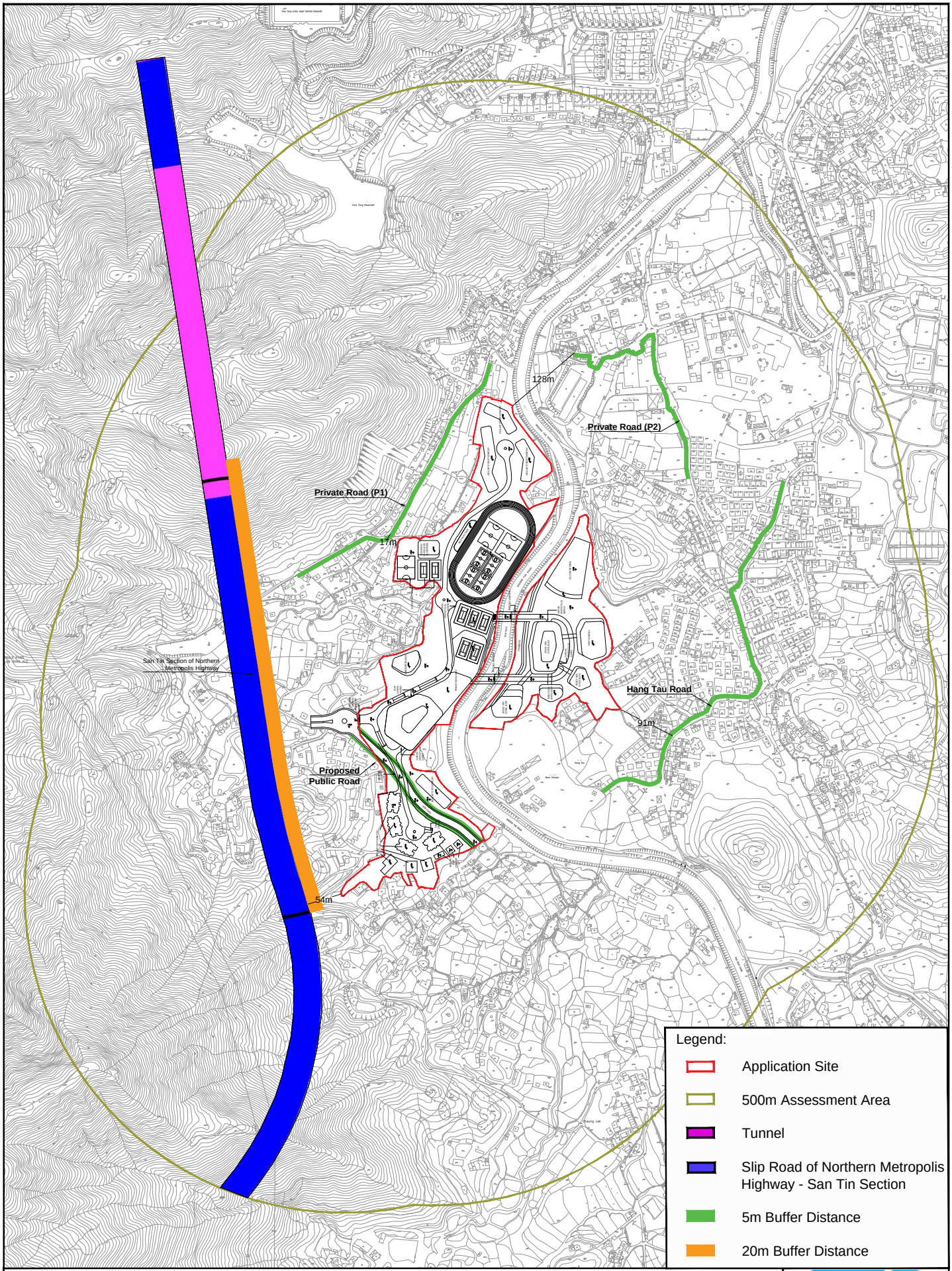

Figure:	3.3	RAMBOLL
Title:	Buffer Distances between Kerb Side of Nearest Carriageways and Application Site	Drawn by: TL Checked by: TC
Project:	Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories	Rev.: 1.0 Date: Oct 2025

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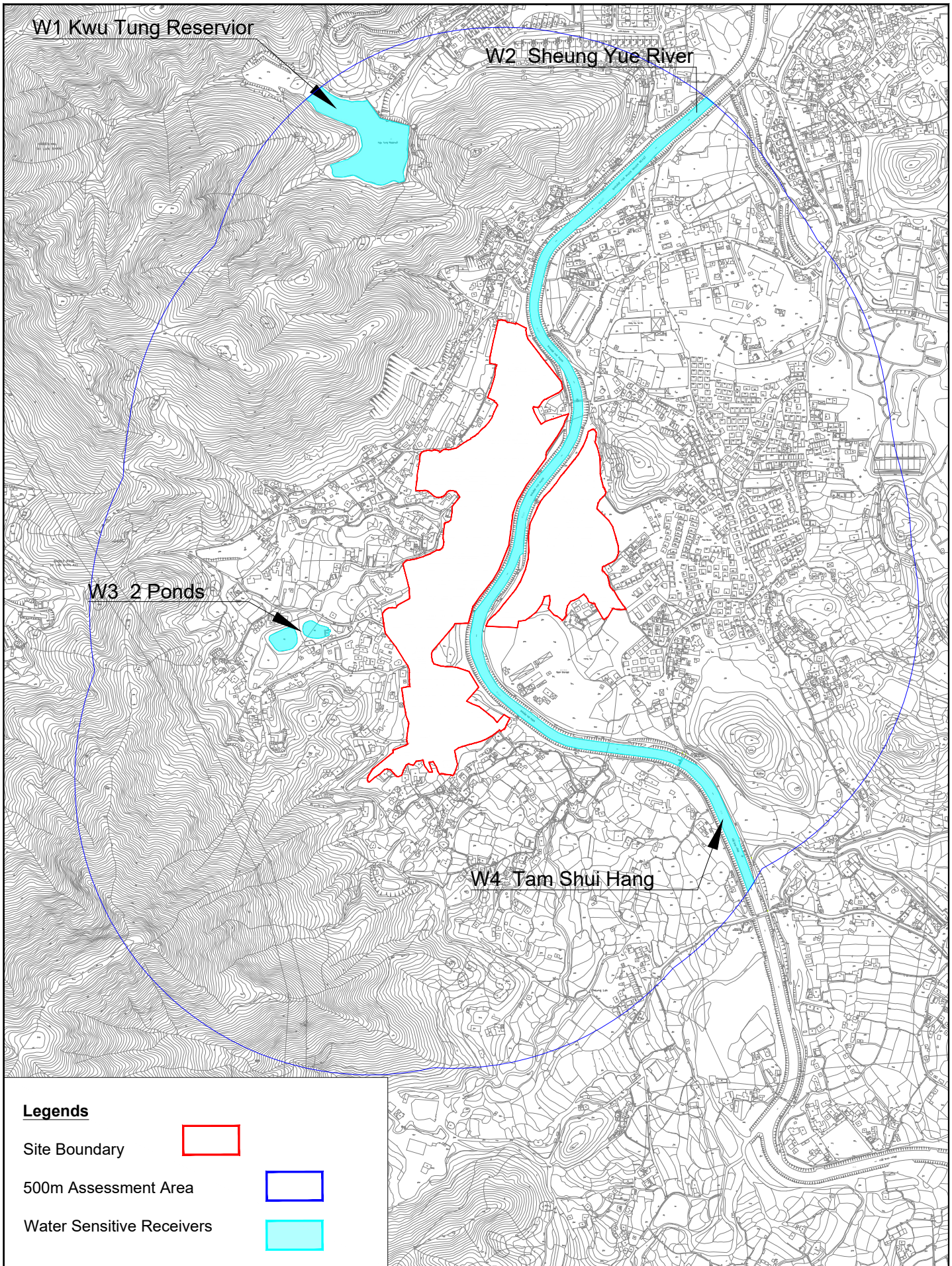

Figure: 6.1

Title: Water Sensitive Receivers

Project: Proposed School at Various Lots in D.D. 94, 98 &100 and adjoining Government Land, Kwu Tung South, New Territories

RAMBOLL

Drawn by:	SC
Checked by:	TC
Rev.:	1.0
Date:	Aug 2025

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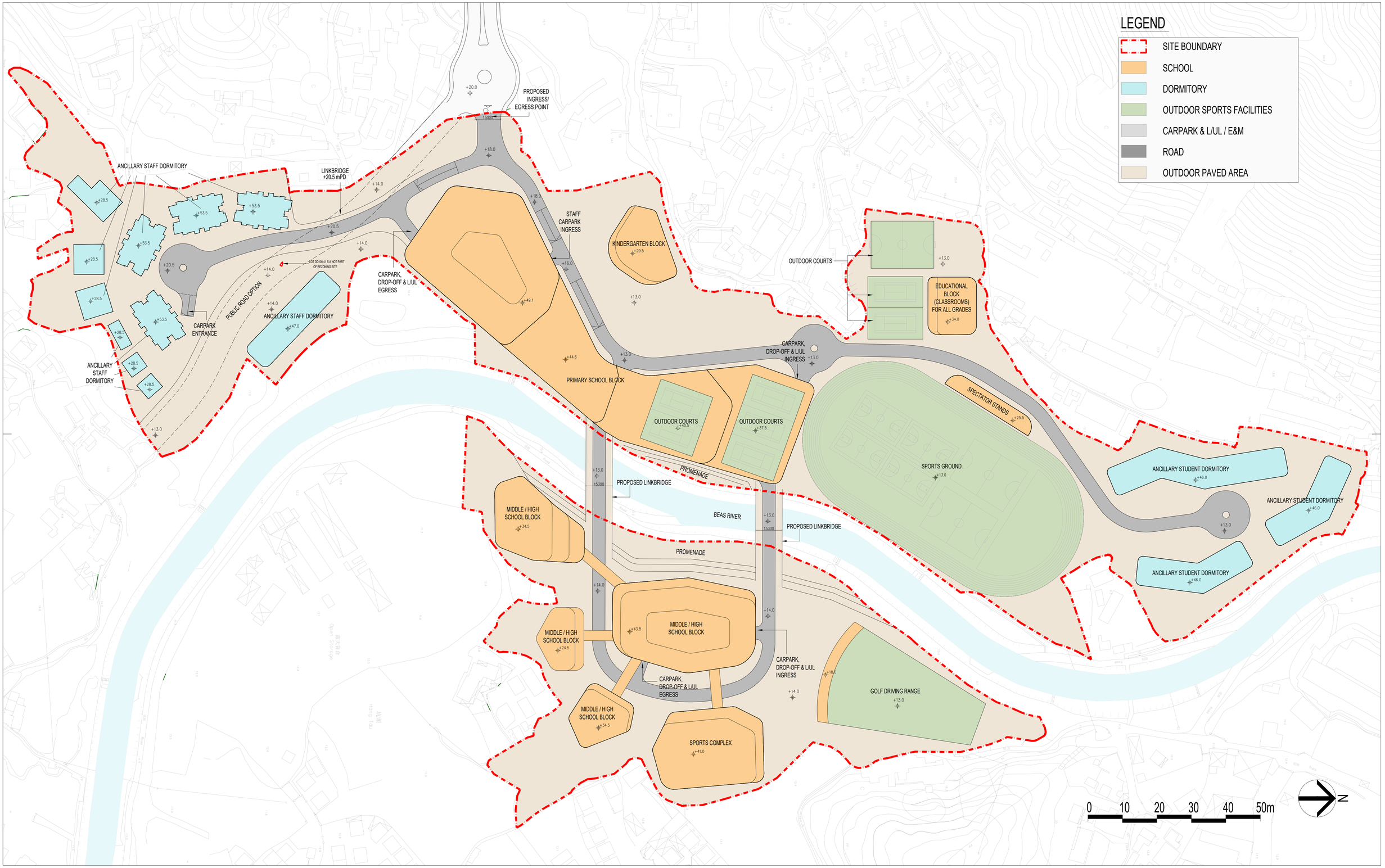
Appendix 1.1 Master Layout Plans



Rev.	Description	Drawn	Checked	Approved	Date
_	PLANNING SUBMISSION	HKO	JHK	JHY	9-2025
A	PLANNING SUBMISSION	HKO	JHK	JHY	11-2025

Rev.	Description	Drawn	Checked	Approved	Date

Check all measurements on site. Do not scale off drawings.

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B.D. Ref. _
F.S.D. Ref. _
D.L.O. Ref. _
Drawn HKO Date 11-2025
Checked JHK Date 11-2025
Approved JHY Date 11-2025
Cad File No. P:\JHK\25018NT\planning submission\PLOT_BD\GBP_01_

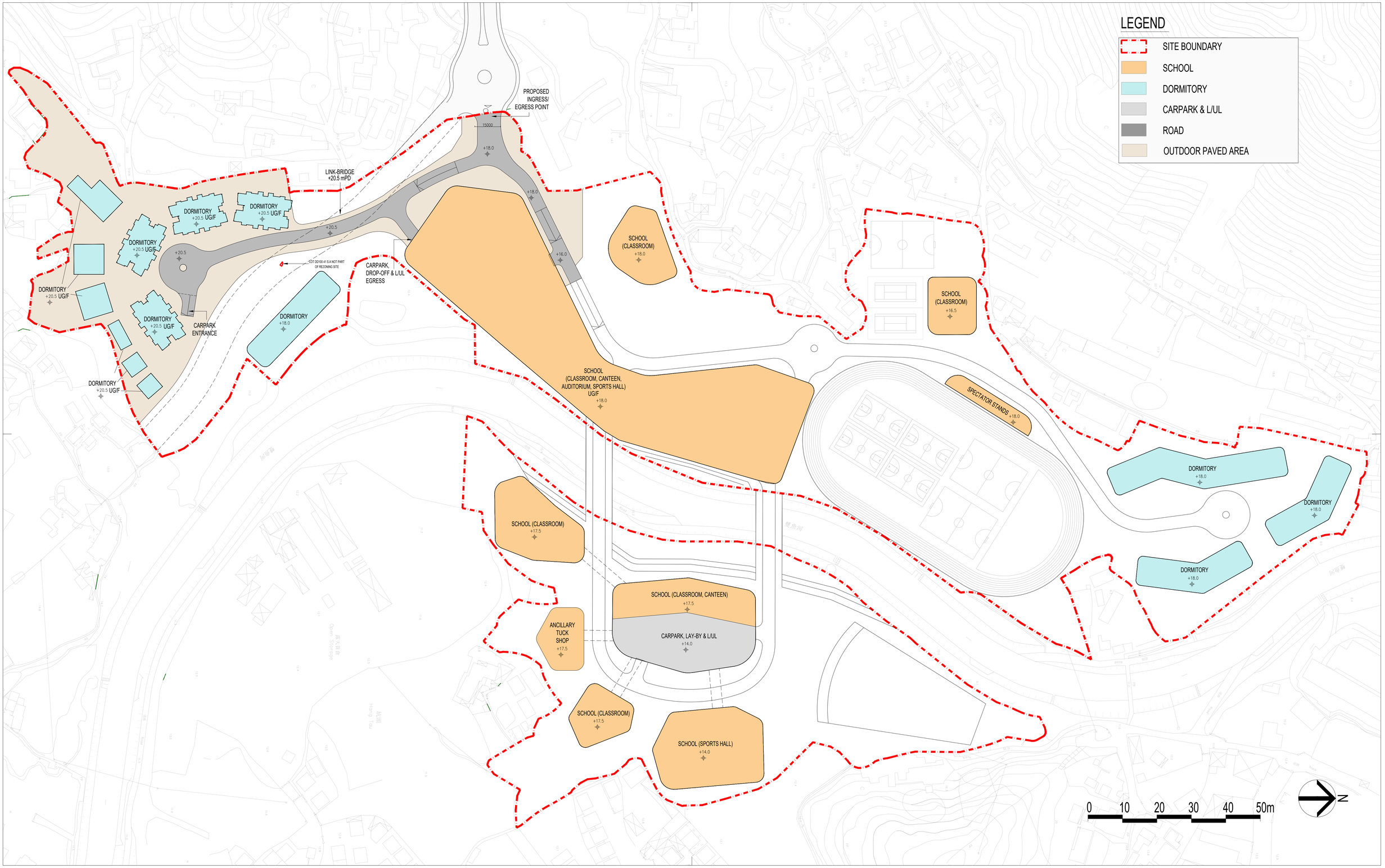
RONALD LU & PARTNERS
呂元祥建築師事務所

Project Title
PROPOSED INTERNATIONAL SCHOOL DEVELOPMENT AT KWU TUNG SOUTH

Drawing Title
FULL PHASE – MASTER LAYOUT PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_01_

Drawing Purpose



Rev.	Description	Drawn	Checked	Approved	Date
_	PLANNING SUBMISSION	HKO	JHK	JHY	9-2025
A	PLANNING SUBMISSION	HKO	JHK	JHY	11-2025

Rev.	Description	Drawn	Checked	Approved	Date

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F.S.D. Ref. _
D.L.O. Ref. _
Drawn HKO Date 11-2025
Checked JHK Date 11-2025
Approved JHY Date 11-2025
Cad File No. P:\JHK\25018NT\planning submission\PLOT_BD\GBP_03

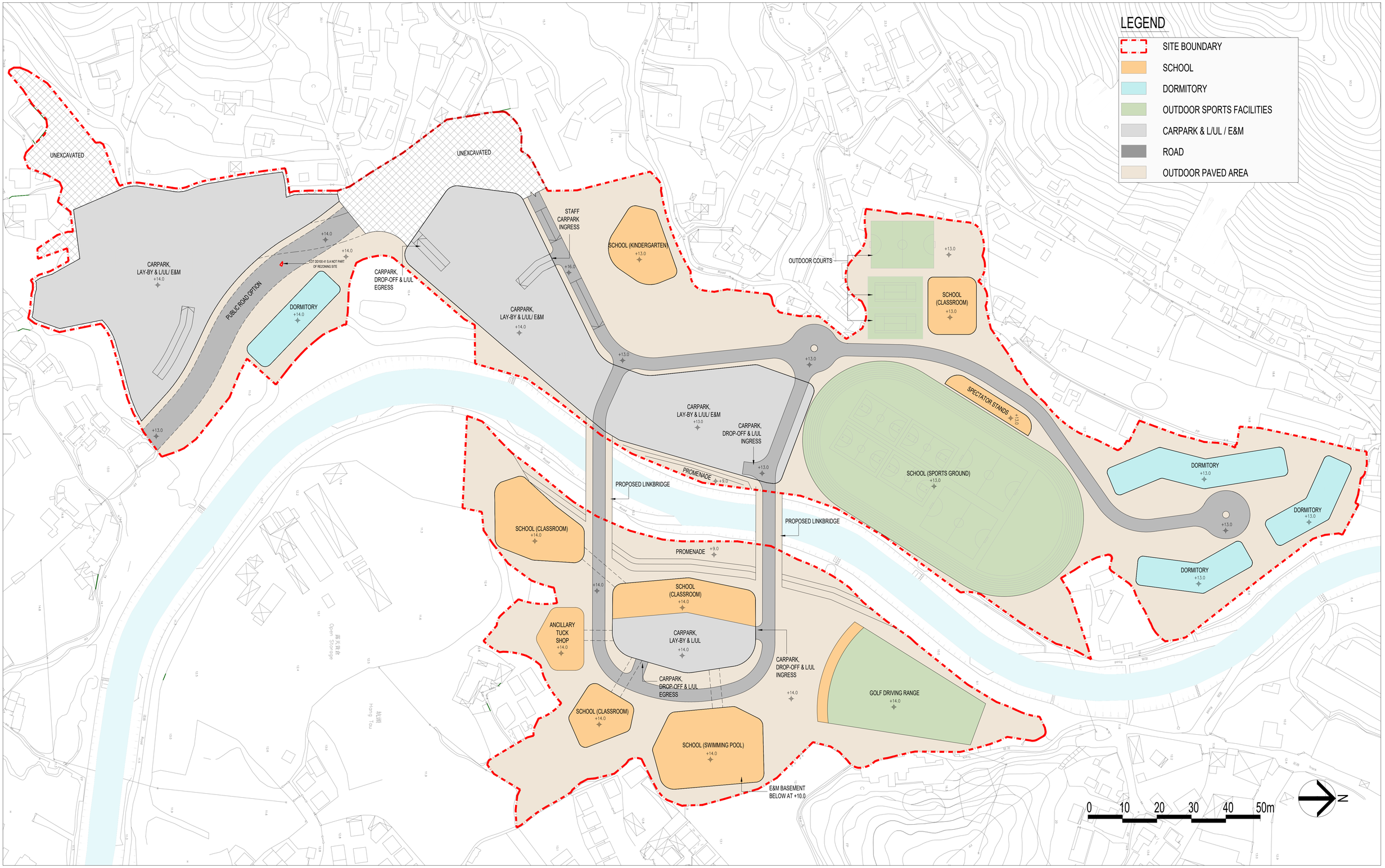
RONALD LU & PARTNERS
呂元祥建築師事務所

Project Title

Drawing Title
FULL PHASE –
FIRST FLOOR PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_03

Drawing Purpose



Rev.	Description	Drawn	Checked	Approved	Date
_	PLANNING SUBMISSION	HKO	JHK	JHY	9-2025
A	PLANNING SUBMISSION	HKO	JHK	JHY	11-2025

Rev.	Description	Drawn	Checked	Approved	Date

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Checked JHK Date 11-2025
Approved JHY Date 11-2025

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RONALD LU & PARTNERS
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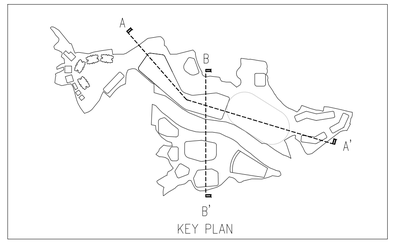
Project Title

Drawing Title
FULL PHASE -
GROUND FLOOR PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_04

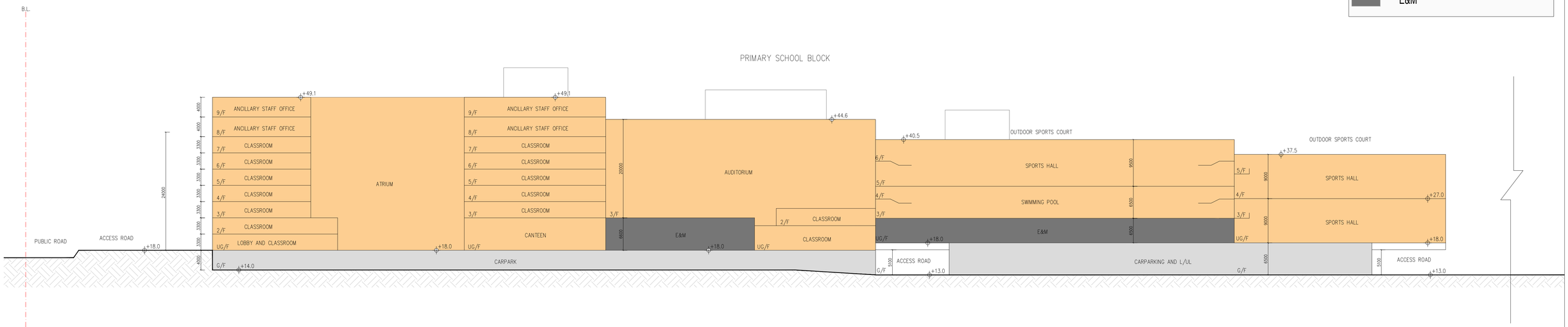
Drawing Purpose



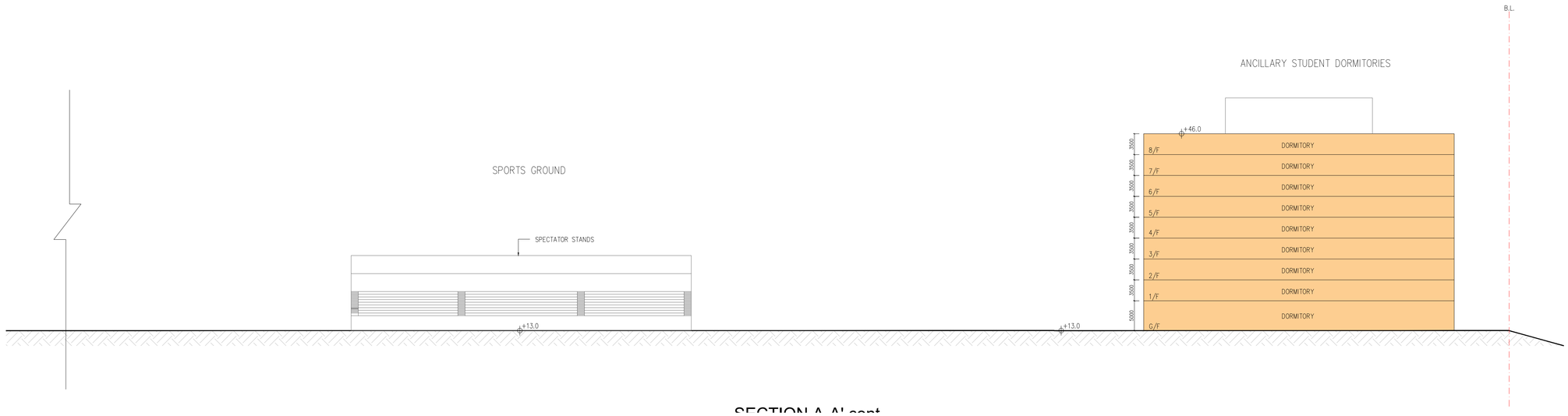
KEY PLAN

LEGEND

- SITE BOUNDARY
- SCHOOL
- DORMITORY
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



SECTION A-A'



SECTION A-A' cont

Rev.	Description	Drawn	Checked	Approved	Date
_	PLANNING SUBMISSION	HKO	JHK	JHY	9-2025
A	PLANNING SUBMISSION	HKO	JHK	JHY	11-2025

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D.L.O. Ref. _
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Checked JHK Date 11-2025
Approved JHY Date 11-2025
Cad File No. P:\JHK\25018NT\planning submission\PLOT_BD\GBP_05

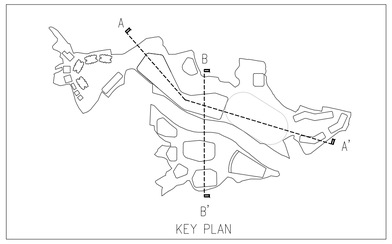
RONALD LU & PARTNERS
呂元祥建築師事務所

Project Title

Drawing Title
SECTION A-A

Project No. 25018NT
Scale 1:400 Issue Date NOV 2025
Drawing No. A/GBP_05

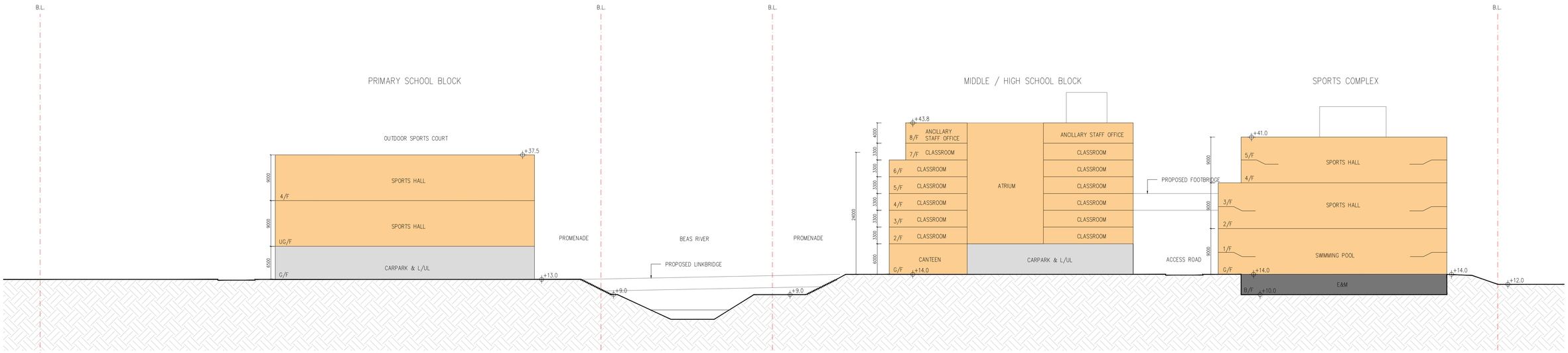
Drawing Purpose



KEY PLAN

LEGEND

- SITE BOUNDARY
- SCHOOL
- DORMITORY
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



SECTION B-B'

Rev.	Description	Drawn	Checked	Approved	Date

Rev.	Description	Drawn	Checked	Approved	Date

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B.D. Ref.

F.S.D. Ref.

D.L.O. Ref.

Drawn HKO Date 9-2025

Checked JHK Date 9-2025

Approved JHY Date 9-2025

Cad File No. P:\JHK\25018NT\planning submission\PLOT_BD\GBP_06

RONALD LU & PARTNERS

呂元祥建築師事務所

Project Title

PROPOSED INTERNATIONAL SCHOOL DEVELOPMENT AT KWU TUNG SOUTH

Drawing Title

SECTION B-B

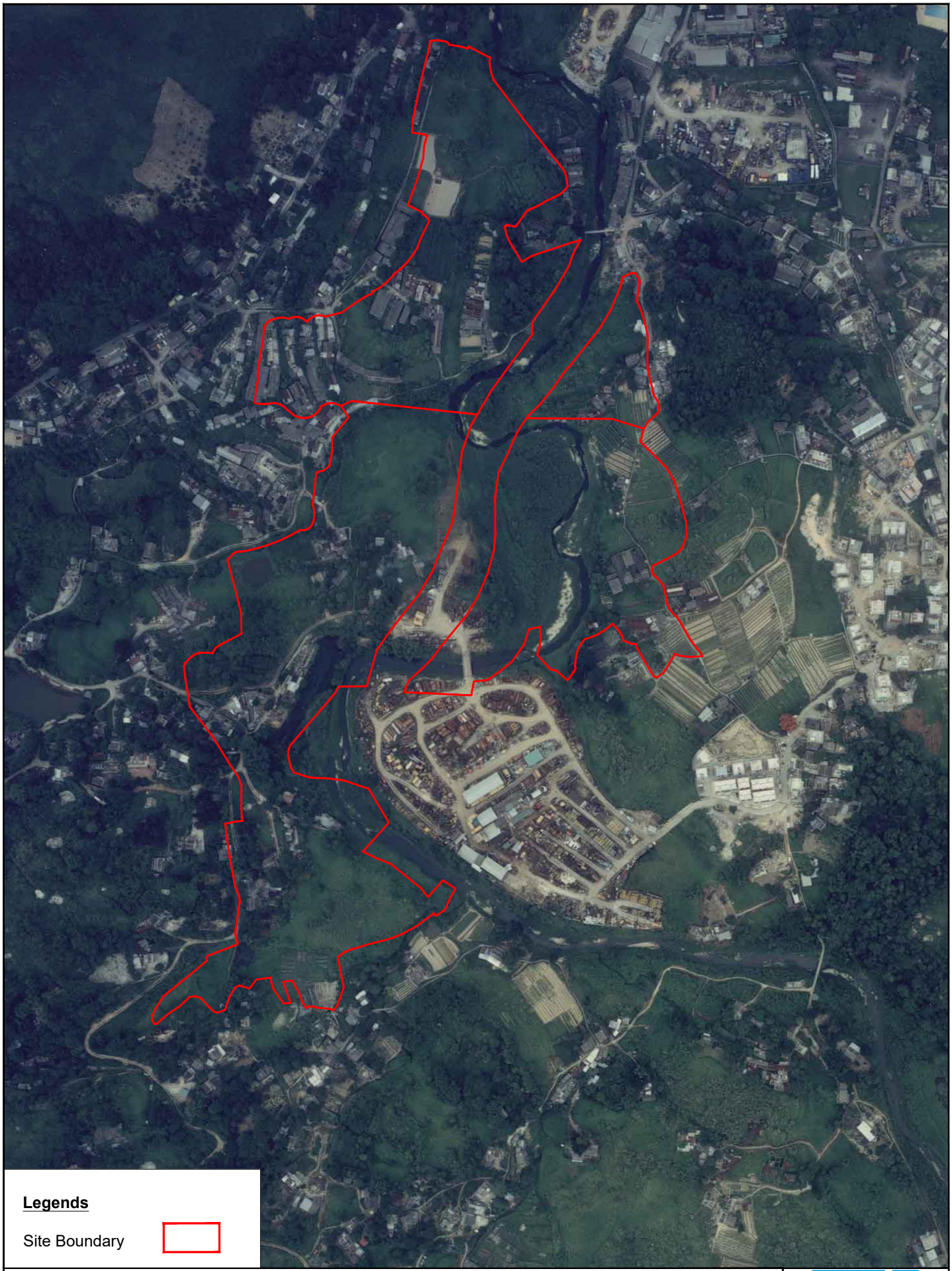
Project No. 25018NT

Scale 1 : 400 Issue Date OCT 2025

Drawing No. A/GBP_06

Drawing Purpose

Appendix 4.1 Aerial Photos



Appendix: 4.1

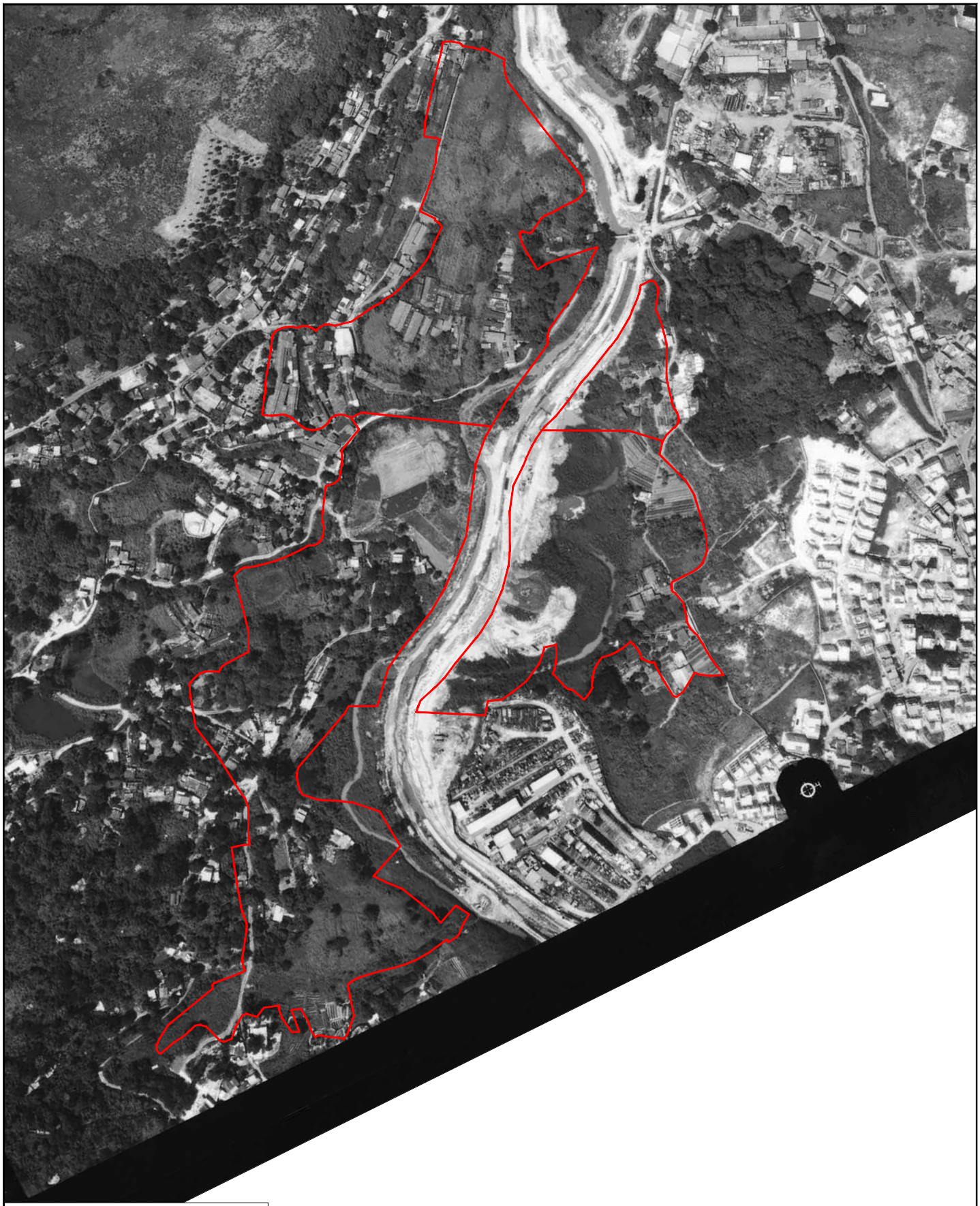
Title: Aerial Photo (1995 - Ref No. CN09827)

Project: Proposed International School in Kwu Tung South

RAMBOLL

Drawn by:	SC
Checked by:	TC
Rev.:	1.0
Date:	Aug 2025

Q:\Projects\HENKTSISEI00\05 Assessments\08 Land Con\Aerial Photo\Aerial Photo.dwg

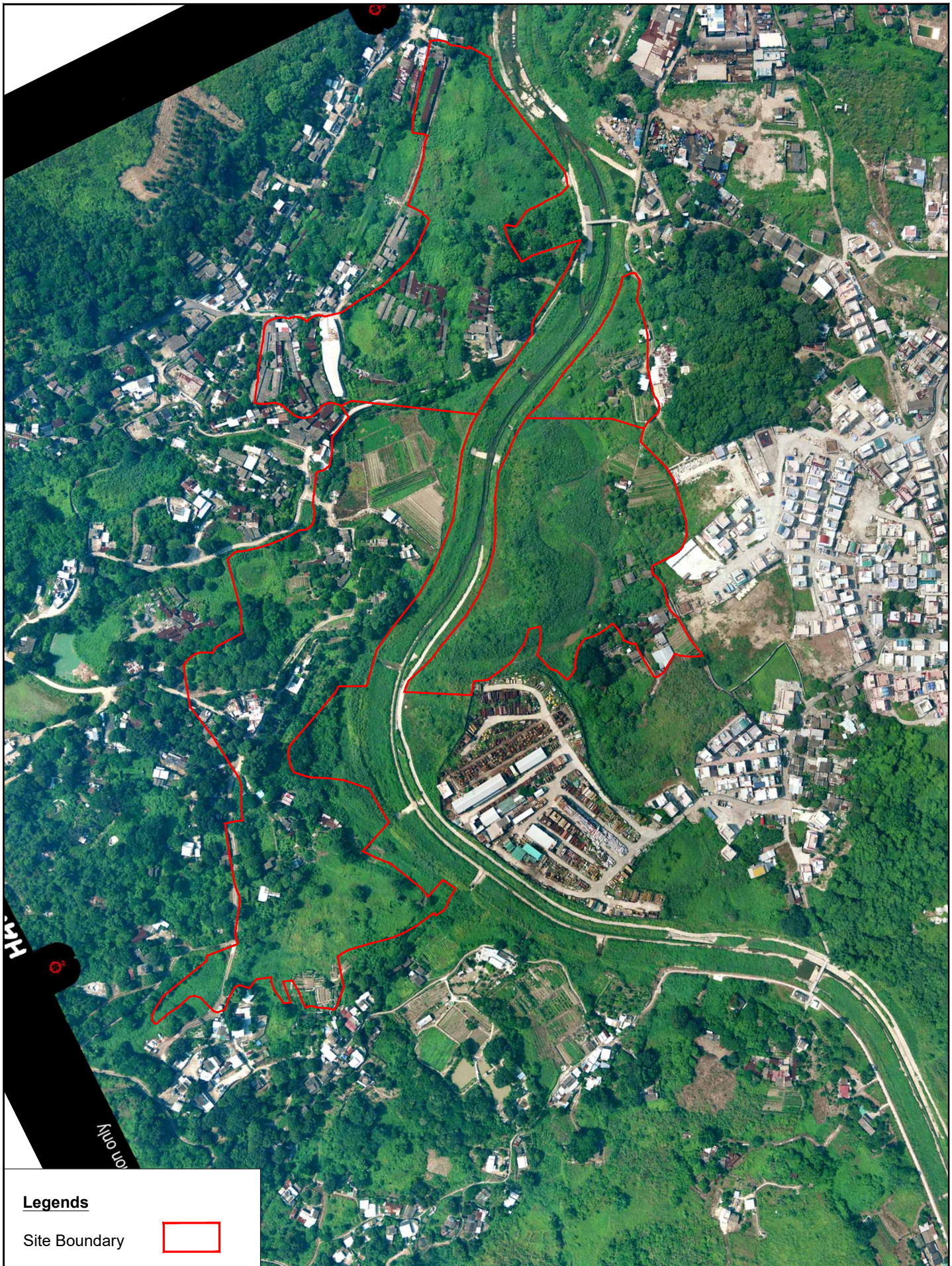


Legends

Site Boundary

Appendix: 4.1	RAMBOLL
Title: Aerial Photo (2000 - Ref No. A51043)	Drawn by: SC
	Checked by: TC
Project: Proposed International School in Kwu Tung South	Rev.: 1.0
	Date: Aug 2025

Q:\Projects\HENKTSISEI00\05 Assessments\08 Land Con\Aerial Photo\Aerial Photo.dwg



Appendix: 4.1	RAMBOLL
Title: Aerial Photo (2004 - Ref No. CW58299)	Drawn by: SC
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Project: Proposed International School in Kwu Tung South	Rev.: 1.0
	Date: Aug 2025

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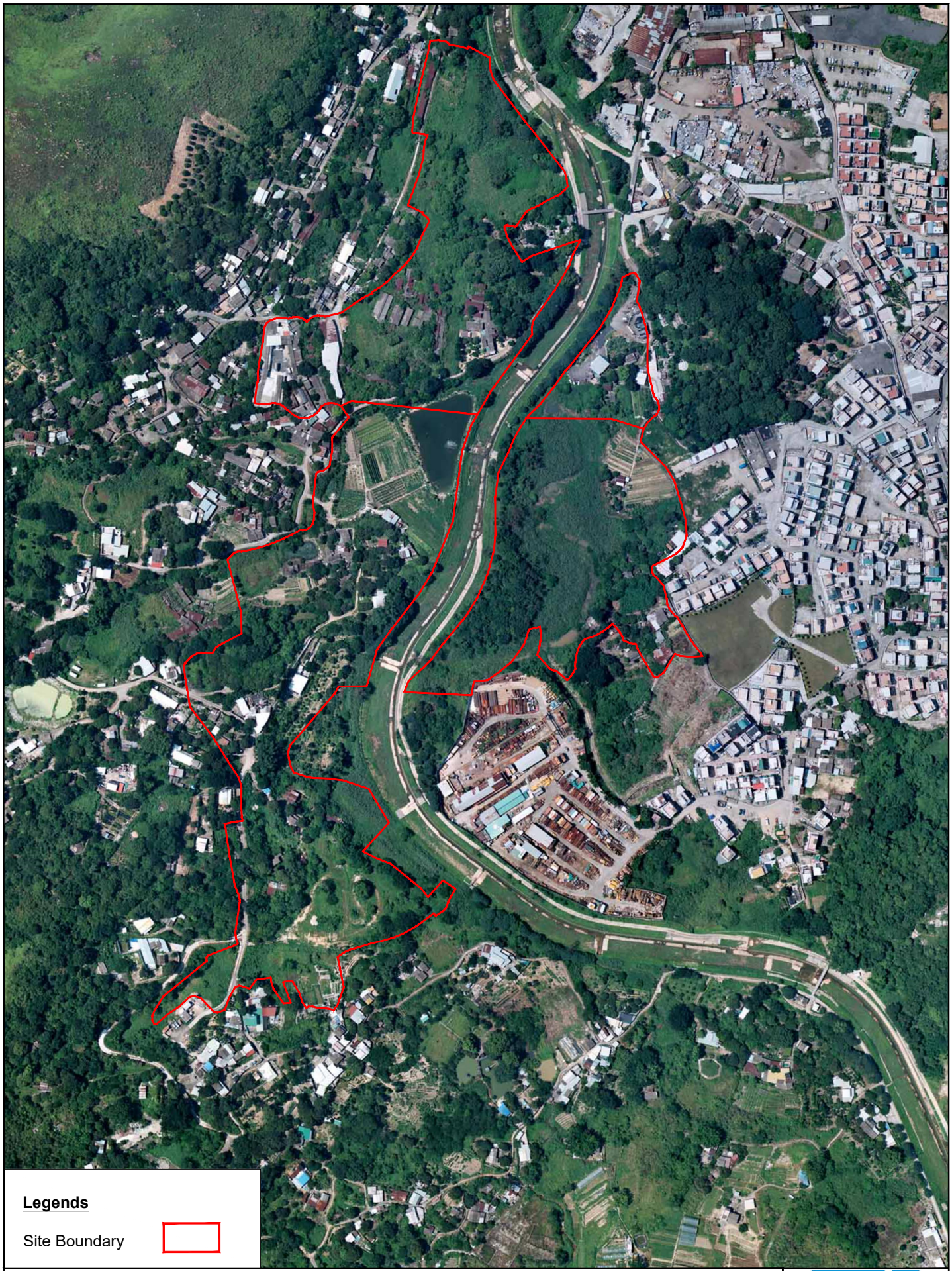

Appendix: 4.1

Title: Aerial Photo (2011 - Ref No. CS32953)

Project: Proposed International School in Kwu Tung South

RAMBOLL

Drawn by:	SC
Checked by:	TC
Rev.:	1.0
Date:	Aug 2025

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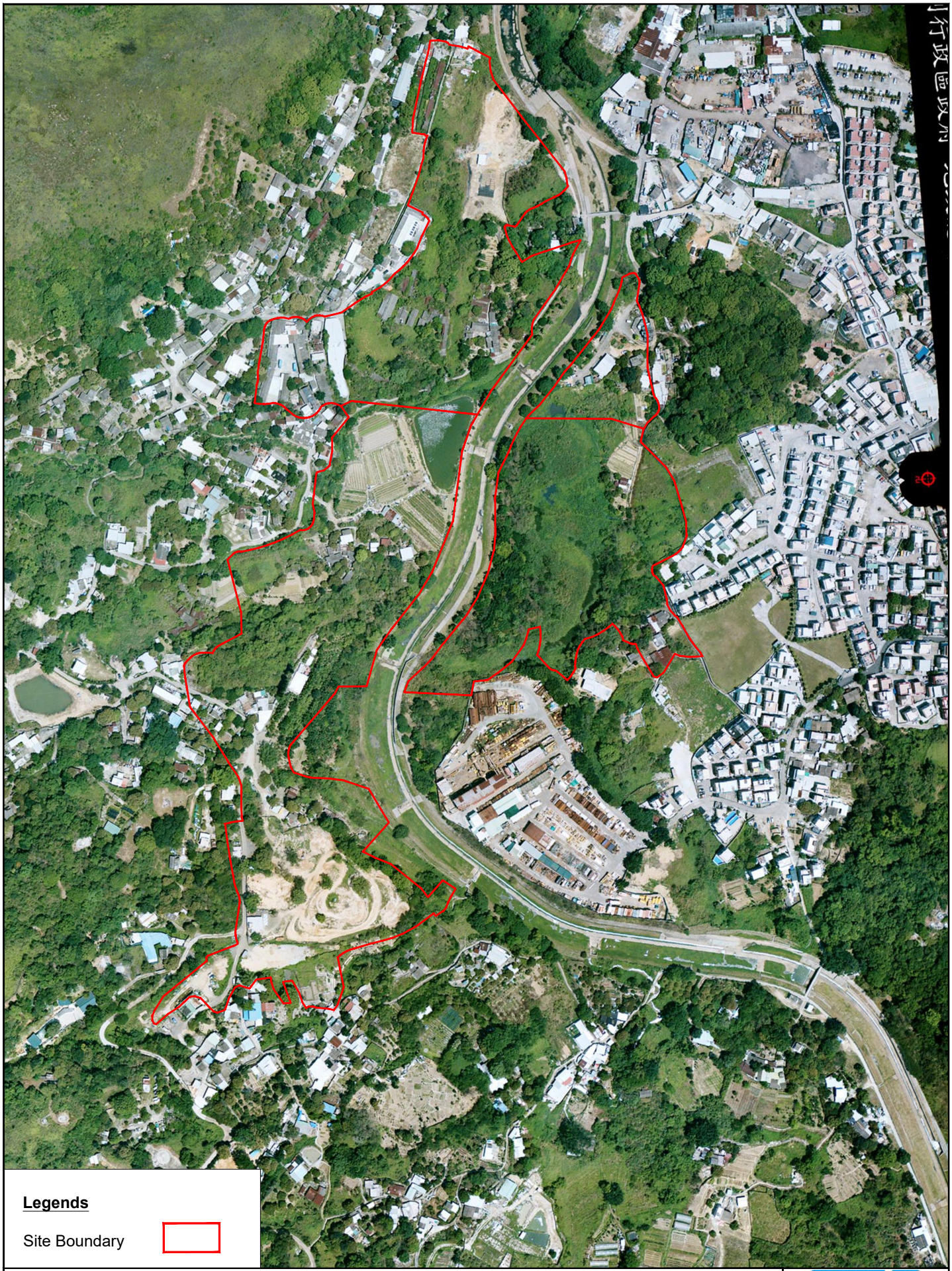

Appendix: 4.1	RAMBOLL
Title: Aerial Photo (2015 - Ref No. CS59207)	Drawn by: SC
	Checked by: TC
Project: Proposed International School in Kwu Tung South	Rev.: 1.0
	Date: Aug 2025

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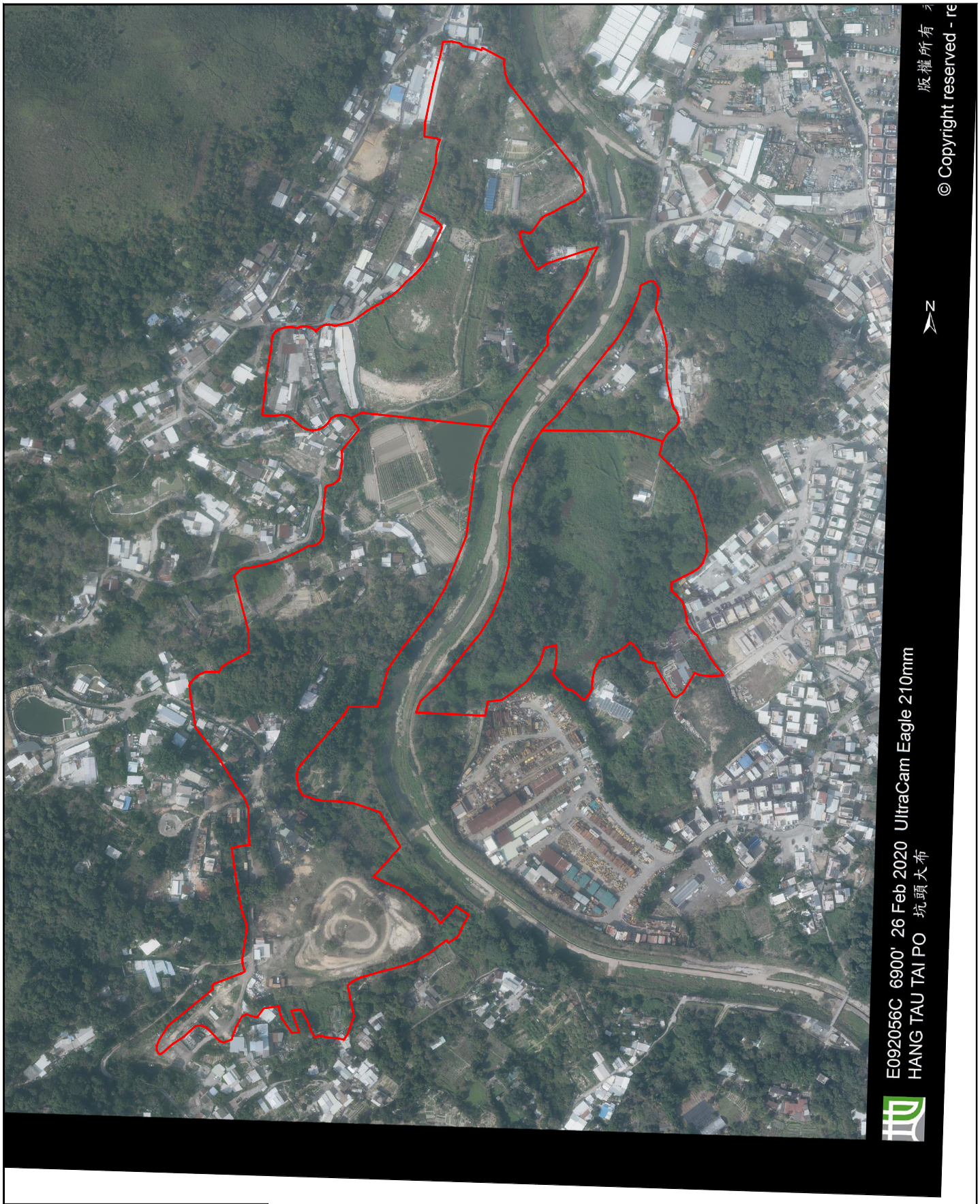

Legends

Site Boundary

Appendix: 4.1	RAMBOLL
Title: Aerial Photo (2020 - Ref No. E092056C)	Drawn by: SC
	Checked by: TC
Project: Proposed International School in Kwu Tung South	Rev.: 1.0
	Date: Aug 2025

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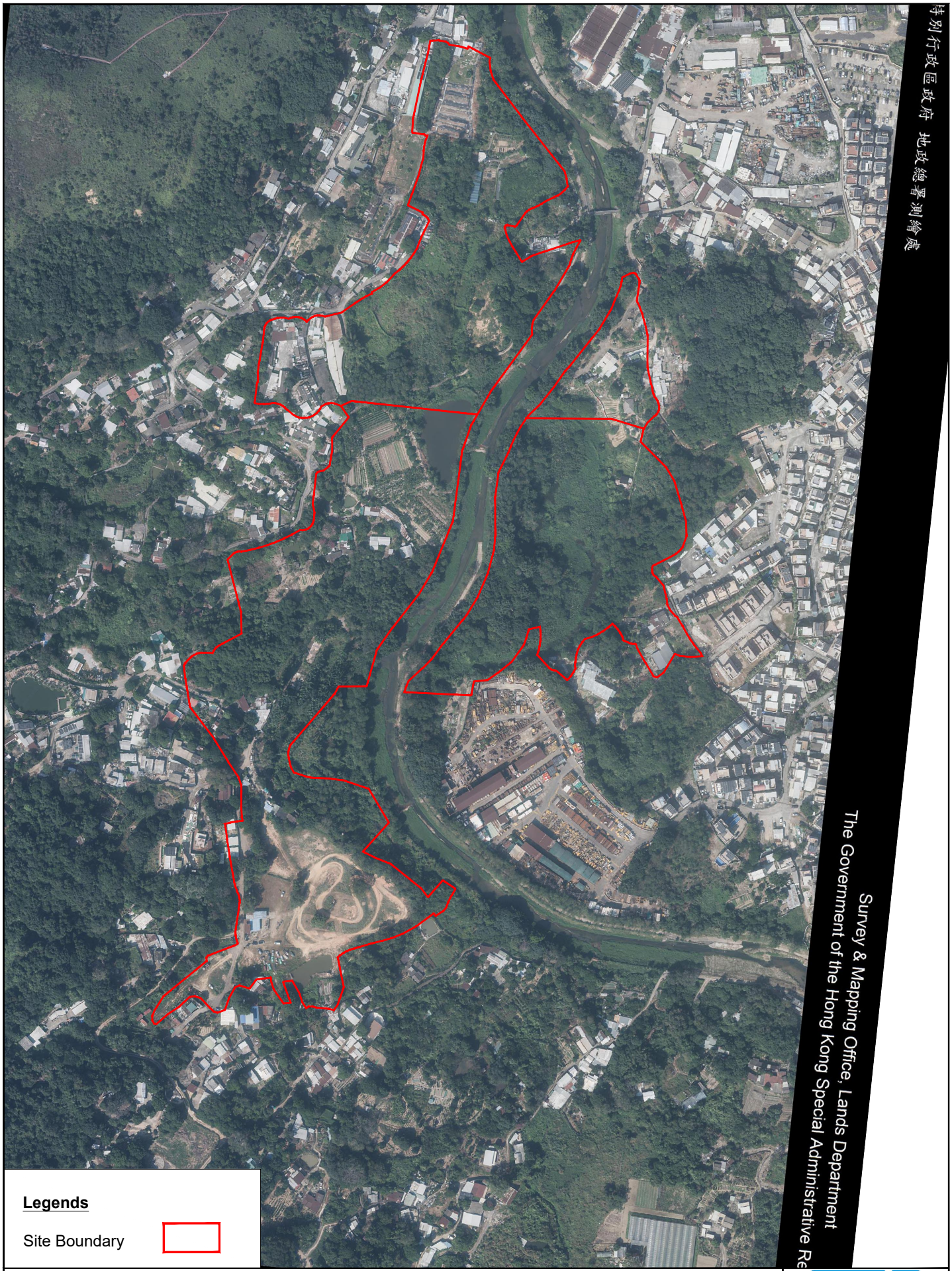

Appendix: 4.1	RAMBOLL
Title: Aerial Photo (2024 - Ref No. E239765C)	Drawn by: SC
	Checked by: TC
Project: Proposed International School in Kwu Tung South	Rev.: 1.0
	Date: Aug 2025

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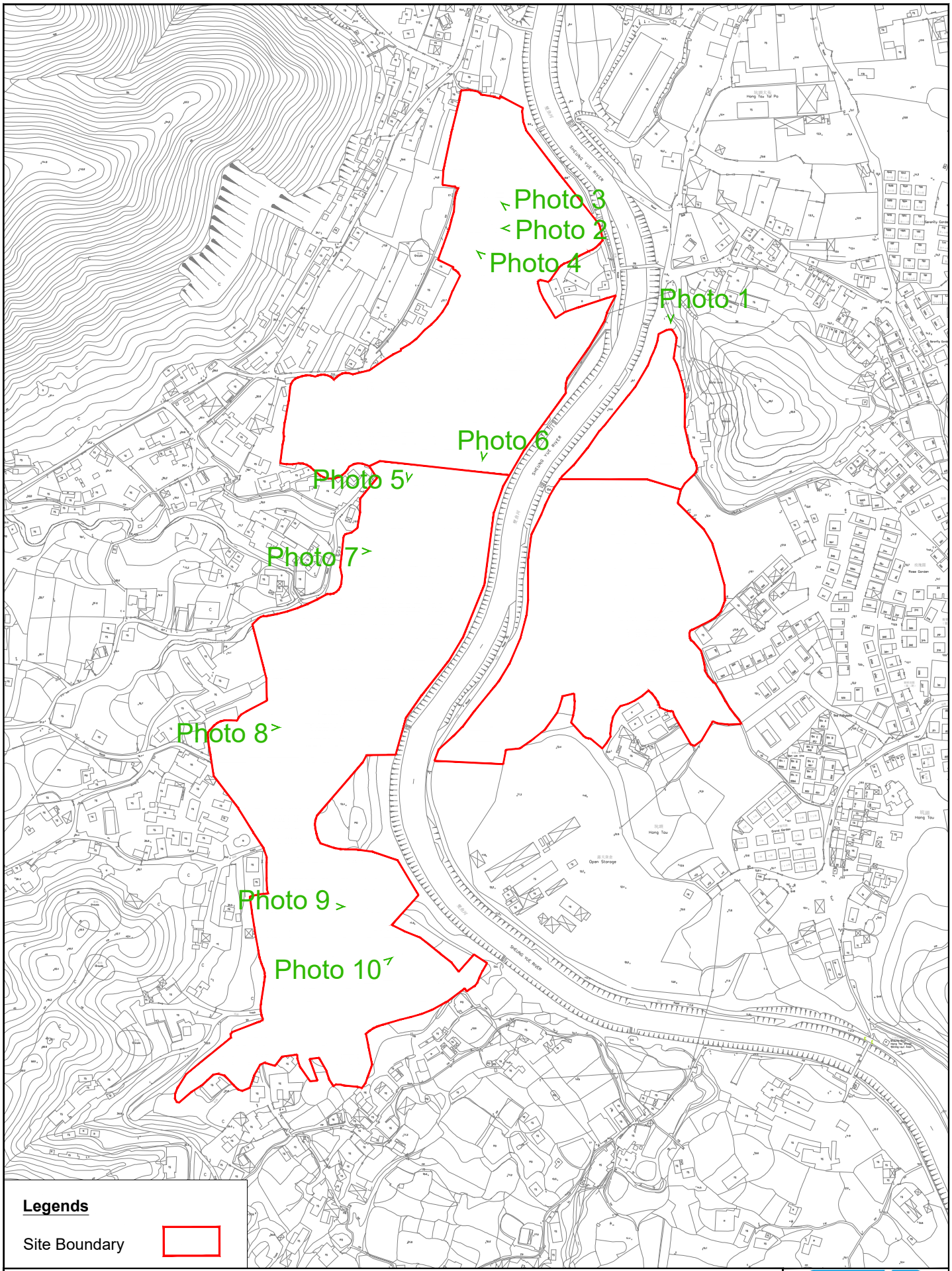
Appendix 4.2 Photo Records for Site Visit



Appendix: 4.2	RAMBOLL
Title: Photo Records for Site Visit	Drawn by: SC
	Checked by: TC
Project: Proposed International School in Kwu Tung South	Rev.: 1.0
	Date: Aug 2025

Q:\Projects\HENKTSISEI00\05 Assessments\08 Land Con\Site Visit Photo Record\Photo Location.dwg

Photo 1: The site cannot be accessed.

Photo 2: There are mainly trees. Village houses are observed

Photo 3: Village house is observed.

Photo 4: Village house is observed.

Photo 5: Fram land is observed.

Photo 6: The pond is observed

Photo 7: Fram land is observed

Photo 8: Many trees are observed

Photo 9: Many trees are observed.

Photo 10: Many trees are observed.

Appendix 4.3 Site walkover checklist

Annex C1

Reference from Annex C1 Site Walkover Checklist of Practice Guide for Investigation and Remediation of Contaminated Land (EPD, August 2011, Revised in April 2023)

Site Walkover Checklist

GENERAL SITE DETAILS

SITE OWNER/CLIENT	Global King Investment Limited, Winpost (HK) Investment Limited and Rand Development Limited
PROPERTY ADDRESS	Various Lots in DD94, DD98 & DD100 and Adjoining Government Land, Kwu Tung South, New Territories

PERSON CONDUCTING THE QUESTIONNAIRE

NAME	Sally Chiu
POSITION	Assistant Environmental Consultant (Ramboll Hong Kong Ltd.)

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME	
POSITION	
TELEPHONE	

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled.

Obtain a flow schematic if possible.

Number of employees:	Full-time:	N/A
	Part-time:	N/A
	Temporary/Seasonal:	N/A
Maximum no. of people on site at any time:		N/A
Typical hours of operation:		N/A
Number of shifts:		N/A
Days per week:		N/A
Weeks per year:		N/A
Scheduled plant shut-down:		N/A

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Detail the main sources of energy at the site:

Gas	~~Yes~~/No
Electricity	Yes/~~No~~
Coal	~~Yes~~/No
Oil	~~Yes~~/No
Other	~~Yes~~/No

SITE DESCRIPTION

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

What is the total site area: About 131,000m^2

What area of the site is covered by buildings (%): 0%

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

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

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

If yes, identify those parties:

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

North: Rural

South: Rural

East: Residential: Grand Garden; Po Shu Garden

West: Rural

Confidential

Annex C1 – Site Walkover Checklist

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

Flat terrain with vegetation

State the size and location of the nearest residential communities.

Grand Garden (~50m to the east); Po Shu Garden (~80m to the east)

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

No

Questionnaire with Existing~~/Previous~~ Site Owner or Occupier

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

Confidential

	on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	
16.	Do you have any underground storage tanks? (If yes, please provide details.)	No
	▪ How many underground storage tanks do you have on site?	NA
	▪ What are the tanks constructed of?	NA
	▪ What are the contents of these tanks?	NA
	▪ Are the pipelines above or below ground?	NA
	▪ If the pipelines are below ground, has any leak and integrity testing been performed?	NA
	▪ Have there been any spills associated with these tanks?	NA
17.	Are there any disused underground storage tanks?	No
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	NA
19.	How are the wastes disposed of?	NA
20.	Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	No
21.	Have any spills occurred on site? (If yes, please provide details.)	No
	• When did the spill occur?	NA
	• What were the substances spilled?	NA
	• What was the quantity of material spilled?	NA
	• Did you notify the relevant departments of the spill?	NA
	• What were the actions taken to clean up the spill?	NA
	• What were the areas affected?	NA
22.	Do you have any records of major renovation of your site or rearrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	No
24.	Are there any known contaminations on site? (If yes, please provide details.)	No
25.	Has the site ever been remediated? (If yes, please provide details.)	No

Confidential

Observations

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

Appendix 4.4 Letters Replies from Government Departments

RAMBOLL

Ref.: HENKTSISEI00_0_0001L.25.docx

22 August 2025
By Email and Post

Environmental Protection Department
Environmental Compliance Division
Regional Office (North), North

10th floor, Shatin Government Offices,
No .1 Sheung Wo Chue Road, Sha Tin, New Territories

Dear Cecilia Chan,

Request for Land Contamination Information for the Proposed International School in Kwu Tung South

We are the environmental consultant who are commissioned to conduct a land contamination assessment for the Proposed Internation School in Kwu Tung South. Location of the subject site is shown in **Figure 1.1**.

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

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

1. Potentially contaminating activities that have occurred at the site such as storage and handling of chemicals, oils and/or hazardous waste, on-site waste disposal, burn pits, etc;

2. Accidents, fires, explosions, spillages and any pollution incidents attributed to the site and any remediation that has occurred at the site or neighbouring areas; and

3. Any land contamination assessment that has conducted at the site or neighbouring areas.

Your reply by 5 September 2025 is highly appreciated as it would be very helpful to our assessment. Should you have any queries, please do not hesitate to contact the undersigned at [redacted] or our Ms. Sally Chiu at [redacted].

Thank you very much for your attention.

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

Tony Cheng
Senior Manager

Encl.
Figure 1.1 Location of Subject Site

Ramboll Hong Kong Limited 英環香港有限公司
21/F, BEA Harbour View Centre, 56 Gloucester Road, Wan Chai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899
www.ramboll.com

Confidential

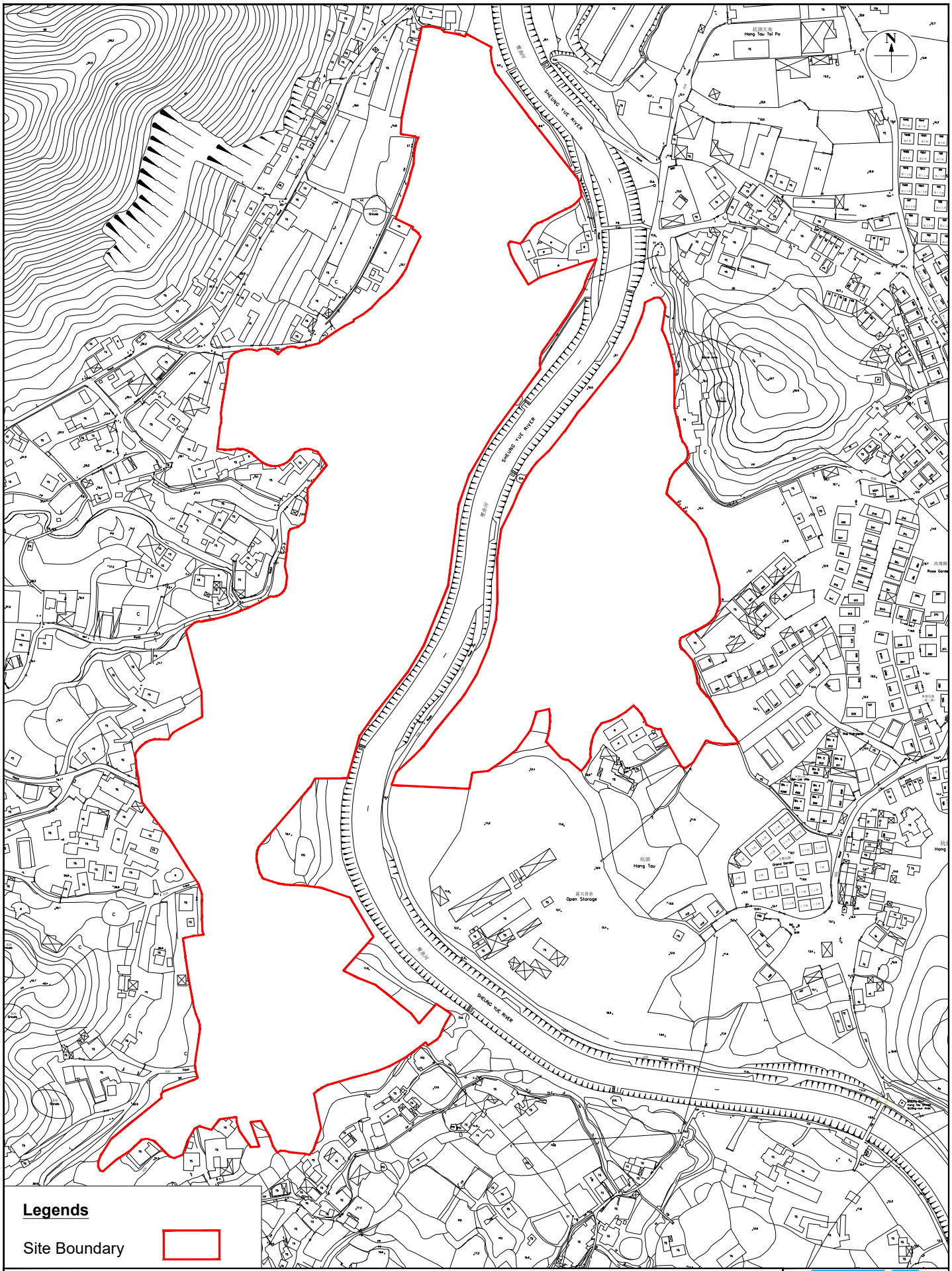

Figure: 1.1

Title: Site Location and its environs

Project: Proposed International School in Kwu Tung

RAMBOLL

Drawn by:	SC
Checked by:	TC
Rev.:	1.0
Date:	Aug 2025

Q:\Projects\HENKTSISEI00\05 Assessments\Site Boundary_250822.dwg

Sally Chiu

From: ceciliaymchan@epd.gov.hk
Sent: Wednesday, 27 August 2025 5:50 pm
To: Sally Chiu
Cc: Tony Cheng; Tony Ling
Subject: Re: Request for Land Contamination Information for the Proposed International School in Kwu Tung South

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Ms. Chiu,

I refer to your email dated 22 Aug 2025 on the captioned.

Please kindly note that his Regional Office has no record of the 3 items mentioned in your email. You may also wish to seek input from other sections of this departmenr and/or relevant departments.
Thank you.

Regards,
Cecilia CHAN
Regional Office (North) / EPD

From: "Sally Chiu" [redacted]
To: "ceciliaymchan@epd.gov.hk" <ceciliaymchan@epd.gov.hk>
Cc: "Tony Cheng" [redacted], "Tony Ling" [redacted]
Date: 22/08/2025 16:35
Subject: Request for Land Contamination Information for the Proposed International School in Kwu Tung South

Dear Cecilia,

We are the environmental consultant who are commissioned to conduct a land contamination assessment for the Proposed Internation School in Kwu Tung South. Location of the subject site is shown in **Figure 1.1**.

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

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

1. Potentially contaminating activities that have occurred at the site such as storage and handling of chemicals, oils and/or hazardous waste, on-site waste disposal, burn pits, etc;

2. Accidents, fires, explosions, spillages and any pollution incidents attributed to the site and any remediation that has occurred at the site or neighbouring areas; and

3. Any land contamination assessment that has conducted at the site or neighbouring areas.

Your reply by 5 September 2025 is highly appreciated as it would be very helpful to our assessment. Should you have any queries, please do not hesitate to contact the undersigned at 3465 2827 or our Mr. Tony Cheng at 3465 2822.

Thank you very much for your attention.

Kind regards

Sally Chiu

Assistant Environmental Consultant

[redacted]

Ecological Review of Ki Lun Shan Study Area
October 2025

1. Introduction

This is a desktop review of the ecological situation of the subject site, undertaken to demonstrate that no eco-sensitive receivers are anticipated. This initial review is based on information from a landscape resources survey (Appendix 2 of this Application submission), and with reference to the Government's proposed Agriculture Park. Subject to approval of the planning application, it will be possible to carry out a more detailed ecological analysis.

2. Site Ecology – Beas River and Wetland

The subject site is located at Kwu Tung South within the Northern Metropolis, adjacent to the Beas River (Sheung Yue River). The river has been channelised and is not listed among the 33 ecologically important streams.

The site does not fall within any sensitive areas, such as an existing or gazetted proposed country park, conservation area, existing or gazetted proposed marine park or marine reserve, site of cultural heritage, or site of special scientific interest (SSSI). Furthermore, no ecological hotspots have been recorded or identified within the subject site.

Little potential ecologically sensitive receivers to be include:

- Lam Tsuen Country Park – approximately 1.9 km south of the subject area.
- Long Valley Nature Park – approximately 1.8 km northeast of the subject area.
- Long Valley (38 ha) has been identified as a Priority Site for Enhanced Conservation under the "New Natue Conservation Policy" and opened to the public in late 2024. The Nature Park is a man-made wetland containing wet farmland and marshes, with approximately 341 bird species recorded. It is separated from the subject area by the San Tin Highway.
- Kwu Tung Reservoir – around 350 m from the subject area, located uphill and used mainly for irrigation.

3. Relevant Reference – Site Landscape Resources (undertaken by Applicant in the Appendix 2 of this submission)

A total of eight habitat types within the 12.7 ha site have been identified and classified (**Table 1**). These habitat types are typical in the northern New Territories. Woodland is dominant (3.8 ha) within the Study Area, while the smallest category is rivers and streams (0.1 ha). The 1.5 ha of farmland will be removed, while rivers, streams, and ponds will be retained as far as possible as water features to enhance on-site landscaping. This approach will help to minimise disturbance to aquatic-related wildlife.

4. Relevant Reference – Government Proposed Agriculture Park (Chapter 10, Report on Preliminary Technical Study, Engineering Feasibility Study for the Establishment of an Agriculture Park – Feasibility Study, CEDD, 2017)

No significant ecologically sensitive issues were identified in this study, and none are anticipated within the proposed subject site.

5. Adjoining EIA

5.1 Adjoining EIAs

According to the EPD's EIA website, there are three Environmental Impact Assessments (EIAs) in this part of the New Territories:

- *The Sheung Shui to Lok Ma Chau Spur Line* (EIA-044/2000)
- *North East New Territories New Development Areas* (EIA-213/2013)
- *Technical Study on Partial Development of Fanling Golf Course Site – Feasibility Study* (EIA-282/2022)

The Spur Line EIA is outdated, and both it and the other EIAs are located more than 1.5 km from the subject area. Therefore, they are considered irrelevant for reference.

5.2 Adjoining Planning Rezoning / Applications

There are two rezoning cases from 2023 located at Kam Hang Road, Kam Tsin, near Fanling Highway. These sites are 1.6 km from the subject area and do not involve any ecological issues.

6. Birds Observations

Bird observations from eBird (an online bird-record database) for the Beas River near the subject area, covering the period December 2024 to February 2025, recorded 45 species, of which 15 were wetland-dependent (**Table 2**). The Greater Painted Snipe — an uncommon waterbird often used as an indicator of ecological value in freshwater habitats — was among the species recorded.

The presence of several waterbird species suggests that the ecological value of the Beas River is low to moderate. More generally, the presence of a range of common terrestrial wildlife in the surrounding area suggests that the subject area is a typical lowland environment in Hong Kong, with no species of high conservation importance or biodiversity "hotspots" expected.

7. Conclusion

Based on the available information, the Sheung Yue River has a low to moderate ecological value due to the presence of waterbirds. For other habitats within the subject area, no relevant ecological data are available. However, the habitat plan indicates that there are no high-value habitats, such as freshwater marshes or fung shui woods, present. Furthermore, there are no identified ecological hotspots in the area. Therefore, any terrestrial ecological issues, if present, are expected to be insignificant.

References:

Appendix 2 – LMP under this Application

Ebird obs

10 Dec 2024 https://ebird.org/checklist/S208696257

11 Jan 2025 https://ebird.org/checklist/S208783743

3 Feb 2025 https://ebird.org/checklist/S211780122

Table 1. Habitats of the subject site extract from the Appendix 2

Habitat type	Area (ha)
Secondary woodland	3.8
Grassland	2.2
Agricultural land	1.5
Rivers and streams	0.1
Ponds and marshes	1.2
Disturbed areas	1.4
Village	2.1
Open storage	0.5
Total	12.7

Table 2. A checklist of bird species recorded at River Beas between Dec 2024 and February 2025 (Based on three checklists available on ebird). A total of 45 bird species. The Greater Painted Snipe is an uncommon species and is often used as an indicator of the ecological value of freshwater habitats. (Remark: * = Wetland dependent species).

	Bird species	10/12/24	14/1/25	3/2/25
1	Spotted Dove (*Spilopelia chinensis*)	+	+	+
2	Greater Coucal (*Centropus sinensis*)			+
3	Asian Koel (*Eudynamys scolopaceus*)	+		
4	White-breasted Waterhen (*Amaurornis phoenicurus*)	+	+	+
5	Black-winged Stilt (*Himantopus himantopus*)			+
6	Greater Painted Snipe (*Rostratula benghalensis*)	+	+	+
7	Common Snipe (*Gallinago gallinago*)	+	+	
8	Common Sandpiper (*Actitis hypoleucos*)			+
9	Green Sandpiper (*Tringa ochropus*)		+	+
10	Wood Sandpiper (*Tringa glareola*)		+	+
11	Common Greenshank (*Tringa nebularia*)	+	+	+
12	Little Egret (*Egretta garzetta*)	+	+	+
13	Chinese Pond Heron (*Ardeola bacchus*)	+	+	
14	Eastern Cattle Egret (*Bubulcus coromandus*)			+
15	Great Egret (*Ardea alba*)		+	+
16	Grey Heron (*Ardea cinerea*)	+	+	+
17	Black Kite (*Milvus migrans*)			+
18	Common Kingfisher (*Alcedo atthis*)			+

19	Black-winged Cuckooshrike (*Coracina melaschistos*)			+
20	Hair-crested Drongo (*Dicrurus hottentottus*)		+	+
21	Red-billed Blue Magpie (*Urocissa erythroryncha*)		+	+
22	Grey Treepie (*Dendrocitta formosae*)	+		+
23	Collared Crow (*Corvus torquatus*)		+	
24	Common Tailorbird (*Orthotomus sutorius*)		+	+
25	Eastern Red-rumped Swallow (*Cecropis striolata*)		+	
26	Chinese Bulbul (*Pycnonotus sinensis*)	+	+	
27	Red-whiskered Bulbul (*Pycnonotus jocosus*)	+	+	+
28	Yellow-browed Warbler (*Phylloscopus inornatus*)		+	
29	Dusky Warbler (*Phylloscopus fuscatus*)	+		
30	Swinhoe's White-eye (*Zosterops simplex*)			+
31	Rufous-capped Babbler (*Stachyridopsis ruficeps*)	+		+
32	Masked Laughingthrush (*Pterorhinus perspicillatus*)	+	+	+
33	Black-collared Starling (*Gracupica nigricollis*)	+	+	+
34	Crested Myna (*Acridotheres cristatellus*)	+	+	+
35	White's Thrush (*Zoothera aurea*)			+
36	Grey-backed Thrush (*Turdus hortulorum*)		+	+
37	Oriental Magpie Robin (*Copsychus saularis*)	+	+	+
38	Red-breasted Flycatcher (*Ficedula parva*)			+
39	Daurian Redstart (*Phoenicurus auroreus*)			+
40	Amur Stonechat (*Saxicola stejnegeri*)			+
41	Eurasian Tree Sparrow (*Passer montanus*)		+	+
42	Grey Wagtail (*Motacilla cinerea*)	+	+	+
43	Eastern Yellow Wagtail (*Motacilla tschutschensis*)			+
44	White Wagtail (*Motacilla alba*)	+	+	+
45	Olive-backed Pipit (*Anthus hodgsoni*)		+	+

Prepared by

Ramboll Hong Kong Limited

PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

SEWERAGE IMPACT ASSESSMENT

Date	**October 2025**
Prepared by	**Sally Chiu** **Assistant Environmental Consultant**
Signed	
Approved by	**Tony Cheng** **Environmental Consultant**
Signed	
Project Reference	**HENKTSISEI00**
Document No.	**R9853_v1.0.docx**

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Appendix 2.1 Detailed Sewerage Impact Assessment Calculations

1. INTRODUCTION

1.1 Background and Objectives

1.1.1 The applicants, Global King Investment Limited, Winpost (HK) Investment Limited and Rand Development Limited, seek to rezone the current "Agriculture" zoning with a minor portion of "Green Belt" of the Application Site as outlined in the approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22.

1.1.2 Ramboll Hong Kong Limited is commissioned to conduct the sewerage impact assessment based on the information regarding the proposed scheme.

1.2 Application Site and its Environs

1.2.1 The Application Site is situated along the Sheung Yue River which separate the Application Site into 2 portions (West and East Portions). It is bounded by Sheung Shui Hang Tau Village Sitting Out Area No.2 to the North and Po Shu Garden to the East.

1.2.2 **Figure 1.1** shows the location and the environs of the Proposed Development.

1.3 Proposed Development

1.3.1 Under the current application, the Application Site is proposed for an International School development. Details of the proposed development schedule are summarised in **Table 1.1** below and the layout plan is shown in **Appendix 1.1**.

Table 1.1 Development Schedule of the Proposed Development

Portions Located	West	East
Site Area (m^2)	~92,000	~35,000
Total GFA (m^2)	~126,850	~44,150
No. of Blocks	18	6
No. of Classrooms	76	65
No. of Students	1,600	1,400
No. of Staff (Including Teaching and Non-Teaching)	338	295
No. of Student/ Staff who can Live in the Accommodation	2243	0
Completion Year	2036	

2. SEWERAGE IMPACT ASSESSMENT

2.1 Scope of Work

2.1.1 The aim of this study is to compare the sewage flow generated from the proposed development with the sewage flow generated from the existing usage, and to determine whether adverse sewage impact is anticipated.

2.2 Assessment Criteria and Methodology

2.2.1 The Commercial and Industrial Floor Space Utilization Survey (CIFSUS) conducted by the Planning Department has been used to determine the worker density for various economic activities and planned usage types.

2.2.2 Environmental Protection Department's (EPD's) Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning, Version 1 (GESF) has been referred to for the purposes of estimating the quantity of the sewage generated from the Proposed Development and the existing catchment area. Sewage flow parameters and global peaking factors in this document have been adopted for this SIA.

2.2.3 According to the GESF, the overall unit flow is composed of flows due to employees and the associated activities. The following unit flow factors have been adopted in the SIA calculation in accordance with Tables T-1, T-2 and T-3 of the GESF:

- J10 Restaurants & Hotels: 1.58 m^3/day

2.3 Existing and Future Sewerage System

2.3.1 With reference to the sewerage system shown in Geoinfo Map, there is currently no existing public sewerage system in the vicinity of the Application Site.

2.4 Wastewater Generated by the Proposed Development

2.4.1 The sewage generated by the proposed development is given in **Table 2.1** shown below. Detailed Calculation (including the breakdown for West and East Portions) refers to **Appendix 2.1**.

Table 2.1 Estimated Peak Flow (Overall)

Calculation for Sewage Generation Rate of the Proposed Development at the Application Site			
1. Internation School			
Total number of teachers & staff	=	633	people
Design flow for teachers & staff	=	0.28	m^3/person/day (refer to Table T-2 of GESF, Community, Social & Personal Services)
Total number of students	=	3000	people
Design flow for students	=	0.04	m^3/person/day (refer to Table T-2 of GESF, School Student)
Sewage Generation rate	=	**297.2**	m^3/ day
2. Swimming Pool			
Assumed area	=	2500	m^2
Assumed depth of water	=	1.5	m
Volume of water	=	1500	m^3
Turnover Rate	=	4.0	hr CAP132, Section 42 Swimming Pools Regulation (covered))
Surface loading rate of filter	=	50.0	$m^3/m^2/hr$
Filter areas required	=	7.5	m^2
Backwashing flow rate	=	30.0	$m^3/m^2/hr$
Design flow for backwashing	=	225	m^3/hr
Backwash duration	=	3.0	min/day
Backwash generation rate	=	11.25	m^3/day
Backwash generation rate	=	**156.3**	litre/sec
3. Dormitory			
No. of residents	=	2243	people
Design flow	=	0.19	m^3/day (Institutional and Special Class in Table T-1 of GESF)
Sewage generation rate	=	**426.2**	m^3/day
4. Canteen			
Assumed floor area	=	4500	m^2
Assumed floor area per employee	=	19.6	m^2/employee
Total number of employees	=	230	employees
Design flow for commercial employees	=	1.58	m^3/employee/day
Sewage generation rate	=	**362.6**	m^3/day
Total Flow from the Proposed Development			
Flow rate	=	1086.0	m^3/day
Flow rate with P_{CIF}	=	1086.0	m^3/day (refer to Table T-4 of GESF – North District - 1.0)

2.5 Assessment of Sewerage Impact

2.5.1 As mentioned in **Section 2.3.1**, there is no existing sewerage connection in the vicinity of the Proposed Development. It is proposed to construct private STPs in the development site to handle the development sewage.

2.5.2 The estimated Average Dry Weather Flow (ADWF) from the proposed development is approximately 705.7 m^3/day and 380.3 m^3/day in West and East Portion respectively. Detailed Sewage flow calculation refers to **Appendix 2.1**.

2.5.3 The sewage generated from the Proposed Development would be collected and treated on-site and ultimately be discharged to Sheung Yue River through proposed stormwater drain.

2.5.4 To avoid the contamination of the Sheung Yue River, no sewage can be passed through and discharged to the Sheung Yue River before treatment. Therefore, two private sewage treatment plants, namely STP – West and STP – East are proposed to treat the sewage discharge generated from West and East Portion of the development respectively. The design capacity of each STP is summarized in **Table 2.2**.

Table 2.2 Design Capacity of STPs

	Design Capacity (m^3/day)
STP – West	705.7
STP – East	380.3
Total	1086.0

2.5.5 The design capacity of STP – West and STP – East are calculated and the construction of STP – West and STP – East shall be completed before the school admission in 2036. The treated effluent will be discharged to Sheung Yue River through the proposed storm drain.

2.5.6 The exact treatment process would be subject to later detailed design and submissions. It will be necessary for the treatment facilities to achieve the necessary discharge standards, as set out in EPD's Technical Memorandum – Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters.

2.5.7 Membrane bioreactor with ultra-filtration (MBR) is generally recommended to achieve required effluent discharge standard and sludge dewatering system will be provided and designed in accordance with the requirement in the "Guidelines for the Design of Small Sewage Treatments Plants" issued by EPD.

2.5.8 Sludge storage tank with deodorisation facilities will be provided. Exhaust fan will be located and facing away from existing and planned air sensitive uses. The sludge after having been dewatered and thickened will be tanked away to the landfill for disposal subject to confirmation with future licensed collector/contractor. As good practice for sewage treatment facilities, measures will be incorporated into the design to minimize the risk of emergency overflow from the treatment plant. These measures will include standby pumps, secure power supplies and appropriate alarms, as well as comprehensive Operation and Maintenance procedures, to keep the facilities in good working order. Holding tank for emergency storage/retention will be included with adequate capacity (e.g. to store 6-hours of ADWF discharge) to minimise need of emergency discharge. In the event of any emergency overflow, on-call crews will follow the overflow emergency response plan and proceed with the best response to correct the problem immediately. For example, the alarm system will be activated once overflow occurs. The on-call crews will provide instant response by acknowledging the alarm, to investigate the cause of overflow and correct the problem. The alarm system will repeat until it is acknowledged. In addition, the on-call crews will ensure the standby pump is switched on and contain the overflowed sewage using temporary weirs or vacuum trucks, where applicable.

2.6 Maintenance Responsibility

2.6.1 The Applicant will be responsible for construction of internal sewerage infrastructure (including the proposed STPs and storm drain) within the development site boundary.

2.6.2 The design of the proposed STPs will follow the Guidelines for the Design of Small Sewage Treatment Plants prepared by the EPD.

2.6.3 Future property management will be responsible for the maintenance of all the internal sewerage system (including the proposed STPs and storm drain) within the development site boundary.

2.6.4 The Applicant will be responsible for the construction, operation and maintenance of the STP. When there is a public sewer available in close proximity to the Application Site in future, the Applicant will make connection to the public sewer and dismantle the proposed underground STP subject to the agreement of DSD and EPD. As the sewage generated from the Application Site will be discharged to the public sewer in accordance with the Water Pollution Control (Sewerage) Regulation, no adverse quality impact is anticipated.

2.6.5 The Applicant will be responsible for the future sewer connection upon its availability in future and STP decommissioning with connection details subject to agreement of DSD.

3. OVERALL CONCLUSION

3.1.1 The SIA has been carried out to assess the impact on the existing sewerage system due to the Proposed Development.

3.1.2 The estimated Average Dry Weather Flow (ADWF) from the Proposed Development is about 1086.0 m^3/day with 705.7 m^3/day in West Portion and 380.3 m^3/day in East Portion.

3.1.3 2 on-site sewage treatment plants are proposed to treat the sewage discharge generated from West and East Portion and the treated effluent will be discharged to Sheung Yue River through the proposed storm drains.

3.1.4 It is concluded that no adverse sewerage impact is anticipated.

Figures

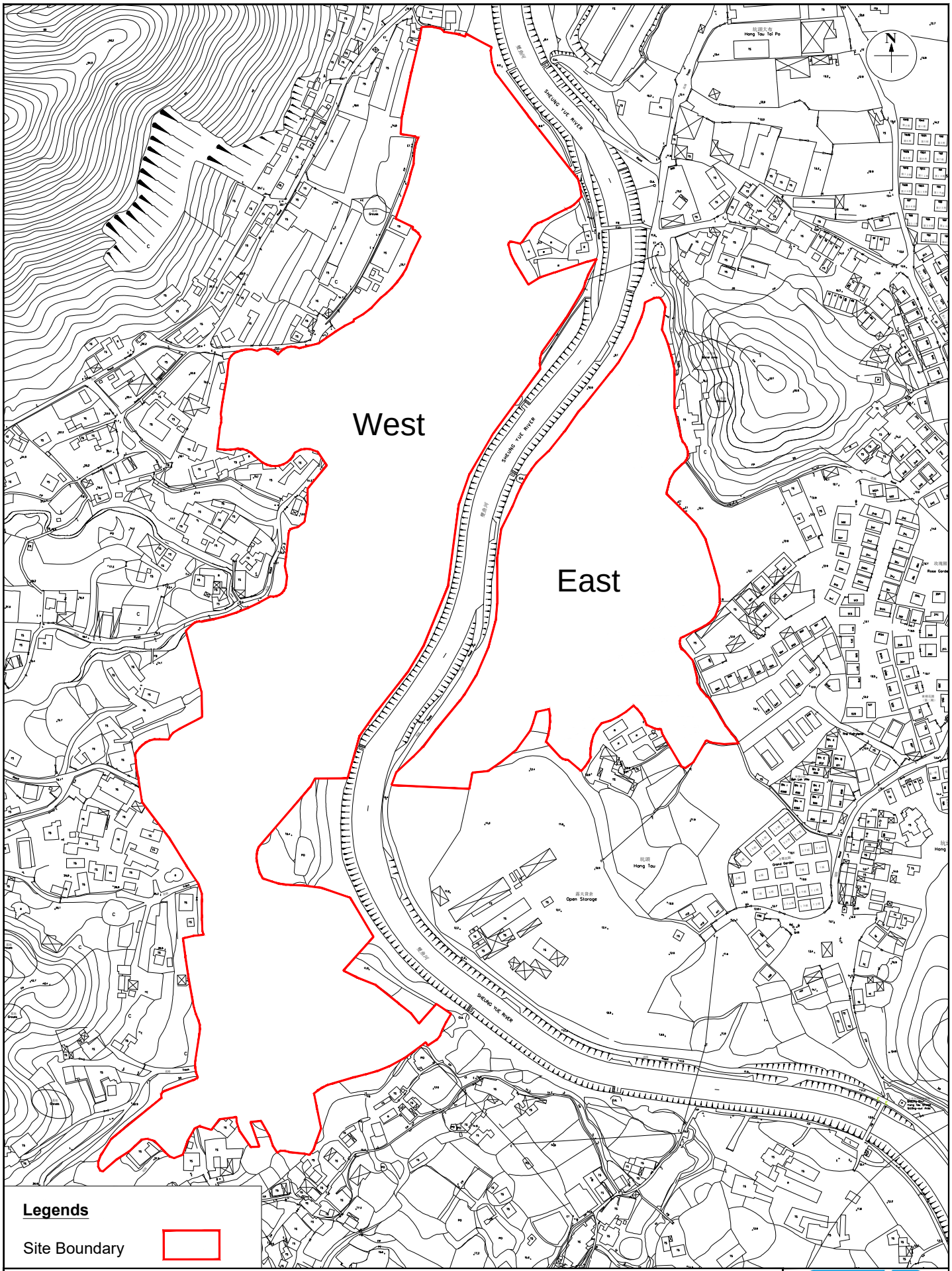

Figure: 1.1

Title: Site Location and its environs

Project: Proposed School at Various Lots in D.D.94, 98 & 100 and Adjoining Government Land, Kwu Tung South, New Territories

RAMBOLL

Drawn by:	SC
Checked by:	TC
Rev.:	1.0
Date:	Aug 2025

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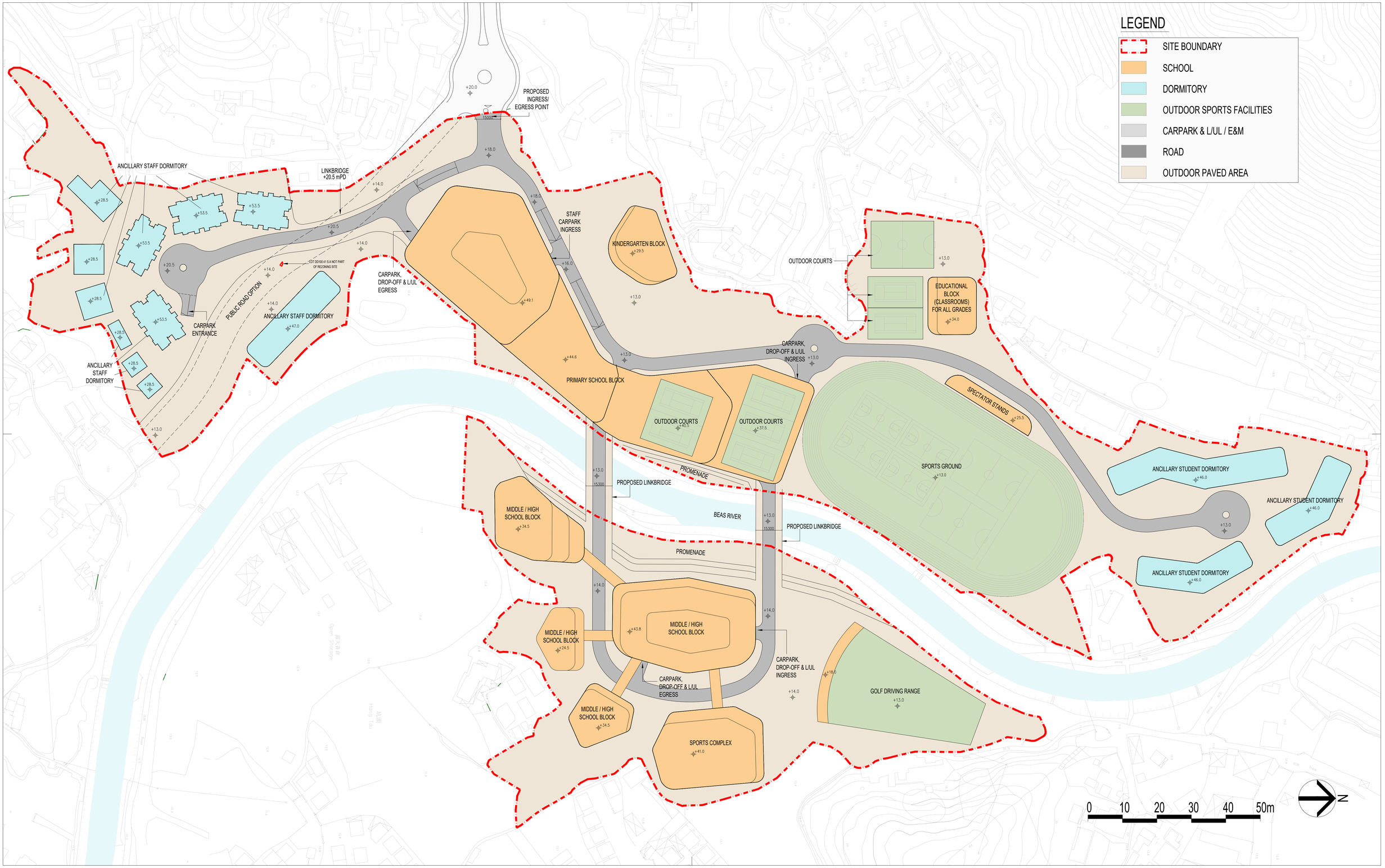
Appendix 1.1 Master Layout Plan of the Application Site



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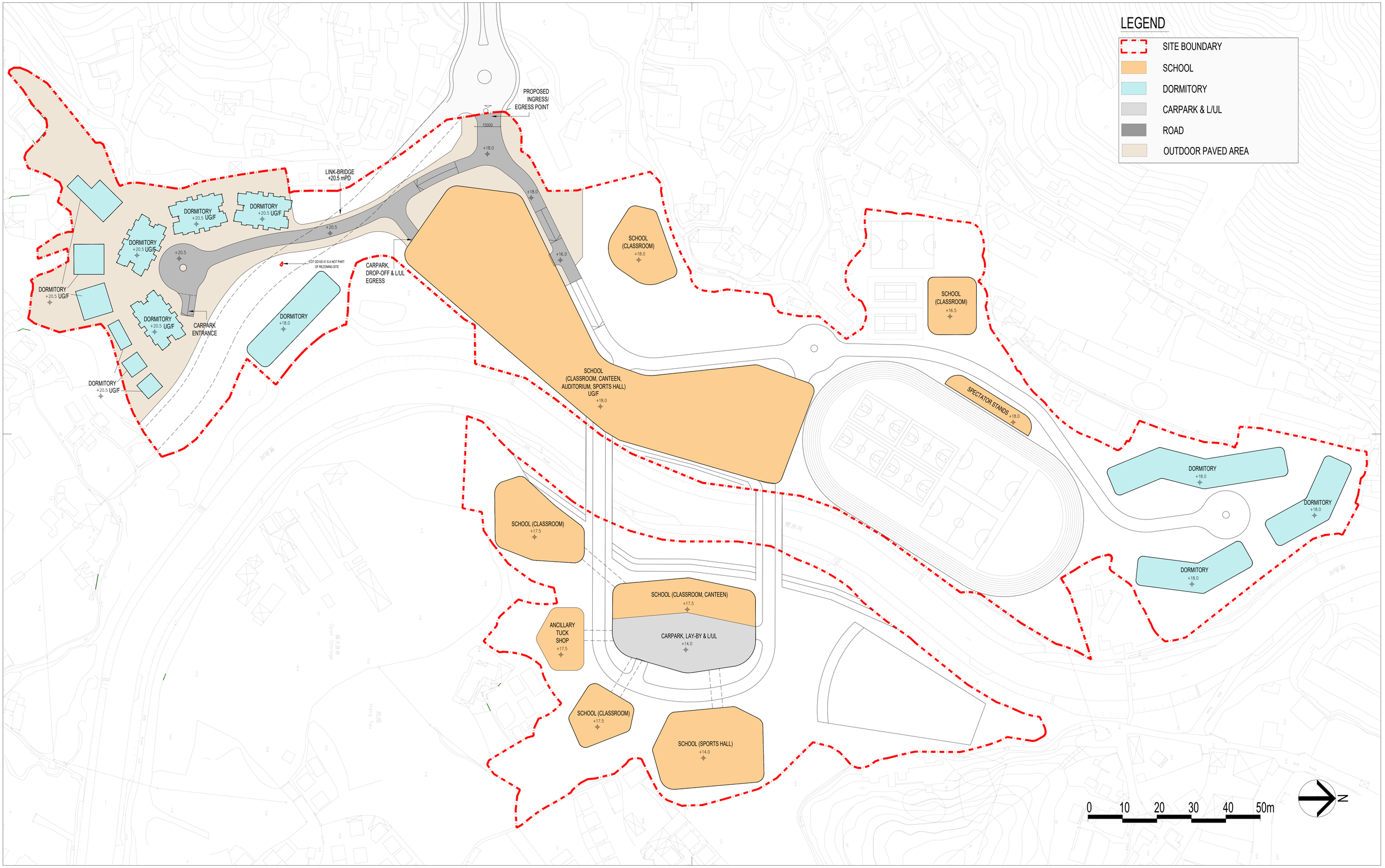
Project Title
PROPOSED INTERNATIONAL SCHOOL DEVELOPMENT AT KWU TUNG SOUTH

Drawing Title
FULL PHASE – MASTER LAYOUT PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_01_

Drawing Purpose



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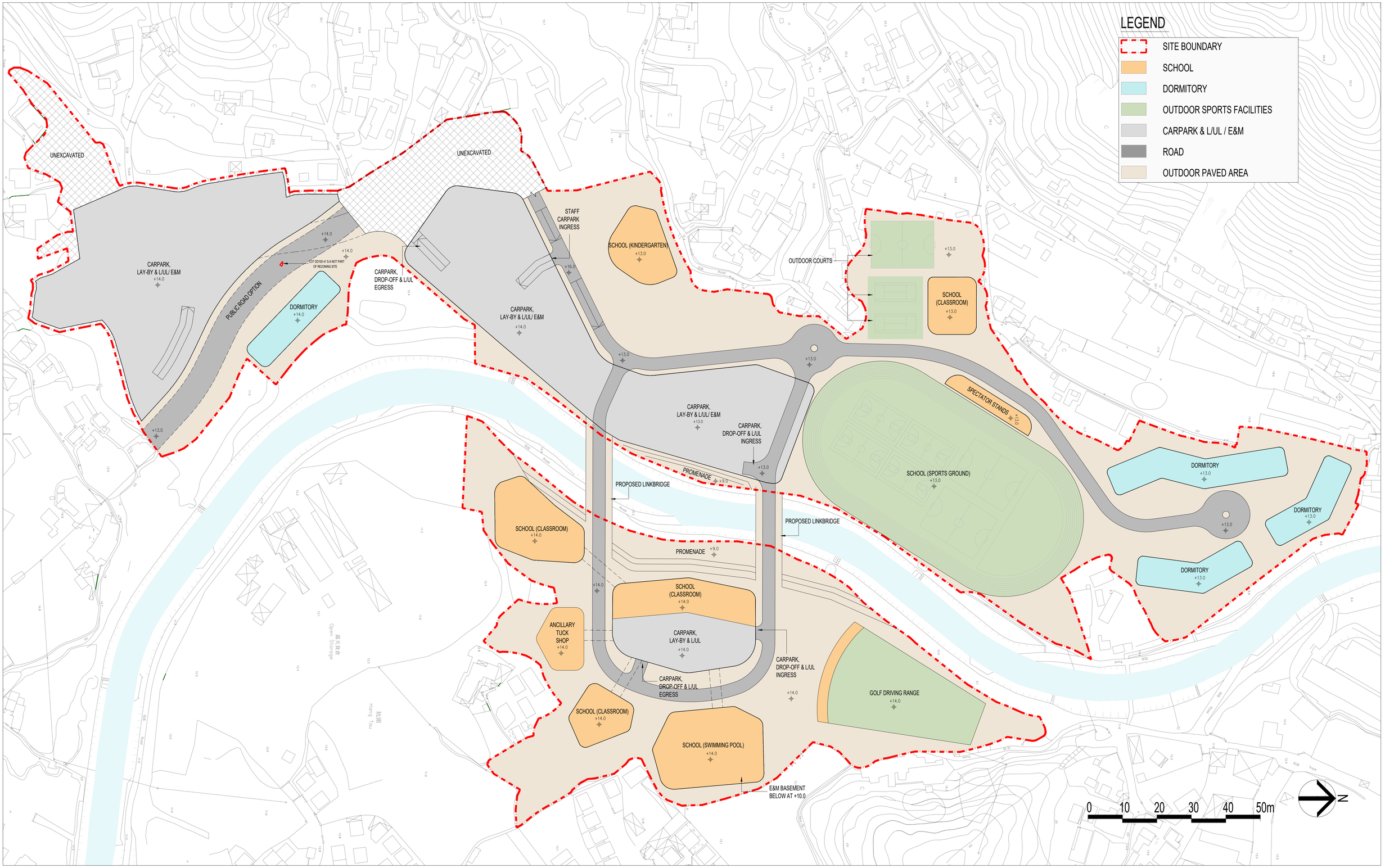
Project Title

Drawing Title
FULL PHASE –
FIRST FLOOR PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_03

Drawing Purpose



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Project Title

Drawing Title
FULL PHASE -
GROUND FLOOR PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
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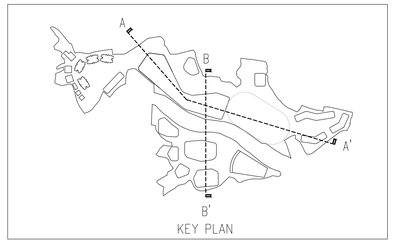
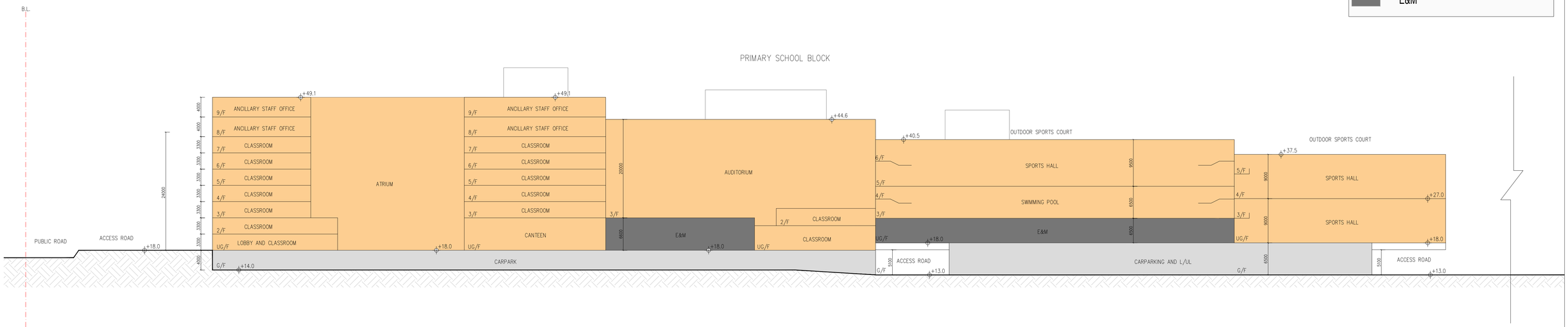


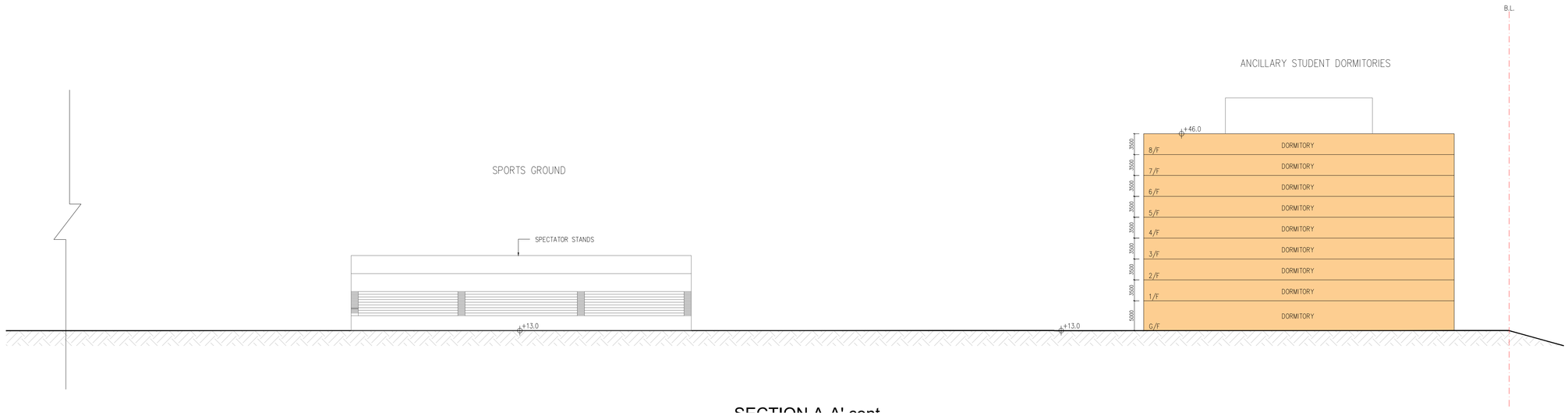
KEY PLAN

LEGEND

- SITE BOUNDARY
- SCHOOL
- DORMITORY
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



SECTION A-A'



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SECTION A-A

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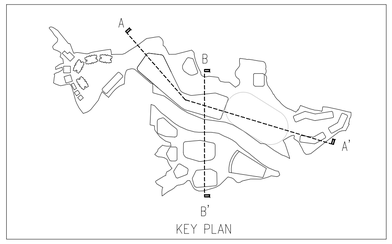
Drawing No. A/GBP_05

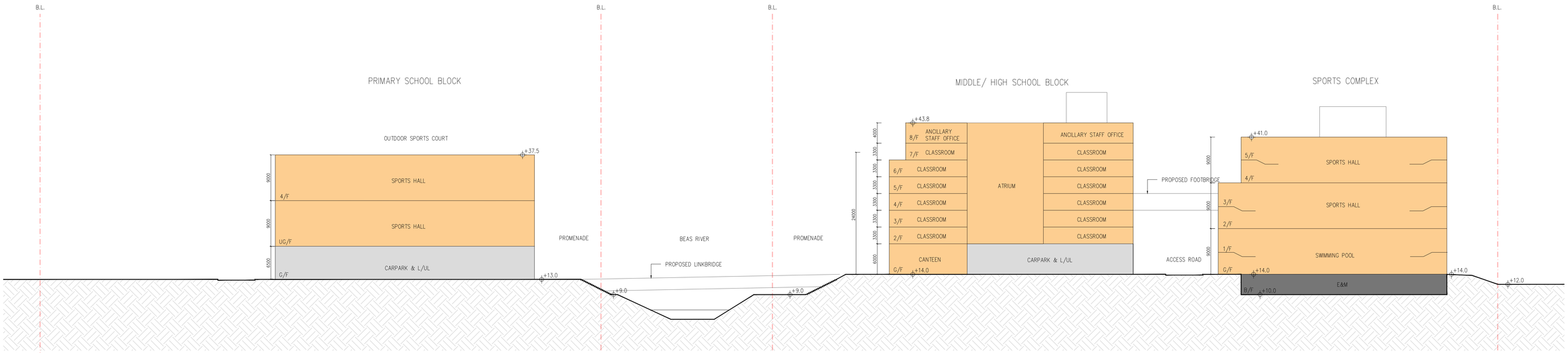
Drawing Purpose



KEY PLAN

LEGEND

- SITE BOUNDARY
- SCHOOL
- DORMITORY
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



SECTION B-B'

Rev.	Description	Drawn	Checked	Approved	Date
_	PLANNING SUBMISSION	HKO	JHK	JHY	9-2025
A	PLANNING SUBMISSION	HKO	JHK	JHY	11-2025

Rev.	Description	Drawn	Checked	Approved	Date

Check all measurements on site. Do not scale off drawings.

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B.D. Ref. _
F.S.D. Ref. _
D.L.O. Ref. _
Drawn HKO Date 11-2025
Checked JHK Date 11-2025
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RONALD LU & PARTNERS
呂元祥建築師事務所

Project Title

Drawing Title
SECTION B-B

Project No. 25018NT
Scale 1:400 Issue Date NOV 2025
Drawing No. A/GBP_06

Drawing Purpose

Appendix 2.1 Detailed Sewerage Impact Assessment Calculations

Table 1 Calculation for Sewage Generation Rate of the Proposed Development (Overall)

1. International School			
Total number of teachers & staff	=	633	people
Design flow for teachers & staff	=	0.28	m^3/person/day (refer to Table T-2 of GESF , Community, Social & Personal Services)
Total number of students	=	3000	people
Design flow for students	=	0.04	m^3/person/day (refer to Table T-2 of GESF, School Student)
Sewage Generation rate	=	**297.2**	m^3/day
2. Indoor Swimming Pool			
Assumed area	=	2500	m^2
Assumed depth of water	=	1.5	m
Volume of water	=	3750.0	m^3
Turnover Rate	=	4.0	hr (CAP132, Section 42 Swimming Pools Regulation (covered))
Surface loading rate of filter	=	50.0	$m^3/m^2/hr$
Filter areas required	=	18.8	m^2
Backwashing flow rate	=	30.0	$m^3/m^2/hr$
Design flow for backwashing	=	562.5	m^3/hr
Backwash duration	=	3.0	min/day
Backwash generation rate	=	28.13	m^3/day
Backwash generation rate	=	**156.3**	litre/sec
3. Dormitory for Student and Staff			
Number of residents	=	2243	residents
Design flow	=	0.19	m^3/day (Institutional and Special Class in Table T-1 of GESF)
Sewage generation rate	=	**426.2**	m^3/day
4. Canteen			
Assumed Floor Area	=	4500	m^2
Assumed floor area per employee	=	19.6	m^2 per employee -- (refer to Table 8 of CIFSUS - Restaurant)
Total number of employees	=	230	employees
Design flow for commercial employees	=	1.58	m^3/employee/day -- (refer to Table T-2 of GESF - J10 Restaurant & Hotels)
Sewage generation rate	=	**362.6**	m^3/day
Total Flow from the Proposed Development			
Flow rate	=	1086.0	m^3/day
Flow rate with P_{CIF}	=	1086.0	m^3/day (refer to Table T-4 of GESF - North District - 1.00)

Table 2
Calculation for Sewage Generation Rate of the Proposed Development (West)

1. International School			
Total number of teachers & staff	=	338	people
Design flow for teachers & staff	=	0.28	m^3/person/day (refer to Table T-2 of GESF , Community, Social & Personal Services)
Total number of students	=	1,600	people
Design flow for students	=	0.04	m^3/person/day (refer to Table T-2 of GESF, School Student)
Sewage Generation rate	=	**158.6**	m^3/day
2. Indoor Swimming Pool			
Assumed area	=	1250	m^2
Assumed depth of water	=	1.5	m
Volume of water	=	1875.0	m^3
Turnover Rate	=	4.0	hr (CAP132, Section 42 Swimming Pools Regulation (covered))
Surface loading rate of filter	=	50.0	$m^3/m^2/hr$
Filter areas required	=	9.4	m^2
Backwashing flow rate	=	30.0	$m^3/m^2/hr$
Design flow for backwashing	=	281.3	m^3/hr
Backwash duration	=	3.0	min/day
Backwash generation rate	=	14.06	m^3/day
Backwash generation rate	=	**78.1**	litre/sec
3. Dormitory for Student and Staff			
Number of residents	=	2243	people
Design flow	=	0.19	m^3/day (Institutional and Special Class in Table T-1 of GESF)
Sewage generation rate	=	**426.2**	m^3/day
4. Canteen			
Assumed floor area	=	1500	m^2
Assumed floor area per employee	=	19.6	m^2 per employee -- (refer to Table 8 of CIFSUS - Restaurant)
Total number of employees	=	77	employees
Design flow for commercial employees	=	1.58	m^3/employee/day -- (refer to Table T-2 of GESF - J10 Restaurant & Hotels)
Sewage generation rate	=	**120.9**	m^3/day
Total Flow from the Proposed Development (West)			
Flow rate	=	705.7	m^3/day
Flow rate with P_{CIF}	=	705.7	m^3/day (refer to Table T-4 of GESF - North District - 1.0)

Table 3
Calculation for Sewage Generation Rate of the Proposed Development (East)

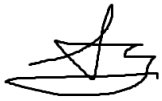
1. International School			
Total number of teachers & staff	=	295	people
Design flow for teachers & staff	=	0.28	m^3/person/day (refer to Table T-2 of GESF , Community, Social & Personal Services)
Total number of students	=	1400	people
Design flow for students	=	0.04	m^3/person/day (refer to Table T-2 of GESF, School Student)
Sewage Generation rate	=	**138.6**	m^3/day
2. Indoor Swimming Pool			
Assumed area	=	1250	m^2
Assumed depth of water	=	1.5	m
Volume of water	=	1875.0	m^3
Turnover Rate	=	4.0	hr (CAP132, Section 42 Swimming Pools Regulation (covered))
Surface loading rate of filter	=	50.0	$m^3/m^2/hr$
Filter areas required	=	9.4	m^2
Backwashing flow rate	=	30.0	$m^3/m^2/hr$
Design flow for backwashing	=	281.3	m^3/hr
Backwash duration	=	3.0	min/day
Backwash generation rate	=	14.06	m^3/day
Backwash generation rate	=	**78.1**	litre/sec
3. Dormitory for Student and Staff			
Number of residents	=	0	people (All dormitory are at the West Portion of the Site)
Design flow	=	0.19	m^3/day (Institutional and Special Class in Table T-1 of GESF)
Sewage generation rate	=	**0.0**	m^3/day
4. Canteen			
Assumed floor area	=	3000	m^2
Assumed floor area per employee	=	19.6	m^2 per employee -- (refer to Table 8 of CIFSUS - Restaurant)
Total number of employees	=	153	employees
Design flow for commercial employees	=	1.58	m^3/employee/day -- (refer to Table T-2 of GESF - J10 Restaurant & Hotels)
Sewage generation rate	=	**241.7**	m^3/day
Total Flow from the Proposed Development (East)			
Flow rate	=	380.3	m^3/day
Flow rate with P_{CIF}	=	380.3	m^3/day (refer to Table T-4 of GESF - North District - 1.0)

Prepared by

Ramboll Hong Kong Limited

PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

DRAINAGE IMPACT ASSESSMENT

Date	**October 2025**
Prepared by	**Sunny Yeung / Kim Leung** **Assistant Engineer/ Senior Engineer**
Signed7	
Approved by	**Tony Cheng** **Senior Manager**
Signed	
Project Reference	**HENKTSISEI00**
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Annex 2 Design of Drainage System
Annex 3 Master Layout Plan

1. INTRODUCTION

1.1 Project Background

1.1.1 Ramboll Hong Kong Limited in associated with Binnies Hong Kong Limited (Binnies) has been commissioned to carry out drainage impact assessment (DIA) for the Proposed International School in Kwu Tung South. (Application Site).

1.1.2 The Application Site is divided into eastern and western parts by the River Beas, with a few local village houses. Access to the Application Site is provided via Hang Tau Road and village track roads (**Figure F1**).

1.1.3 The Application Site covers an area of approximately 127,000 m².

1.1.4 The Proposed Development consists of Kindergartens, primary schools, middle & high schools and ancillary facilities, with a total plot ratio of 1.35. The scheduled year of completion of 2036. A summary of key information of the Proposed Development is shown below in **Table 1-1**

Table 1-1 Development Schedule

Development Parameter	Proposed Development
Site Area	About 127,000 m²
Plot Ratio	About 1.35
Total Gross Floor Area (GFA)	About 171,000 m²
Anticipated Population	
Kindergarten	About 600
Grades 1-5	About 1,000
Grades 6-12	About 1,400

1.1.5 This DIA is prepared based on available information and requirement under Drainage Services Department (DSD) Advice Note No. 1 – Application to Drainage Impact Assessment Process to Private Sector Projects.

2. EXISTING DRAINAGE NETWORK

2.1 The Application Site

2.1.1 The Application Site is currently occupied by a number of temporary structures. The land use of the Application Site will be changed to approximately 70% paved after the Proposed Development.

2.2 Existing Catchment Drainage

2.2.1 The Application Site lies in the middle reach of River Beas. River Beas runs from the south to the north and discharges into River Indus, which further discharges into Shenzhen River to the north. Shenzhen River flows to the west and eventually discharges into Deep Bay.

2.2.2 River Beas locates within the Indus Basin forming one of the tributaries of River Indus and serves the southwest part of the Indus Basin.

2.3 Site Drainage and Sub-catchments

2.3.1 The identified relevant sub-catchments for and in vicinity of the Application Site are shown on **Figure F2**. The existing drainage system in vicinity of the Application Site is shown on **Figure F3**.

2.3.2 Runoff from all sub-catchments (Catchments 1 to 5) drains to the River Beas. Runoff from these area passes through the Application Site and discharge to the River Beas.

2.4 Ground Levels

2.4.1 The western part of the Application Site slopes downward from the south and west in general, and dipped gently towards River Beas.

2.4.2 The existing ground level of the western part falls gently from +16.0 mPD to +12 mPD (south to north). The existing ground level of the eastern part falls gently from +13.0 mPD to +10 mPD (north to south).

3. METHODOLOGY AND DESIGN PARAMETERS

3.1.1 The assessment criteria for the Application Site is based on the standards as set out in DSD's 5th edition of Stormwater Drainage Manual (SDM) published in January 2018 and the updates pursuant to Corrigendum No. 1/2022 and No.1/2024 promulgated. Table 10 of the SDM provides the recommended design return periods based on flood levels for the various drainage systems depending on the land use.

3.1.2 According to the SDM, 50-year design return period is recommended for the design of drainage system.

3.1.3 The Ration Method is adopted for evaluating the runoff for the drainage design.

3.1.4 According to the rainfall zone as shown in Figure 3 of SDM, the Application Site is located in an area that adopts rainfall statistics of North District Area. Hence, the design storm constants are adopted in accordance with Table 3a of the SDM corrigendum No.1/2024. The storm constants are shown in **Table 3.1** below.

Table 3-1 Storm Constants with 50-year Return Period

Parameter	Value
A	474.6
B	2.9
C	0.371

3.1.5 The runoff coefficient (C) values for the Rational Method were adopted in accordance with Clause 7.5.2 of the SDM. A table of runoff coefficient is shown in **Table 3.2** below.

Table 3-2 Runoff Coefficient

Land Use	Runoff Coefficient (C) Value
Unpaved (e.g. existing tree groups)	0.35
Paved (e.g. concrete)	0.95

3.1.6 The effects of climate change are considered in accordance with Clause 6.8, Table 28 and Table 29 of the SDM corrigendum No.1/2022. A summary of increased rainfall due to climate change is shown in **Table 3.3** below.

Table 3-3 Rainfall Increase due to Climate Change

Classification	Rainfall Increase (%)	Sea Level Rise (m)
End of 21st Century (2081-2100)	16.0	0.47

3.1.7 Design allowance in the End-21st Century is considered in the calculation as well and summarized in **Table 3–4**.

Table 3-4 Design Allowance in End of 21st Century

Rainfall Increase	Sea Level Rise (m)
12.1%	0.23

3.1.8 The roughness values of pipes were adopted in accordance with Table 13 and 14 of the SDM. As a conservation approach, 10% (of flow area) sedimentation is adopted for the proposed drainage system in design checking. A summary of roughness coefficients is shown in **Table 3-5** below.

Table 3-5 Roughness Coefficient

Classification	Roughness Coefficient	Remarks
Poor Precast Concrete Pipes	Colebrook-White k_s = 0.6mm	Concrete Pipe
Rectangular Channel	Mannings'n = 0.015	Peripheral drains

4. POTENTIAL DRAINAGE IMPACT OF PROPOSED DEVELOPMENT

4.1.1 The Application Site will be developed into an international school. The Master Layout Plan of the Proposed Development is shown in **Annex 3**.

4.2 Changes to Drainage Characteristics

4.2.1 The Proposed Development will induce changes to the land use of the Application Site. The percentage of paved area comprising building blocks, concrete structures, roads and other paved facilities will be increased. As a result, there will be an increase in surface runoff generated from the Application Site.

4.3 Volume of Runoff and Peak Runoff Rate

4.3.1 The increase in the peak runoff rates due to the Proposed Development at the Application Site against various rainstorm return periods are shown in **Tables 4-1** below.

4.3.2 The relevant calculations are included in **Annex 1**.

Table 4-1 Estimated Peak Runoff Rate

Return Period	Peak Runoff Rate (m^3/s)		
	Before Development (1)	After Development (2)	Increase in Runoff (2) — (1)
50 years	4.45	6.47	2.02
200 years	5.05	7.33	2.28

5. PROPOSED DRAINAGE IMPACT MITIGATION MEASURES

5.1.1 To intercept existing overland flow blocked by the Proposed Development, surface channels will be provided along the site boundaries of the Proposed Development. The catchment of the flow intercepted and the proposed drainage system are shown on **Figure F4**.

5.1.2 The flow will be discharged to River Beas through the proposed 1000 mm to 1650 mm diameter drains along the public road inside the Application Site.

5.1.3 Details of the hydraulic calculations and results of hydraulic check of the proposed drainage system along the public road inside the Application Site are contained in **Annex 2**.

5.1.4 The runoff from the Proposed Development and its adjacent catchment as shown in **Figure F4**.

6. MAINTENANCE AND CONSTRUCTION CONSIDERATIONS

6.1 Maintenance Considerations

6.1.1 The parties responsible for managing and maintaining the completed proposed drainage works are listed in **Table 6-1**.

Table 6-1 Preliminary Management and Maintenance Matrix

Description of Proposed Drainage Works	Management and Maintenance Party
Stormwater Storage facilities, box culverts, drainage pipes and associated manholes on public roads or outside boundaries	Drainage Services Department
U-channels and associated catchpits which received the surface water inside the Development sites	The Applicant
Stormwater drainage facilities exclusively used for public roads (I.e. carriageway and footpaths.)	Highways Department

6.2 Construction Considerations

6.2.1 The contractor for the Proposed Development will be responsible for the maintenance of the existing drainage conditions in the vicinity of the Proposed Development during the construction stage. The contract documents will specify that the contractor must put in place appropriate temporary drainage measures to ensure that the flooding conditions during the construction period must not be worse than those under existing conditions.

6.2.2 The contractor's attention shall be drawn to the diversion of the existing U-channel along the boundary of the Proposed Development. Such measures must be submitted to the Authorised Person or his representative for approval before construction activities commence.

6.2.3 A settling basin will be installed to intercept runoff from the construction Application Site before discharge into the River Beas.

7. CONCLUSION

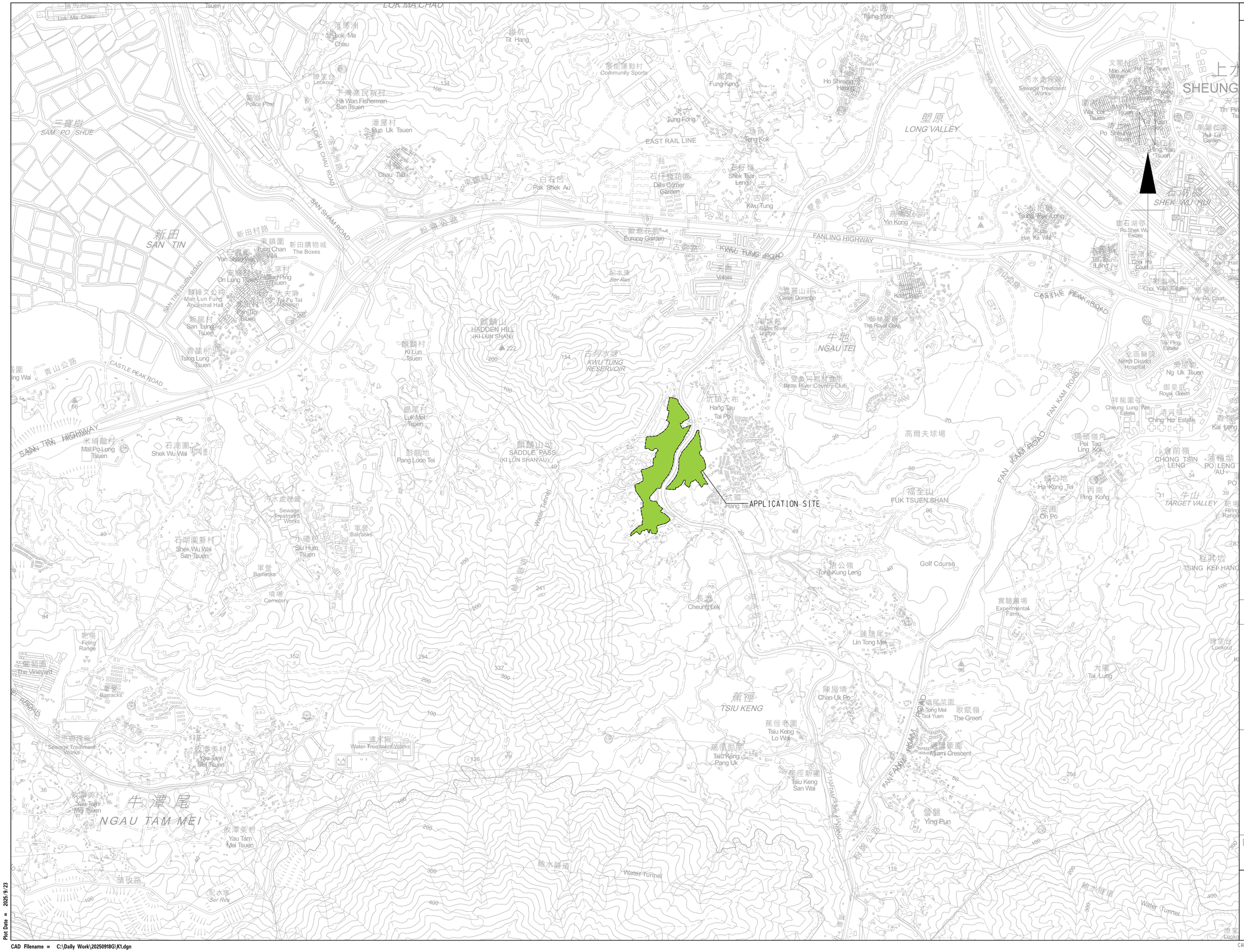
7.1.1 The runoff from the Proposed Development and from the adjacent catchment area of the Proposed Development will be diverted by the project proponent. The runoff will be conveyed by the proposed 1000 mm to 1800 mm diameter drains along public road inside Application Site.

7.1.2 The runoff generated from the Proposed Development and its adjacent catchment would only utilize about 84% of the proposed 1000 mm diameter drain, about 87% of the proposed 1500 mm diameter drain, about 52% of the proposed 1650 mm diameter drain and about 85% of the proposed 1800 mm diameter drain. The proposed drain in public road inside Application Site discharges into the upstream section of the River Beas.

7.1.3 Temporary drainage measures shall be implemented to ensure that the flooding conditions will not be worsened during construction. Periodic inspection by the Authorized Person or his representative will be carried out during construction.

7.1.4 With the implementation of the above proposed drainage measures and temporary drainage works, the Proposed Development at the Application Site is technically feasible from drainage impact point of view.

Figures



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LEGEND:

THE APPLICATION SITE

Initial	Date	Checked	Date

Project

S16 APPLICATION FOR PROPOSED INTERNATIONAL SCHOOL IN KWU TUNG SOUTH

Title

LOCATION PLAN

Figure No.	Scale
K1	A3 1 : 20000

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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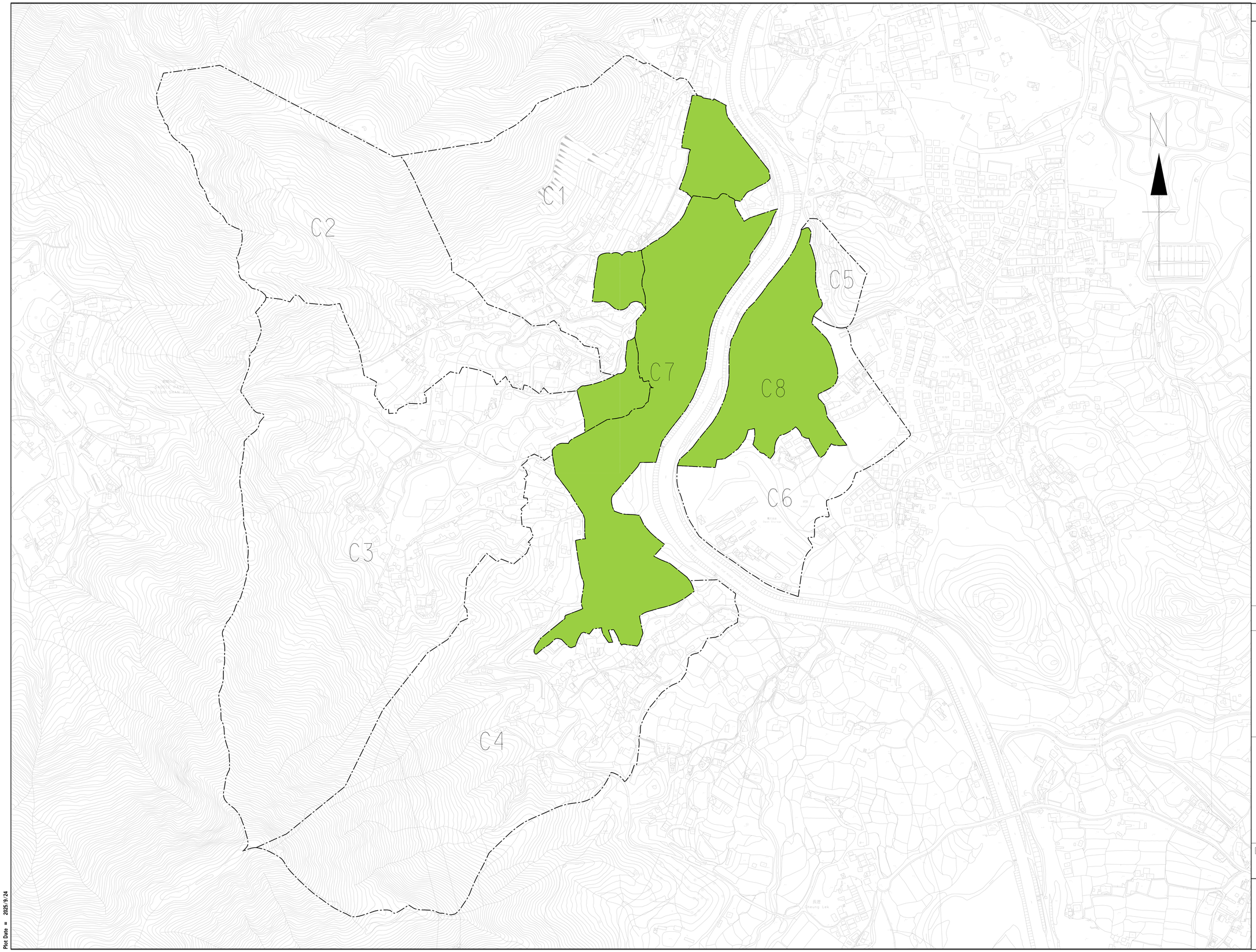

LEGEND:

THE APPLICATION SITE

CATCHMENT	AREA (m^2)
C1	99045
C2	122826
C3	211950
C4	164692
C5	7603
C6	46806
C7	91816
C8	35300

Initial	Date	Checked	Date

Project

S16 APPLICATION FOR PROPOSED INTERNATIONAL SCHOOL IN KWU TUNG SOUTH

Title

EXISTING CATCHMENT AREA

Figure No.	Scale
K2	A3 1 : 5000

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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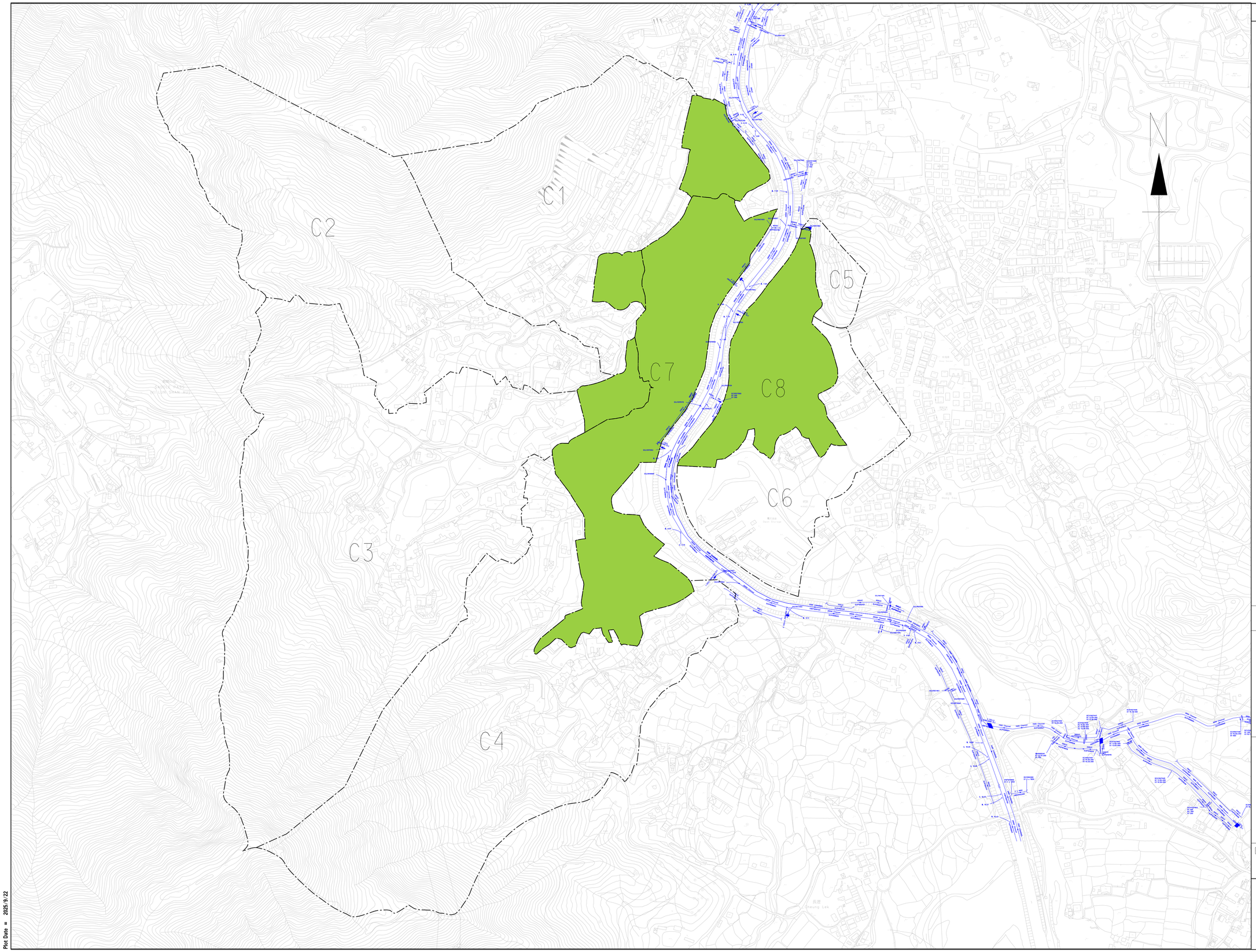

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LEGEND:

- EXISTING CATCHPIT
- THE APPLICATION SITE
- EXISTING DRAINAGE PIPE/ CHANNEL

Initial	Date	Checked	Date

Project

S16 APPLICATION FOR PROPOSED INTERNATIONAL SCHOOL IN KWU TUNG SOUTH

Title

EXISTING DRAINAGE SYSTEMS

Figure No.	Scale
K3	A3 1 : 5000

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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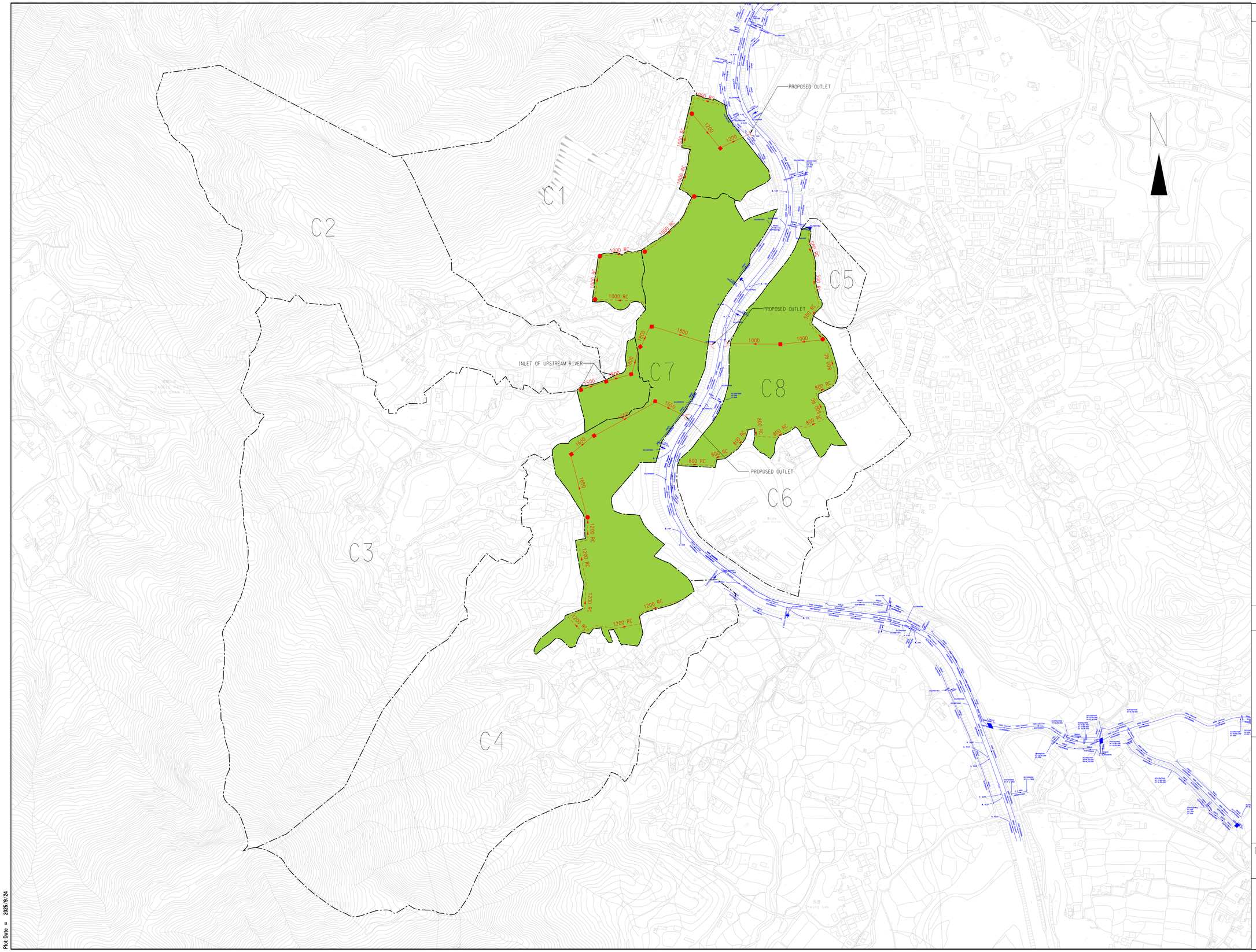

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LEGEND:

- EXISTING CATCHPIT
- THE APPLICATION SITE
- EXISTING DRAINAGE PIPE/ CHANNEL
- PROPOSED CATCHPIT
- PROPOSED MANHOLE
- RC. 800 — PROPOSED 800mm RECTANGULAR CHANNEL
- RC. 1000 — PROPOSED 1000mm RECTANGULAR CHANNEL
- RC. 1200 — PROPOSED 1200mm RECTANGULAR CHANNEL
- DIA. 1000 — PROPOSED 1000mm DIAMETER STORMWATER DRAIN
- DIA. 1200 — PROPOSED 1500mm DIAMETER STORMWATER DRAIN
- DIA. 1500 — PROPOSED 1500mm DIAMETER STORMWATER DRAIN
- DIA. 1650 — PROPOSED 1650mm DIAMETER STORMWATER DRAIN
- DIA. 1800 — PROPOSED 1650mm DIAMETER STORMWATER DRAIN
- PROPOSED OUTLET

CATCHMENT	AREA (m^2)
C1	99045
C2	122826
C3	211950
C4	164692
C5	7603
C6	46806
C7	91816
C8	35300

Initial	Date	Checked	Date

Project

S16 APPLICATION FOR PROPOSED INTERNATIONAL SCHOOL IN KWU TUNG SOUTH

Title

EXISTING DRAINAGE SYSTEMS

Figure No. K4

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賓尼斯工程顧問有限公司

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Annex 1
Runoff Calculations

Capacity Check:	Catchment C7 and C8 (Before development) (50 years)			
Design Parameters				
Design storm		50	year return period	
Storm constants	a	474.6		
	b	2.9		
	c	0.371		
Average Slope	H	0.30	m/100m	
Length of flow	L	110	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	6.25	min	
Unpaved area	A_U	88900	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	38100	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	127,000	m^2	
Runoff coef.	$C_{average}$	0.53		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

Capacity Check:	Catchment C7 and C8 (Before development) (50 years)					
Peak Runoff						
Flow time	t_f	=	Lj / Vj			
		=	3.38	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	9.63	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	238.01	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**4.454**	m^3/s		

Capacity Check:	Catchment C7 and C8 (After development) (50 years)			
Design Parameters				
Design storm		50	year return period	
Storm constants	a	474.6		
	b	2.9		
	c	0.371		
Average Slope	H	0.30	m/100m	
Length of flow	L	110	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	6.25	min	
Unpaved area	A_U	38100	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	88900	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	127,000	m^2	
Runoff coef.	$C_{average}$	0.77		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

Capacity Check:	Catchment C7 and C8 (After development) (50 years)					
Peak Runoff						
Flow time	t_f	=	Lj / Vj			
		=	3.38	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	9.63	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	238.01	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**6.470**	m^3/s		

Capacity Check:	Catchment C7 and C8 (Before development) (200 years)			
Design Parameters				
Design storm		200	year return period	
Storm constants	a	501.4		
	b	2.45		
	c	0.348		
Average Slope	H	0.30	m/100m	
Length of flow	L	110	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	6.25	min	
Unpaved area	A_U	88900	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	38100	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	127,000	m^2	
Runoff coef.	$C_{average}$	0.53		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

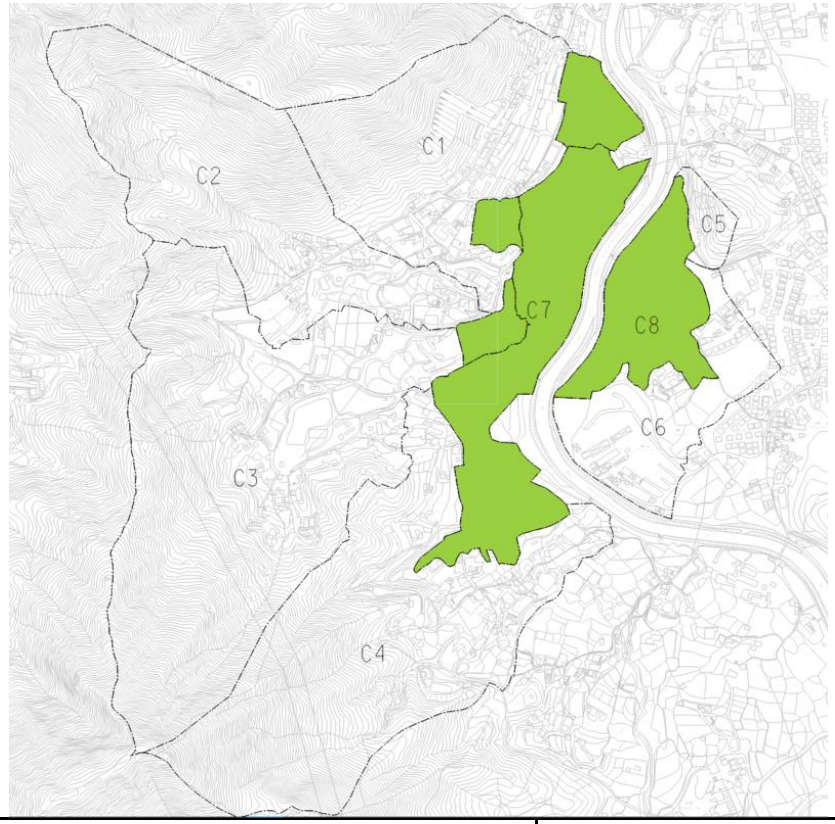
Capacity Check:	Catchment C7 and C8 (Before development) (200 years)					
Peak Runoff						
Flow time	t_f	=	Lj / Vj			
		=	3.38	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	9.63	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	269.91	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**5.051**	m^3/s		

Capacity Check:	Catchment C7 and C8 (After development) (200 years)			
Design Parameters				
Design storm		200	year return period	
Storm constants	a	501.4		
	b	2.45		
	c	0.348		
Average Slope	H	0.30	m/100m	
Length of flow	L	110	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	6.25	min	
Unpaved area	A_U	38100	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	88900	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	127,000	m^2	
Runoff coef.	$C_{average}$	0.77		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

Capacity Check:	Catchment C7 and C8 (After development) (200 years)					
Peak Runoff						
Flow time	t_f	=	Lj / Vj			
		=	3.38	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	9.63	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	269.91	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**7.338**	m^3/s		

Annex 2
Design of Drainage System

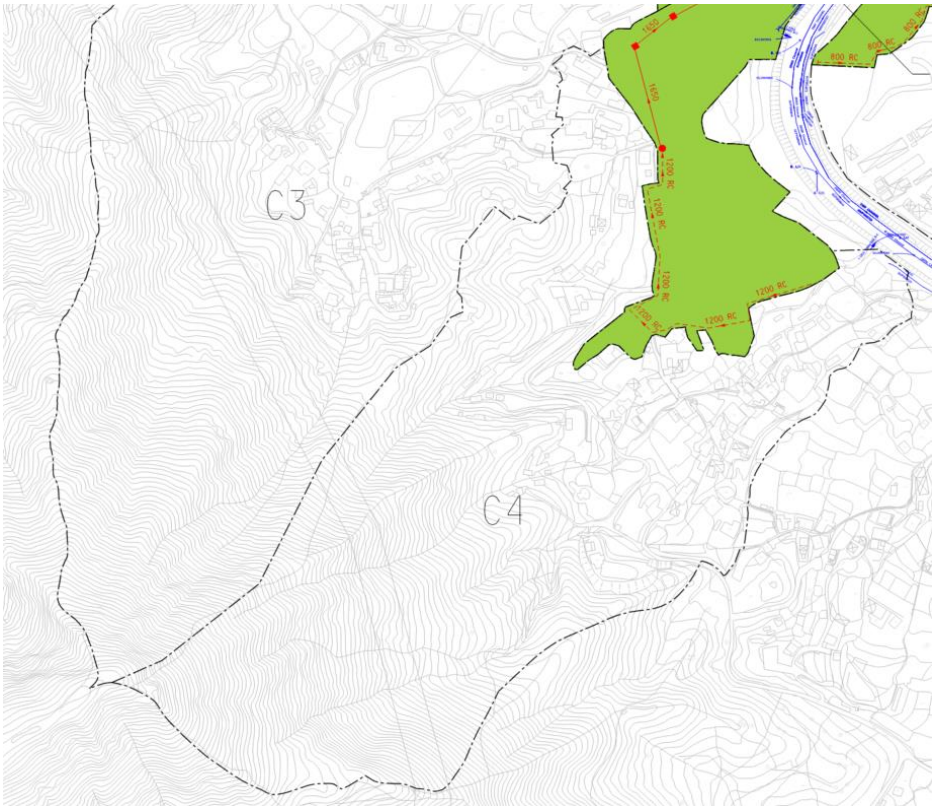
Summary of Catchment Characteristic



Cachment	Area (m^2)	Before Development		After Development		Runoff Coefficient	
		Paved Area (m^2)	Unpaved Area (m^2)	Paved Area (m^2)	Unpaved Area (m^2)	Paved	Unpaved
C1	99045	29,714	69,332	29,714	69,332	0.95	0.35
C2	122,826	36,848	85,978	36,848	85,978	0.95	0.35
C3	211,950	63,585	148,365	63,585	148,365	0.95	0.35
C4	164,692	49,408	115,284	49,408	115,284	0.95	0.35
C5	7,603	2,281	5,322	2,281	5,322	0.95	0.35
C6	46,806	14,042	32,764	14,042	32,764	0.95	0.35

Annex 2

Capacity Check: Catchment C4



Design Parameters				
Design storm		50	year return period	
Storm constants	a	474.6		
	b	2.9		
	c	0.371		
Average Slope	H	28.00	m/100m	
Length of flow	L	770	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	17.21	min	
Unpaved area	A_U	115284	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	49408	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	164,692	m^2	
Runoff coef.	$C_{average}$	0.53		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

Capacity Check: Catchment C4

Peak Runoff

Flow time	t_f	=	Lj / Vj			
		=	3.38	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	20.58	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	188.51	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**4.574**	m^3/s		

Using Manning's Equation for Rectangular-Channel Geometry

Width	**1200**	**mm**	Input Parameter
Height	**1200**	**mm**	Input Parameter
Area	1.440	m^2	
Wetted Perimeter	3.600	m	
Hydraulic Radius	0.400	m	
Slope [Decimal]	**0.01**		Slope = tan θ
Manning's Roughness	**0.015**		for Fair concrete Pipe

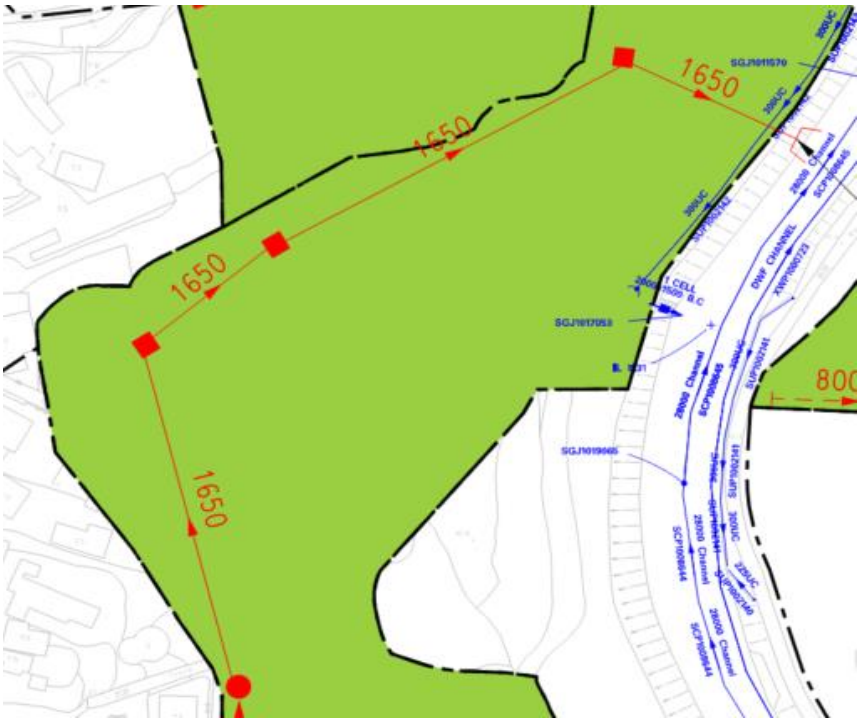
Full Flow Velocity Vu	3.62	m/s
Full Flow Discharge	5.21	m^3/s
	312701	l/min

Assume the maximum water depth in the Rectangular-channel be 100% of the size

Water Depth	Area	Wetted Perimeter	Hydraulic Radius	Velocity	Discharge
[mm]	m^2	m	m	m/s	m^3/s
1200	1.440	3.600	0.400	3.619	**5.212**

> Peak runoff Q_p

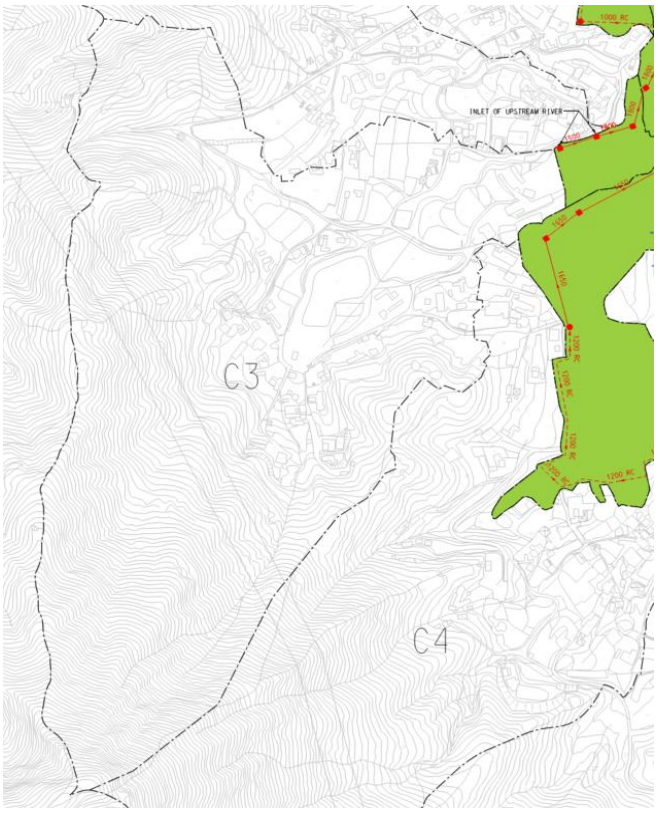
Capacity Check: Proposed 1650mm Drain



Design Parameters				
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		
Peak runoff from C3	=	4.57	m^3/s	

Capacity of Drain				
Trial pipe size	D	=	**1650**	mm
Hydraulic radius	R = D/4	=	0.4125	m
Mean velocity (Colebrook-White)	$\bar{V}$	=	$-\sqrt{32gRS_f}\log\left[\frac{k_s}{14.8R}+\frac{1.255v}{R\sqrt{(32gRS_f)}}\right]$	
		=		
		=	4.55	m/s
Capacity provided	Q	=	V x Cross Section Area of Drain	
		=	**9.72**	m^3/s
Allow 10% Area for Siltation	$Q_{90\%}$	=	**8.75**	m^3/s
		>	Peak runoff Q_p	
Utilization		=	$Qp/Q_{90\%}$	
		=	52%	

Capacity Check: Catchment C3

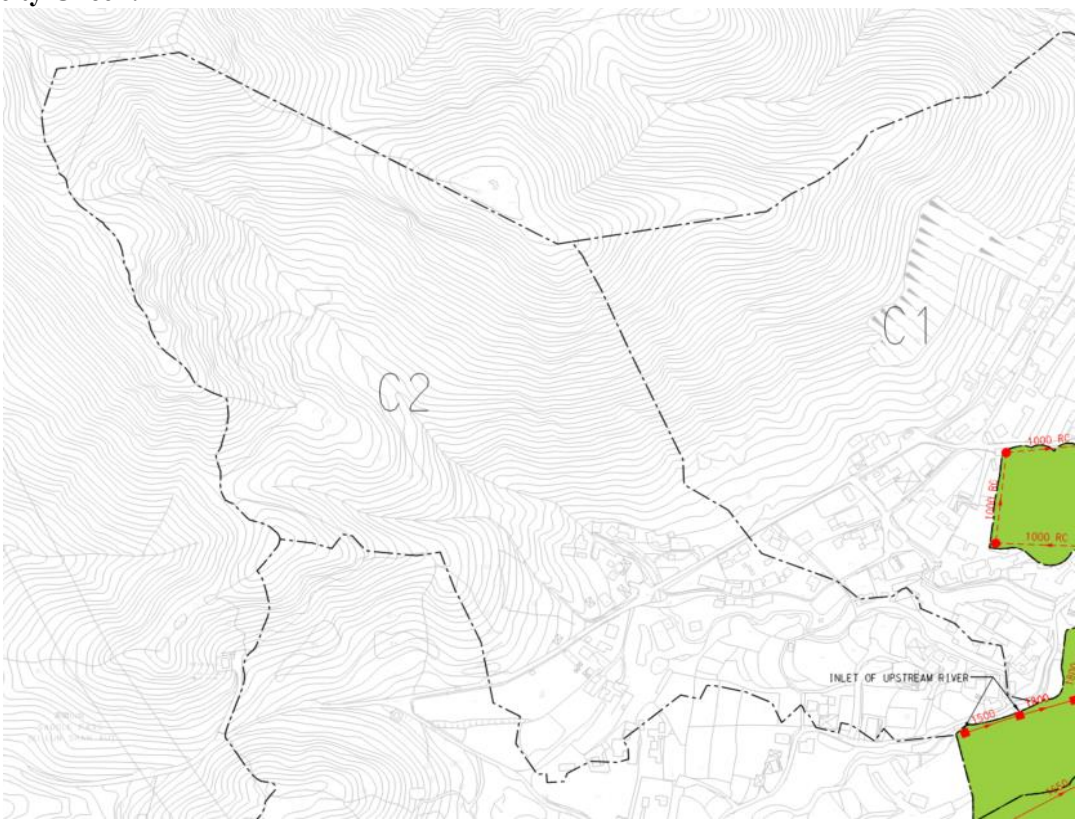


Design Parameters				
Design storm		50	year return period	
Storm constants	a	474.6		
	b	2.9		
	c	0.371		
Average Slope	H	26.00	m/100m	
Length of flow	L	770	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	17.03	min	
Unpaved area	A_U	148365	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	63585	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	211,950	m^2	
Runoff coef.	$C_{average}$	0.53		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

Annex 2

Capacity Check:	Catchment C3					
Peak Runoff						
Flow time	t_f	=	Lj / Vj			
		=	3.20	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	20.23	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	189.57	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**5.920**	m^3/s		
Capacity of Drain						
Trial pipe size	D	=	**1500**	mm		
Hydraulic radius	R = D/4	=	0.375	m		
Mean velocity (Colebrook-White)	$\bar{V}$	=	$-\sqrt{32gRS_f}\log\left[\frac{k_s}{14.8R}+\frac{1.255v}{R\sqrt{(32gRS_f)}}\right]$			
		=				
		=	4.29	m/s		
Capacity provided	Q	=	V x Cross Section Area of Drain			
		=	**7.58**	m^3/s		
Allow 10% Area for Siltation	$Q_{90\%}$	=	**6.82**	m^3/s		
		<	Peak runoff Q_p			
Utilization		=	$Qp/Q_{90\%}$			
		=	87%			

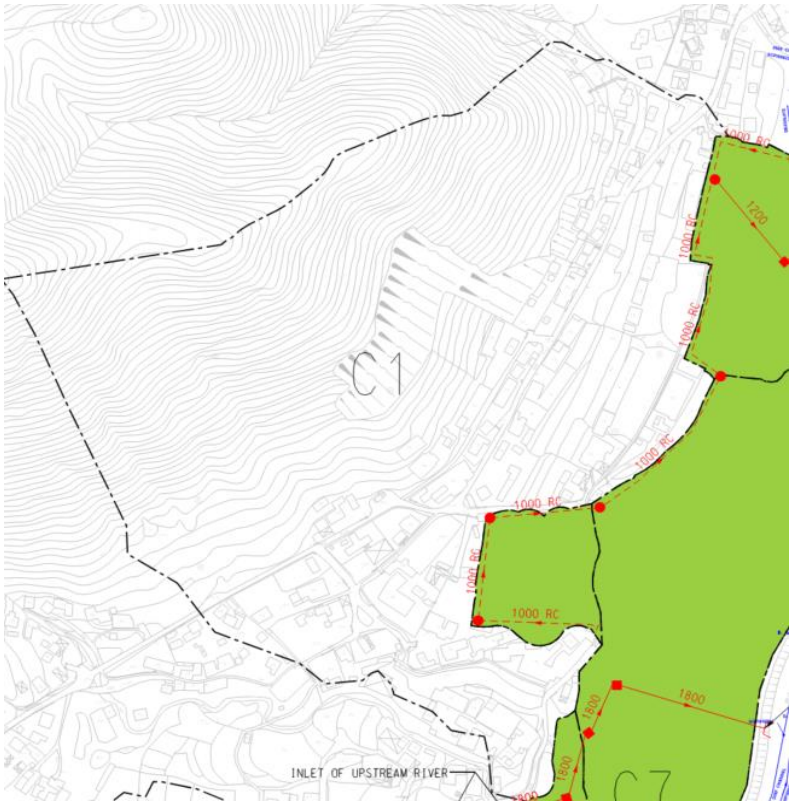
Capacity Check: Catchment C2



Design Parameters				
Design storm		50	year return period	
Storm constants	a	474.6		
	b	2.9		
	c	0.371		
Average Slope	H	26.00	m/100m	
Length of flow	L	770	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	17.98	min	
Unpaved area	A_U	85978	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	36848	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	122,826	m^2	
Runoff coef.	$C_{average}$	0.53		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

Capacity Check:	Catchment C2					
Peak Runoff						
Flow time	t_f	=	Lj / Vj			
		=	3.20	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	21.18	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	186.75	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**3.380**	m^3/s		
Peak runoff from catchment 3		=	**5.920**	m^3/s		
Total runoff		=	**9.300**			
Capacity of Drain						
Trial pipe size	D	=	**1800**	mm		
Hydraulic radius	R = D/4	=	0.45	m		
Mean velocity (Colebrook-White)	$\bar{V}$	=	$-\sqrt{32gRS_f}\log[\frac{k_s}{14.8R}+\frac{1.255v}{R\sqrt{(32gRS_f)}}]$			
		=				
		=	4.79	m/s		
Capacity provided	Q	=	V x Cross Section Area of Drain			
		=	**12.20**	m^3/s		
Allow 10% Area for Siltation	$Q_{90\%}$	=	**10.98**	m^3/s		
		<	Peak runoff Q_p			
Utilization		=	$Qp/Q_{90\%}$			
		=	85%			

Capacity Check: Catchment C1



Design Parameters				
Design storm		50	year return period	
Storm constants	a	474.6		
	b	2.9		
	c	0.371		
Average Slope	H	20.00	m/100m	
Length of flow	L	770	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	19.37	min	
Unpaved area	A_U	69332	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	29714	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	99,045	m^2	
Runoff coef.	$C_{average}$	0.53		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

Capacity Check: Catchment C1

Peak Runoff

Flow time	t_f	=	Lj / Vj			
		=	3.81	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	23.18	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	181.32	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**2.646**	m^3/s		

Using Manning's Equation for Rectangular-Channel Geometry

Width	**1000**	**mm**	Input Parameter
Height	**1000**	**mm**	Input Parameter
Area	1.000	m^2	
Wetted Perimeter	3.000	m	
Hydraulic Radius	0.333	m	
Slope [Decimal]	**0.01**		Slope = tan θ
Manning's Roughness	**0.015**		for Fair concrete Pipe

Full Flow Velocity Vu	3.20	m/s
Full Flow Discharge	3.20	m^3/s
	192300	l/min

Assume the maximum water depth in the Rectangular-channel be 100% of the size

Water Depth	Area	Wetted Perimeter	Hydraulic Radius	Velocity	Discharge
[mm]	m^2	m	m	m/s	m^3/s
1000	1.000	3.000	0.333	3.205	**3.205**

> Peak runoff Q_p

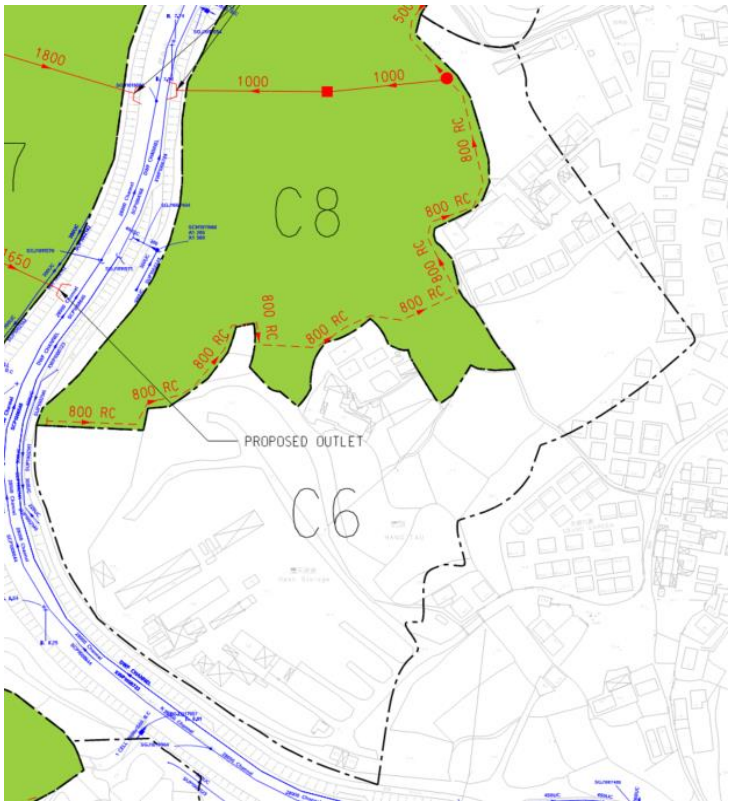
Capacity Check: Proposed 1200mm Drain for Catchment C1

Design Parameters					
Surface roughness	k_s		0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v		1.14	mm^2/s	
Frictional gradient	S_f	1 in	100		
Peak runoff from C1		=	2.65	m^3/s	

Capacity of Drain				
Trial pipe size	D	=	**1200**	mm
Hydraulic radius	R = D/4	=	0.3	m
Mean velocity (Colebrook-White)	$\bar{V}$	=	$-\sqrt{32gRS_f}\log\left[\frac{k_s}{14.8R}+\frac{1.255v}{R\sqrt{(32gRS_f)}}\right]$	
		=		
		=	3.74	m/s
Capacity provided	Q	=	V x Cross Section Area of Drain	
		=	**4.23**	m^3/s
Allow 10% Area for Siltation	$Q_{90\%}$	=	**3.81**	m^3/s
		>	Peak runoff Q_p	
Utilization		=	$Qp/Q_{90\%}$	
		=	70%	

Annex 2

Capacity Check: Catchment C6



Design Parameters				
Design storm		50	year return period	
Storm constants	a	474.6		
	b	2.9		
	c	0.371		
Average Slope	H	0.30	m/100m	
Length of flow	L	240	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	15.07	min	
Unpaved area	A_U	23403	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	23403	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	46,806	m^2	
Runoff coef.	$C_{average}$	0.65		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

Capacity Check: Catchment C6

Peak Runoff

Flow time	t_f	=	Lj / Vj			
		=	4.42	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	19.49	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	191.86	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**1.623**	m^3/s		

Using Manning's Equation for Rectangular-Channel Geometry

Width	**800**	**mm**	Input Parameter
Height	**800**	**mm**	Input Parameter
Area	0.640	m^2	
Wetted Perimeter	2.400	m	
Hydraulic Radius	0.267	m	
Slope [Decimal]	**0.01**		Slope = tan θ
Manning's Roughness	**0.015**		for Fair concrete Pipe

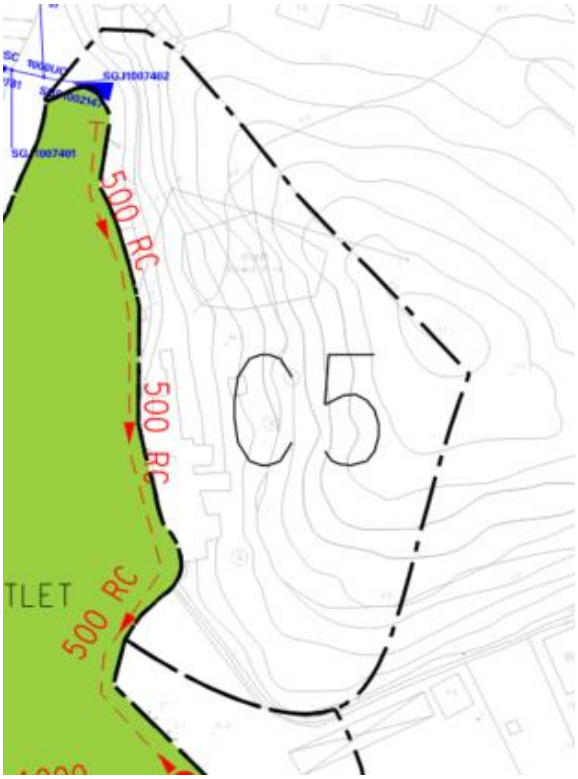
Full Flow Velocity Vu	2.76	m/s
Full Flow Discharge	1.77	m^3/s
	106060	l/min

Assume the maximum water depth in the Rectangular-channel be 100% of the size

Water Depth	Area	Wetted Perimeter	Hydraulic Radius	Velocity	Discharge
[mm]	m^2	m	m	m/s	m^3/s
800	0.640	2.400	0.267	2.762	**1.768**

> Peak runoff Q_p

Capacity Check: Catchment C5



Design Parameters				
Design storm		50	year return period	
Storm constants	a	474.6		
	b	2.9		
	c	0.371		
Average Slope	H	3.00	m/100m	
Length of flow	L	70	m	
Inlet time $t_0=0.14465L/H^{0.2}A^{0.1}$	t_0	3.33	min	
Unpaved area	A_U	3041	m^2	
Runoff coef.	C_U	0.35		
Paved area	A_P	4562	m^2	
Runoff coef.	C_P	0.95		
Catchment area	A_{Total}	7,603	m^2	
Runoff coef.	$C_{average}$	0.71		
Surface roughness	k_s	0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v	1.14	mm^2/s	
Frictional gradient	S_f 1 in	100		

Capacity Check: Catchment C5

Peak Runoff

Flow time	t_f	=	Lj / Vj			
		=	6.05	min		
Time of concentration	t_c	=	$t_0 + t_f$			
		=	9.38	min		
Intensity	i	=	$a / (t_c + b)^c$	x	1.281	*(Climate Change Factor)*
		=	239.79	mm/hr		(SDM Table 28)
Peak runoff	Q_p	=	0.278 C i A			
		=	**0.360**	m^3/s		

Using Manning's Equation for Rectangular-Channel Geometry

Width	**500**	**mm**	Input Parameter
Height	**500**	**mm**	Input Parameter
Area	0.250	m^2	
Wetted Perimeter	1.500	m	
Hydraulic Radius	0.167	m	
Slope [Decimal]	**0.01**		Slope = tan θ
Manning's Roughness	**0.015**		for Fair concrete Pipe

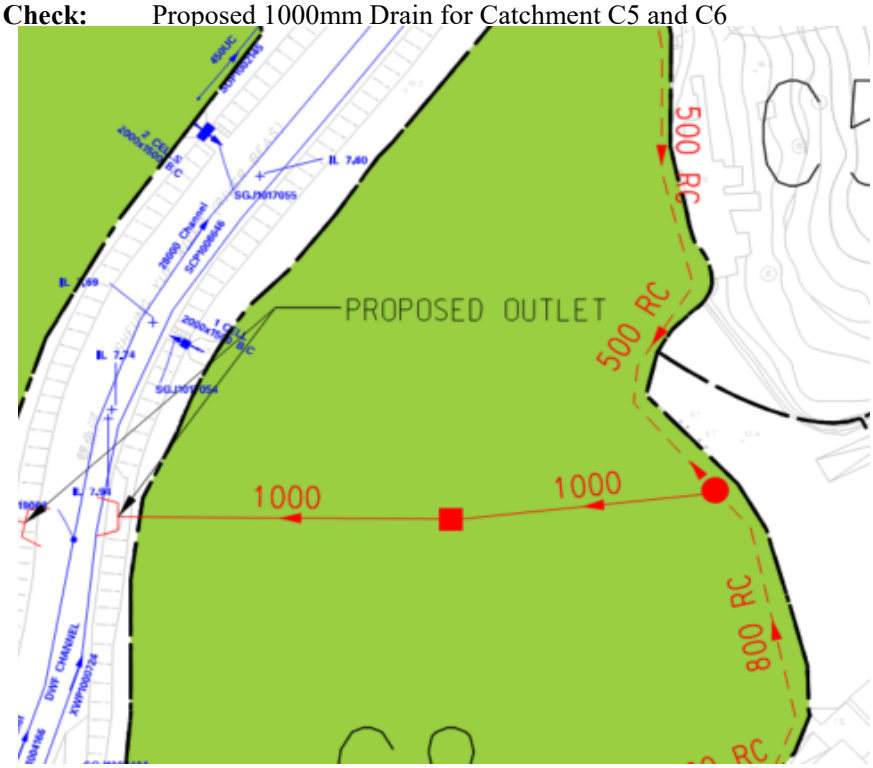
Full Flow Velocity Vu	2.02	m/s
Full Flow Discharge	0.50	m^3/s
	30285	l/min

Assume the maximum water depth in the Rectangular-channel be 90% of the size

Water Depth	Area	Wetted Perimeter	Hydraulic Radius	Velocity	Discharge
[mm]	m^2	m	m	m/s	m^3/s
450	0.250	1.500	0.167	2.019	**0.505**

> Peak runoff Q_p

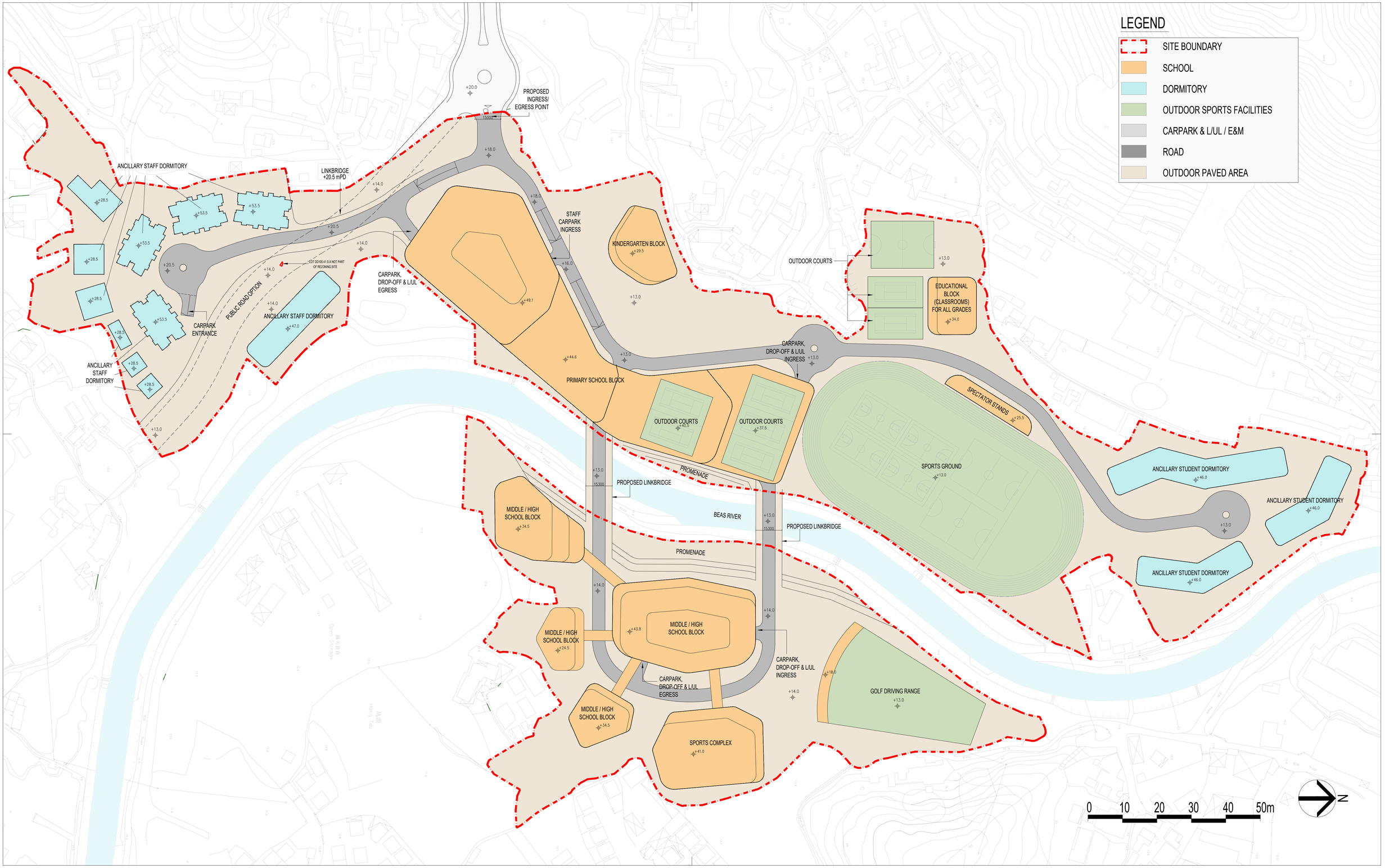
Capacity Check: Proposed 1000mm Drain for Catchment C5 and C6



Design Parameters					
Surface roughness	k_s		0.6	mm	For Poor Precast Concrete Pipes
kinematic viscosity	v		1.14	mm^2/s	
Frictional gradient	S_f	1 in	100		
Peak runoff from C5		=	0.36	m^3/s	
Peak runoff from C6		=	1.62	m^3/s	
Total runoff		=	1.98	m^3/s	
Capacity of Drain					
Trial pipe size	D	=	**1000**	mm	
Hydraulic radius	R = D/4	=	0.25	m	
Mean velocity (Colebrook-White)	$\bar{V}$	=	$-\sqrt{32gRS_f}\log\left[\frac{k_s}{14.8R}+\frac{1.255v}{R\sqrt{(32gRS_f)}}\right]$		
		=			
		=	3.34	m/s	
Capacity provided	Q	=	V x Cross Section Area of Drain		
		=	**2.63**	m^3/s	
Allow 10% Area for Siltation	$Q_{90\%}$	=	**2.36**	m^3/s	
		>	Peak runoff Q_p		
Utilization		=	$Qp/Q_{90\%}$		
		=	84%		

Annex 2

Annex 3
Master Layout Plan



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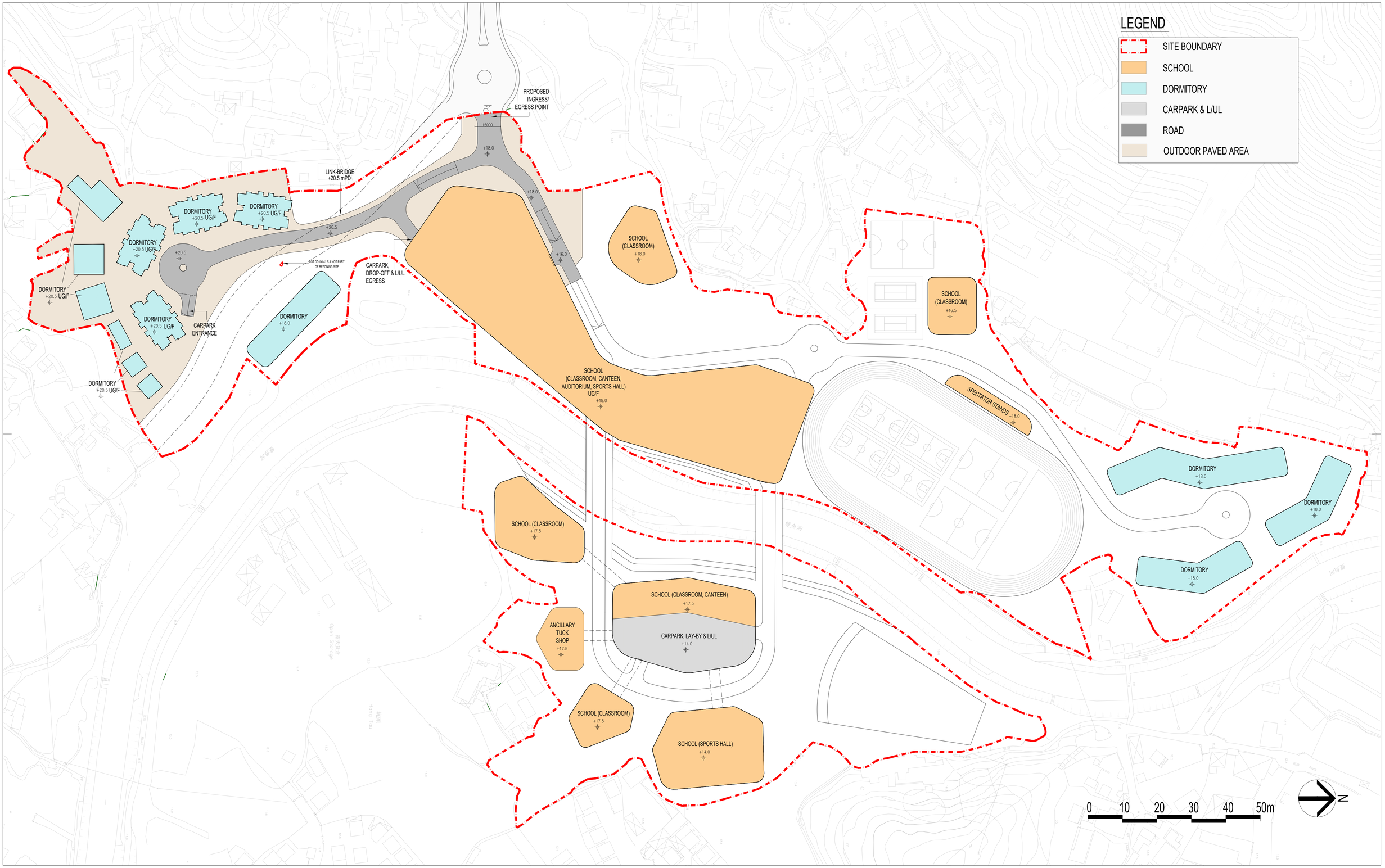
呂元祥建築師事務所

Project Title
PROPOSED INTERNATIONAL SCHOOL DEVELOPMENT AT KWU TUNG SOUTH

Drawing Title
FULL PHASE – MASTER LAYOUT PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_01_

Drawing Purpose



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Drawing Title
FULL PHASE –
FIRST FLOOR PLAN

Project No. 25018NT
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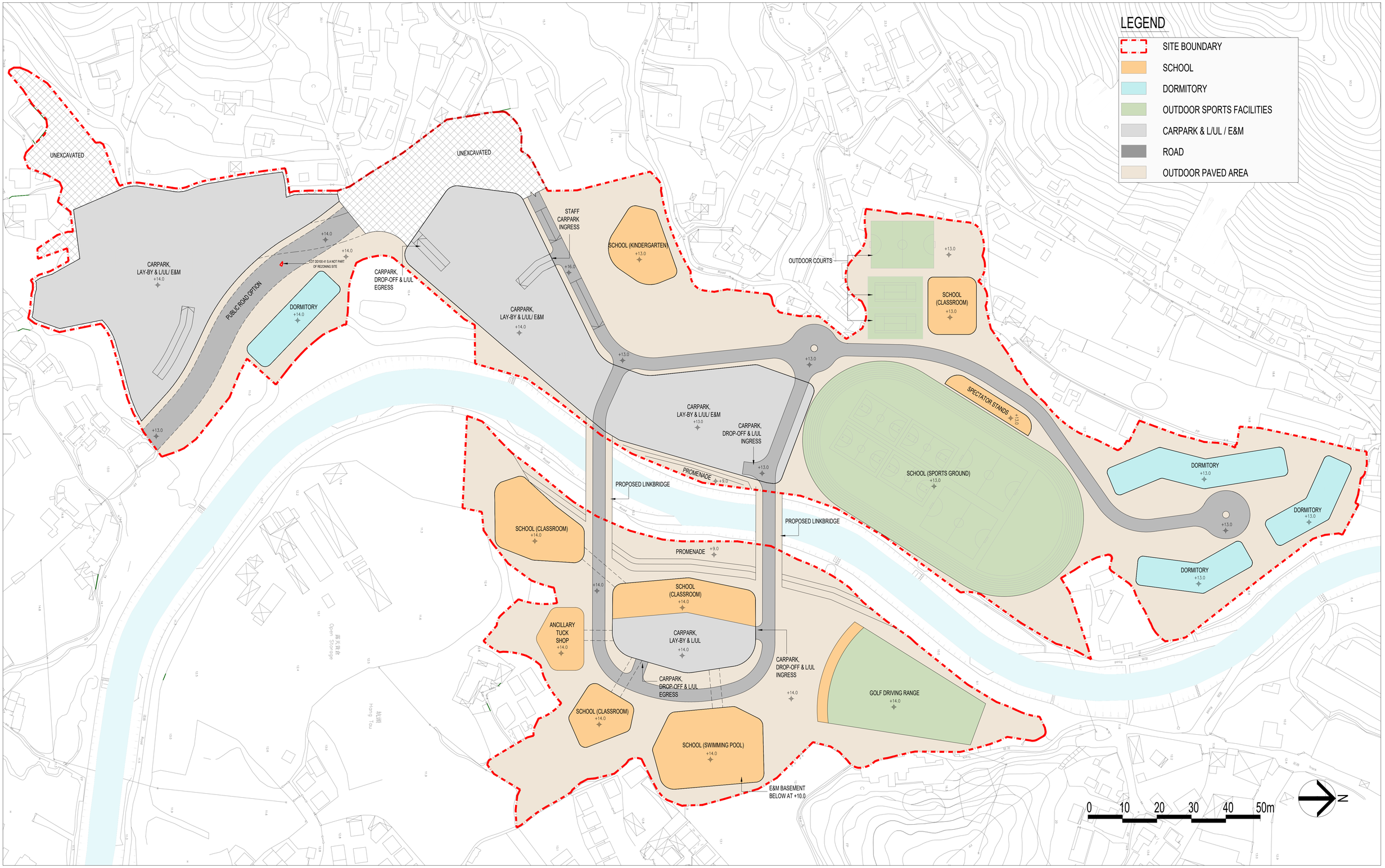
Drawing No. A/GBP_03

Drawing Purpose



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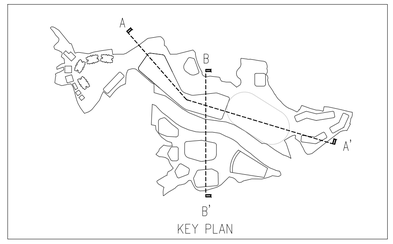
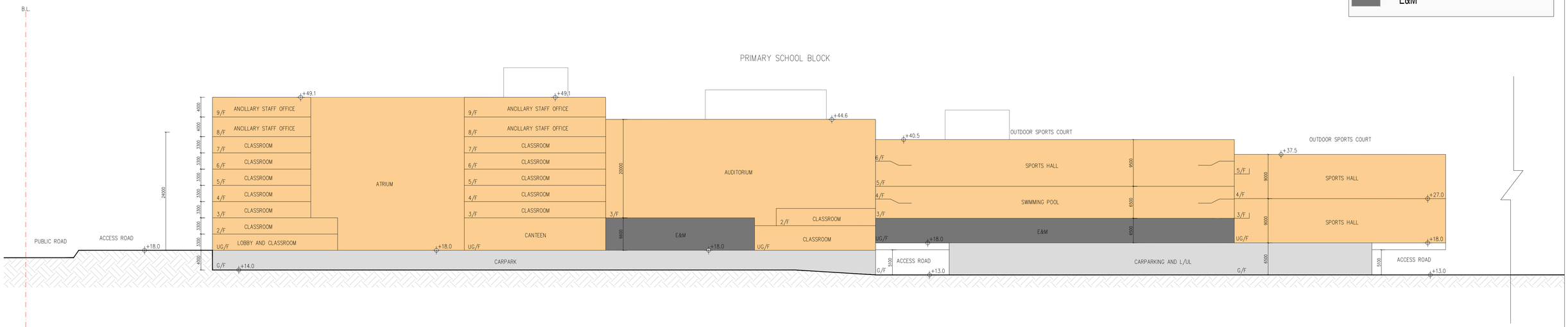


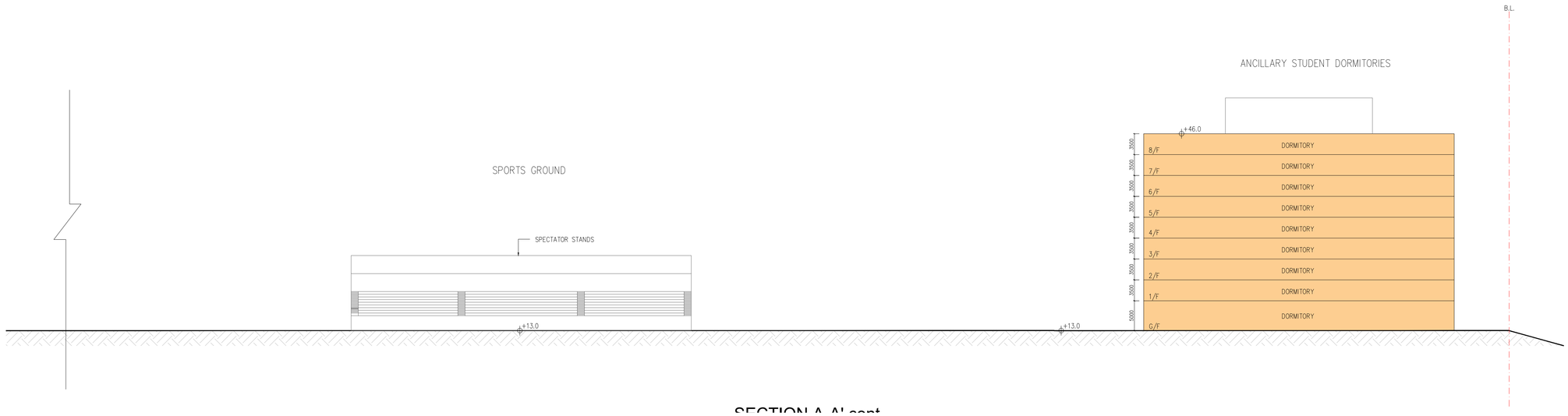
KEY PLAN

LEGEND

- SITE BOUNDARY
- SCHOOL
- DORMITORY
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



SECTION A-A'



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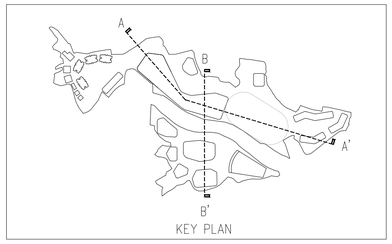
Drawing No. A/GBP_05

Drawing Purpose



KEY PLAN

LEGEND

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- DORMITORY
- OUTDOOR SPORTS FACILITIES
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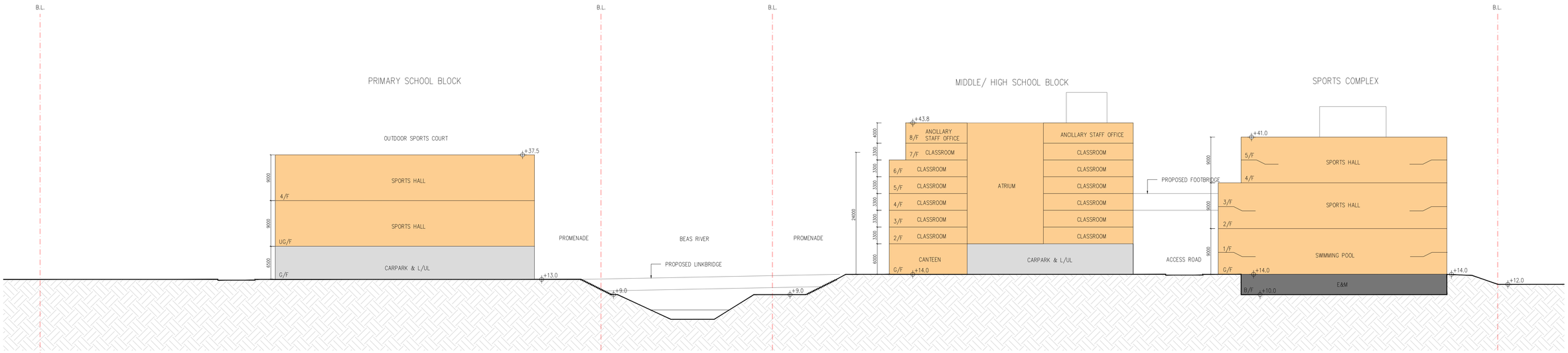

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Drawing No. A/GBP_06

Drawing Purpose

Prepared by

Ramboll Hong Kong Limited

PROPOSED SCHOOL AT VARIOUS LOTS IN D.D. 94, 98 & 100 AND ADJOINING GOVERNMENT LAND, KWU TUNG SOUTH, NEW TERRITORIES

WATER SUPPLY IMPACT ASSESSMENT

Date	**October 2025**
Prepared by	**Sally Chiu** **Assistant Environmental Consultant**
Signed	
Approved by	**Tony Cheng** **Senior Manager**
Signed	
Project Reference	**HENKTSISEI00**
Document No.	**R9854_v1.0.docx**

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Figure 1.1 Location of the Application Site and its Environs

Figure 2.1 Existing and Proposed Freshwater Supply System for Proposed Development

APPENDICES

Appendix 1.1 Master Layout Plan

Appendix 2.1 Records Obtained from Water Supplies Department

Appendix 2.2 Detailed Water Supply Impact Assessment Calculations

1. INTRODUCTION

1.1 Project Background

1.1.1 The applicants, Global King Investment Limited, Winpost (HK) Investment Limited and Rand Development Limited, seek to rezone the current "Agriculture" zoning with a minor portion of "Green Belt" of the Application Site as outlined in the approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22.

1.1.2 The Water Supply Impact Assessment (WSIA) is prepared as a technical supporting document to estimate the water demand arising from the Proposed Development.

1.2 The Application Site and Its Environs

1.2.1 The Application Site is situated along the Sheung Yue River which separate the Application Site into 2 portions (West and East Portions). It is bounded by Sheung Shui Hang Tau Village Sitting Out Area No.2 to the North and Po Shu Garden to the East.

1.2.2 **Figure 1.1** shows the location of the Application Site and its environment.

1.3 Proposed Development

1.3.1 Under the current application, the Application Site is proposed for an International School development. Details of the proposed development schedule are summarised in **Table 1-1** below and the layout plan is shown in **Appendix 1.1**.

Table 1-1 Development Schedule of the Proposed Development

Portions Located	West	East
Site Area (m^2)	~92,000	~35,000
Total GFA (m^2)	~126,850	~44,150
No. of Blocks	18	6
No. of Classrooms	76	65
No. of Students	1,600	1,400
No. of Staff (Including Teaching and Non-Teaching)	338	295
No. of Student/ Staff who can Live in the Accommodation	2243	0
Completion Year	2036	

2. WATER SUPPLY IMPACT ASSESSMENT

2.1 Scope of Work

2.1.1 The aim of this study is to assess whether the capacity of the existing water supply facilities serving the Application Site is sufficient to cope with the water demands from the Proposed Development. Data and record plans from Water Supplies Department (WSD) were obtained to facilitate the WSIA.

2.2 Assessment Criteria and Methodology

2.2.1 The freshwater and the salt water of the Proposed Development is supplied by Kwu Tung Fresh Water Service Reservoir. Although the Kwu Tung Fresh Water Service Reservoir is fully loaded at present, it is understood that the Tong Hang No. 3 Fresh Water Service Reservoir (TH3FWSR) is under construction under Contract No. 3/WSD/18 for taking up part of the supply zone of KTFWSR. The infrastructure project under Public Works Project (PWP) No.: 9355WF, which includes the construction of TH3FWSR, shal be completed by fourth quarter of 2024. Freshwater supply to TH3FWSR will be provided by Tai Po Tau Treatment Works and the storage capacity of TH3FWSR is about 55,000 m^3.

2.2.2 The capacity of Kwu Tung Reservoir is summarized in **Table 2-1**.

Table 2-1 Capacity of Kwu Tung water service reservoirs

	Kwu Tung Fresh Water Service Reservoir
Capacity (m^3)	30,853

2.2.3 The existing fresh water supply network are provided in **Appendix 2.1**.

2.2.4 Reference has been made to the Water Supplies Department's Departmental Instruction 1309 (WSD DI 1309), as well as Environmental Protection Department's (EPD's) Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF). In addition, Planning Department's (PlanD) Commercial and Industrial Floor Space Utilization Survey (CIFUS) have also been used.

2.2.5 WSD DI 1309 sets out the design criteria for water supplies in Hong Kong and includes unit water demands for various classes of consumer. Apart from the above, EPD's GESF includes unit sewage flow factors for various residential development.

2.2.6 For this WSIA, WSD's data from DI 1309 has been referenced to provide unit water demands for the various population categories with the relevant EPD GESF unit sewage flow factors to determine overall unit water demand factors. PlanD's CIFSUS has been also referenced for calculation of the population density where necessary.

2.2.7 The unit water demand has been combined with the relevant development parameters to assess the future water demands, from which the potential impacts have been assessed. Calculations for the water demands of the Proposed Development are included in **Appendix 2.2**.

2.3 Assessment of Water Demand

2.3.1 The water demand from the West and East Portions of the Proposed Development have been assessed in **Table 2-2** and **Table 2-3** below and detailed calculation is shown in **Appendix 2.2**.

Table 2-2 Water Demand from the Proposed Development (West Portion)

	Daily Water Demand (without swimming pool)	Peaking Factor	Peak Water Demand (without swimming pool)	Peak Water Demand (with swimming pool)
	m^3/day		m^3/day	m^3/day
Freshwater	953.2	3	2859.6	4734.6
Flushing Water	303.2	2	606.4	606.4
			Total	**5341.0 [1]**

[1] Assume both fresh water and flushing water are provided from Kwu Tung Water Service Reservoir

Table 2-3 Water Demand from the Proposed Development (East Portion)

	Daily Water Demand (without swimming pool)	Peaking Factor	Peak Water Demand (without swimming pool)	Peak Water Demand (with swimming pool)
	m^3/day		m^3/day	m^3/day
Freshwater	102.4	3	307.2	2182.2
Flushing Water	139.7	2	279.4	279.2
			Total	**2461.6 [1]**

[1] Assume both fresh water and flushing water are provided from Kwu Tung Water Service Reservoir

2.3.2 According to **Table 2-2** and **Table 2-3**, the Proposed Development will be taking minor portions of the freshwater reservoirs capacities (i.e. 17.3% from West Portion and 8.0% from East Portion).

2.3.3 Given that the contribution is not significant, the Proposed Development would unlikely pose any adverse impact to existing service reservoir capacity.

2.4 Existing and Proposed Water Supply System

2.4.1 The existing water supply system is provided in **Appendix 2.1**.

2.4.2 200mm freshwater mains are proposed to connect the West Portion and East Portion of the Proposed Development and the existing freshwater main for freshwater and flushing water supply. The alignment of the existing and proposed freshwater mains is shown in **Figure 2.1**.

2.5 Construction and Maintenance

2.5.1 The Project Proponent will take up the design and construction cost for the future water main connection. The detailed design and assessment will be submitted for comments/ approval at detailed design stage.

2.5.2 The responsibility for operation and maintenance of the proposed waterworks will be discussed and agreed with WSD and relevant departments during detailed design stage.

3. CONCLUSION

3.1.1 The water supply impact assessment has been carried out for the Proposed Development. The assessment results show that the peak water demand from the West and East Portions of the Proposed Development are 5341.0 m^3/day and 2461.6 m^3/day which only accounts for the existing Kwu Tung Fresh Water Service Reservoirs of 17.3% and 8.0% respectively.

3.1.2 Given that the contribution is not significant, the Proposed Development would unlikely pose any adverse impact to existing freshwater supply system.

Figures

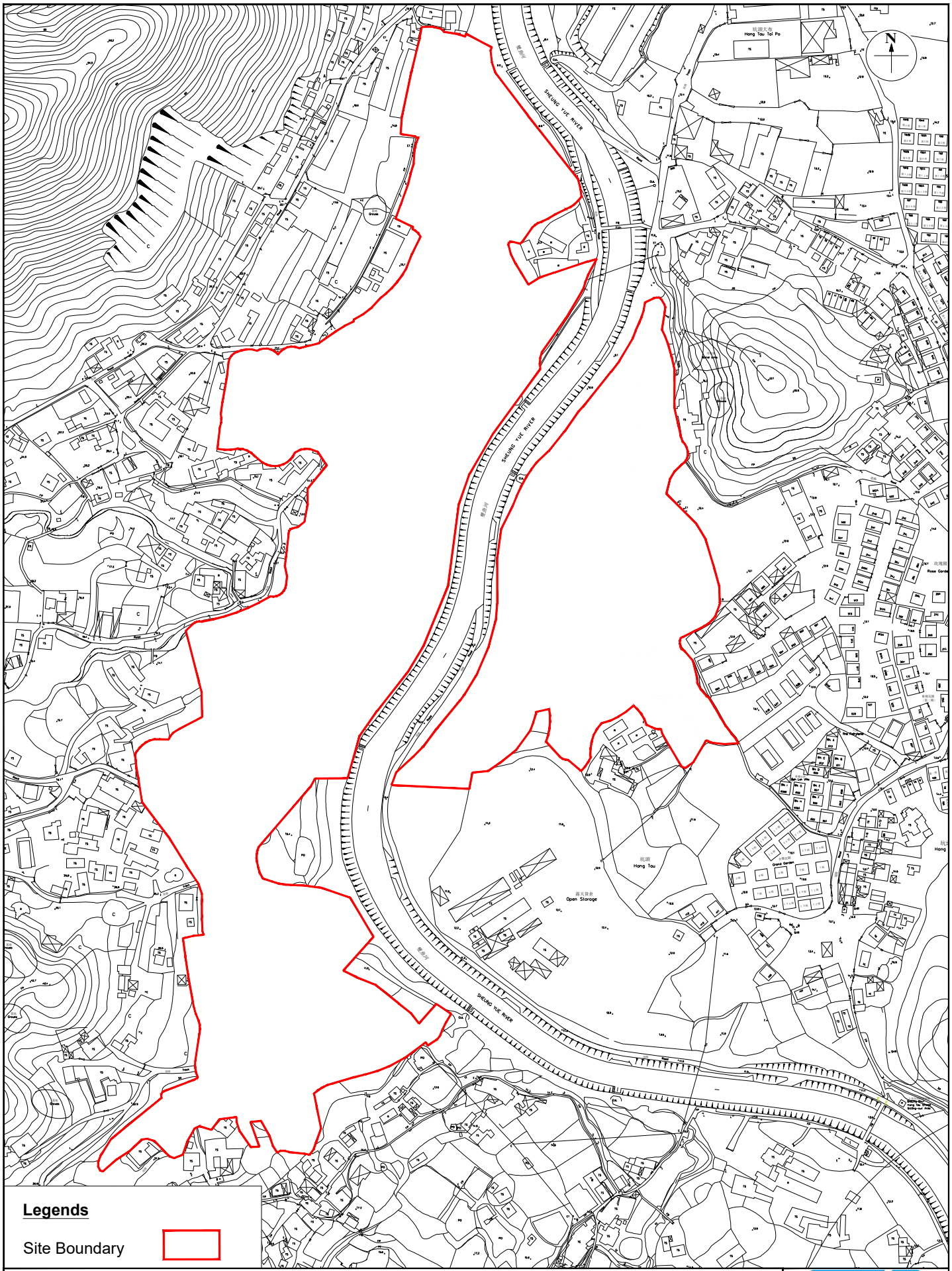

Figure: 1.1

Title: Site Location and its environs

Project: Proposed School at Various Lots in D.D.94, 98 & 100 and Adjoining Government Land, Kwu Tung South, New Territories

RAMBOLL

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Checked by:	TC
Rev.:	1.0
Date:	Aug 2025

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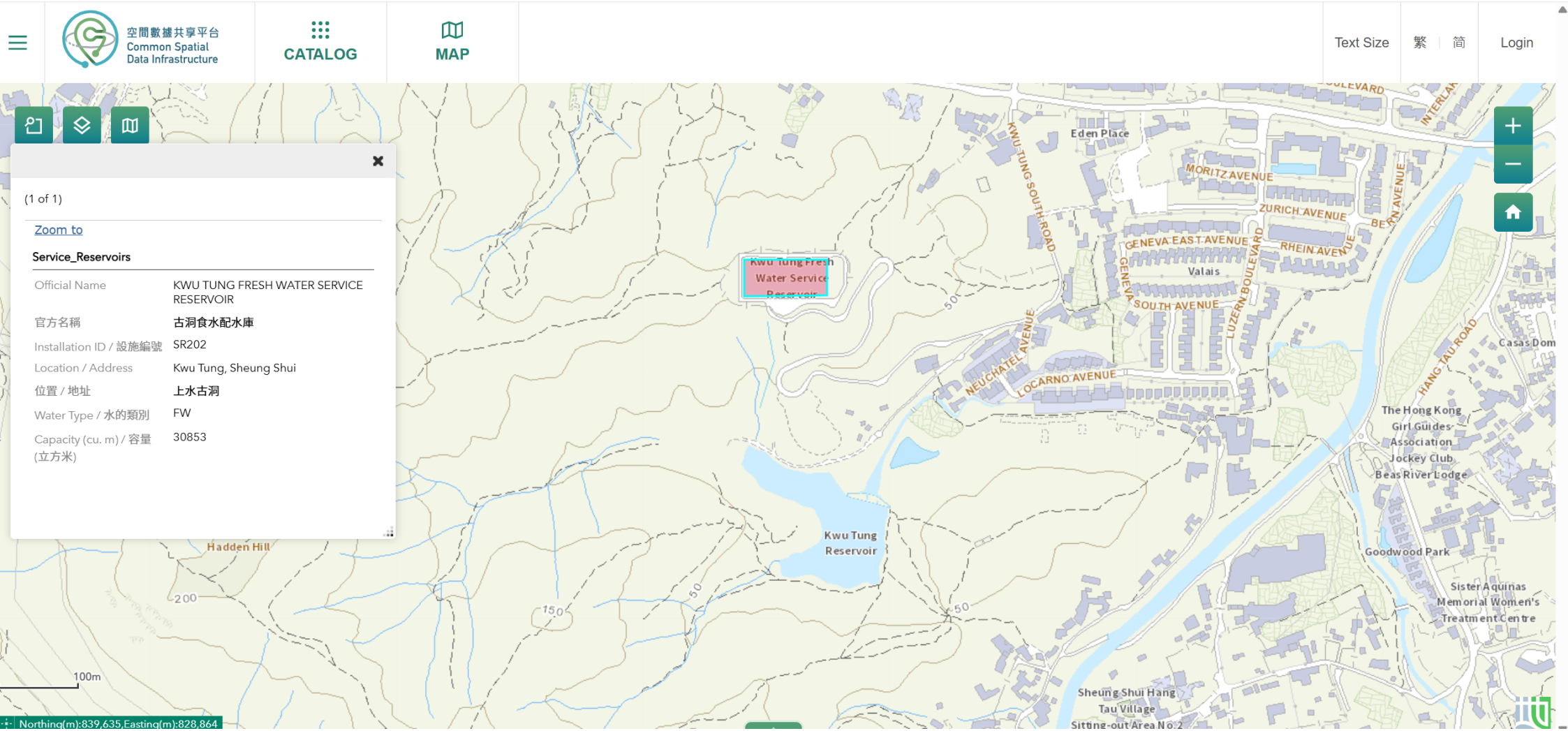
Figure 2.1a: Existing Fresh Water Service Reservoir



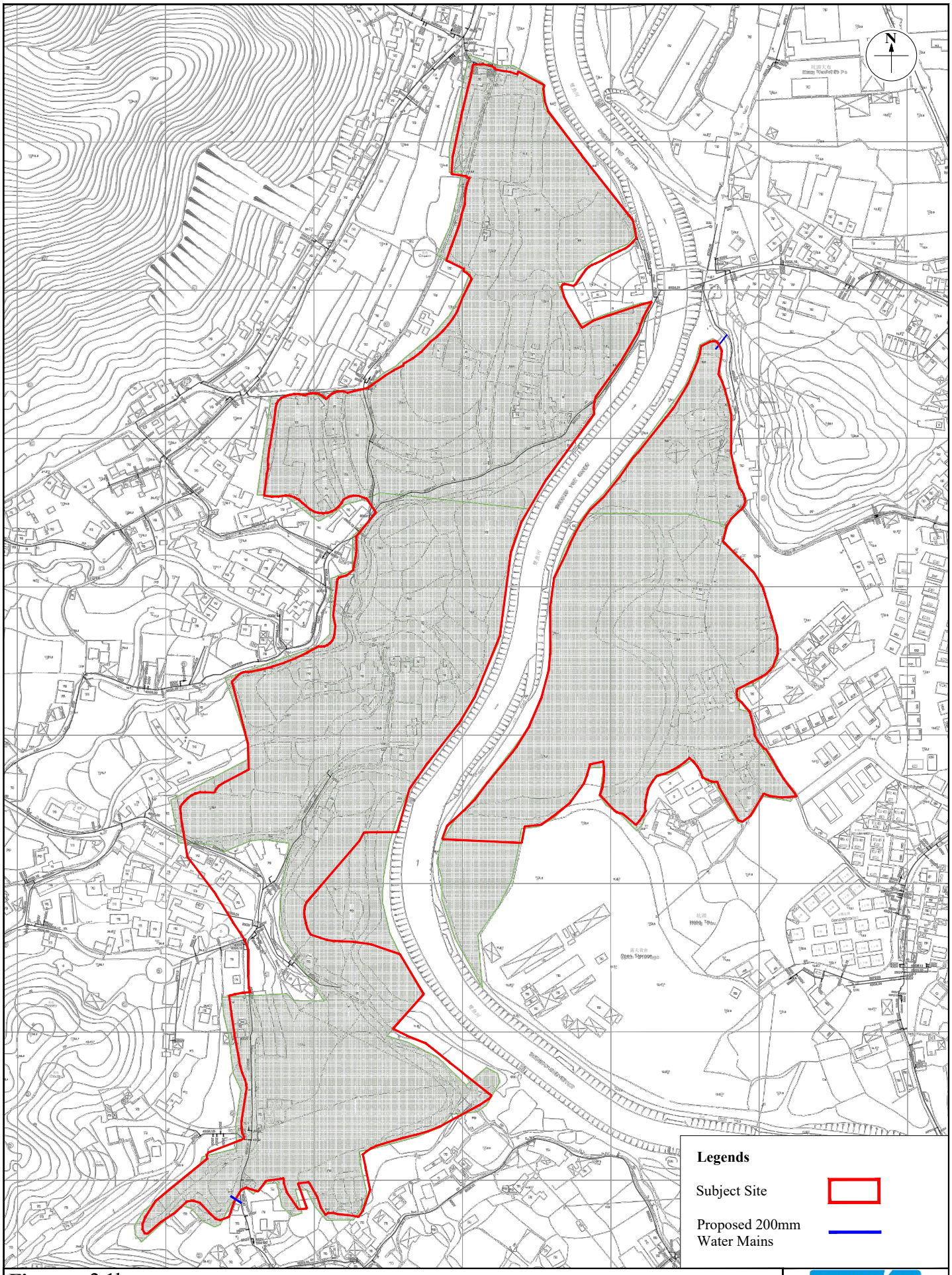


Figure: 2.1b	RAMBOLL
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Project: Proposed School at Various Lots in D.D.94, 98 & 100 and Adjoining Government Land, Kwu Tung South, New Territories	Rev.: 1.0
	Date: Sep 2025

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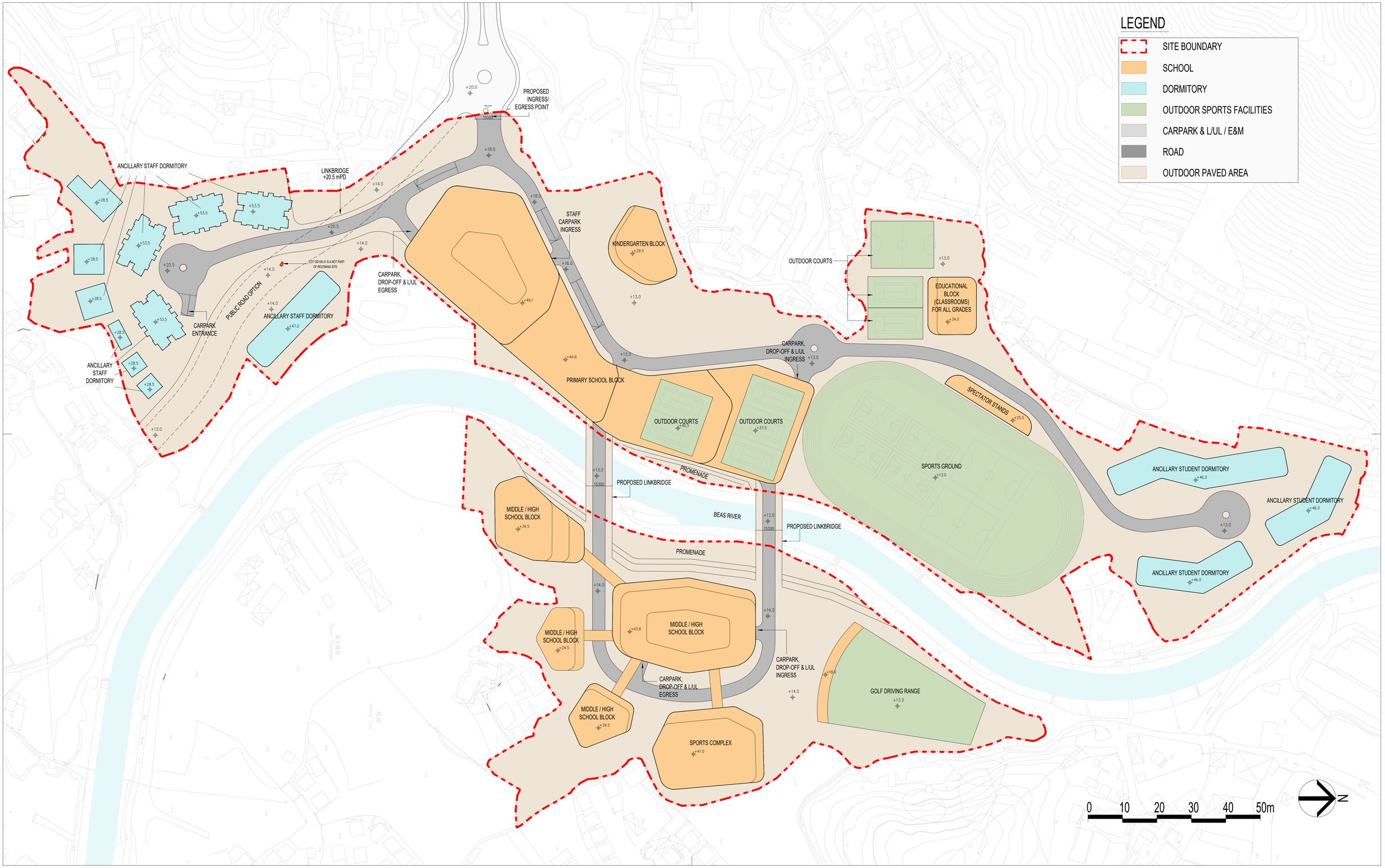
Appendix 1.1 Master Layout Plan



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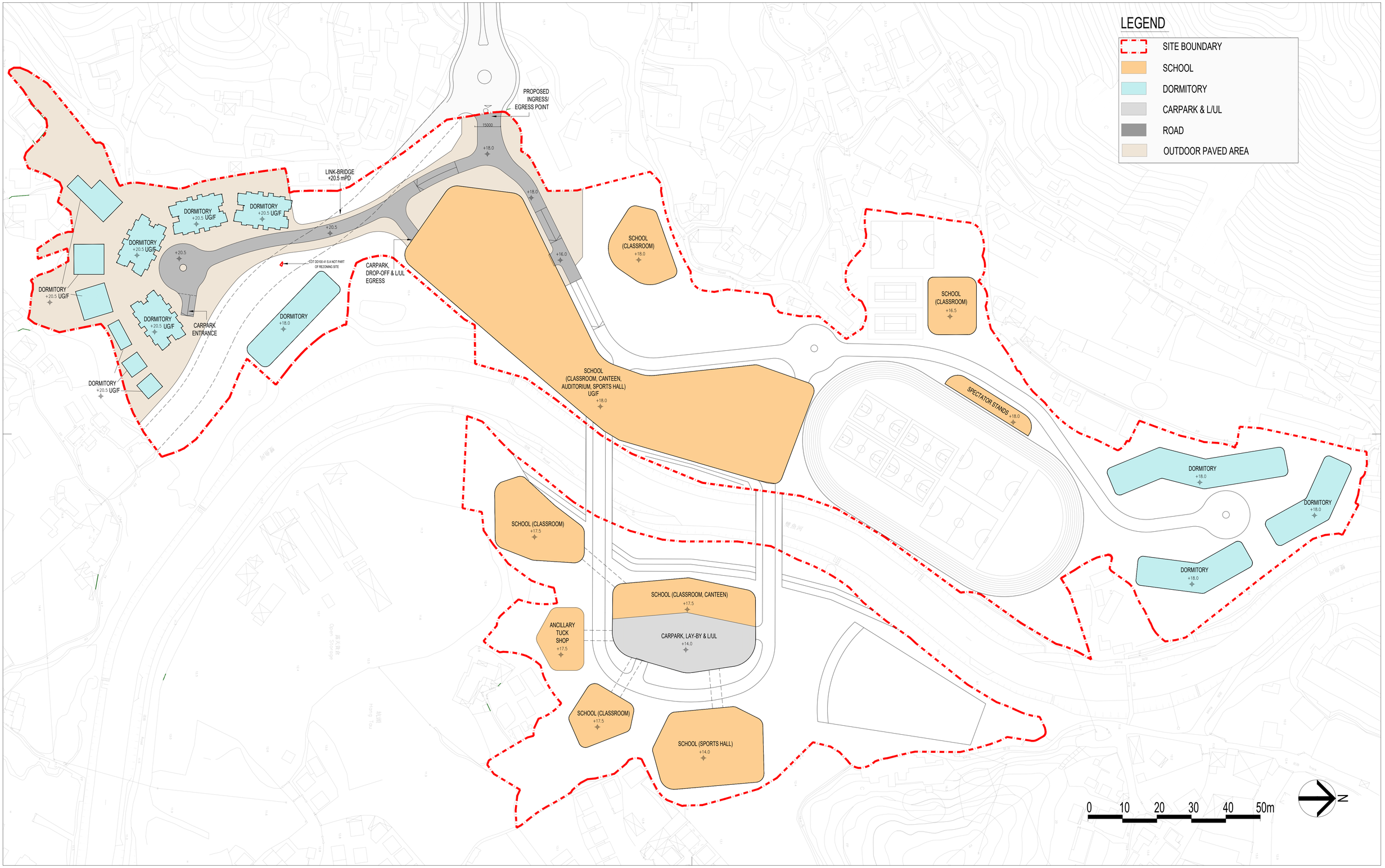

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FIRST FLOOR PLAN

Project No. 25018NT
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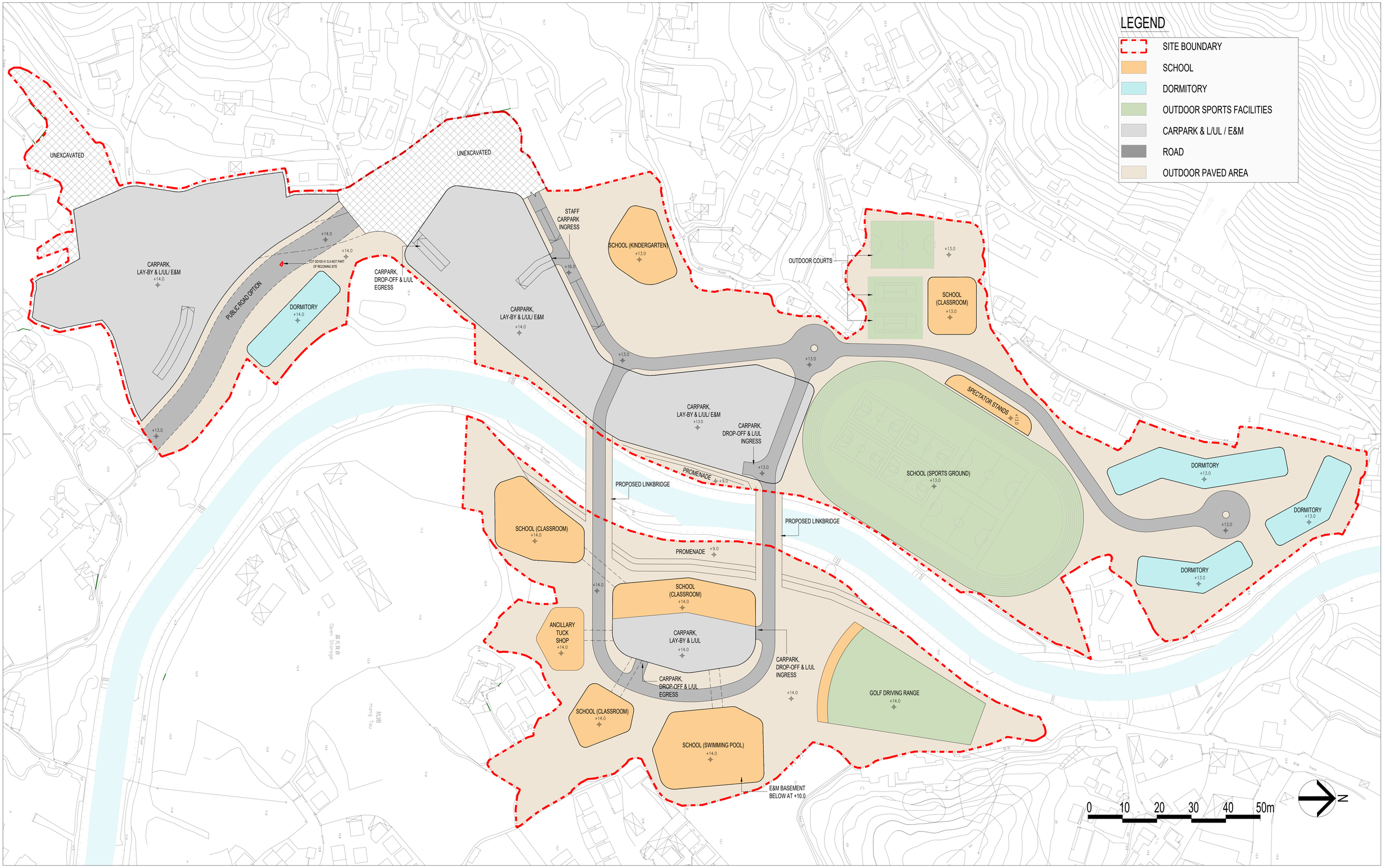

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Drawing Title
FULL PHASE -
GROUND FLOOR PLAN

Project No. 25018NT
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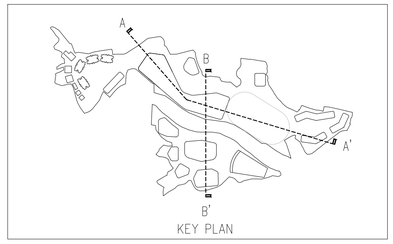
Drawing No. A/GBP_04

Drawing Purpose



KEY PLAN

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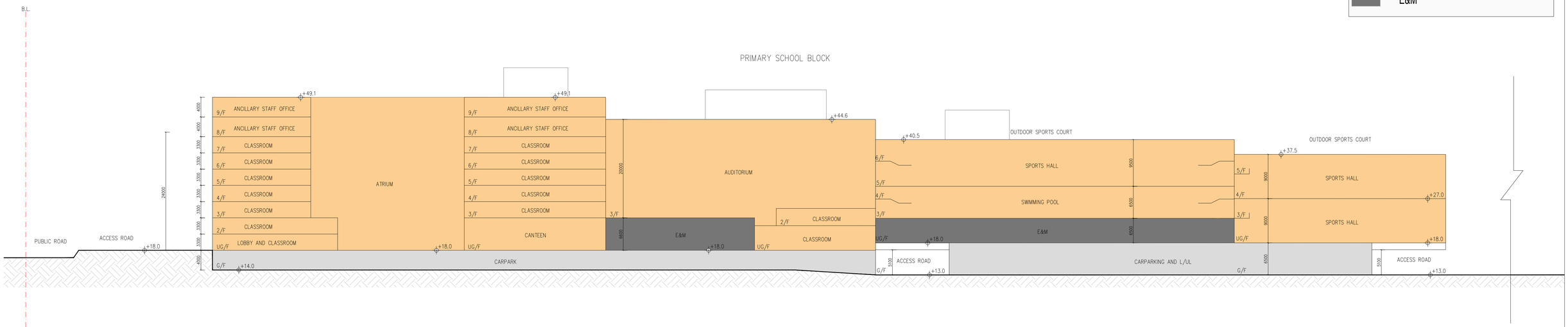
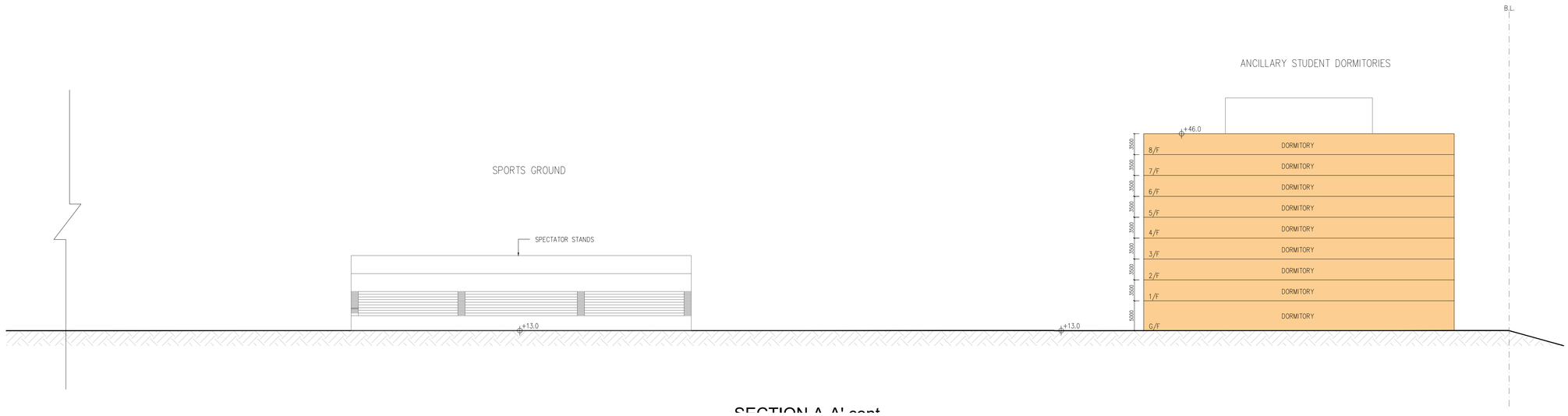
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



SECTION A-A'



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Rev.	Description	Drawn	Checked	Approved	Date
_	PLANNING SUBMISSION	HKO	JHK	JHY	9-2025
A	PLANNING SUBMISSION	HKO	JHK	JHY	11-2025

Rev.	Description	Drawn	Checked	Approved	Date

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D.L.O. Ref. _
Drawn HKO Date 11-2025
Checked JHK Date 11-2025
Approved JHY Date 11-2025
Cad File No. P:\JHK\25018NT\planning submission\PLOT_BD\GBP_05

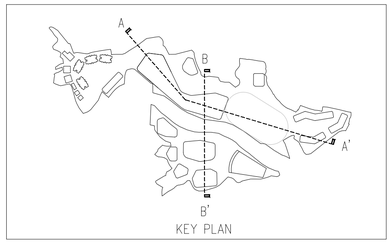
RONALD LU & PARTNERS
呂元祥建築師事務所

Project Title

Drawing Title
SECTION A-A

Project No. 25018NT
Scale 1:400 Issue Date NOV 2025
Drawing No. A/GBP_05

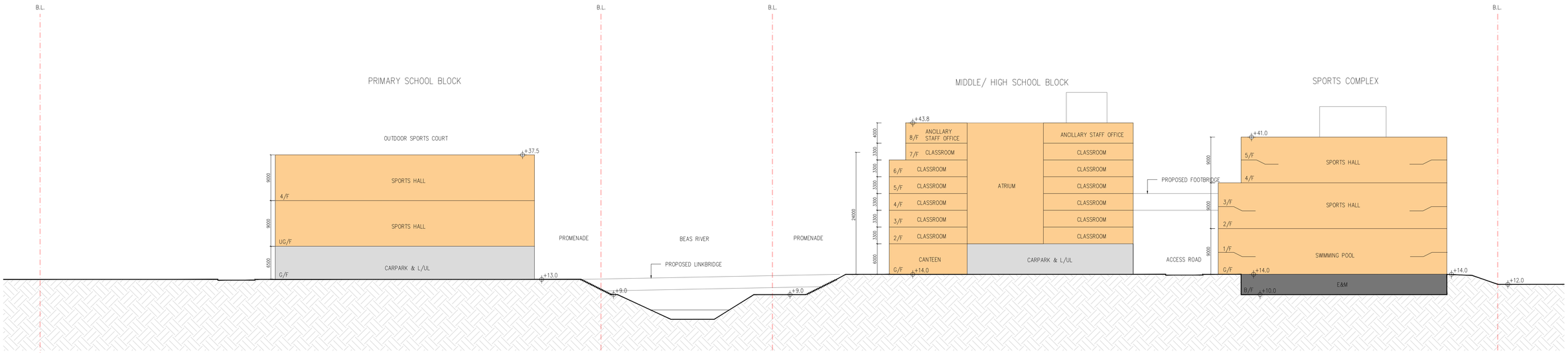
Drawing Purpose



KEY PLAN

LEGEND

- SITE BOUNDARY
- SCHOOL
- DORMITORY
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



SECTION B-B'

Rev.	Description	Drawn	Checked	Approved	Date
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A	PLANNING SUBMISSION	HKO	JHK	JHY	11-2025

Rev.	Description	Drawn	Checked	Approved	Date

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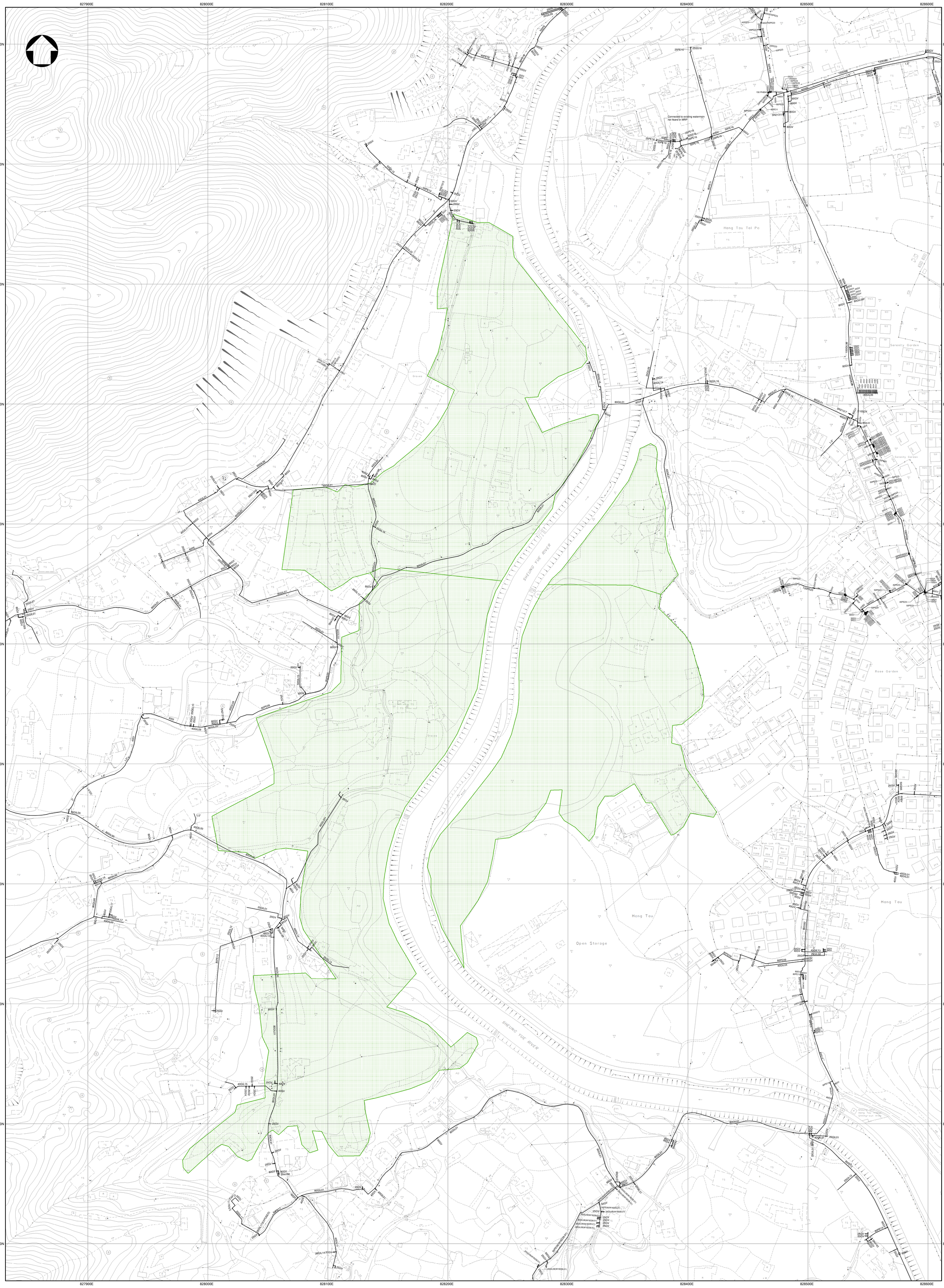
Drawing Title
SECTION B-B

Project No. 25018NT
Scale 1:400 Issue Date NOV 2025
Drawing No. A/GBP_06

Drawing Purpose

Appendix 2.1 Records Obtained from Water Supplies Department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828000E
828100E
828200E
828300E
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839600N
839500N
839400N
839300N
839200N
839100N
839000N
838900N
838800N
838700N
838600N
SHEUNG YUE RIVER
Hang Tau Tai Po
Hang Tau
Open Storage
Serenity Garden
Rose Garden
Grand Garden
Graves
Connected to existing watermain not found in MRP
SN213111
SN4190
SN4189
SN4188
SN4187
SN4186
SN4185
SN4184
SN4183
SN4182
SN4181
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SN4154
SN4153
SN4152
SN4151

SIGN CONVENTIONS

TYPE / LEGEND

MAINS

- FRESH / SALT WATER MAINS
- RAW / UNTREATED WATER MAINS / CONDUIT
- WASHOUT PIPE / OVERFLOW PIPE
- SLUDGE PIPE
- TREATED EFFLUENT MAINS
- WATER MAINS REQUIRE REGULAR FLUSHING
- PIPE LAID IN SLEEVE
- PIPE LAID IN TROUGH
- PIPE LAID INSIDE TUNNEL
- BEING LAID MAINS
- WATER TUNNEL
- PROPOSED MAINS
- PRIVATE MAINS (SEE NOTE 2)
- MAINS OF OTHER DEPARTMENTS (SEE NOTE 3)

FIRE SERVICE

- PEDESTAL FIRE HYDRANT — PH
- GROUND FIRE HYDRANT — GH
- HEAVY DRAW-OFF FIRE HYDRANT — HD
- SWAN NECK FIRE HYDRANT — SN
- TWIN OUTLET SWAN NECK FIRE HYDRANT — SN

VALVE

- VALVE (SEE ABBREVIATIONS)
- NORMALLY CLOSED VALVE
- FLAP VALVE — FV
- FLOW REGULATING VALVE — FRV
- NON RETURN / REFLUX VALVE — NRV
- PRESSURE CONTROL / REDUCING / RELIEF VALVE — PRV

AIR VALVE

- AIR VALVE (SEE ABBREVIATIONS)
- AIR VALVE ON INSPECTION TEE (SEE ABBREVIATIONS)

METER

- METER (SEE ABBREVIATIONS)
- VENTURI TUBE — VEN
- CRITICAL PRESSURE POINT — PP

OTHERS

- CHANGE IN PIPE
- BLANK FLANGE / END CAP
- EXTENTS SHOWING FEATURES OF WATER MAINS
- INSPECTION TEE (SEE ABBREVIATIONS)
- PIPES CONNECTED
- STANDPIPE — STP
- STRAINER — STR
- CATHODIC PROTECTION INSTALLATION (SEE ABBREVIATIONS)
- LEAK NOISE CORRELATION POINT — LNC
- LEAKAGE COLLECTION CHAMBER — LCC
- FLOW MEASUREMENT CHAMBER — FMC
- INSPECTION MANHOLE — IMH
- MULTI - PURPOSE INSERTION CHAMBER — MIC
- ESSENTIAL VALVE REFERENCE NUMBER (ALPHABET SEE ABBREVIATIONS) — C 888888
- PIPES CROSS OVER

DESIGNATIONS

450ACRB12XX(YYY)

- 450 — DIAMETER OF MAINS
- A — REHABILITATED METHOD (SEE ABBREVIATIONS)
- CR — MAINS TYPE (SEE ABBREVIATIONS)
- B — PIPE MATERIAL (SEE ABBREVIATIONS)
- 12 — COMPLETION YEAR OF MAINS
- XX — ADDITIONAL PIPE INFORMATION (SEE ABBREVIATIONS)

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NOTES

1. WSD MAINS INCLUDE:
   (a) MAINS LAID AND MAINTAINED BY WSD.
   (b) MAINS LAID BY OTHER DEPARTMENTS OR PRIVATE PARTIES BUT MAINTAINED BY WSD AT WSD'S COST.
2. PRIVATE MAINS INCLUDE MAINS IN PRIVATE ROADS, PRIVATE HOUSING ESTATES, ETC. NOT MAINTAINED BY WSD.
3. MAINS OF OTHER DEPARTMENTS INCLUDE MAINS LAID BY OTHER GOVERNMENT DEPARTMENTS NOT MAINTAINED BY WSD.

ABBREVIATIONS

PIPE MATERIAL

AC	ASBESTOS CEMENT
CI	CAST IRON
CONC	CONCRETE
COPP	COPPER ALLOY
DI	DUCTILE IRON
GI	GALVANIZED IRON
GIL	LINED GALVANIZED IRON
GMS	GALVANIZED MILD STEEL
GRP	GLASS FIBRE REINFORCED PLASTIC
MDPE	MEDIUM DENSITY POLYETHYLENE
MS	MILD STEEL
PE	POLYETHYLENE
S	STEEL
SS	STAINLESS STEEL
UPVC	UNPLASTICISED POLYVINYL CHLORIDE

REHABILITATION METHOD

RA	CURED IN PLACE PIPE
RB	CLOSED FIT (FOLD AND FORM SYSTEM)
RD	SLIP LINING / SLIP INSERTION
RE	CLOSE FIT (SWAGELINING SYSTEM)
RF	FIBRE REINFORCED PLASTIC SYSTEM
RG	INTERNAL LINING REPAIRED
RH	EXTERNAL COATING REPAIRED
RK	COMBINATION OF INTERNAL LINING REPAIRED AND EXTERNAL COATING REPAIRED
RL	PIPE BURSTING
RM	EXTERNAL FIBRE REINFORCED PLASTIC (FRP) SYSTEM
RN	JOINT SEALANT WORKS
RP	PRIMUS LINE
RS	SPRAY POLYURETHANE SYSTEM

MAINS TYPE

F	FIRE SERVICE MAINS
OF	OVERFLOW PIPE
WO	WASHOUT PIPE

INSPECTION TEE

IT	INSPECTION TEE
MIT	MULTI - PURPOSE INSPECTION TEE

ADDITIONAL PIPE INFORMATION

(400)	OUTSIDE DIAMETER OF THE INSERTED PE PIPE FOR SPECIFIED REHABILITATED MAINS
(CPS10)	CATHODIC PROTECTION SYSTEM NO. 10
(DRY)	DRY MAINS
(E)	MAINS LAID UNDER ENTRUSTMENT WORKS
(EXPOSED)	EXPOSED PIPE
(IRRIGATION)	IRRIGATION PIPE
(L)	MAINS WITH LEAKAGE COLLECTION SYSTEM
(PC)	PENDING COMMISSIONED MAINS
(SCM100)	SHALLOW COVERED MAINS NO. 100
(SUBMARINE)	SUBMARINE PIPE
(TE)	TREATED EFFLUENT MAINS
(TMF)	TEMPORARY MAINS FOR FLUSHING
(W20163)	DRAWING REFERENCE
(WSD 437/....)	WSD FILE REFERENCE

METER

EMFM	ELECTROMAGNETIC FLOWMETER
FM	FLOWMETER
WDM	WASTE DETECTION METER
DM	DISTRICT METER

VALVE

BV	BUTTERFLY VALVE
GV	GATE VALVE
SC	STOP COCK
SV	SLUICE VALVE
V	GENERIC VALVE
WOV	WASHOUT VALVE

AIR VALVE

AV	GENERIC AIR VALVE
SAV	SINGLE AIR VALVE
DAV	DOUBLE AIR VALVE
MDAV	MULTI - PURPOSE DOUBLE AIR VALVE
ATV	GENERIC AIR VALVE ON INSPECTION TEE
STV	SINGLE AIR VALVE ON INSPECTION TEE
DTV	DOUBLE AIR VALVE ON INSPECTION TEE

ALPHABET OF ESSENTIAL VALVE REFERENCE NUMBER

FRESH WATER NETWORK SYSTEM

B	CONTROL VALVES OF DIRECT TEEING OFF TO SUPPLY FROM FRESH WATER TRUNK MAINS
C	CUT- LINE VALVES
D	ALL OTHER ESSENTIAL VALVES
M	DISTRICT BOUNDARY VALVES FOR DISTRICT METERING AREAS AND PRESSURE MANAGEMENT AREAS
S	SCOUR VALVES
T	TRUNK MAIN VALVES INCLUDING THOSE AT TEES
V	VALVES UNDER CHINA WATER SCHEME, HIGH ISLAND WATER SCHEME AND PLOVER COVE WATER SCHEME

SALT WATER NETWORK SYSTEM

X	ESSENTIAL VALVES

CATHODIC PROTECTION INSTALLATION

TS1	TEST STATION NO.1
HA2(1)	HORIZONTAL ANODE NO. 2 (1 GROUP OF ANODE)
VA3(2)	VERTICAL ANODE NO. 3 (2 GROUPS OF ANODE)

編號 no.	日期 date	摘 要 description	簽署 initial
C	6/12/19	GENERAL REVISION	SE/PGIS
B	11/02/11	GENERAL REVISION	(Signed) L.H. LAM SE/Dev(SD)
A	16/06/05	GENERAL REVISION	(Signed) K.T. CHAN SE/AM
修訂 REVISION			

圖則名稱 drawing title	簽署 initial	日期 date	圖則編號 drawing no. / 比例 scale
MAINS RECORDS SIGN CONVENTIONS AND DESIGNATIONS	繪製 drawn N.I. CHEUNG	03/03/98	**SK 3988C** / NOT APPLICABLE
	核對 checked		
	加簽 endorsed		
	核准 approved (Signed) C.C. CHAN CE/RA	12/03/98	水務署 Water Supplies Department

A4 210 X 297

CAD REF. SK3988C.DWG
PLOTTING SCALE 1 : 1

Appendix 2.2 Detailed Water Supply Impact Assessment Calculations

Table 1a - Population Estimation for Proposed Development (Overall)

Table 4b- Mains Capacity Calculation for Proposed Development (East Portion)	**Dormitory**				
	Total number of residents	=	2243	people	
	Total	**=**	**2243**	**people**	
Non-Domestic (School)	**1. International School**				
	Total number of Students	=	3000	people	
	Total number of Teachers & Staff	=	633	people	
	Total	**=**	**3633**	**people**	
	2. Canteen				
	Total Area	=	4500	m^2	
	3. Swimming Pool				
	Volume	=	3750	m^3	(2 x 1250 m^2 x 1.5m depth)

Table 1b - Population Estimation for Proposed Development (West)

Table 4b- Mains Capacity Calculation for Proposed Development (East Portion)	**Dormitory**				
	Total number of residents	=	2243	people	
	Total	**=**	**2243**	**people**	
Non-Domestic (School)	**1. International School**				
	Total number of Students	=	1600	people	
	Total number of Teachers & Staff	=	338	people	
	Total	**=**	**1938**	**people**	
	2. Canteen				
	Total Area	=	1500	m^2	
	3. Swimming Pool				
	Volume	=	1875	m^3	(1250 m^2 x 1.5m depth)

Table 1c - Population Estimation for Proposed Development (East)

Table 4b- Mains Capacity Calculation for Proposed Development (East Portion)	**Dormitory**				
	Total number of residents	=	0	people	
	Total	**=**	**0**	**people**	
Non-Domestic (School)	**1. International School**				
	Total number of Students	=	1400	people	
	Total number of Teachers & Staff	=	295	people	
	Total	**=**	**1695**	**people**	
	2. Canteen				
	Total Area	=	3000	m^2	
	3. Swimming Pool				
	Volume	=	1875	m^3	(1250 m^2 x 1.5m depth)

Table 2a - Daily Water Demands Calculation for Proposed Development (Overall)

Type	Population (head)	Freshwater		Flushing Water	
		Daily Unit Demand (m^3/head/day)	Daily Demand (m^3/day)	Daily Unit Demand (m^3/head/day)	Daily Demand (m^3/day)
Non-Domestic (Dormitory) [1]	2,243	0.390	874.77	0.070	157.01
Non-Domestic - International School	1695	0.025	42.38	0.07	118.65
Type	**GFA (m^2)**	**Freshwater**		**Flushing Water**	
		Daily Unit Demand (m^3/m^2/day)	**Daily Demand (m^3/day)**	**Daily Unit Demand (m^3/m^2/day)**	**Daily Demand (m^3/day)**
Non-Domestic - Canteen	4,500	0.020	90.00	0.007	31.50
Non-Domestic - Swimming Pool	-	-	3750	-	-
		Total for Proposed Development	**4757.1**		**307.2**

[1] The residential R4 Type consideres all students and staff living in the Dormitory

Table 2b - Daily Water Demands Calculation for Proposed Development (West Portion)

Type	Population (head)	Freshwater		Flushing Water	
		Daily Unit Demand (m^3/head/day)	Daily Demand (m^3/day)	Daily Unit Demand (m^3/head/day)	Daily Demand (m^3/day)
Non-Domestic (Dormitory) [1]	2,243	0.390	874.77	0.070	157.01
Non-Domestic - International School	1938	0.025	48.45	0.07	135.66
Type	**GFA (m^2)**	**Freshwater**		**Flushing Water**	
		Daily Unit Demand (m^3/m^2/day)	**Daily Demand (m^3/day)**	**Daily Unit Demand (m^3/m^2/day)**	**Daily Demand (m^3/day)**
Non-Domestic - Canteen	1,500	0.020	30.00	0.007	10.50
Non-Domestic - Swimming Pool	-	-	1875	-	-
		Total for Proposed Development	**2828.2**		**303.2**

[1] The residential R4 Type consideres all students and staff living in the Dormitory

Table 2c - Daily Water Demands Calculation for Proposed Development (East Portion)

Type	Population (head)	Freshwater		Flushing Water	
		Daily Unit Demand (m^3/head/day)	Daily Demand (m^3/day)	Daily Unit Demand (m^3/head/day)	Daily Demand (m^3/day)
Non-Domestic (Dormitory) [1]	0	0.390	0.00	0.070	0.00
Non-Domestic - International School	1695	0.025	42.38	0.07	118.65
Type	**GFA (m^2)**	**Freshwater**		**Flushing Water**	
		Daily Unit Demand (m^3/m^2/day)	**Daily Demand (m^3/day)**	**Daily Unit Demand (m^3/m^2/day)**	**Daily Demand (m^3/day)**
Non-Domestic - Canteen	3,000	0.020	60.00	0.007	21.00
Non-Domestic - Swimming Pool	-	-	1875	-	-
		Total for Proposed Development	**1977.4**		**139.7**

[1] The residential R4 Type consideres all students and staff living in the Dormitory

Table 4b- Mains Capacity Calculation for Proposed Development (East Portion)

Site Demand	Mean Daily Demand (without swimming pool)	Peak Factor	Peak Flow (without swimming pool)	Peak Flow (with swimming pool)
	m^3/day	-	m^3/day	m^3/day
Fresh Water	1007.1	3	3021.3	6771.3
Flushing Water	307.2	2	614.4	614.4
			Total* =	7385.7

* Assume both fresh water and flushing water are provided from Kwu Tung Water Service Reservoir

Table 4b- Mains Capacity Calculation for Proposed Development (West Portion)

Site Demand	Mean Daily Demand (without swimming pool)	Peak Factor	Peak Flow (without swimming pool)	Peak Flow (with swimming pool)
	m^3/day	-	m^3/day	m^3/day
Fresh Water	953.2	3	2859.6	4734.6
Flushing Water	303.2	2	606.4	606.4
			Total* =	5341.0

* Assume both fresh water and flushing water are provided from Kwu Tung Water Service Reservoir

Table 4b- Mains Capacity Calculation for Proposed Development (East Portion)

Site Demand	Mean Daily Demand (without swimming pool)	Peak Factor	Peak Flow (without swimming pool)	Peak Flow (with swimming pool)
	m^3/day	-	m^3/day	m^3/day
Fresh Water	102.4	3	307.2	2182.2
Flushing Water	139.7	2	279.4	279.4
			Total* =	2461.6

* Assume both fresh water and flushing water are provided from Kwu Tung Water Service Reservoir

Table 4b- Mains Capacity Calculation for Proposed Development (East Portion)

(A) Proposed Main Capacity

Pipe Designation	Diameter	Area	Total Peak Flow	Velocity	Peak Flow within
	mm	sqm	m3/day	m/s	0.9 to 3.0m/s ?
New Fresh Water	200	0.031416	5341.0	1.9677	yes

Table 4b- Mains Capacity Calculation for Proposed Development (East Portion)

(A) Proposed Main Capacity

Pipe Designation	Diameter	Area	Total Peak Flow	Velocity	Peak Flow within
	mm	sqm	m3/day	m/s	0.9 to 3.0m/s ?
New Fresh Water	200	0.031416	2461.6	0.9069	yes

Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories

Air Ventilation Review

1. Background

1.1 The applicants, Global King Investment Limited, Winpost (HK) Investment Limited and Rand Development Limited, seek to rezone the current "Agriculture" zoning with a minor portion of "Green Belt" of the Application Site as outlined in the approved Kwu Tung South Outline Zoning Plan No. S/NE-KTS/22.

1.2 The purpose of this application is to develop an international school campus in the Kwu Tung South area, spanning both sides of the Beas River. The development will include a kindergarten, primary school, middle and high school, as well as sports facilities, cultural amenities, and student dormitories. This will enhance the social infrastructure of San Tin and the wider community, diversity and innovation at the heart of Hong Kong's new technology corridor. The total project site area is approximately 127,000 m^2.

2. Baseline Scheme and Proposed Scheme

2.1 The Baseline Scheme adopts existing condition which consists of agriculture land with some temporary structures.

2.2 The Proposed Scheme outlined in this study features several low-rise buildings serving various functions, including a kindergarten, primary school, middle and high school, along with sports facilities, cultural amenities, and student dormitories. A 400-meter track with ball courts are located to the west of the Beas River.

2.3 The height of the low rises ranges from approximately 23mPD to 53.5mPD. The highest buildings are situated in the southernmost section designated for the student dormitory area.

2.4 The Proposed Scheme incorporates stepped heights and terrace designs in several buildings, which will help mitigate the wind impact. Overall, the building heights are greater at the northern and southern ends, while the central portion, which includes sports complex, a 400m track and outdoor learning garden, is relatively lower.

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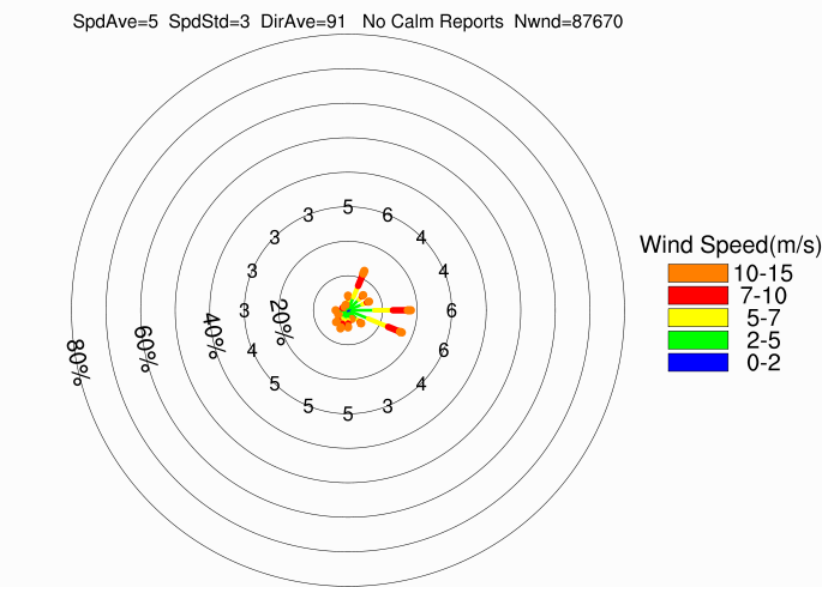
2.5 To improve connectivity and circulation within the site and enhance surrounding transportation, a proposed loop road and public roads will be developed within the Application Site. In the southern portion of the site near dormitory area, the elevated EVA is positioned at a higher level above the public road, and they overlap in the top view. Additionally, two bridges span the Beas River, linking the campus on both sides.

2.6 **Figure 1** illustrates the layout of the Proposed Scheme as well as its surroundings.

3. Site Wind Availability

Regional Atmospheric Modelling System (RAMS)

3.1 The Application Site is covered by RAMS wind data grids: (064, 081), (064, 080), (065, 081) and (065, 080). However, the identified prevailing winds in the concerned grids are the same, thus it has been extracted from the Planning Department's website for Application Site wind availability data at 200m. The annual prevailing winds come from NNE, E and ESE directions whereas the summer prevailing winds come from S, SSW and SW. Below are the wind roses extracted from the Planning Department's website.



Annual Condition at 200m

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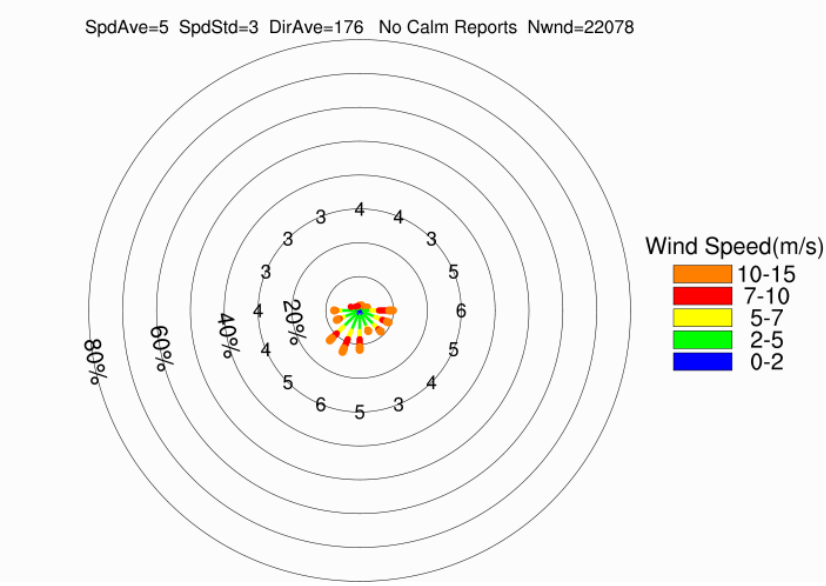

Summer Condition at 200m

4. Important Pedestrian Areas

4.1 The Application Site is currently zoned for agriculture, which means there are relatively fewer sensitive receivers in the vicinity. The nearby important pedestrian areas are mainly the residential developments to the east of the Application Site and Ki Lun Tsuen to the west, as shown in **Figure 1**. These areas include:

- Hang Tau Road
- Grand Garden
- Wah Lok Villa
- The Fairyland
- Caverdish Villa
- Eden Garden
- Rose Garden
- Nice Villa
- Richmond Garden
- Regent garden
- Serenity Garden
- Grand View
- Richmond Villa

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- Ki Lun Tsuen
- Ki Lun Tsuen Playground
- Sheung Shui Hang Tau Village Sitting-out Area No. 2s

5. Wind Flow under Annual and Summer Prevailing Conditions

5.1 Figures 2a to 6a and 2b to 6b show the illustrations of annual (NNE, E and ESE) and summer (S, SSW and SW) prevailing wind flows of the Baseline Scheme and the Proposed Scheme respectively. Below section discuss the annual and summer wind flows of the area under the Baseline Scheme and Proposed Scheme.

Annual Condition – NNE Wind

5.2 **Figure 2a** illustrates the NNE wind flow under the Baseline Scheme, while **Figure 2b** depicts the flow under the Proposed Scheme.

5.3 Given the current vacant land on the Application Site, the NNE wind can primarily travel along the Beas River and through the Site without any obstructions affecting the downwind area in the Baseline Scheme.

5.4 In the Proposed Scheme, it is expected that the NNE wind at pedestrian level will be reduced due to the low-rise clusters of the campus. However, it is important to highlight that there are very few sensitive receivers in the downwind area of the Application Site, with only some temporary structures present.

5.5 According to the Urban Design Guidelines of HKSPG, height variation across the district with decreasing heights towards the direction where the prevailing wind comes from should be adopted to promote air movements. In the Proposed Scheme, building heights increase in a stepped manner from the 400m track to the southernmost part of the site. This design may also enhance the NNE wind towards the downwind areas.

5.6 Similar to the Baseline Scheme, the NNE wind is expected to flow along the Beas River, as well as over the outdoor area to the southeast of Middle/ High School Blocks. Although two linkage bridges will span the river, they are designed to be naturally ventilated, thus it is expected that they will not impede the NNE wind's passage along the river. Additionally, the Proposed Scheme does not encroach upon the river, and given its low-rise design, it is unlikely to significantly impact the downwind areas.

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Annual Condition – E and ESE Winds

5.7 **Figure 3a** illustrates the E and ESE winds flow under the Baseline Scheme, while **Figure 3b** depicts the flow under the Proposed Scheme.

5.8 In the upwind area of the Application Site, there are mainly low-rise residential developments, along with a small local hill slope located to the west of Regent Garden. As a result, the wind availability for the Application Site is expected to be high.

5.9 With the current vacant land on the Application Site in the Baseline Scheme, the E and ESE winds can pass through the Site unobstructed, reaching the downwind areas, which primarily include Ki Lun Tsuen, Ki Lun Tsuen Playground, and some temporary structures located to the west of the southern portion of the Application Site.

5.10 In the Proposed Scheme, it is anticipated that E and ESE winds would flow through the 400 track and the building separation between the dormitory and the primary school. To the east of the 400m track is a golf driving range across the Beas River, while three ball courts are situated to the west. This relatively open area allows for good penetration of E and ESE winds, benefiting the downwind area, i.e. Ki Lun Tsuen.

5.11 The terrace designs of specific buildings in the Proposed Scheme, such as the Sports Complex and Middle/ High School Blocks, will enhance the flow of E/ESE winds through the spaces between these structures, if any.

5.12 As such, the Proposed Scheme is not expected to have a significant impact on the downwind areas.

Summer Condition – S Wind

5.13 **Figure 4a** illustrates the S wind flow under the Baseline Scheme, while **Figure 4b** depicts the flow under the Proposed Scheme.

5.14 Given the current vacant land on the Application Site, the S wind can travel through the Site without any obstructions in the Baseline Scheme. The downwind areas under S wind include Ki Lun Tsuen, Sheung Shui Hang Tau Village Sitting-out Area No. 2, and some nearby squatters.

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5.15 In the Proposed Scheme, it is anticipated that the S wind would mainly flow along the Beas River to pass through the site from south to north. One section of the proposed road, located to the east of the Middle/ High School, runs in a south-north direction. This alignment could facilitate the northward flow of wind. Although there is a 4-5m height structure at the Golf Driving Range, its low-rise nature is expected to cause only minimal obstruction to the wind.

5.16 The Ancillary Staff Dormitory buildings, which are 53.5mPD and the tallest structures on the campus, are positioned at the southernmost part of the Application Site. This positioning may obstruct the flow of S winds toward the downwind areas, primarily affecting the campus itself. However, some reduction in wind flow is also expected in the portion of Ki Lun Tsuen to the north of the Application Site.

5.17 Given the low-rise nature of the Proposed Scheme, it is not expected to have a significant impact on the downwind area.

Summer Condition – SSW Wind

5.18 **Figure 5a** illustrates the SSW wind flow under the Baseline Scheme, while **Figure 5b** depicts the flow under the Proposed Scheme.

5.19 Ngau Tam Shan, which rises above 320mPD, is situated in the upwind area under SSW winds, thus, it is expected that primarily hill foot winds will reach the Application Site.

5.20 Given the current vacant land on the Application Site, hill foot winds can flow through the Site without any obstructions in the Baseline Scheme. The downwind areas under SSW wind include Ki Lun Tsuen, Sheung Shui Hang Tau Village Sitting-out Area No. 2, and some nearby squatters.

5.21 In the Proposed Scheme, the dormitory buildings, which are 53.5mPD and the tallest structures on the campus, are positioned at the southernmost part of the Application Site. This placement may obstruct the flow of SSW winds toward the downwind areas, with the campus itself being the most affected due to its elongated layout. Additionally, some reduction in wind flow is anticipated in the northern portion of Ki Lun Tsuen and Sheung Shui Hang Tau Village Sitting-out Area No. 2.

5.22 On the other hand, given that there is a row of dormitory buildings with a height of 28.5mPD at the southernmost part of the Application Site, it is anticipated that hill foot winds may skim over these buildings and flow along the Beas River towards downwind areas, such as the Sheung Shui Hang Tau Village Sitting-out Area No. 2.

5.23 As a result, the Proposed Scheme is not expected to have a significant impact on the downwind areas.

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Summer Condition – SW Wind

5.24 **Figure 6a** illustrates the SW wind flow under the Baseline Scheme, while **Figure 6b** depicts the flow under the Proposed Scheme.

5.25 Similarly, Ngau Tam Shan, which rises above 320mPD, is situated in the upwind area under SW winds, thus, it is expected that primarily katabatic winds will reach the Application Site.

5.26 With the current vacant land on the Application Site, katabatic winds can pass through the Site unobstructed in the Baseline Scheme, reaching downwind areas such as the clusters of residential developments, Sheung Shui Hang Tau Village Sitting-out Area No. 2, and some nearby squatters, as detailed in Section 4.1.

5.27 In the Proposed Scheme, some SW wind could pass through the 400m track and the building separation between the Primary School and the Middle/ High School. Although two linkage bridges will span the river, they are designed to be naturally ventilated, thus it is expected that they will not impede the SW wind's passage along the river, if any. It is important to note that the distance between the building structures in the Proposed Scheme and the sensitive receiver area is generally more than 200m, significantly greater than the height of the Proposed Scheme's buildings. This distance greatly reduces the potential impact.

5.28 As a result, the Proposed Scheme is not expected to have a significant impact on the downwind areas.

6. Conclusion

6.1 Considering the existing topography, the location of built areas, and the layout of the Proposed Scheme, the potential air ventilation impacts have been assessed.

6.2 The Application Site is currently zoned for agriculture and is surrounded by low-rise residential developments, villages, and temporary structures.

6.3 The annual prevailing winds are from the NNE, E, and ESE, while the summer prevailing winds come from the S, SSW, and SW.

6.4 During the annual prevailing winds, temporary structures, Ki Lun Tsuen and Ki Lun Tsuen Playground are found in the downwind areas. Given the campus nature of the Proposed Scheme, which consists entirely of low-rise buildings, the tallest being 53.5mPD, with the stepped height profile and terrace deign, the anticipated blockage effect is relatively minor.

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6.5 Under the summer prevailing S and SSW winds, similar to the annual conditions, portion of Ki Lun Tsuen, Sheung Shui Hang Tau Village Sitting-out Area No. 2, and temporary structures are present in the downwind areas. The low-rise nature of the Proposed Scheme is not expected to significantly impact these areas. For SW winds, the sensitive receivers are the low-rise residential buildings to the east of the Application Site, Sheung Shui Hang Tau Village Sitting-out Area No. 2, and some nearby squatters. However, due to the Proposed Scheme's low height and the considerable distance from the buildings to these sensitive receivers, no significant impact is anticipated.

6.6 In summary, the Proposed Scheme features a low-rise, stepped height design, incorporating building separations and road spacing in both north-south and east-west directions. Additionally, some buildings have terrace designs aligned with prevailing winds. As a result, no significant impact on the surrounding environment is anticipated.

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Appendix 1

Layout and Section Plans of the Proposed Scheme

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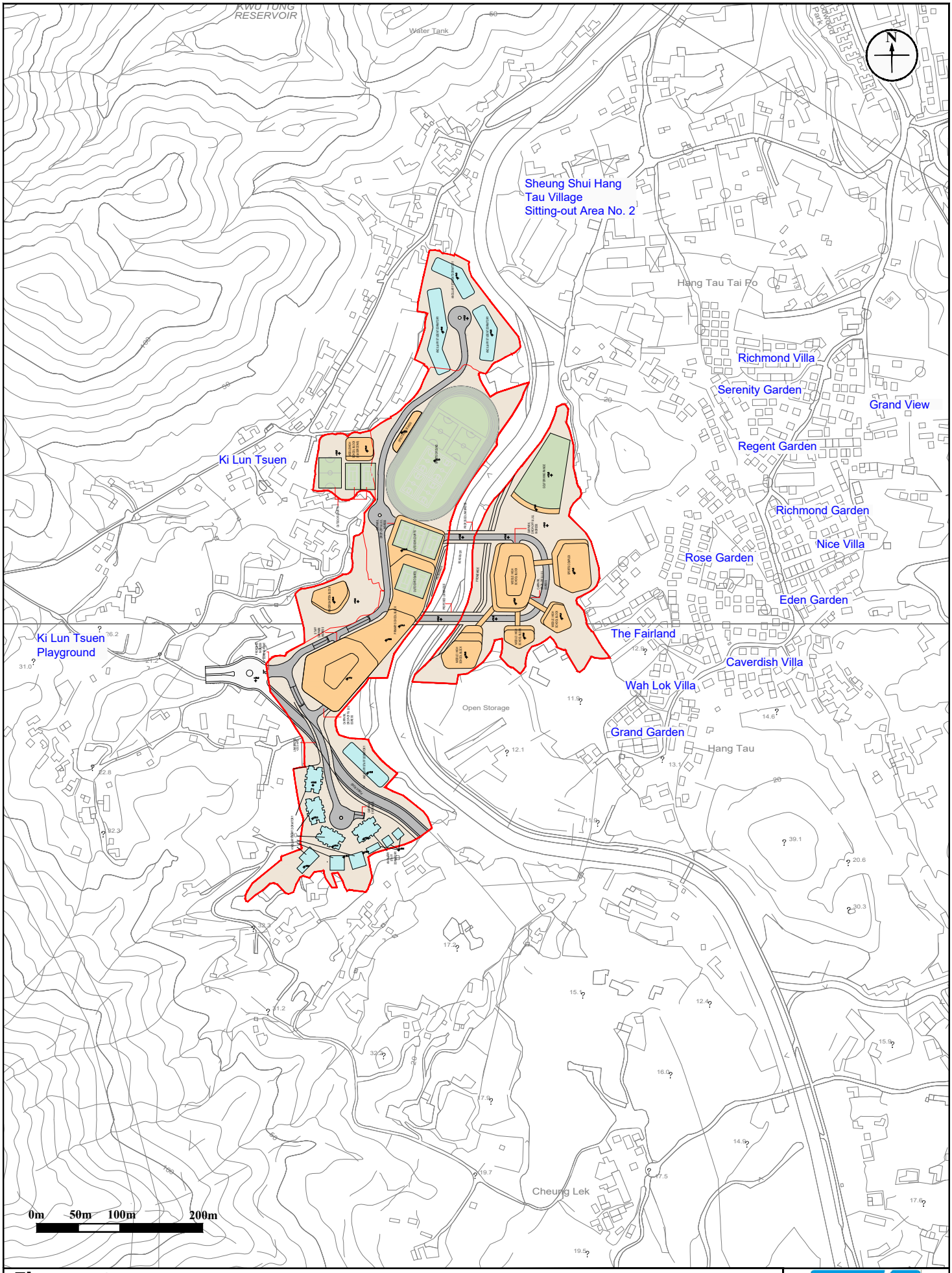

Figure: 1		RAMBOLL
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		Checked by: TC
Project:	Section 16 Planning Application for Beas River International School Campus	Rev.: 1.0
		Date: Sep-25

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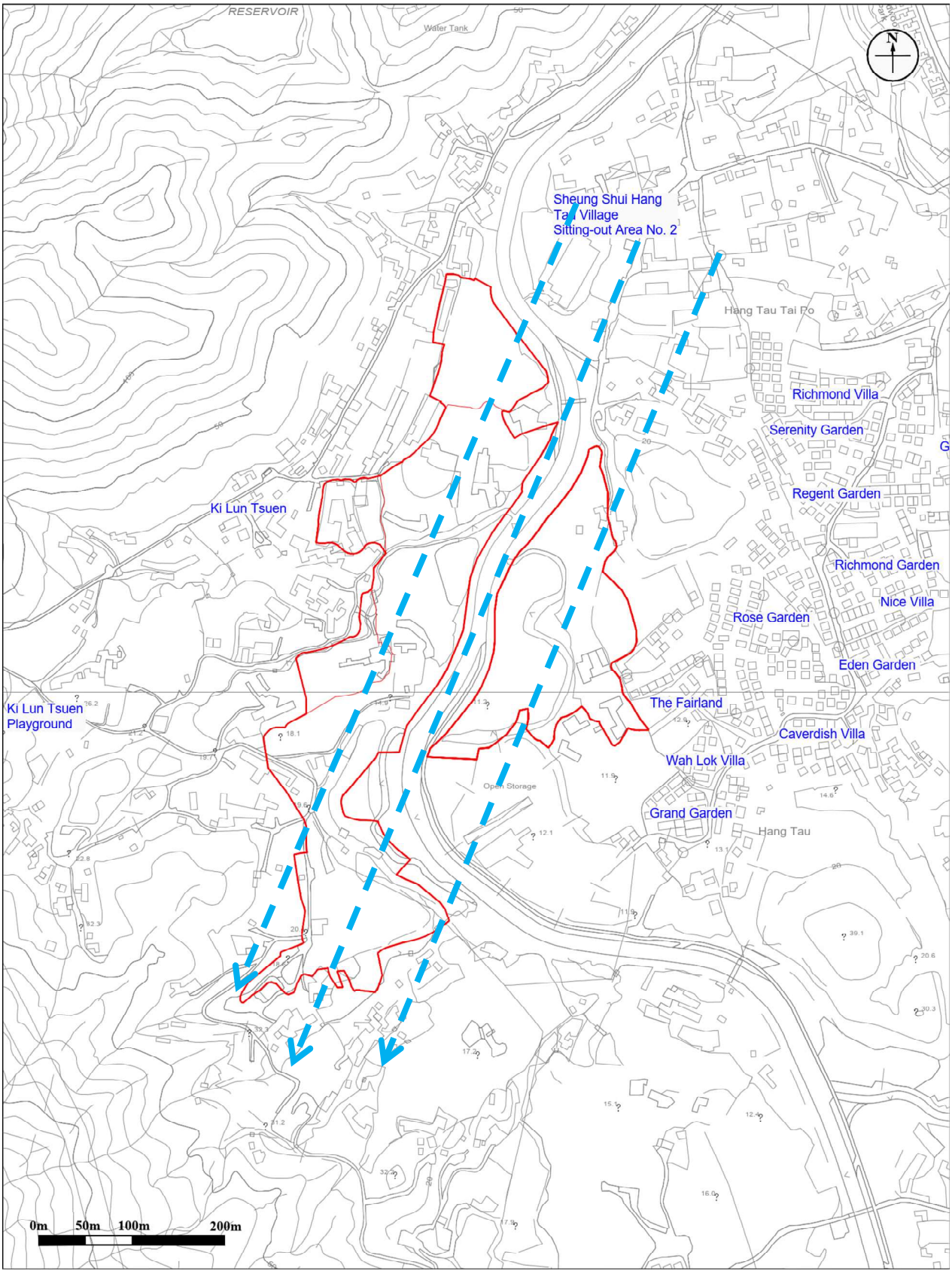

Figure:	**2a**	RAMBOLL
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Project:	**Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories**	Rev.: 2.0 Date: Sep 2025

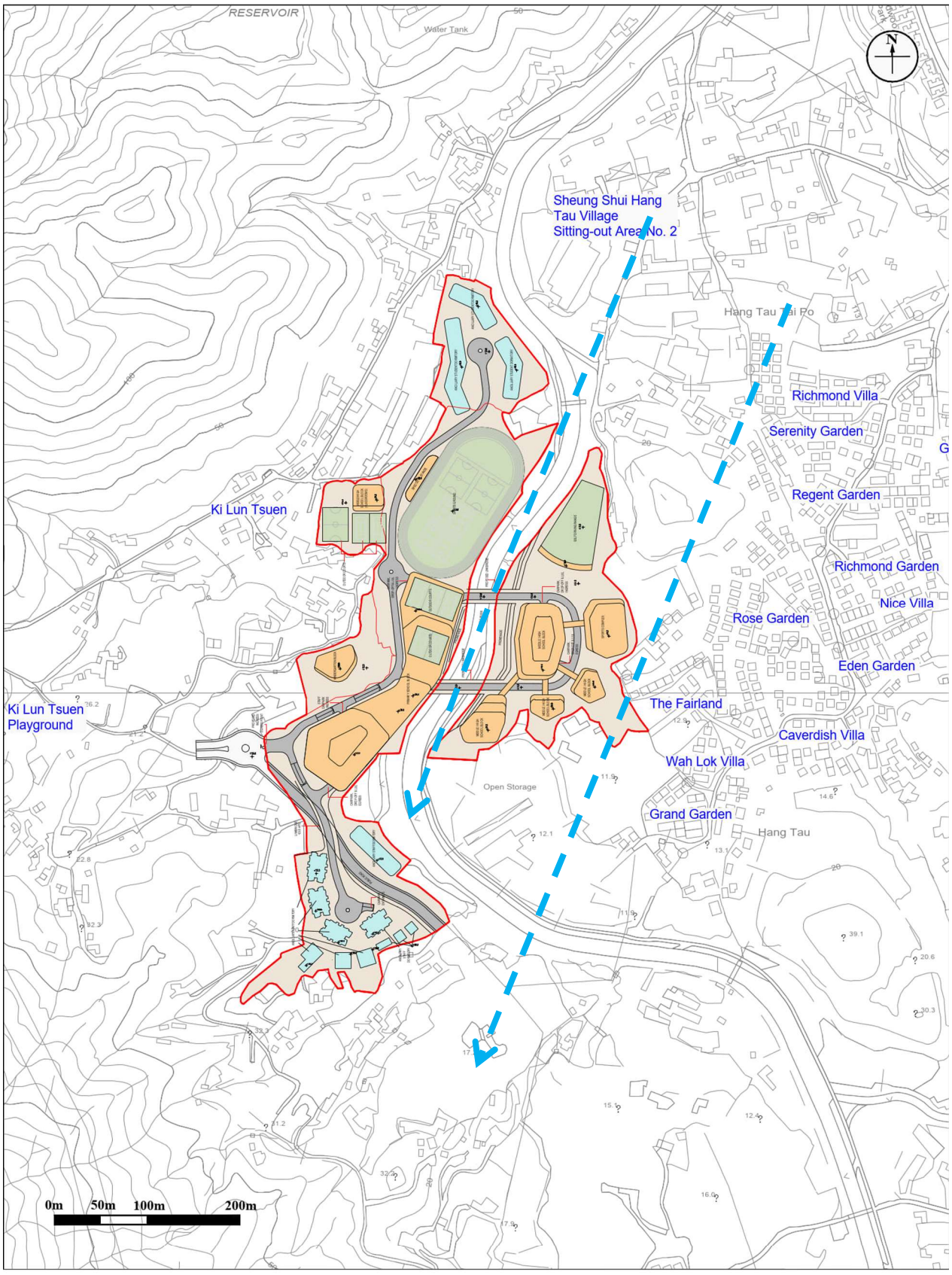

Figure:	**2b**	RAMBOLL
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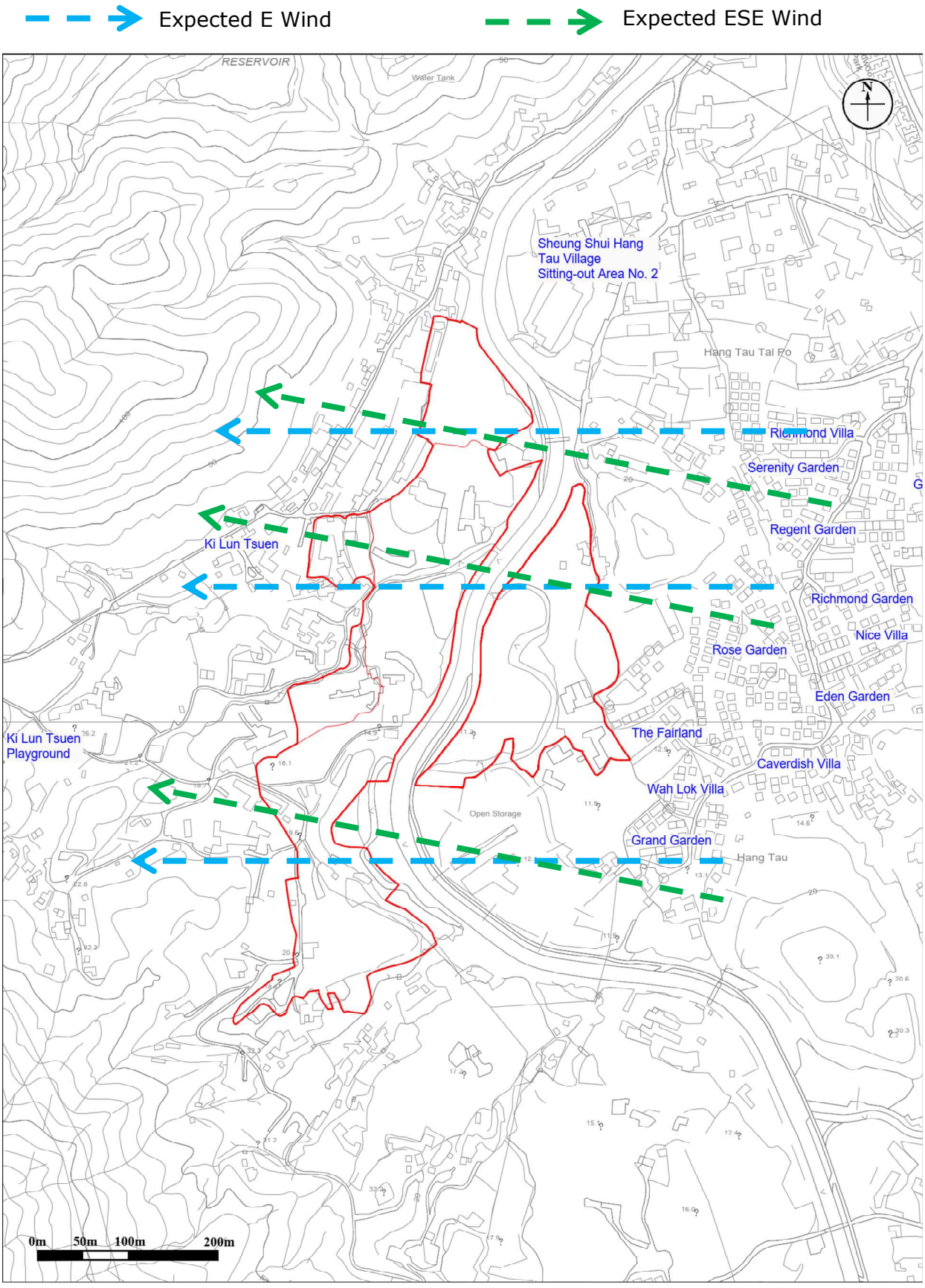

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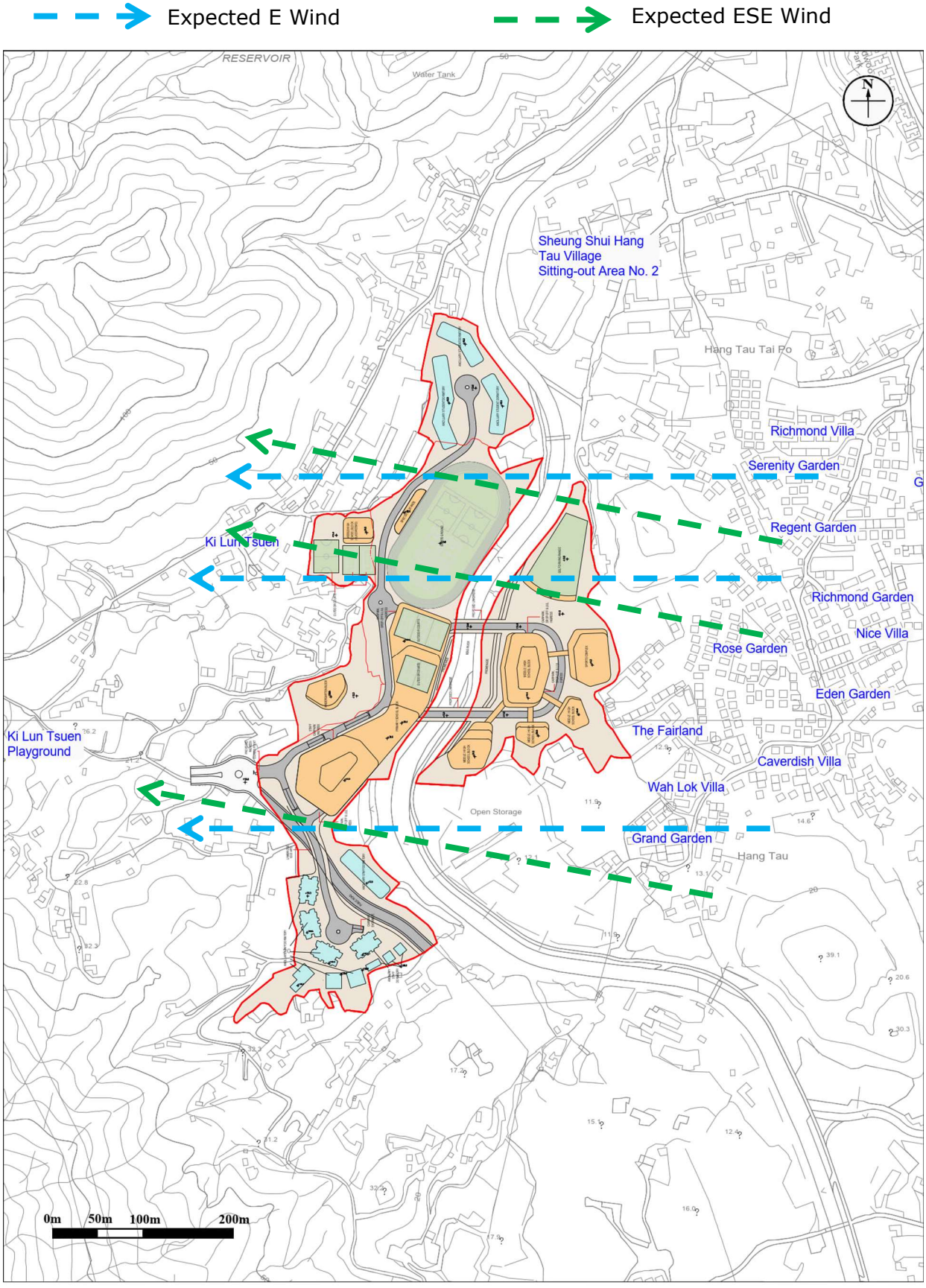

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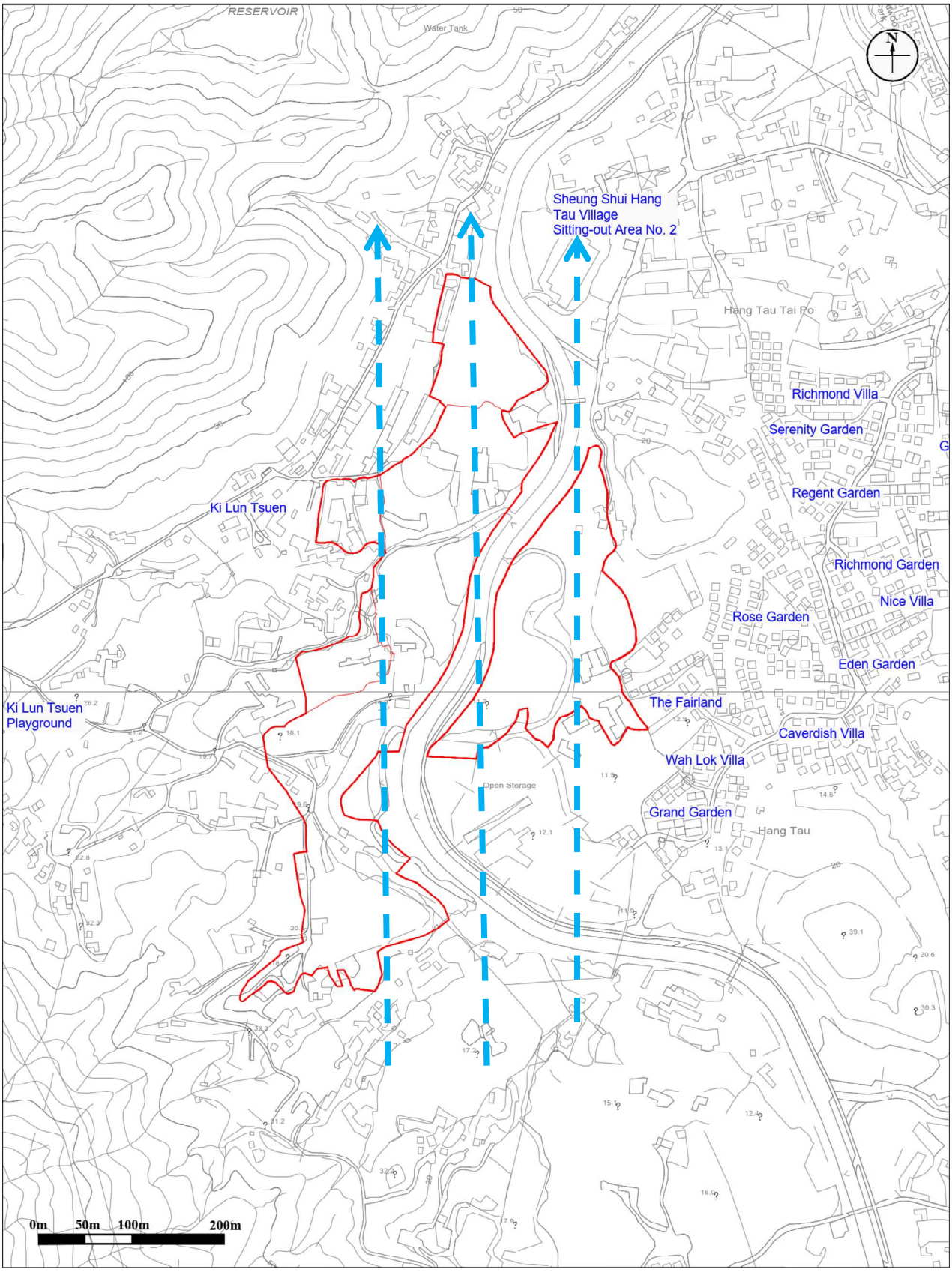

Figure:	**4a**	RAMBOLL
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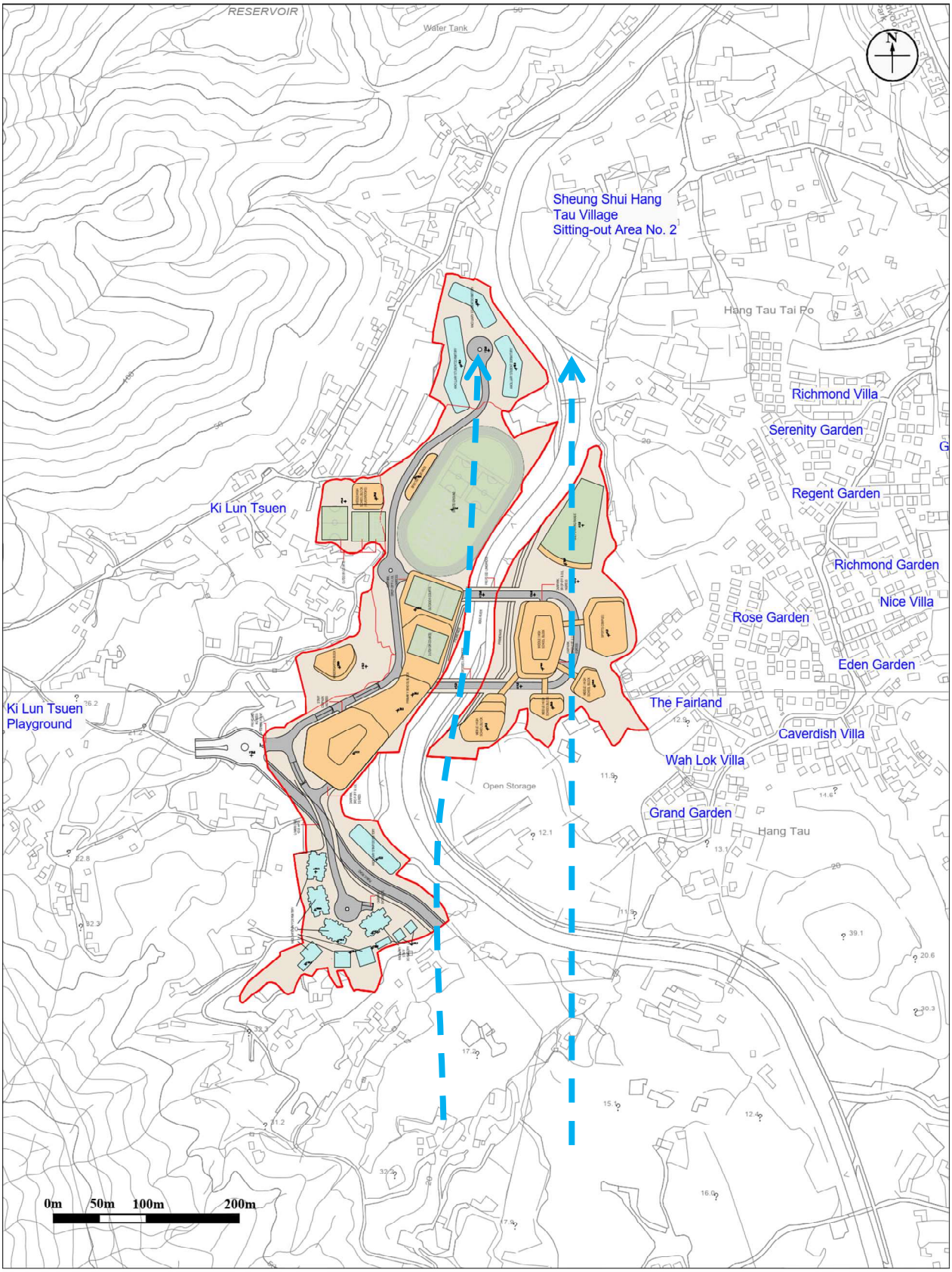

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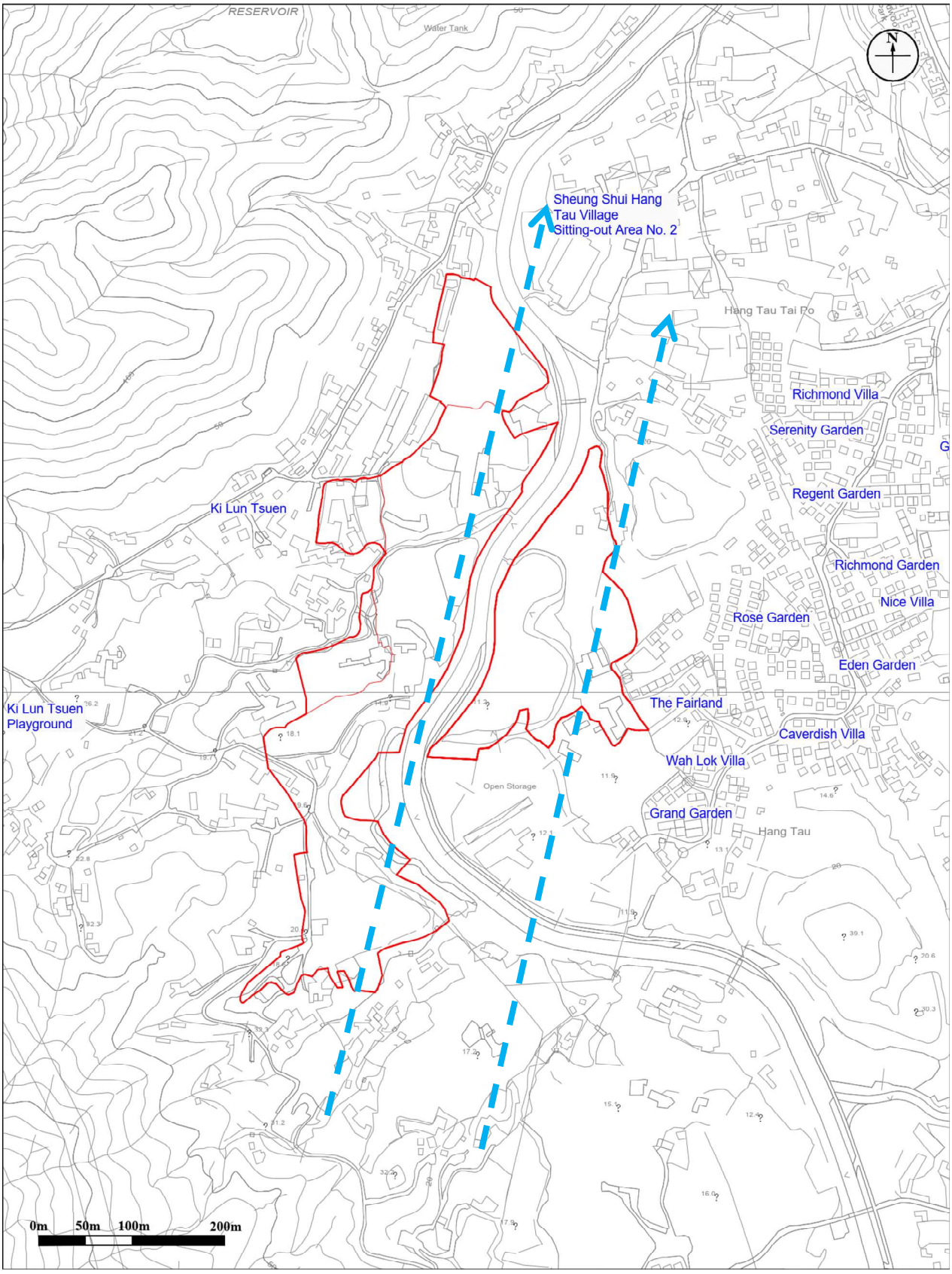

Figure:	**5a**	RAMBOLL
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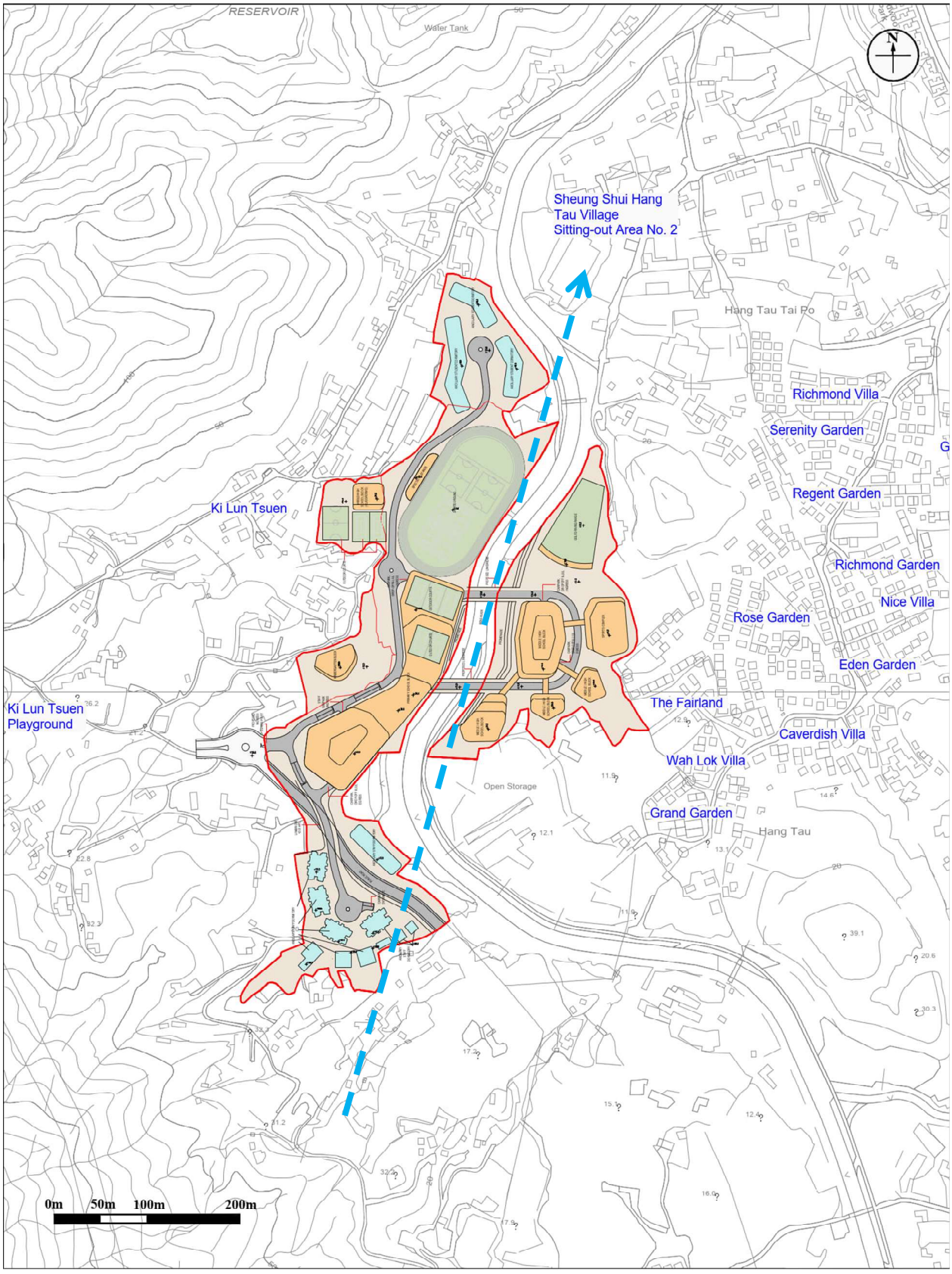

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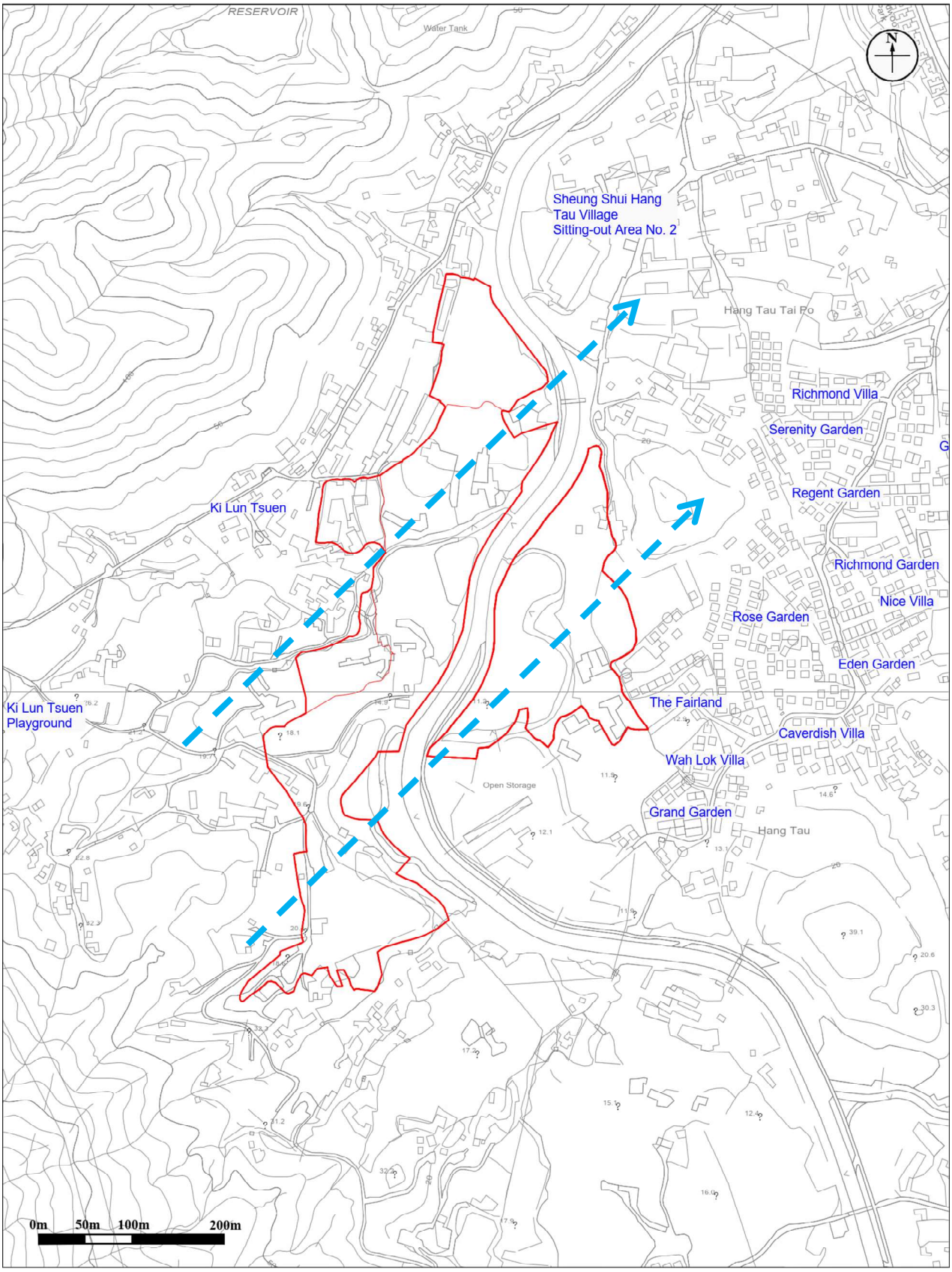

Figure:	**6a**	RAMBOLL
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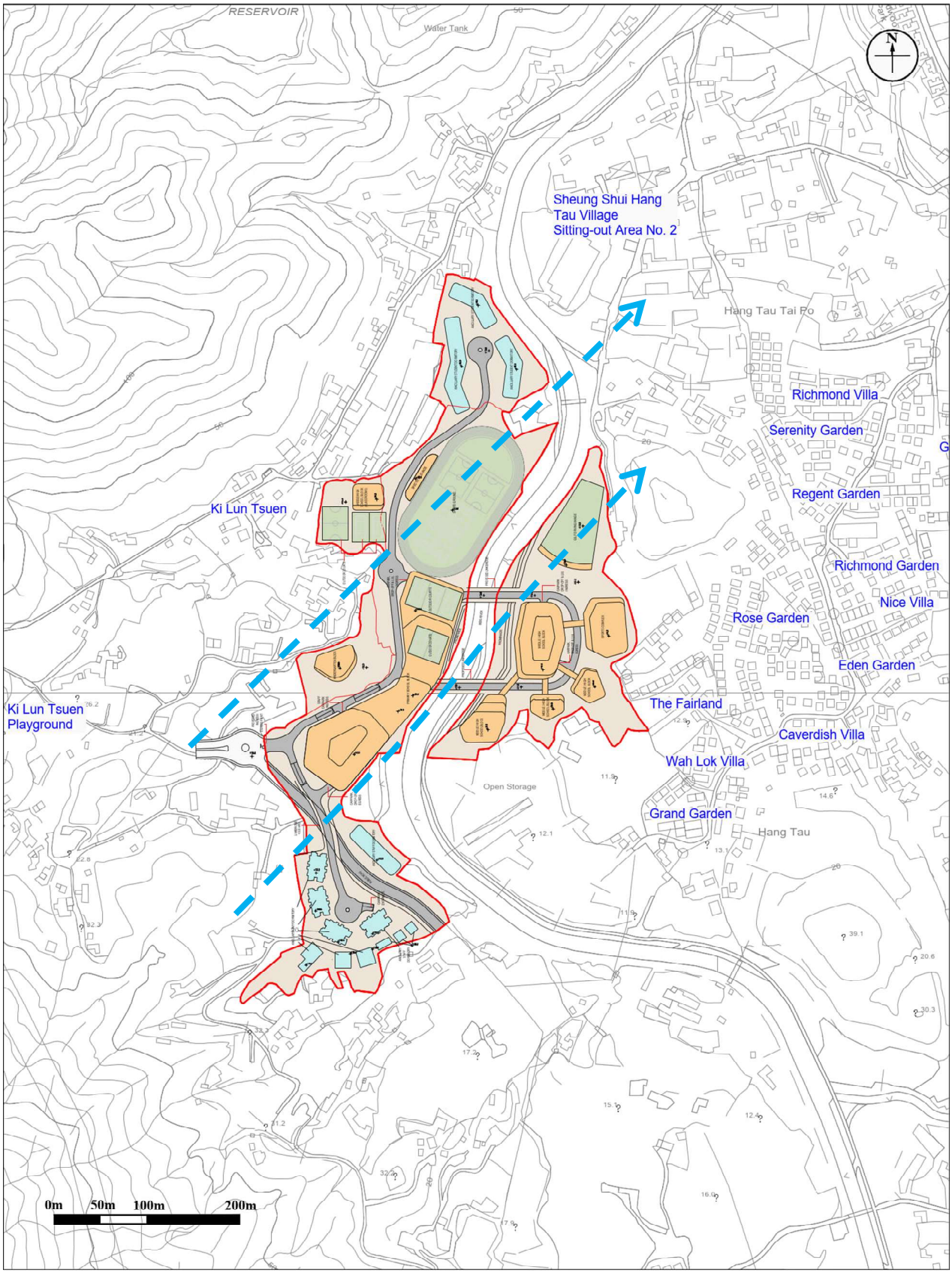

Figure:	**6b**	RAMBOLL
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Project:	**Proposed School at Various Lots in D.D. 94, 98 & 100 and adjoining Government Land, Kwu Tung South, New Territories**	Rev.: 1.0 Date: Sep 2025

Appendix 1

Layout and Section Plans of the Proposed Scheme

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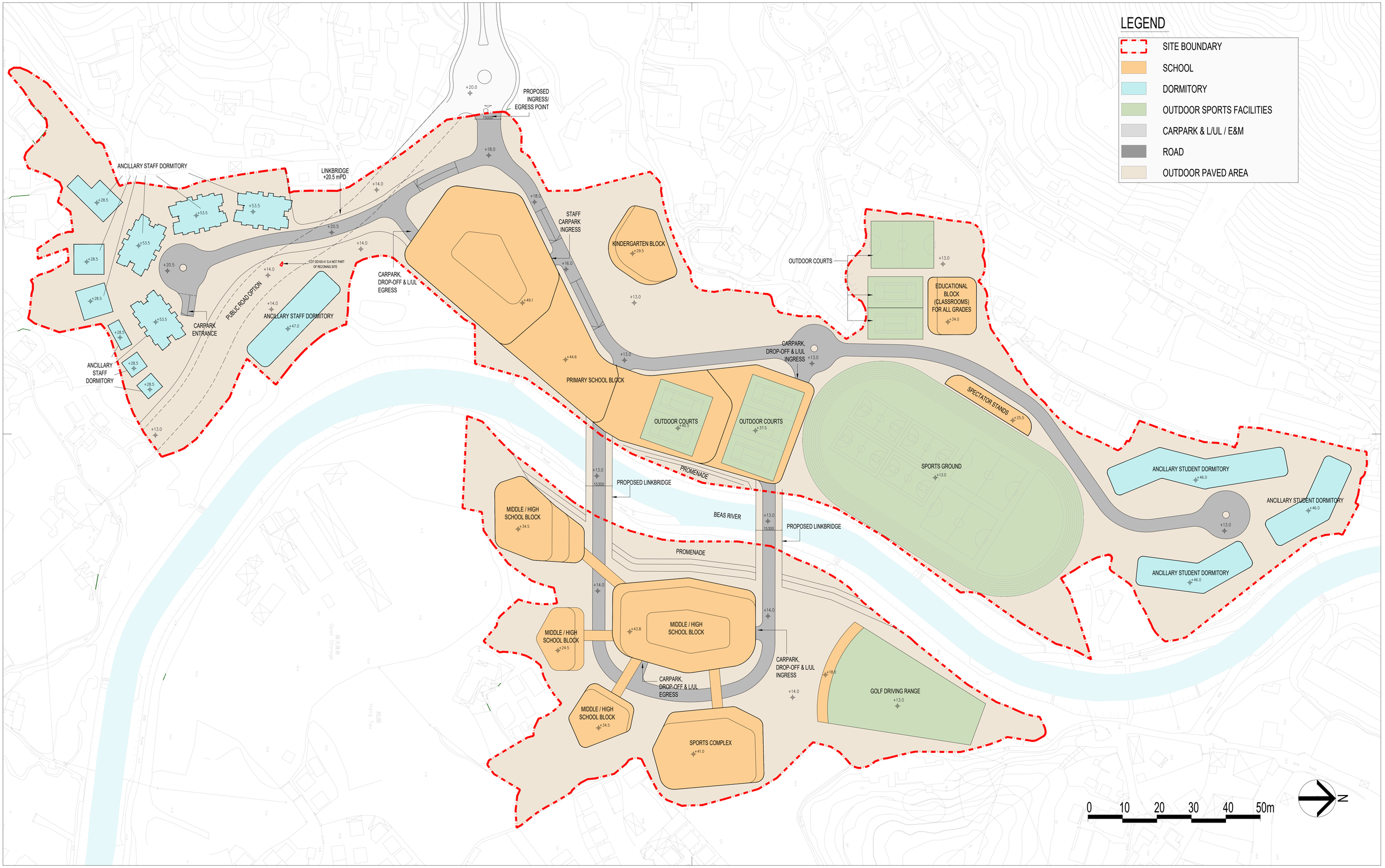

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Rev.	Description	Drawn	Checked	Approved	Date

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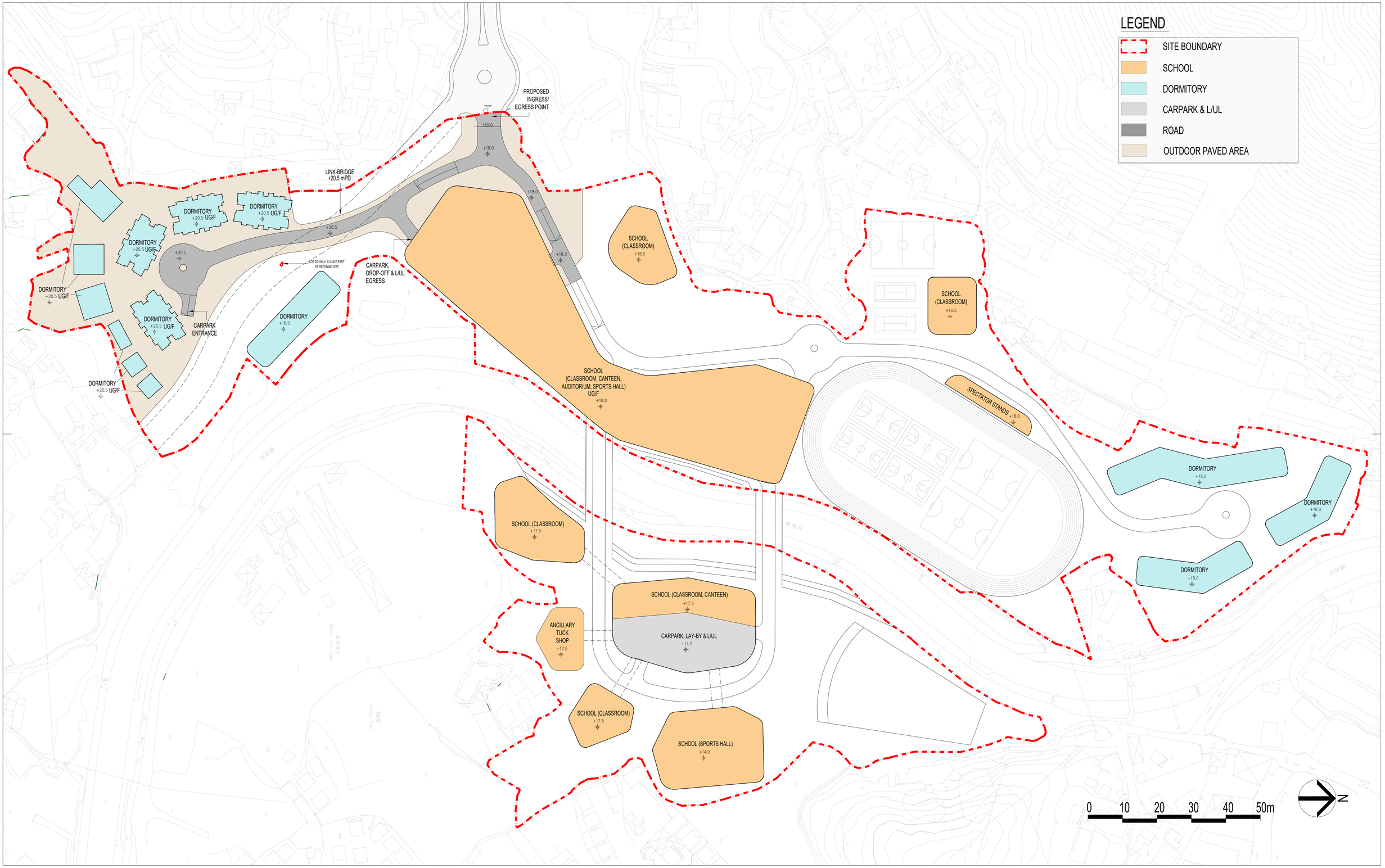
Project Title
PROPOSED INTERNATIONAL SCHOOL DEVELOPMENT AT KWU TUNG SOUTH

Drawing Title
FULL PHASE – MASTER LAYOUT PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_01_

Drawing Purpose



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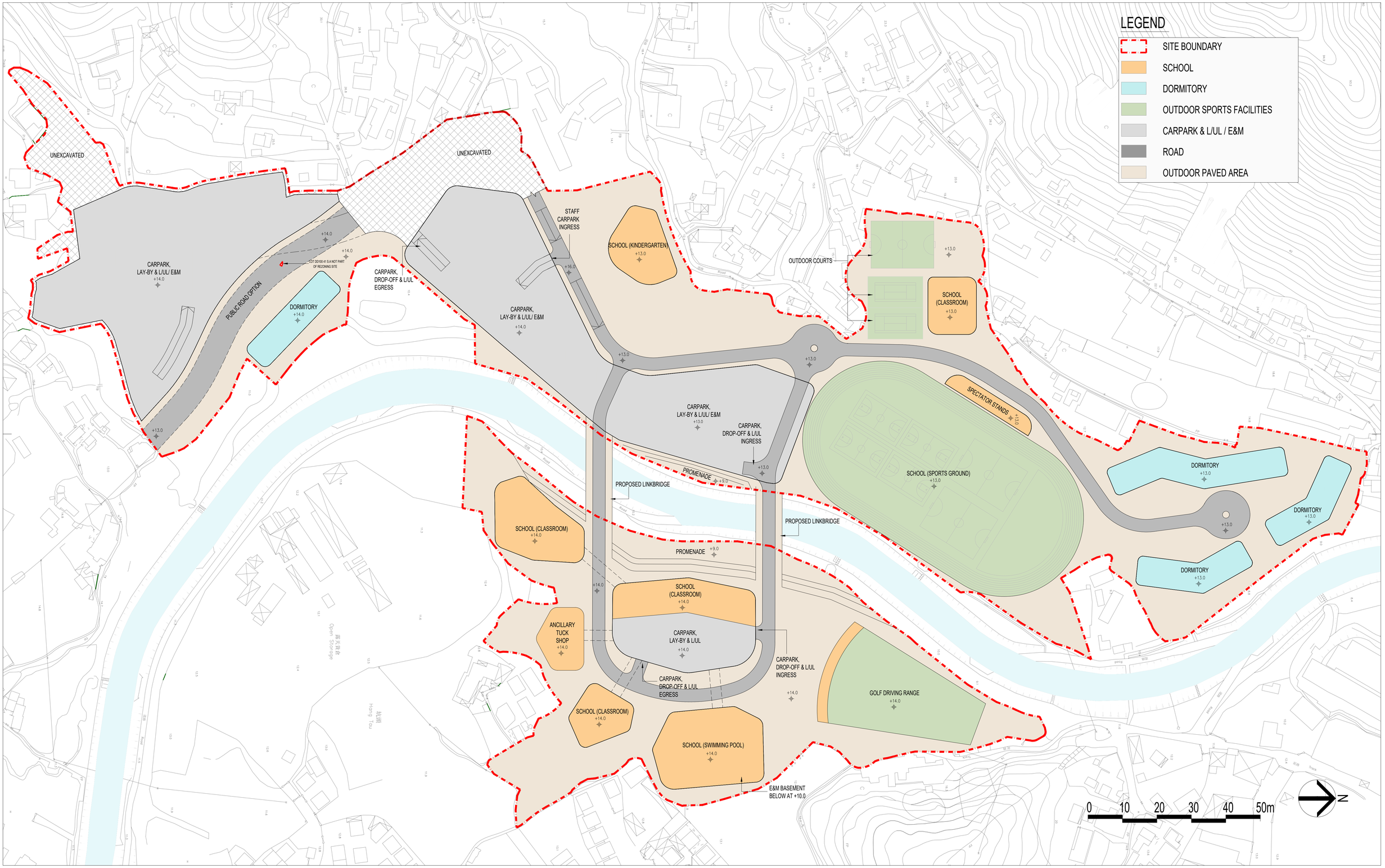
Project Title

Drawing Title
FULL PHASE –
FIRST FLOOR PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_03

Drawing Purpose



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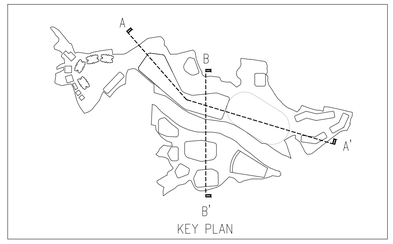
Project Title

Drawing Title
FULL PHASE -
GROUND FLOOR PLAN

Project No. 25018NT
Scale 1 : 1000 Issue Date NOV 2025
Drawing No. A/GBP_04

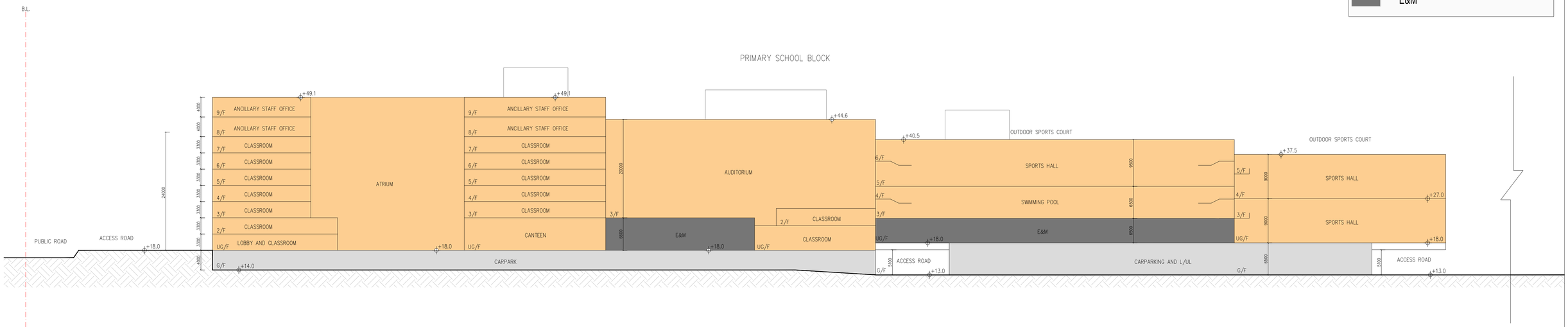
Drawing Purpose



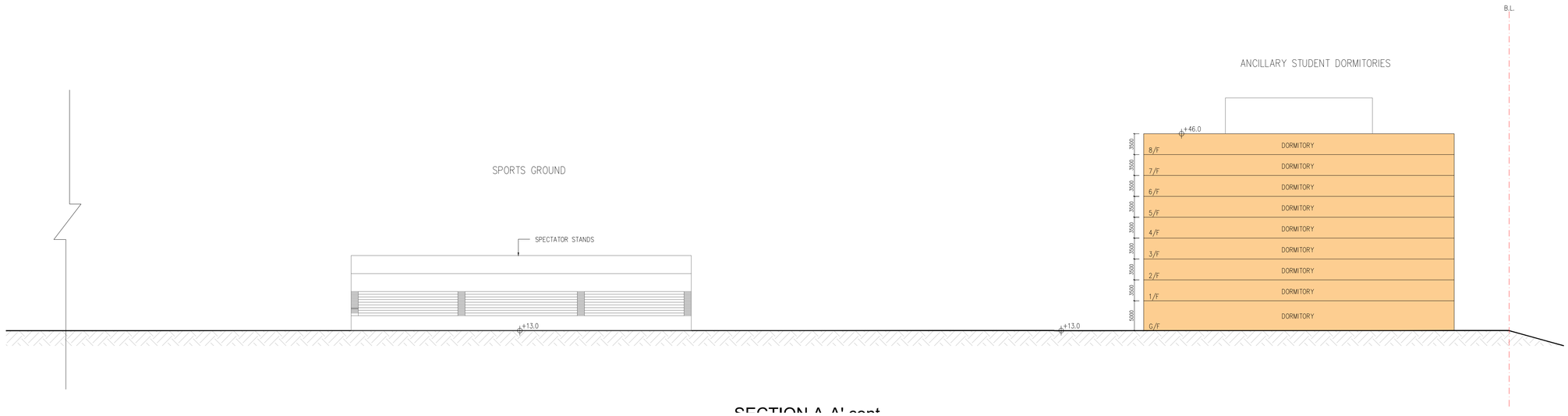
KEY PLAN

LEGEND

- SITE BOUNDARY
- SCHOOL
- DORMITORY
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



SECTION A-A'



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Project Title

Drawing Title
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Drawing No. A/GBP_05

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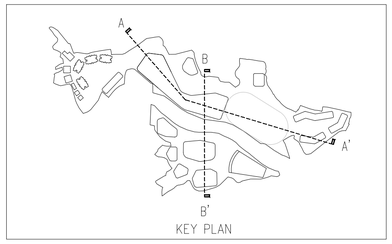
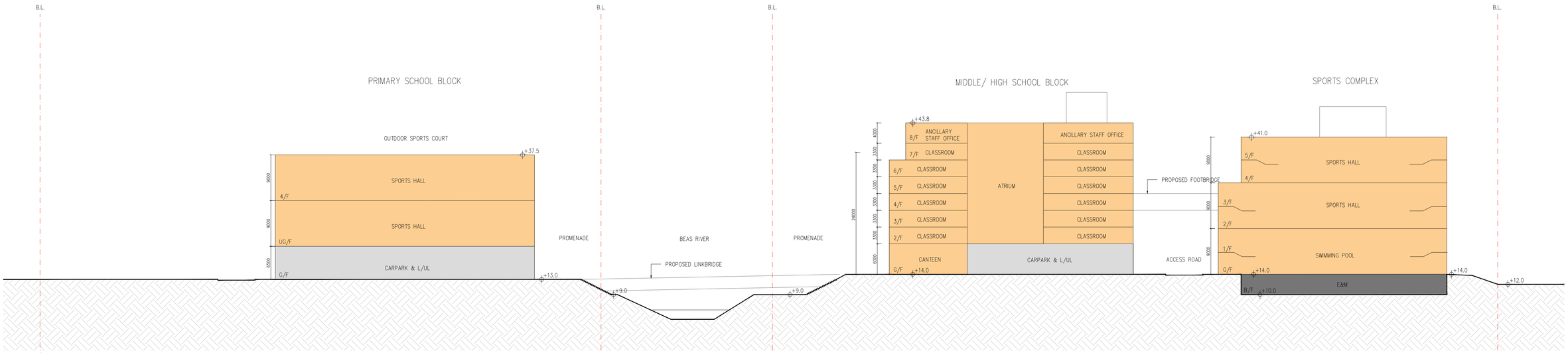


KEY PLAN

LEGEND

- SITE BOUNDARY
- SCHOOL
- DORMITORY
- OUTDOOR SPORTS FACILITIES
- CARPARK & L/UL
- E&M



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Drawing Title
SECTION B-B

Project No. 25018NT
Scale 1:400 Issue Date NOV 2025
Drawing No. A/GBP_06

Drawing Purpose