S12A AMENDMENT OF PLAN APPLICATION
APPROVED FANLING / SHEUNG SHUI OZP NO. S/FSS/28

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

SUPPORTING PLANNING STATEMENT

August 2025

Applicant

Sime Darby Motor Services Limited

Consultancy Team

KTA Planning Limited
CKM Asia Limited
Ramboll Hong Kong Limited
Landes Limited

Executive Summary

This Planning Application is prepared and submitted on behalf of Sime Darby Motor Services Limited ("the Applicant") to seek approval from the Town Planning Board ("the TPB") under section 12A of the Town Planning Ordinance for the rezoning of the Site from "Government, Institution or Community" ("G/IC") to "Other Specified Uses" annotated "Innovation and Technology" ("OU(I&T)") on the Approved Fanling / Sheung Shui Outline Zoning Plan ("Approved OZP") No. S/FSS/28, to enable the proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation (the "Proposed Development") at various lots in D.D. 51 and adjoining Government land in Fanling (the "Rezoning Site").

To capitalise on the rapidly growing trends of EV and green energy, and more recently, the emerging low-altitude economy, the Applicant proposes to establish a "EV Mobility City" at the Site. The vision for the proposed EV Mobility City is to create a sustainable and forward-thinking regional hub that drives innovation and development of electric vehicle sector in Hong Kong, while also advancing technological development in green energy, low-altitude aerial vehicle, and smart city mobility solutions.

The Proposed Development comprises (i) a 7-storey podium (excluding 1-level of basement) accommodating innovation & technology ("I&T") related uses; and (ii) 2 domestic towers atop for provision of ancillary accommodation, comprising staff quarters (6-storey) and residential institution (12-storey). The indicative development scheme yields a total Plot Ratio ("PR") of 5.0 and Gross Floor Area ("GFA") of about 27,400m^2. The proposed building height will reach approx. +99.55mPD.

The rezoning proposal is fully justified based on the following grounds:

- In Line with Recent Government's Policies on Electric Vehicle, Green Energy and Low-altitude Economy;
- Long-term Planning & Economic Benefits and Investment Opportunities;
- Synergise and Catalyse the Development of Northern Metropolis;
- The Current "G/IC" Zoning is Redundant and the Previously Planned School is No Longer Required;
- Nurture I&T Talents in a Suitable Location with Supporting Facilities;

- Appropriate Development Quantum and Compatible with the Surrounding Developments;
- A More Efficient and Effective Use of the Site;
- Environmental Improvement and Upgrading of the Area; and
- The Indicative Development Scheme is Technically Feasible With No or No Significant Adverse Technical Impacts Nor Interface Issue.

In light of the above, we sincerely request the TPB to give favourable consideration for this Rezoning Proposal from planning and technical points of view.

行政摘要

（內文如有差異，應以英文版本為準）

本規劃申請是代表 Sime Darby Motor Services Limited（下稱「申請人」）根據城市規劃條例第 12A 條，向城市規劃委員會 （下稱「城規會」） 申請修訂粉嶺／上水分區計劃大綱核准圖編號 S/FSS/28 （下稱「核准圖」），把位於丈量約份第 51 約地段的多個私人地段及毗連的政府土地（下稱「申請地點」），由「政府、機構或社區」地帶改劃為「其他指定用途」註明「創新及科技」地帶，以作擬議「電動車智能城」及附屬員工宿舍和人才公寓（「擬議發展」）。

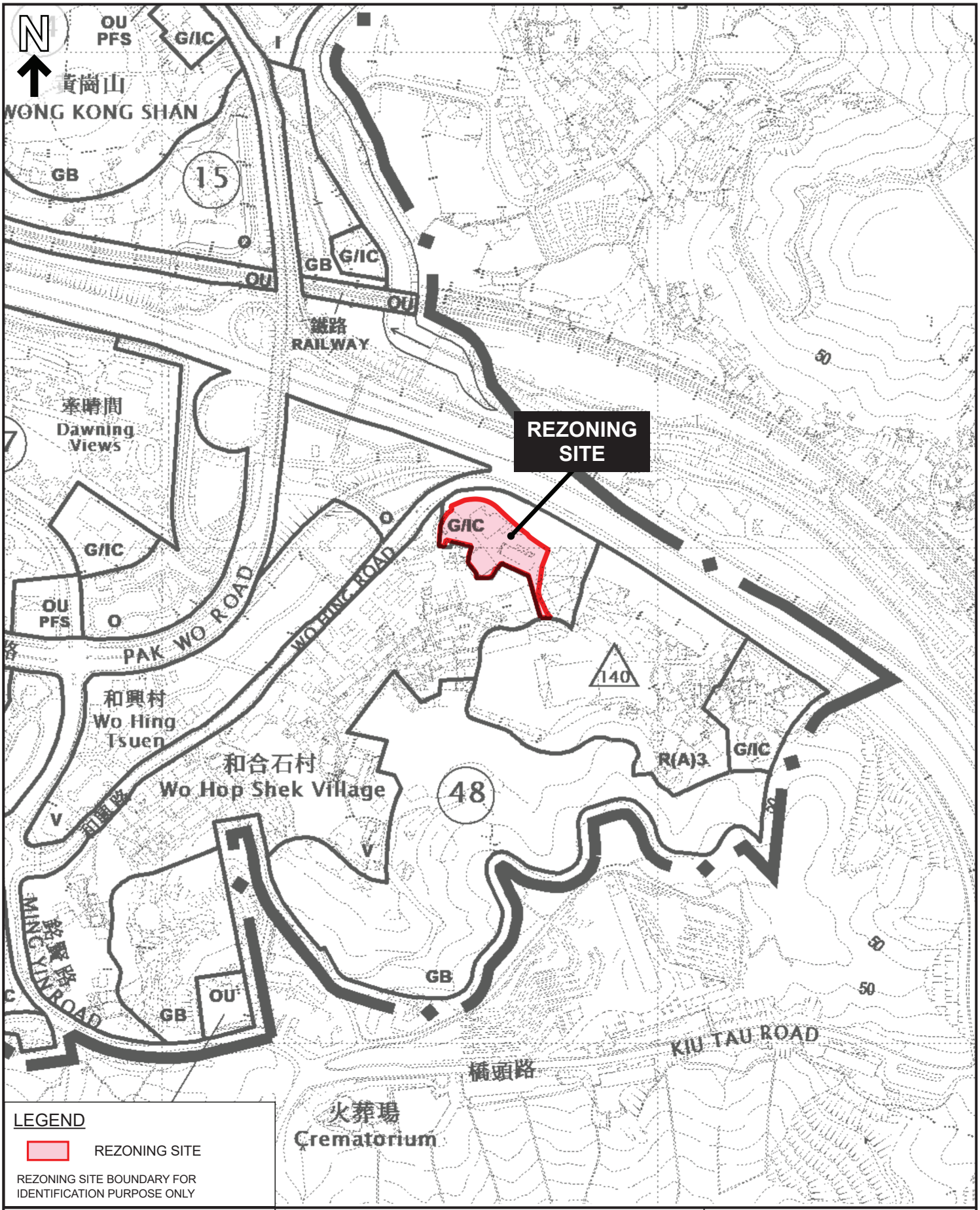
為把握電動車及綠色能源快速增長的趨勢，以及近期興起的低空經濟，申請人建議在申請地點興建「電動車智能城」。擬議發展的願景為打造一個可持續及具前瞻性的區域樞紐，促進香港電動車產業的創新及發展同時，並推動綠色能源、低空飛行及智慧城市的技術發展。

擬議發展包括（i）7 層高的基座（不包括 1 層地庫），用作電動車的創新及科技相關用途；以及（ii）2 座樓宇，用作員工宿舍（6 層高）及住宿機構（12 層高）用途。擬議發展的地積比約為 5 倍，樓面面積約為 27,400 平方米。建築物高度約為主水平基準上 +99.55 米。

擬議改劃申請具充份理據，原因如下：

- 擬議改劃方案切合政府現時對電動車、綠色能源及低空經濟所推行的政策。
- 擬議發展能夠提供長期的規劃及經濟效益以及帶來投資機會。
- 擬議方案能夠協同及催化北部都會區的發展。
- 現時的「政府、機構或社區」地帶已過時，而且早前規劃的學校將不再需要。
- 申請地點適合培育創科研人才。
- 建議發展的發展規模恰當並與周邊發展相容。
- 擬議發展能更充分有效地利用珍貴土地資源。
- 擬議發展能改善並提升附近的環境。
- 各項技術評估均證明擬議發展方案將不會或不會帶來嚴重的不良影響，以及不會造成銜接問題。

根據以上各點，申請人懇請是次的修訂圖則申請能獲得城規會支持。



LEGEND

REZONING SITE

REZONING SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

KTA PLANNING LIMITED 規劃顧問有限公司

LOCATION PLAN

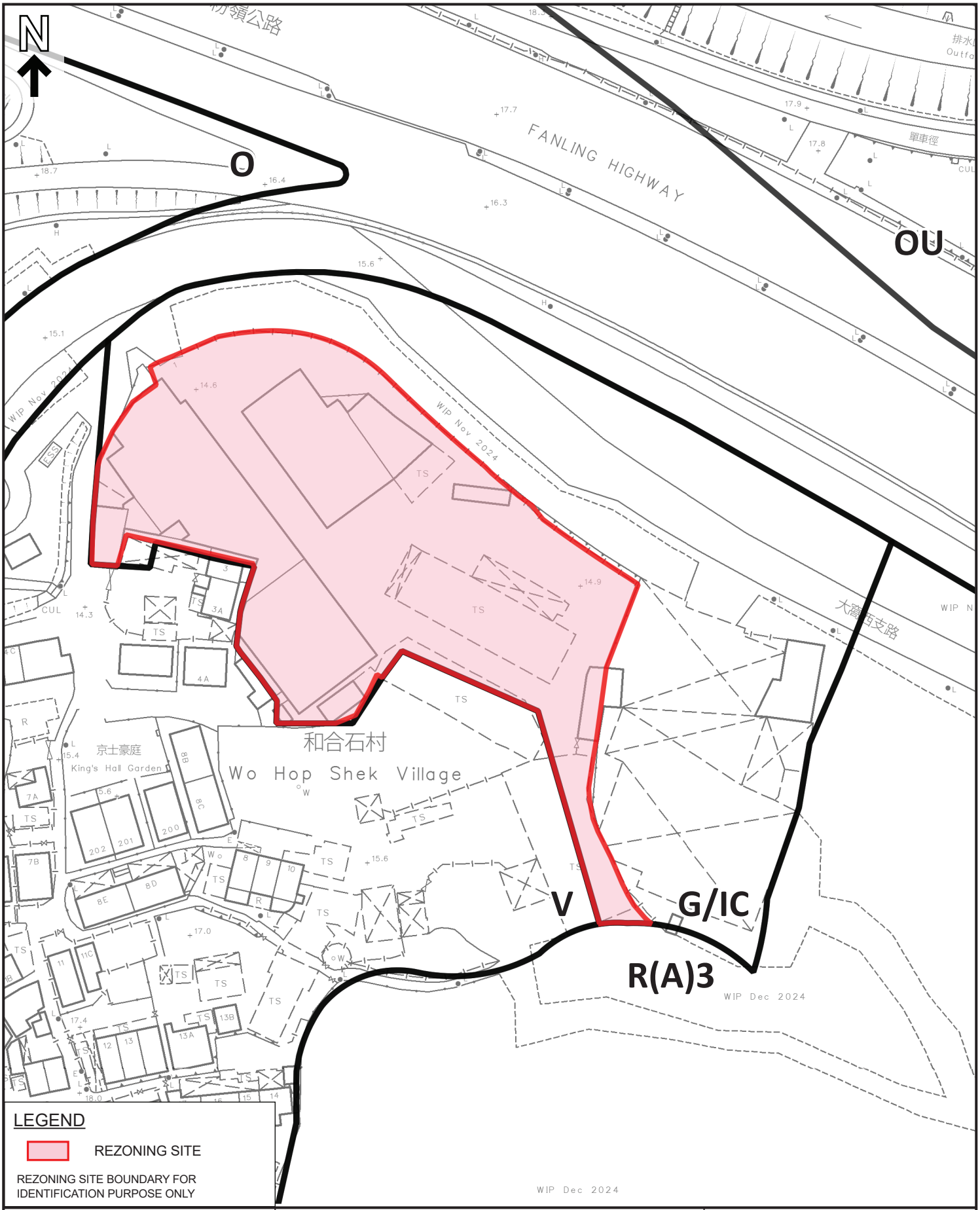
Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

SCALE 1:5000

PLAN A

Extract plan based on the Approved Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/28 approved on 9.4.2024

DATE: 12 July 2025



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SITE PLAN

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

SCALE 1:1000

PLAN B

Extract plan based on thE Survey Sheet Nos. 3-SW-13C & 18A

DATE: 12 July 2025

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S12A AMENDMENT OF PLAN APPLICATION
APPROVED FANLING / SHEUNG SHUI OZP NO. S/FSS/28

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

Supporting Planning Statement

1. INTRODUCTION

1.1 Purpose

1.1.1 This Supporting Planning Statement is prepared and submitted on behalf of Sime Darby Motor Services Limited ("the Applicant") to seek the Town Planning Board's approval for the proposed amendment to the Approved Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/28 ("Approved OZP") to enable the Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation Development ("Proposed Development") at various lots[1] in D.D. 51 and adjoining Government land in Fanling (the "Site" or "Rezoning Site"). The Rezoning Site is currently zoned "Government, Institution Or Community" ("G/IC") on the Approved OZP.

1.1.2 The proposed amendment of the subject S12A application include:

i) Rezoning of the Site from "G/IC" to "Other Specified Uses" annotated "Innovation and Technology" ("OU(I&T)") zone.

1.1.3 This Supporting Planning Statement is to provide the Town Planning Board ("TPB") and relevant Government Departments with the necessary information to facilitate consideration of this S12A application.

1.2 Report Structure

1.2.1 Following this introductory section, the site and planning context will be briefly set out in **Section 2**. The need for the Proposed Development are described in **Section 3**, followed by the recent relevant Government policies described in **Section 4**. **Section 5** outlines the Indicative Development Proposal of the Rezoning Site, whilst the proposed amendment to the Approved OZP will be

[1] Referring to lots nos. 4250 s.D, 4250 RP (Part), 4252 s.A RP (Part), 4272 s.D, 4272 RP, 4273 s.B ss.1, 4273 s.B RP, 4897 s.A and 4897 RP (Part) in D.D. 51.

presented in **Section 6**. The planning merits and justifications of the Proposed Development will be discussed in **Section 7,** followed by a summary of the results and findings of various technical assessments in **Section 8**. **Section 9** concludes and summarises this supporting planning statement.

2. SITE AND PLANNING CONTEXT

2.1 Site Location

2.1.1 The Rezoning Site is situated in the fringe of Fanling New Town at various lots in D.D. 51 and adjoining Government land. It is located within the 'village environ' ('VE') of Wo Hop Shek Village and Wing Ning Tsuen and bounded by a workshop and planned public housing estate to its east; Wo Hop Shek Village and Regalia Villa to its south; Wo Hing Road to its west; and Tai Wo Service Road West and Fanling Highway to its north (**Figure 2.1** refers). The existing vehicular access is located in the north-west of the Site abutting Wo Hing Road.

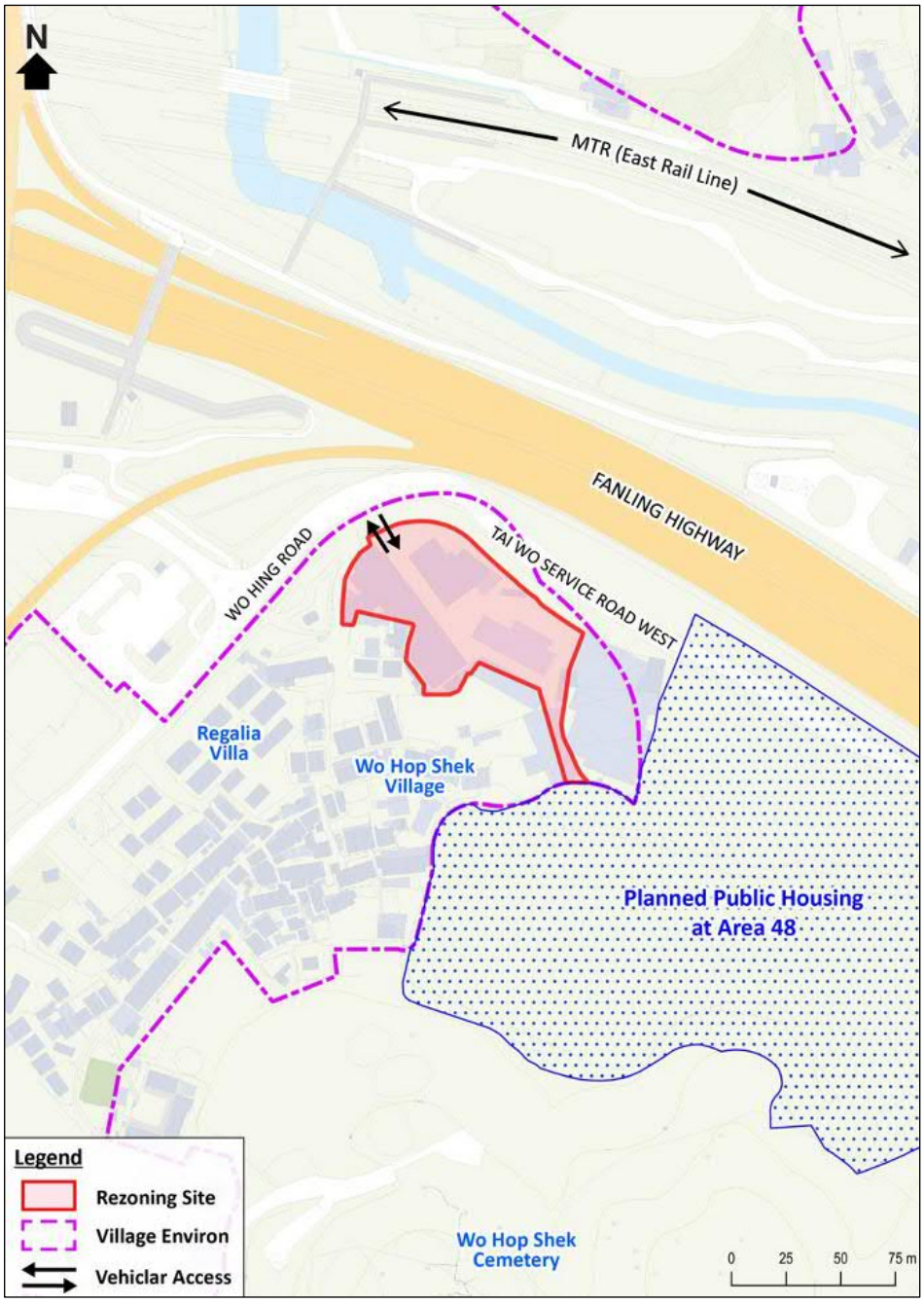


Figure 2.1: Site Location Plan

2.2 Surrounding Land Uses

2.2.1 The Rezoning Site is situated at the interface of urban / sub-urban setting intermixed with village-type houses, rural workshops and warehouses, vegetated vacant land and a planned high-rise public housing estate at Area 48 (currently under construction) **(Figure 2.2** refers).

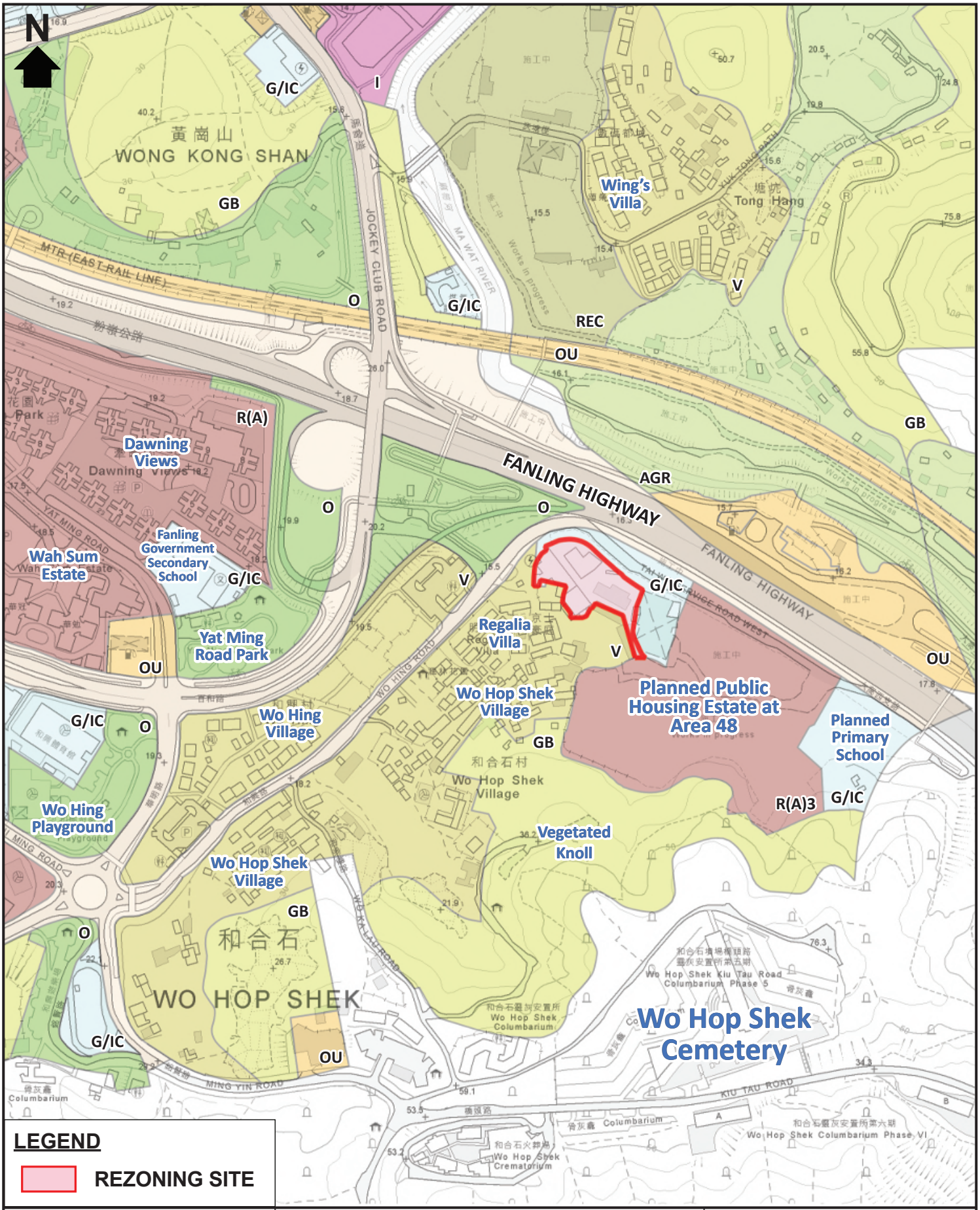
- To the immediate east of the Rezoning Site is a rural workshop; to the further east are the planned high-rise public housing development[2] (comprising 7 residential towers with building height ranging from about +118mPD to +175mPD) and planned primary school at Area 48;

- To its immediate south is a “Village Type Development” (“V”) zone of Wo Hop Shek Village, comprising various low-rise village-type dwellings and rural workshops and warehouses; To its further south beyond the vegetated knoll zoned “Green Belt” (“GB”) is the Wo Hop Shek Cemetery, which is not covered by any OZP;

- To its west across Wo Hing Road is a “V” zone for Wo Hing Village; to its further west is a local open space (i.e. Yat Ming Road Park) and high-rise residential estates, namely Dawning Views (about +115mPD) and Wah Sum Estate (about +130mPD);

- To its north across the Tai Wo Service Road West and Fanling Highway are areas zoned ‘‘Agriculture” (“AGR”) and “Other Specified Uses” annotated “Amenity Area” on the Approved Lung Yeuk Tau & Kwan Tei South OZP No. S/NE-LYT/19, currently occupied by petrol filling station, open storage, construction sites and vegetated areas.

[2] The planned high-rise public housing development at Area 48 falls within an area "Residential (Group A)3" (“R(A)3”) and subject to a Building Height Restriction of +140mPD. The BHR of the planned public housing development were relaxed to +175mPD under the planning application No. A/FSS/295 approved by the TPB on 12.1.2024.



LEGEND

REZONING SITE

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LAND USE CONTEXT PLAN

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

SCALE 1:5000

FIGURE 2.2

Extract plan based on the Survey Sheet Nos. 3-SW-13C & 18A

DATE: 12 July 2025

2.3 Accessibility

2.3.1 The Rezoning Site is accessible from Wo Hing Road via the existing run-in/out in the north-west of the Site. It is also served by various local roads (e.g. Pak Wo Road and Jockey Club Road) and highway (e.g. Fanling Highway), which provide convenient connections to the town centre of Fanling and other districts within New Territories.

2.3.2 While the MTR Fanling Station is located about 1.1km away, the Rezoning Site is well served by various public transport services, including franchised and non-franchised bus services, and minibus services. The bus/minibus stops are mainly located along Wo Hing Road and Tai Wo Service Road West, in close proximity to the Rezoning Site.

2.4 Existing Use and Site Condition

2.4.1 The Rezoning Site has a site area of about 5,480m^2 and a site level of about +14.75mPD. It is currently occupied by temporary rural warehouses and structures (**Figure 2.3** refers).

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EXISTING USE AND SITE CONDITION PLAN

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

Supporting Planning Statement

FIGURE 2.3

Scale: 1:500

Date: 12 July 2025

2.5 Statutory Planning Context

2.5.1 According to the Approved Fanling / Sheung Shui Outline Zoning Plan ("Approved OZP") No. S/FSS/28, the Rezoning Site falls entirely within a "G/IC" zone (**Figure 2.4** refers). The planning intention of the "G/IC" zone is 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"*.

2.5.2 Under the Explanatory Statement of the Approved OZP, the subject "G/IC" zone is reserved for planned primary school.

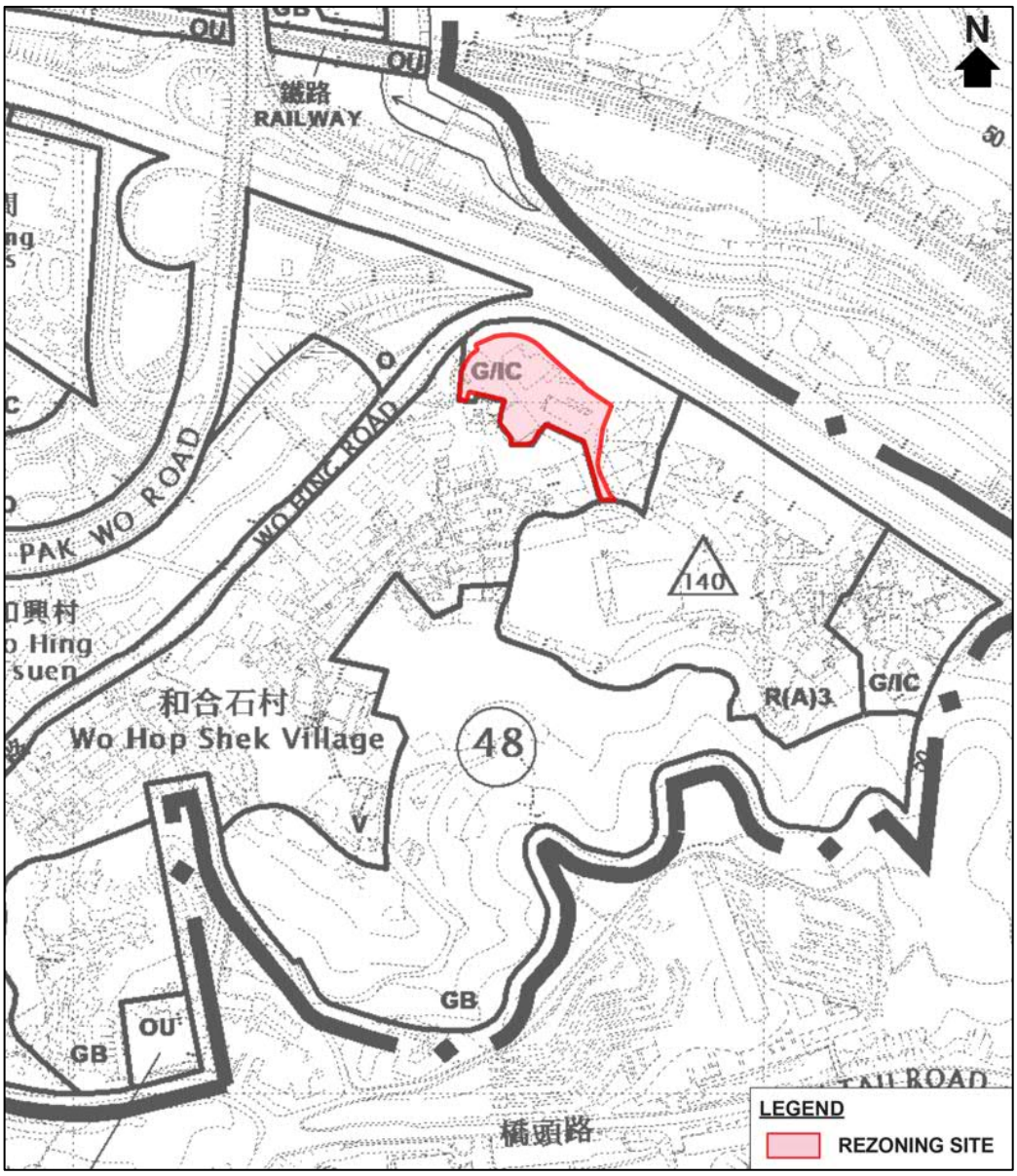


Figure 2.4: Zoning Context Plan (Extracted from Approved OZP)

2.6 Land Status and Land Administration Matters

2.6.1 Originally, the private lots (9 nos. in total[3]) involved and owned by the Applicant have a total site area of about 6,186m^2. To avoid unnecessary complications, the portion of these private lots encroaching onto the adjoining "V" zone are excluded from the rezoning boundary. As such, the residual site area of private land is reduced to about 5,469.0m^2. Together with the small piece of Government land along the northern periphery (about 11.4m^2), the total site area of the Rezoning Site amounts to approx. 5,480.4m^2. A breakdown of the land ownership is provided in **Table 2.1** and **Figure 2.5**.

Table 2.1: Breakdown of Land Ownership

Land Ownership	Area (m^2)
Private land owned by the Applicant within Rezoning Site: D.D. 51 • 4250 s.D * • 4250 RP (Part) • 4252 s.A RP (Part) • 4272 s.D * • 4272 RP • 4273 s.B ss.1 * • 4273 s.B RP • 4897 s.A * • 4897 RP (Part)	5,469.0 (99.8%)
Government land	11.4 (0.2%)
Total	**5,480.4 (100%)**

* Registered in the Deed Poll dated 10 January 2022

Remark

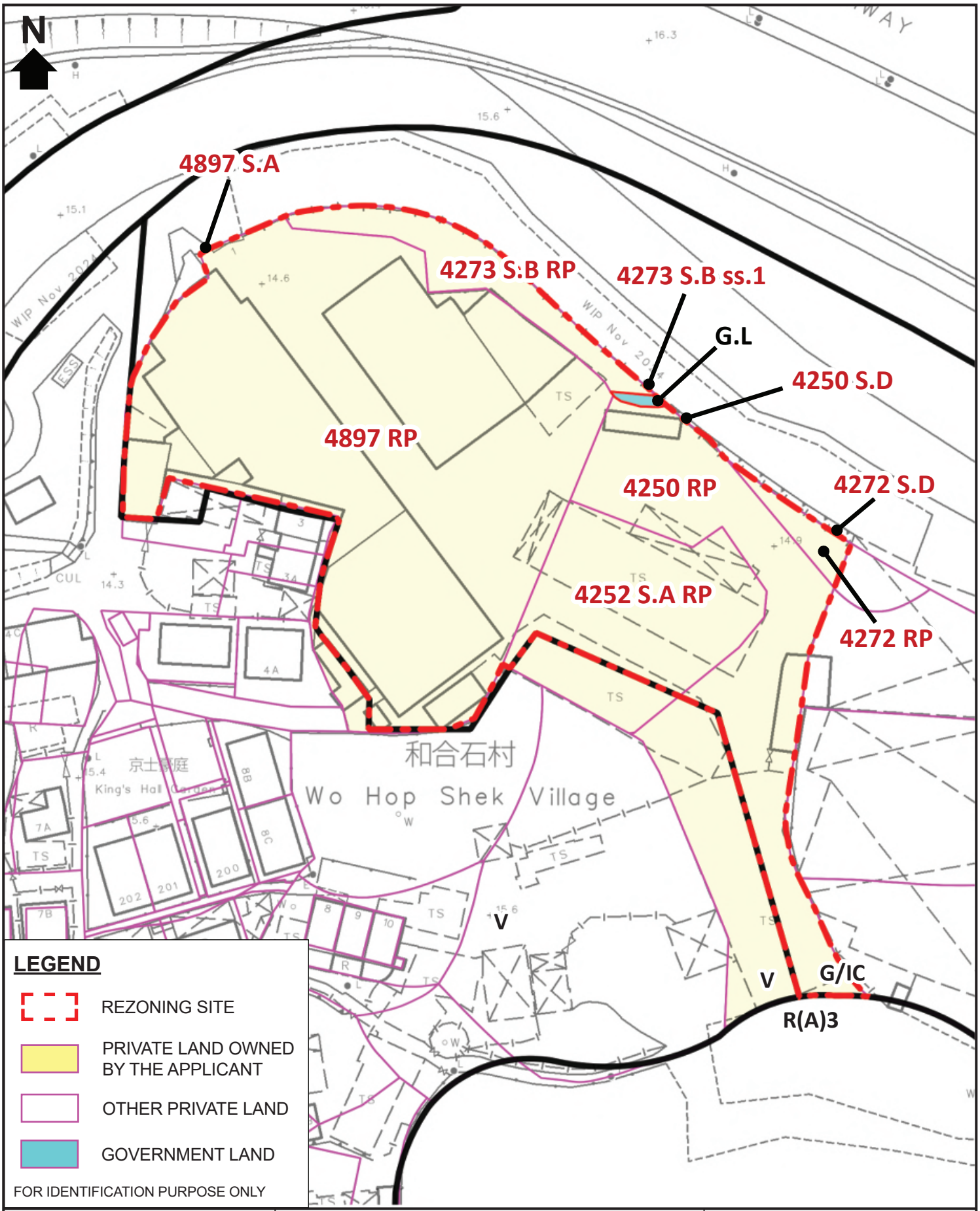
These areas are based on geographic information system and subject to detailed on-site survey.

2.6.2 The Rezoning Site was subject to two Short Term Waivers (i.e. Short Term Waiver ("STW") No. 870 first issued on 3 July 1987 for a "metal- ware and electrical goods factory" and STW No. 963 first issued on 14 September 1990 for the "manufacturing of metalware and electrical goods"). The two STWs had expired in December 2019 and both the "metal-ware and electrical goods factory" and "manufacturing of metalware and electrical goods" use on the Rezoning Site had ceased operation for quite some time (at least since the acquisition of the Rezoning Site by the Applicant).

2.6.3 However, by the two letters both dated 20 August 2024, the District Land Officer/North offered to renew these two STWs, notwithstanding the fact that both

[3] For the avoidance of doubt, the "V" zoned land falling outside the Rezoning Site in the southwest will not be included in the land area shown in **Table 2.1** for PR calculation.

"metal-ware and electrical goods factory" and "manufacturing of metalware and electrical goods" uses are not uses permitted under the "G/IC" zone. The offers to renew the two STWs were accepted by the Applicant. Both the "metal-ware and electrical goods factory" and the "manufacturing of metalware and electrical goods" uses permitted under the 2 STWs are incompatible with the surrounding developments which are predominantly residential in nature and inconsistent with the planning intention of the OZP.



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LAND OWNERSHIP PLAN

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

SCALE 1:750

FIGURE 2.5

Extract plan based on the Survey Sheet Nos. 3-SW-13C & 18A

DATE: 4 August 2025

3. NEED FOR THE PROPOSED EV MOBILITY CITY

3.1 Planning and Development History of the Site

3.1.1 The planning and development history of the Site are briefly set out in the following paragraphs and summarised in **Figure 3.1**.

Original OZP Zoning and Acquisition of Site (September 2015)

3.1.2 The original Site, comprising five private lots of D.D. 51 in Fanling, had a site area of about 7,047m^2 (before subsequent resumption by the Government for the Fanling Bypass Road Widening). It was partly zoned “Industrial” (“I”) and “V” under the first Fanling/Sheung Shui OZP No. S/FSS/1 back in 1987 and remained unchanged until 2016.

3.1.3 In September 2015, Marksworth Limited, an affiliated company of the Applicant, acquired the private lots and later transferred them to the Applicant. At the time of acquisition, majority of the Site was zoned "I" under the then OZP.

Land Resumption (December 2015 - December 2019)

3.1.4 Shortly after the acquisition of the Site, the then Transport and Housing Bureau (THB) gazetted an land resumption proposal under the Roads (Works, Use and Compensation) Ordinance, under which about one-third area of the original Site was affected by the resumption proposal. Despite the objections and negotiations subsequently raised by the Applicant, the affected land parcels, albeit in a reduced scale due to adjusted road alignment, were eventually resumed and reverted to the Government in December 2019.

Proposed OZP Amendment (January 2016 - January 2017)

3.1.5 In January 2016, right after the publication of the resumption gazette, the subject "I" zone was rezoned to “G/IC” (Item B2) and "Residential (Group A)3" (Item A) by the Planning Department (PlanD), with a view to reserve the Site for a primary school in support of the Fanling/Sheung Shui New Town[4]. Representation was submitted by Marksworth Limited in March 2016, objecting to the proposed amendment. Together with the representation, an alternative proposal to rezone the Site to "Other Specified Uses (Automobile Dealership Centre)" was also proposed for consideration of the TPB.

3.1.6 Two rounds of hearing were held by the TPB in September 2016, after which the representation was not upheld. The amended OZP was approved by the Chief Executive in Council in January 2017 and renumbered as S/FSS/22.

[4] Both Items B1 and B2 are rezoned to “G/IC” to reserve sufficient land for primary school use according to the advice of Education Bureau. While item B1 is planned to be implemented to tie in with the proposed public housing development, item B2 (subject site) is a reserve school site to meet the demand of Fanling/Sheung Shui New Town.

General Building Plan Submissions (November 2018 - July 2019)

3.1.7 Between the period of November 2018 to May 2019, three rounds of General Building Plans (GBPs) were submitted to the Buildings Department for the proposed "Automotive Support Centre" at the Site. The proposal involved training centre, parts warehouse, and pre-delivery inspection facilities. All three submissions were rejected due to various issues such as no proof of control over the Government land, non-compliance with the OZP, and interference with land resumption negotiations. In July 2019, the Applicant was formally informed that the Site falls within the VE boundary.

Legal Proceedings (May 2020 - Present)

3.1.8 In May 2020, an application for leave to apply for judicial review was filed to the Court of First Instance. After rounds of legal proceedings, the case remains unresolved and currently pending final resolution before the Court of Final Appeal.

Funding Application for the School (Item B1) and Public Housing Development (Item A) (April 2022)

3.1.9 In April 2022, the funding application for “site formation and infrastructure works for public housing development at Area 48, Fanling” was discussed and considered by the Public Works Subcommittee (“PWSC”) of Legislative Council (“LegCo”). According to the proposal submitted by THB, the subject “G/IC” zone (where the Rezoning Site is located) was NOT covered by the funding application.

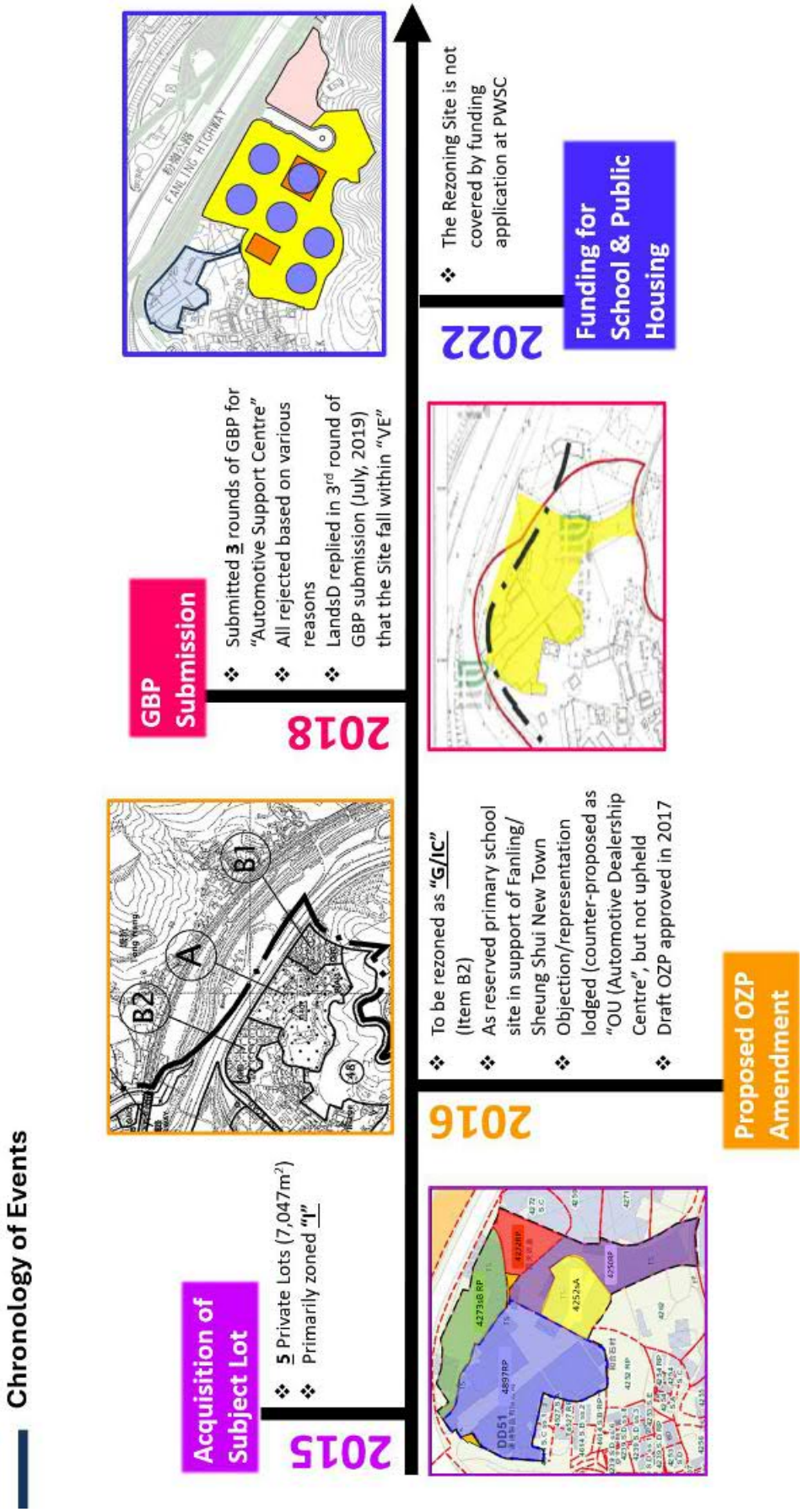


Figure 3.1: Planning and Development History of the Site

3.2 Background of the Applicant

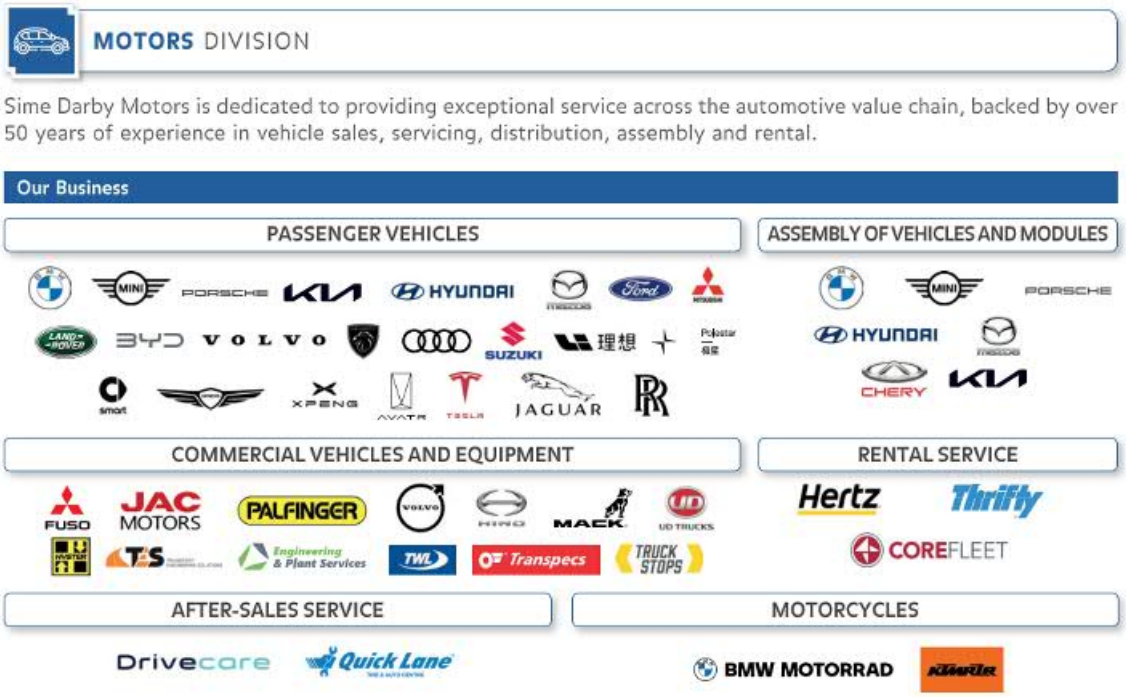
3.2.1 The Applicant, Sime Darby Motor Services Limited, is a wholly owned subsidiary of Sime Darby Motor Group (HK) Limited ("Sime Motor Group Hong Kong"). Sime Motor Group Hong Kong is a leading group of motor distributors with over 50 years of experience in the automotive industry, involving in importation, distribution, retail, provision of vehicle pre-delivery inspection and aftersales services and car rental businesses in the territory. Its parent group, "Sime", is a multinational conglomerate headquartered in Malaysia and is listed on the main market of Bursa Malaysia Securities Berhad with core businesses in automotive and industrial sectors.

3.2.2 With over a century-long legacy in automotive industry, Sime has established a strong global presence with a workforce of more than 30,000 employees all around the world. Its operations span over 18 countries and territories across the Asia Pacific region, with approximately 24% based in Australia and New Zealand, and 20% based in Mainland China. Amongst the 30,000 employees, about 50% of the workforce are under the motor division, underlying Sime's strong presence in the automotive sector. In the context of Hong Kong, there are currently around 1,000 staff, with showrooms, servicing and testing centres strategically located in Wanchai, Tsuen Wan, Chai Wan, To Kwa Wan, and Yuen Long.

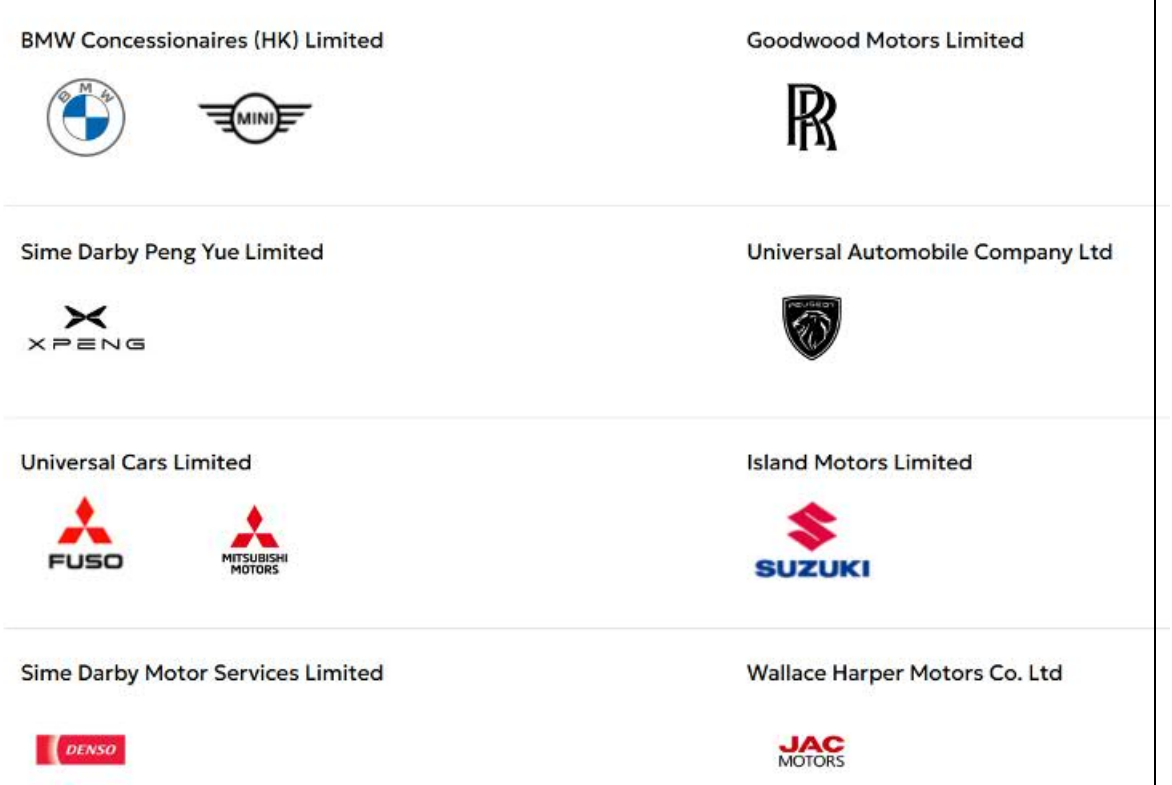
3.2.3 In addition to its extensive geographical footprint, Sime is also the preferred partner for various globally renowned automotive brands. Credited to its century-long history of operation and reputation for consistently delivering high quality products and services, Sime has built an extensive network of dealerships and long-standing brand partnerships with many of the world's top automotive and commercial truck brands. In the local context, Sime Motor Group Hong Kong represents a diverse portfolio, including luxury and premium brands such as Rolls-Royce, BMW, BMW Motorrad and MINI; mass-market brands like Peugeot, Suzuki, and Mitsubishi; and commercial vehicles, including Mitsubishi Fuso and JAC trucks. In 2024, Sime Motor Group Hong Kong further expanded its portfolio by securing distributorship rights for Xpeng, a leading Chinese electric vehicle ("EV") manufacturer, aligning with Hong Kong's sustainability goals and the global shift toward green mobility. This diverse brand representation, combined with an extensive dealership network and a commitment to high-quality service, solidifies the leadership of Sime Motor Group Hong Kong in the regional automotive industry.

3.2.4 In view of the above, the need to establish a regional hub in Hong Kong, in addition to the existing servicing and training centre, for consolidating all automotive business, operations, events, training and conference etc. across Asia Pacific region and even internationally, is therefore become essential and indispensable. The Applicant, as one of the investment arms of Sime Motor Group Hong Kong, is to lead this strategic move to develop and establish the Proposed Development to align with the rapidly growing EV sector in Hong Kong, enabling Sime Motor Group Hong Kong to reinforce its leading position in EV industry,

while also supporting the development and widespread adoption of EV and green mobility across the city.



Automotive Brands Represented / Partnering with Sime



Automotive Brands Represented / Partnering with the Applicant

Figure 3.2: Automotive Brands Represented / Partnering with Sime and the Applicant

3.3 Applicant's Vision of EV Mobility City

3.3.1 In 2013, when the land acquisition procedure first began, the Site was zoned "I" on the then OZP. Subsequently, the Applicant, without knowing the impending Government development programme (i.e. land resumption and OZP amendment), acquired the subject lots in 2015 with the genuine intention of developing an automotive dealership centre at the Site to expand its dealer network and strengthen business growth in the north and west New Territories (N.T.). As revealed in a Dealer Network Study conducted by the Applicant, the Site's strategic location was identified as ideal due to the growing number of affluent residents and increasing market potential in the region. However, the subsequent government actions restricted the development rights of the Site, and more importantly, disrupted the expansion plan for establishing a new regional stronghold in N.T. Despite the initial proposal for a planned primary school, the Site has remained idled for nearly a decade since its acquisition in 2015, with no implementation programme by Government for the development of the planned primary school anticipated in the foreseeable future.

3.3.2 To capitalise on the rapidly growing trends of EV and green energy, and more recently, the emerging low-altitude economy ("LAE"), the Applicant proposes to invest in Hong Kong by establishing a "EV Mobility City" at the Site. The vision for the proposed EV Mobility City is to create a sustainable and forward-thinking regional hub that drives innovation in the Hong Kong's EV industry, while advancing technological development in green energy, low-altitude aerial vehicles, and smart city mobility solutions. The proposed EV Mobility City will integrate state-of-art infrastructure, combining cutting edge technology, research and development (R&D), and commercial activities, including vehicle sales, low-altitude aerial vehicle indoor training (e.g. flying cars), battery swapping infrastructure[5] and related business supporting facilities such as showrooms, training and testing units, conferencing, seminars, and after-sales servicing, etc. It will not only support the Applicant's EV business, but also serve as a beacon for innovation and technological advancement in EV, green energy, low-altitude aerial vehicles, as well as smart city mobility solutions.

Photo 3.1: Examples of Aerial Vehicle for Training

[5] Battery charging and swapping services will be provided to both electric private and commercial vehicle (e.g. LGV).

3.3.3 As discussed in **Section 3.2** above, the Applicant and its parent company possess an extensive business network in the automotive industry, spanning 18 countries and territories across the Asia Pacific region. Employing over 7,600 staffs in the Greater China region, the group has a significant presence in the motor industry on both sides of Shenzhen River. Its market share was further strengthened by securing distributorship rights for Xpeng last year, a leading Chinese EV manufacturer. Now that the Site has no designated G/IC use nor the need to be reserved for G/IC use in the foreseeable future, this presents an valuable opportunity to fully utilise the Site by leveraging the Applicant's cross-border network and its strategic location (i.e. close proximity to Northern Metropolis, strategic transport infrastructure and boundary control points ("BCPs")).

3.3.4 The Applicant has been actively fostering its strategic partnerships with leading EV manufacturers such as Xpeng and others EV pioneers. These collaborations focus on the development of advanced EV technologies, research into low-altitude aerial vehicles, and the integration of green mobility innovations for commercial fleets and heavy-duty vehicles. Another strategic focus for SMDS is the exploration of advanced technologies in automotive maintenance and after-sales services. This includes the potential use of artificial intelligence (AI), robotics, and automation to improve service efficiency, accuracy, and the overall customer experience

3.3.5 Through these forward-looking initiatives, SMDS is positioning itself not only as a conventional automotive dealer but as a proactive contributor to the future of smart mobility and sustainable transportation. The proposed EV mobility city at the site serves as a critical first step in realizing this vision. It will be regional hub for the Greater China region, which will not only enhance the Applicant's EV business but also foster cross-border collaboration, innovation, and technological knowledge transfer in the EV and low-altitude aerial vehicle sectors.

4. RECENT GOVERNMENT'S POLICIES ON ELECTRIC VEHICLE, GREEN ENERGY & LOW-ALTITUDE AERIAL VEHICLE

4.1 Government's Policies on Electric Vehicle

4.1.1 As part of the policy initiative and commitment to achieving carbon neutrality and zero vehicular emissions before 2050, the Government has established a comprehensive framework to promote and popularise EV. The "Hong Kong Roadmap on Popularisation of Electric Vehicles" ("EV Popularisation Roadmap"), first announced in 2021 and updated in 2024, is the cornerstone of these efforts, which outlines various territorial EV strategies, from expansion of EV infrastructure, provision of financial incentives, to fostering of industry collaboration.

EV Infrastructure

4.1.2 The expansion of EV infrastructure, particularly EV-charging facilities, is prioritised to support the widespread adoption of EV. Central to these policy initiatives is the EV Popularisation Roadmap, which sets out ambitious targets of installing over 155,000 charging points by 2025, including 150,000 in private parking spaces and 5,000 public ones. The Policy Address (PA) 2024 commits to adding **200,000 EV-charging parking spaces** by mid-2027, including HK$ 300 million for 3,000 quick-chargers by 2030, as well as the marketisation of public charging services in Government carparks. In addition, the **EV-charging at Home Subsidy Scheme** (EHSS), backed by HK$ 3.5 billion funding, was rolled out in 2020 to subsidise the installation of EV-charging facilities in private residential and commercial buildings. The EHSS is expected to cover about **140,000 private parking spaces** across 700 car parks in existing private residential estates, subsidising up to **75% of costs** for eligible car parks to encourage home-based charging. As of Q1 2025, over 11,188 EV chargers has been installed across the city, aligning with the EV Popularisation Roadmap's target of 155,000 charging facilities by 2025.

Financial Incentives

4.1.3 Financial incentives play a pivotal role in making EV more accessible and thus accelerating EV uptake. The Government has provided a wide range of EV-related financial incentives targeting both individual and commercial sector. As announced in the 2024-25 Budget, the **First Registration Tax** (FRT) concessions for EV have been extended until March 2026, offering waivers up to HK$58,500 for vehicles priced at HK$500,000 or below. The **"One-for-One Replacement"** Scheme, extended to 31 March 2026, provides a maximum tax reduction of HK$172,500 for owners replacing fuel-based cars with EV. Additionally, as mentioned above, a HK$3.5 billion funding has been allocated to the EHSS, subsidising the installation of charging infrastructure in private residential and commercial buildings. For commercial EV, the Government will allocate around $750 million from the New Energy Transport ("NET") Fund to

subsidise taxis and franchised bus companies in their transition to EV.

Fostering Industry Collaboration

4.1.4 To innovate and scale up EV technology, the Government has been actively fostering collaboration among stakeholders in the EV sector. As set out in the EV Popularisation Roadmap, **partnerships with private sector entities**, such as power companies (e.g. CLP) and automakers, are emphasised to develop integrated charging networks and smart grid solutions. In December 2024, the Transport Department ("TD") relaxed **restrictions on deployed features** of private EV, including advanced driver assistance systems, to encourage importers and manufacturers to introduce cutting-edge models, facilitating joint R&D efforts. Further, the NET Fund also supports **collaborative trials**, with recent approvals for electric commercial vehicles involving industry players to test real-world applications and refine technologies.

4.2 Government's Policies on Green Energy

4.2.1 Another major approach to reduce carbon emission is through promotion of new/green energy. As the major policy for green energy, the **Climate Action Plan 2050** targets carbon neutrality before 2050 thought four major decarbonization pillars: net-zero electricity generation, energy-efficient buildings, green transport, and waste reduction. In particular on green transport, to achieve zero vehicular emissions, several key initiatives were set out, including (a) promoting widespread adoption of EV and new/green energy vehicle, (b) expanding charging infrastructure, and (c) enhancing public transport systems to reduce reliance on fossil fuels. For instance, it supports testing hydrogen fuel cell electric buses and heavy vehicles in collaboration with franchised bus companies and stakeholders, with trials planned over the next few years to integrate hydrogen into the transport mix by 2035. A subsidy scheme for trials of hydrogen fuel cell electric heavy vehicles was also launched under the NET Fund.

4.2.2 Apart from green transport, the PA 2023 announced the formulation of the **Strategy of Hydrogen Development** in Hong Kong with focus on the green transformation of commercial and heavy goods vehicles, outlining several key applications for hydrogen fuel in green transport. **I**t supported the introduction of Hong Kong's first double-decker hydrogen bus and refuelling station to integrate hydrogen into public and commercial transport for net-zero emissions. Further follow-up in PA 2024 includes speeding up of new/green energy development by supporting the **establishment of solar-to-hydrogen facility** for industry demonstration, aiming to drive innovation, research, and development in green and low-carbon energy in Hong Kong. In April 2025, the Gas Safety Ordinance (Cap. 51) was amended to regulate the safe use of hydrogen as fuel, and most importantly to enhance public confidence in hydrogen safety and promote its local development. The amendment bill establishes a regulatory framework for the importation, manufacture, storage, transport, supply, and use of hydrogen.

4.3 Government's Policies on Low-altitude Aerial Vehicle

4.3.1 As an emerging sector gradually gaining importance, the Government is actively developing policies to harness the LAE. As highlighted in PA 2024, the LAE has become a key future industry, with plans to formulate a management system to drive development in areas such as telecommunication technologies, AI, and the digital industry, thereby unlocking low-altitude airspace as a new production factor for the economy.

4.3.2 To enable proliferation of LAE in Hong Kong, key legislative advancements would be required. The Small Unmanned Aircraft (Amendment) Order 2025, gazetted in May 2025 and set to take effect in mid-July 2025, introduces a new Category C for aircraft with higher payloads (> 25kg) and eases restrictions to facilitate drone trials and operations. To boost innovation, the Government has established a regulatory sandbox allowing businesses to test higher-capacity aerial vehicles, promoting applications in different scenarios such as logistics, tourism, and smart city solutions. Recent progress, reported in the Legislative Council's Economic Development Panel in June 2025, highlights coordinated efforts to integrate LAE into Hong Kong's economy, with revised regulations addressing operational challenges and fostering industry growth.

4.3.3 Not least, the Government has been consistently supporting the R&D in different technology areas through the Innovation and Technology Fund (ITF), including funding for local universities, R&D centres and enterprises to conduct R&D related to LAE. To promote the development of the I&T industry, the Government encourages enterprises (including those involved in LAE-related industries) to establish R&D centres and new smart production lines in Hong Kong, with a view to leveraging existing manufacturing resources to advance the real economy.

4.4 Synergy with Northern Metropolis

4.4.1 The Northern Metropolis (NM), spanning approx. 30,000 ha of land across the northern N.T., is envisioned as a new engine for the Hong Kong's future development. Under the new industrial pattern of "South-North dual engine (finance-I&T)", this flagship initiative aims to transform Hong Kong into an international I&T hub, by providing substantial amount of economic land for I&T development, particularly within the "Innovation and Technology Zone" encompassing the STT (including HSITP in the Loop) and Ngau Tam Mei (NTM) NDA.

4.4.2 With the intention to establish a regional hub for EV, green energy and low-altitude aerial vehicle sectors, the proposed EV Mobility City will align seamlessly with NM which also has a major focus in I&T development. Located in Fanling, the proposed EV Mobility City is envisaged to synergise well with the NM in the following three aspects, i.e. locational advantage and cross-boundary connectivity, collaboration with Northern Metropolis University Town (NMUT), and two-way contribution on the I&T ecosystem:-

<u>Locational Advantage & Cross-boundary Connectivity</u>

4.4.3 The Rezoning Site is strategically located in Fanling, close to key NDAs in NM, BCPs, as well as the Shenzhen's innovation zones, offering significant locational advantages. The planned strategic transport infrastructures, such as Northern Link and NM Highway, will further strengthen inter- and intra-connection and linkages with Shenzhen's innovation zones. Capitalising on the close proximity and enhanced connectivity, the proposed EV Mobility City will foster knowledge transfer, cross-border collaboration, joint R&D ventures, as well as market expansion in EV and low-altitude aerial vehicle technologies, supporting its role as a regional hub for industry innovation and collaboration.

<u>Collaboration with Northern Metropolis University Town</u>

4.4.4 About 90 ha. of land are reserved in NM, comprising HSK/NT NDA, NTM NDA and NTN New Town, for the development of NMUT. The NMUT aims to transform Hong Kong into an international post-secondary education hub through a "Research, Academic, and Industry" (產學研) strategy, encouraging co-operation with renowned Mainland and overseas institutions and collaboration with the industry sector in the area through resource sharing.

4.4.5 Given the R&D nature and facilities of proposed EV Mobility City, it has the potential to synergise with NMUT and complement the "industry-education-research" strategy by offering practical training, internship opportunities, and collaborative research platforms. Through collaboration with NMUT, it presents unique opportunities to foster a dynamic ecosystem for knowledge exchange and talent development in green mobility and related fields.

Two-way Contribution on the I&T Ecosystem

4.4.6 The proposed EV Mobility City could leverage and contribute to the I&T ecosystem of NM through a two-way collaboration model. The conference venues, seminar spaces, and training facilities of the proposed EV Mobility City could serve as platforms for industry stakeholders, researchers, and global enterprises to engage in knowledge exchange, networking, and collaborative innovation. Through hosting events and fostering partnerships, the proposed EV Mobility City would be able to attract global firms to the NM, enhancing its reputation as a hub for I&T development, while also benefiting from the growing I&T infrastructure and talent pool in the area.

5. THE INDICATIVE DEVELOPMENT PROPOSAL

5.1 The Indicative Development Scheme

5.1.1 The Indicative Development Scheme for the Proposed Development has been devised and is presented in **Appendix 1** of this Supporting Planning Statement. The set of architectural drawings, including Indicative Layout Plan, Diagrammatical Sections and Floor Plans, is devised for reference only and subject to detailed design at later stage.

5.1.2 Based on a site area of about 5,480m^2 and a total plot ratio of 5.0, the attainable total GFA is about 27,400m^2. **Table 3.1** below summarises the major development parameters of the Proposed Development while the proposed floor uses is presented in **Table 3.2**.

5.1.3 The Proposed Development consists of (i) a 7-storey podium (excluding 1-level of basement) accommodating R&D and innovation & technology ("I&T") uses related to EV, green energy and low-altitude aerial vehicle, and associated business activities; and (ii) 2 domestic towers atop for provision of ancillary accommodation, comprising staff quarters (6-storey) and residential institution (12-storey). The PR and GFA of the podium and domestic towers are approx. 3.5 (19,180m^2) and 1.5 (8,220m^2) respectively.

<u>Proposed Regional Hub for the EV Mobility City</u>

5.1.4 As the core of the EV Mobility City, the 7-storey podium (atop 1-level of basement) has a PR of about 3.5 (equivalent to GFA of about 19,180m^2), comprising (i) 6-storey dedicated to R&D and I&T related uses and business, (ii) 1-storey of ancillary and supporting business and training facilities (i.e. conference, seminars, training course, and administration & accounting office), and (iii) 1-level of basement for ancillary carparking. A vehicular ramp is proposed in the southern part of the podium to provide vehicular access to and from B/F to 5/F.

5.1.5 To accommodate the showroom for commercial vehicles on G/F, where a higher headroom is required, a headroom of 8m is proposed, whereas a 5.5m floor-to-floor height for the remaining floors is proposed to facilitate the hoisting of new EV deliveries for undercarriage inspections, testing or battery swapping etc, ensuring they are in merchantable condition and suitable for registration and sale, as well as supporting the operational needs of the training centre, research laboratory, and conferencing facilities. The podium will have a building height of approx. +55.75mPD.

Proposed Ancillary Staff Quarters and Residential Institution for Talent Accommodation

5.1.6 To provide ancillary accommodation for the resident and local staffs, other employees of the Applicant and its parent company, as well as talents and affiliated personnel working/visiting the EV Mobility City, two domestic towers atop the podium are proposed for staff quarters and residential institution uses. These towers have a total GFA of about 8,220m^2 (equivalent to PR of 1.5). The building height of staff quarters and residential institution are 6-storey (approx. +80.65mPD) and 12-storey (approx. +99.55mPD) respectively.

5.1.7 The nature of the ancillary accommodation is similar to the emerging concept of "InnoCell/Talent Accommodation" (人才公寓) (to be further discussed in **Section 6.2**). Based on the assumed average room size, it is anticipated that the 2 domestic towers will provide about 138 rooms, with an estimated population of about 414 persons.

Table 5.1: Major Development Parameters

Development Parameters	Proposed Development
Site Area (about)	5,480 m^2
Total PR (about) - Domestic - Non-domestic	5.0 1.5 3.5
Total GFA (about) - Domestic - Non-domestic	27,400 m^2 8,220 m^2 19,180 m^2
Total No. of Blocks - Domestic Towers - Podium	3 2 1
Total No. of Storeys - Domestic Towers - Podium	 6 - 12 7 (basement excluded)
Building Height (mPD at Main Roof) (about) - Domestic Towers - Podium	 +80.65 to +99.55 mPD +55.75 mPD
No. of Rooms (Average Room Size) - Staff Quarters - Residential Institution	 48 (40m^2) 90 (70m^2)
No. of internal Transport Facilities - Parking Space (excl. bicycle) - Loading/unloading bay	 164 23
Private Open Space (about)	Not less than 414m^2
Estimated Population (1) (about)	414

Note

(1) The estimated population is based on an assumed household size of 3.0, which is considered as a prudent approach for technical assessment purpose only.

Table 5.2: Proposed Floors Uses

Floor	Proposed Uses
7/F - 18/F	Residential Institution (Talent Accommodation)
7/F - 12/F	Staff Quarters
P/F	Podium Garden
6/F	Conference / Seminars / Training Course / Administration & Accounting Office
5/F	Research Laboratory
3/F & 4/F	Pre-delivery Inspection / Research Laboratory
2/F	Training Space / Testing Centre, Battery Charging / Swapping Station
1/F	EV Showroom, Workbay, Main Office, Storage/Warehouse
G/F	EV (commercial vehicle) showroom, Utility, Workshop
B/F	Ancillary Carpark

5.2 Key Design Features

5.2.1 In formulating the Indicative Development Proposal, the schematic design has taken into account the following considerations (**Figure 5.1** refers):

Stepped Building Height

5.2.2 To create a harmonious urban setting and ensure compatibility with surrounding developments, the building height ("BH") of the Proposed Development has been carefully devised. The building height of proposed towers ranges from +80.65mPD to +99.55mPD, which is compatible with the adjacent public housing development at Area 48 (about +118 to +175mPD) and other high-rise developments in the wider area, including Dawning Views (about +115mPD), Wah Sum Estate (about +130mPD), Wah Ming Estate (about +120mPD) and Flora Plaza (about +130mPD).

5.2.3 In addition, the adjacent public housing development at Area 48 has established a stepped height concept for the area with BH descending from southeast to northwest towards Wo Hop Shek Village and Fanling Highway. The indicative development scheme, with a descending building height profile of the towers towards Fanling Highway, will adhere to the established stepped building height profile (i.e. descending from southeast to northwest), ensuring a visually cohesive transition.

Building Layout and Disposition

5.2.4 With an aim to minimise and mitigate the potential traffic noise impact arising from the adjacent carriageway/highway, the proposed layout of the towers are carefully designed. A single-aspect design is adopted to avoid direct frontage onto the Fanling Highway and reduce direct noise exposure. Additionally, a minimum setback of approx. 10m and 30m between the proposed towers and road kerb of Tai Wo Service Road West and Fanling Highway respectively have been incorporated to provide an adequate buffer, further minimising noise disturbance.

Building Separation

5.2.5 To promote air ventilation and visual permeability, the Indicative Development Scheme has incorporated a minimum of approx. 15m building separation between the two towers. This design feature would help reducing the building mass of the development, fostering a quality-built environment, as well as maintaining the wind flow and visual corridors.

Appropriate Setback from Nearby Developments

5.2.6 The Site is bordered by village houses of Wo Hop Shek Village to its immediate south and rural-type workshop to its east. To ensure compatibility with these developments, minimum setbacks of about 5m from the southern boundary and about 20m from the eastern boundary have been adopted under the Indicative Development Scheme. These setbacks would provide sufficient spatial and

visual buffers, thereby minimising the potential impacts on adjacent low-rise developments and enhancing the integration of the Proposed Development with its surroundings.

Provision of Amenity Area with Landscaping on the Private Lots Owned by the Applicant Falling within the "V" Zone

5.2.7 As mentioned in **Section 2.8**, the private lots owned by the Applicant also include a strip of land in the south-east falling within the adjoining "V" zone. The strip of land in question does not form part of the Rezoning Site nor development site so as to avoid unnecessary complication and thus not used for PR calculation. To achieve a better planning outcome and make better use of the land resources, the strip of land is proposed to be used as amenity area with enhanced landscaping. This area will serve as a green buffer, enhancing visual interest and improving the aesthetic appeal of the Site, while also providing a transitional space between the Proposed Development and adjoining village-type developments.

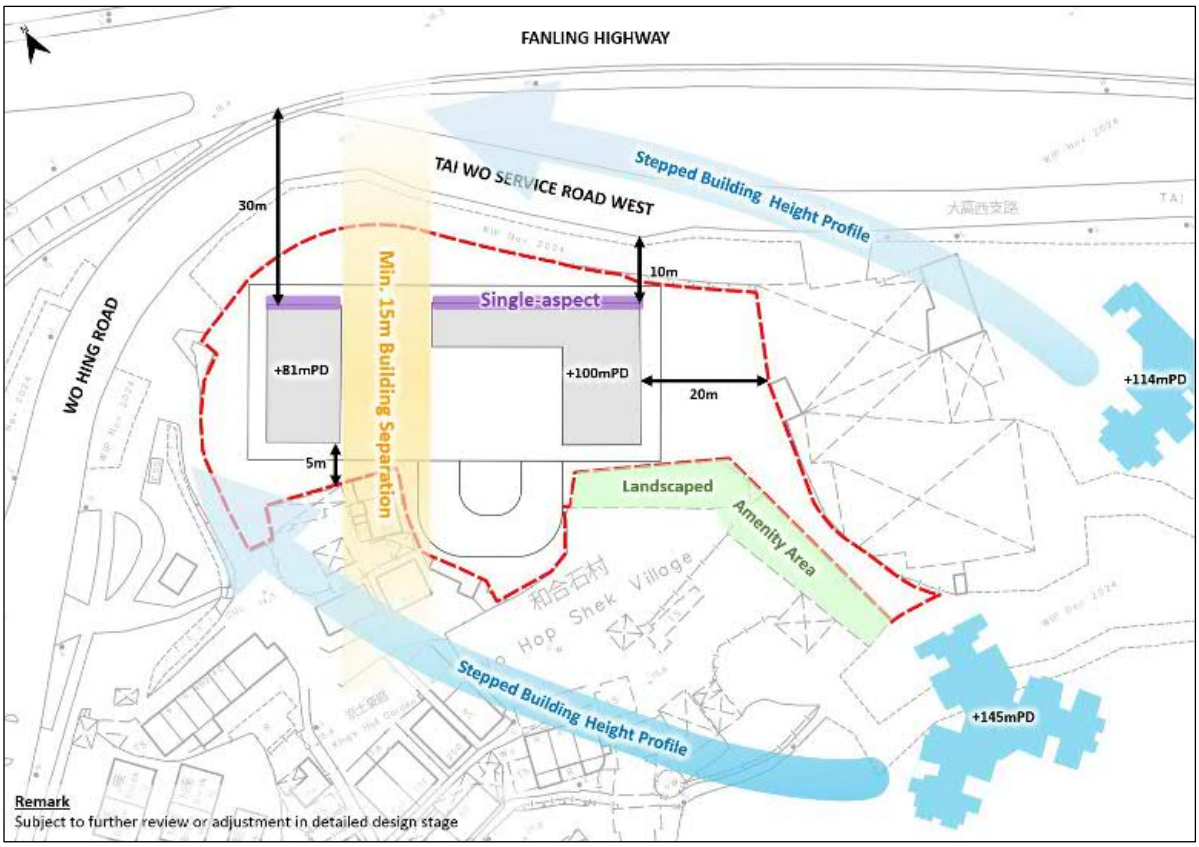


Figure 5.1: Key Design Features

5.3 Landscape Proposal

5.3.1 An indicative landscape proposal for the Proposed Development is provided in **Appendix 3**. The design objectives of the landscape proposal are as follows:

- Responsive to the site context, both in terms of landscape character and visual amenity;
- Creation of a green setting by maximising the opportunity for soft landscape;
- Establishment of pleasant landscape areas which meet the varying needs of users; and
- Minimisation of future maintenance requirements.

Tree & Landscape

5.3.2 As revealed in the tree survey, a total of 36 nos. of trees (including 3 nos. of dead trees) are identified within the Site, of which 9 nos. are undesirable species (i.e. Leucaena leucocephala). No Registered Old and Valuable Trees (OVTs) or protected species are found. All identified trees are proposed to be felled due to various reasons (e.g. poor condition and direct conflict with proposed works). Nonetheless, a total of 37 nos. of heavy standard trees are proposed within the Site, achieving a compensation ratio of not less than 1:1 in terms of quality and quantity.

Open Space and Greenery Provision

5.3.3 To meet the requirement of local open space under the Hong Kong Planning Standard and Guidelines ("HKPSG") (i.e. minimum 1m^2 per person), not less than 414m^2 of private open space will be provided within the Site. While entrance garden, gathering courtyard and amphitheatre will be provided on G/F, multi-functional lawn, yoga place, sitting garden, fitness equipment, outdoor dining area, viewing platform are proposed at podium level,

5.3.4 In terms of greenery coverage, not less than 1,255.5m^2 of greenery area will be provided, which will exceed the required minimum 20% greenery requirement. In particular, to offer easily accessible greenery that can be enjoyed by all users and visitors, the proposed greenery at Primary Zone has been maximised at about 799m^2, exceeding the min. 10% requirement.

Figure 5.2: Landscape Master Plan

5.4 Access Arrangement and Internal Transport Facilities Provision

5.4.1 The existing run-in/out in the north-west of the Site abutting Wo Hing Road will be kept as the vehicular and pedestrian access to the Rezoning Site (**Figure 2.1** refers).

5.4.2 Internal transport facilities for the Proposed Development would be provided in accordance with the requirements as set out in the HKPSG or to the satisfaction to the Transport Department. In gist, a total of 197 nos. of parking spaces (covering private car, motorcycle, light goods vehicle (LGV), light bus, medium goods vehicle (MGV), heavy goods vehicle (HGV), and bicycle) and 23 nos. of loading/unloading (L/UL) bays will be provided. EV charging facilities (medium charging or above subject to further review) will be installed for all parking spaces (except bicycle).

5.4.3 A detailed breakdown of internal transport provision for the indicative proposal is presented in **Table 5.3** below.

Table 5.3: Internal Transport Faciltiies Provision

Type of Facilities	Provision
Parking Space	***197***
- Private Car	63
- Motorcycle	4
- LGV / Light Bus	87
- MGV / HGV / Coach	10
- Bicycle	33
Loading/unloading Bay	***23***
- LGV	13
- HGV	10

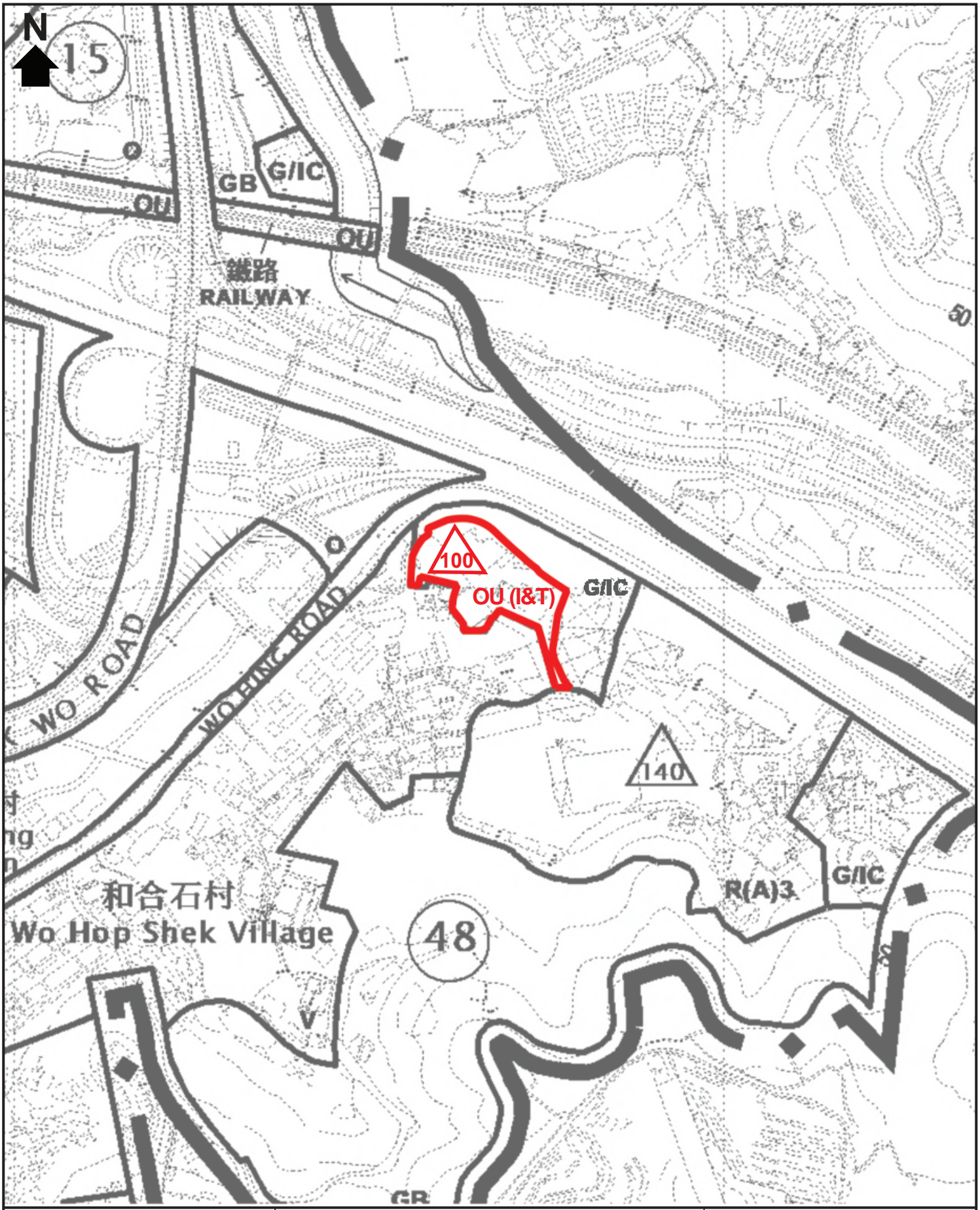
6. PROPOSED ZONING AMENDMENT

6.1 The Rezoning Proposal

6.1.1 The Rezoning Site falls entirely within an area zoned "G/IC" on the Approved OZP. According to the Statutory Notes for the "G/IC" zone under the Approved OZP, the proposed nature of EV Mobility City neither appears in Column 1 nor Column 2.

6.1.2 To enable the Proposed Development and realise the vision of EV Mobility City at the Site, the proposed amendment subject of this S12A application (**Figure 6.1** refers) include:

(i) Rezoning of the Site from "G/IC" to "Other Specified Uses" annotated "Innovation and Technology" ("OU(I&T)") zone.



KTA PLANNING LIMITED
規劃顧問有限公司

PROPOSED OZP AMENDMENT

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

SCALE 1 : 2500

FIGURE 6.1

Modified plan based on the Approved Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/28 approved on 19.4.2024

DATE: 12 July 2025

6.1.3 Given the unique I&T nature of the EV, green energy and low-altitude aerial vehicles sectors with R&D and business needs, a tailor-made zoning designation, with a suitable range of compatible yet permitted land uses, is deemed most appropriate. Such approach would accommodate complementary usage essential to the Proposed Development and provide the necessary business supporting facilities (e.g. conference, seminars, training course, administration & accounting office). This would allow more planning flexibility to cater for ever-changing and evolving circumstances and meeting the long-term development need, particularly in light of the rapid pace of technological advancement in these dynamic sectors.

6.1.4 With reference to the planned public housing developments at Area 48 to the east of the Rezoning Site, which has a maximum PR of 6.5 and maximum building height of +175mPD under the approved planning application No. A/FSS/295[6], it is considered appropriate to restrict the proposed "OU(I&T)" zone with a maximum total PR of 5.0 (of which the domestic part shall not exceed 1.5) and maximum building height restriction of +100mPD. Two set of proposed amendments to the Statutory Notes of the Approved OZP are presented in **Figures 6.2a** and **6.2b** for consideration of the TPB.

6.1.5 To allow more planning flexibility for wider choice of accommodation to meet the market preferences, and to address the potential need to subsidise the future development, 'Flat' is proposed under Column 1 in Option 1 (**Figure 6.2a**), whereas Option 2 (**Figure 6.2b**) presents an alternative, under which 'Flat (Staff Quarters only)' is under Column 1 and 'Flat (not elsewhere specified)' is under Column 2.

[6] Planning application No. A/FSS/295 (Proposed Minor Relaxation of GFA and BH Restrictions for Permitted Public Housing Development) was approved by the TPB on 12.1.2024.

S/FSS/28

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board

For "Innovation and Technology" Only

Eating Place
Flat
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods△)
Information Technology and Telecommunications Industries
Office
Petrol Filling Station / Green Fuel Station
Private Club
Public Vehicle Park (excluding container vehicle)
Public Utility Installation
Research, Design and Development Centre
Residential Institution
Shop and Services
Training Centre
Utility Installation for Private Project
Vehicle Repair Workshop
Warehouse (excluding Dangerous Goods Godown)
Helicopter Landing Pad
Hotel
Social Welfare Facility

△ *Dangerous Goods refer to substances classified as Dangerous Goods and requiring a licence for their use/storage under the Dangerous Goods Ordinance (Cap. 295).*

Planning Intention

This zone is intended primarily to provide development space for accommodating a variety of innovation and technology uses, including research and development, production activities, supporting staff/talent accommodation, commercial/business facilities and other complementary infrastructure.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a plot ratio of 5.0 for a non-domestic building, or a plot ratio of 5.0 for a building that is partly domestic and partly non-domestic of which the domestic part of the building should not exceed a plot ratio of 1.5 and the maximum building height in terms of metres above Principal Datum as stipulated on the Plan, or the plot ratio/height of the existing building, whichever is the greater.

(b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/building height restrictions stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

Figure 6.2a: Proposed Statutory Notes of "OU(I&T)" Zone – Option 1

S/FSS/28

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board

For "Innovation and Technology" Only

Eating Place
Flat (Staff Quarters only)
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods△)
Information Technology and Telecommunications Industries
Office
Petrol Filling Station / Green Fuel Station
Private Club
Public Vehicle Park (excluding container vehicle)
Public Utility Installation
Research, Design and Development Centre
Residential Institution
Shop and Services
Training Centre
Utility Installation for Private Project
Vehicle Repair Workshop
Warehouse (excluding Dangerous Goods Godown)
Flat (not elsewhere specified)
Helicopter Landing Pad
Hotel
Social Welfare Facility

△ *Dangerous Goods refer to substances classified as Dangerous Goods and requiring a licence for their use/storage under the Dangerous Goods Ordinance (Cap. 295).*

Planning Intention

This zone is intended primarily to provide development space for accommodating a variety of innovation and technology uses, including research and development, production activities, supporting staff/talent accommodation, commercial/business facilities and other complementary infrastructure.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a plot ratio of 5.0 for a non-domestic building, or a plot ratio of 5.0 for a building that is partly domestic and partly non-domestic of which the domestic part of the building should not exceed a plot ratio of 1.5 and the maximum building height in terms of metres above Principal Datum as stipulated on the Plan, or the plot ratio/height of the existing building, whichever is the greater.

(b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/building height restrictions stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

Figure 6.2b: Proposed Statutory Notes of "OU(I&T)" Zone – Option 2

6.2 Need and Criteria for Staff Quarters & Residential Institution

6.2.1 The proposed EV Mobility City is designed to serve as a regional hub for EV, green energy and low-altitude aerial vehicles industries with R&D and business operation needs. To support this vision, the Indicative Development Proposal also includes staff quarters and residential institution as Column 1 uses under the proposed schedule of uses in the statutory notes of "OU(I&T)" zone. These ancillary accommodations aim to provide on-site housing for qualified staffs and employees, both locally and regionally, thereby enhancing operational efficiency and supporting the Proposed Development's role as a regional hub.

6.2.2 Drawing from the recent precedent of "OU(I&T)" zone of the STT OZP, which permits a wide range of compatible and complementary uses to provide more planning flexibility and cater for different need for I&T development, the proposed "OU(I&T)" zoning also adopts a similar approach. Under the "OU(I&T)" zone of STT OZP, business supporting facilities (e.g. office, convention facilities, hotel) and living support (e.g. talent accommodation, retail, dining, etc.) are under Column 1 uses and permitted as of right.

6.2.3 While the scale and nature of the proposed EV Mobility City slightly differ from those of the STT, the principle of providing higher flexibility to support I&T development nevertheless remains applicable. As such, to provide convenient and one-stop service on-site, ancillary residential accommodation not exceeding PR of 1.5 is accommodated in the indicative proposal. This approach would allow more flexibility to cater for ever-changing and evolving circumstances and meeting the long-term development need. Both staff quarters and residential institution are compatible and complementary to the EV Mobility City.

Staff Quarters

6.2.4 As outlined in **Section 3.2** above, the Applicant has a staff population of about 7,600 employees across the Greater China region, with about 1,100 currently based in Hong Kong. To meet the housing need of the resident staffs and local/regional staffs, it is considered essential to provide on-site staff quarters, which would not only provide convenient living space close to the workplace, reducing commuting time and cost, and enhancing operational efficiency, but also allowing sufficient planning flexibility without comprising the planning intention of the "OU(I&T)" zone.

Residential Institution (Talent Accommodation)

6.2.5 In addition to staff quarters, residential institution is also proposed for provision of short to medium-term accommodation for personnel affiliated with the Applicant, its parent company or the proposed EV Mobility City. The residential institution is a complementary use that supports the Proposed Development's role as a hub for innovation, collaboration, and industry exchange. As a wholly owned, managed and operated facility, the residential institution will cater to

personnel meeting the pre-set eligibility criteria as prescribed and that the target residents include:-

- Visiting scientists, engineers and researchers engaging in R&D activities;
- R&D talents in EV, green energy and low-altitude aerial vehicle sectors;
- Visiting business partners for meeting/conference/seminar/collaboration/ networking/knowledge sharing etc.;
- Overseas or Mainland employees of partner companies; and
- Overseas or Mainland scientists / engineers / visiting researchers participating in I&T / EV / low-altitude automotive industries or related projects or programmes in Hong Kong.

7. PLANNING MERITS AND JUSTIFICATIONS

7.1 In Line with Recent Government's Policies on Electric Vehicle, Green Energy and Low-altitude Economy

7.1.1 The proposed EV Mobility City, which will adopt state-of-the-art design criteria with modern and environmentally friendly technology, is strategically designed and aligned with the recent Government's policies on sustainable transport and innovation. As mentioned in **Sections 4.1** & **4.2,** by integrating advanced technology, R&D, testing, and operational facilities for EVs, green energy, and low-altitude aerial vehicles, the Proposed Development will support the city's overarching goals of carbon neutrality and zero vehicular emissions before 2050, as well as transformation towards green mobility.

7.1.2 Central to the proposed EV Mobility City is the facilities dedicated for EV and green energy uses, comprising R&D labs, testing units, after-sales servicing, charging infrastructure, and showrooms. Through providing various EV-related facilities, the Proposed Development will complement and support the expansion of EV infrastructure. For example, battery charging and swapping services will be provided with after-sale servicing and repair/maintenance services to support the popularisation of EV. The training space, R&D office and conferencing / seminar space will also provide collaboration, knowledge transfer/sharing and training opportunities for stakeholders in the EV sector, thereby fostering of industry collaboration.

7.1.3 Apart from EV and green energy, LAE on aerial vehicles will be the secondary but also key innovations of the proposed EV Mobility City. The LAE is emerging as a key future industry in Hong Kong and the Government is actively developing policies to support its growth. As outlined in **Section 4.3**, in PA 2024, efforts were focused on integrating LAE into sectors like tele-communication technologies, AI and digital technologies by unlocking low-altitude airspace as new economic driver. Besides, the Government also encourages enterprises to develop smart production lines & R&D centres in Hong Kong. The Proposed Development, with R&D facilities, will help to support Government's initiatives on LAE-related R&D, especially on low-altitude airspace.

7.1.4 The shift towards electric vehicles, green energy and LAE is part of a global trend toward smart cities, and the Proposed Development will support HK's position as a leader in technology and sustainability.

7.2 Long-term Planning & Economic Benefits and Investment Opportunities

Leverage Global Network and Enhance Hong Kong's Business Appeal

7.2.1 While the Applicant is a leading motor dealer and distributor in Hong Kong with over 50 years of experience in the automotive industry, its parent group, Sime, is a foreign investor and a reputable multinational group headquartered in Malaysia

and is listed on the main market of Bursa Malaysia Securities Berhad. With over a century-long legacy in automotive industry, Sime has built an extensive network of dealerships and long-standing brand partnerships with many of the world's top automotive and commercial truck brand (e.g. Rolls-Royce, BMW, and MINI). Xpeng's distributorship rights of Hong Kong was secured by the Applicant in 2024, further expanding its portfolio and a big leap towards proliferation of EV in Hong Kong. In addition to the worldwide business network, Sime also possesses a large global workforce of more than 30,000 employees, with operations spanning over 18 countries and territories across the Asia Pacific region. Amongst which, about 50% of the staff population are under the motor division.

7.2.2 The Applicant has also been actively fostering its strategic partnerships with leading electric vehicle manufacturers such as Xpeng and others EV pioneers. These collaborations focus on the development of advanced EV technologies, research into low-altitude aerial vehicles, and the integration of green mobility innovations for commercial fleets and heavy-duty vehicles. Another strategic focus for SMDS is the exploration of advanced technologies in automotive maintenance and after-sales services. This includes the potential use of artificial intelligence (AI), robotics, and automation to improve service efficiency, accuracy, and the overall customer experience. Through these forward-looking initiatives, SMDS is positioning itself not only as a conventional automotive dealer but as a proactive contributor to the future of smart mobility and sustainable transportation. This is also in line with the Government's policy initiatives towards I&T.

7.2.3 Through leveraging the global workforce, business network, as well as the leading position in automotive industry of the Applicant and its parent group, the success of the proposed EV Mobility City is not only guaranteed, it will also generate planning gains that extend beyond the Site. The proposal to establish the EV Mobility City, a regional hub for Greater China Region, not only demonstrate the confidence in the Hong Kong's long term economic prospects, but also set an exemplar for other foreign investors. Given the reputation of the Applicant and its parent group, the proposal will serve as a major confidence boost and uplift Hong Kong's image as a business and investment epicentre, furthering enhancing the competitive edge of Hong Kong over other competitors in Asia region.

Local Employment Opportunities and Job Creation

7.2.4 Locally, the proposed EV Mobility City will stimulate the local economy by creating high-skilled job opportunities during construction and operation phases in areas such as EV maintenance and innovations, battery technology, software development and downstream works services and logistics etc., as well as providing after-sale EV repairing and advisory services or promoting green and low carbon energy.

7.2.5 With reference to the worker density set out in the HKPSG[7] and the Applicant's project experience/vision, the Proposed Development is estimated to have a staff population of some 440 employees[8], comprising researchers, R&D talents, general & industrial-related staffs, back office staffs and management and maintenance staff of the whole development. For construction stage, based on various factors such as site area, attainable GFA, construction cost and construction period of 3 to 4 years, it is estimated to create employment opportunities of approx. 400 - 600 for professional, technicians and workers in the built-environment sector.

Boosting Local Economy

7.2.6 As mentioned in **Section 3.3**, the initial vision of the Site was to establish a regional stronghold in N.T., with a view to expand business network and strengthen business growth in the north and west N.T. Tying in with the rapid growth of EV sector in Hong Kong, the proposed EV Mobility City will catalyse local economic growth by boosting EV sales, while popularising EV and promoting green mobility at the same time.

7.3 Synergise and Catalyse the Development of Northern Metropolis

7.3.1 Strategically located in Fanling, the proposed EV Mobility City is not only positioned in close proximity with the NM, it also aligns seamlessly with NM's major vision of driving I&T development of Hong Kong. Through fostering collaboration with NMUT and contributing to the wider I&T ecosystem, the proposed EV Mobility City will generate synergies that accelerate the development of NM.

Collaboration with NMUT

7.3.2 Anchored with the "Research, Academic, and Industry" (產學研) strategy, NMUT encourage collaboration with the industry sector in the area. Thus, the proposed EV Mobility City could play a pivotal part in providing practical training, internship and teaching opportunities for STEM students from NMUT, leveraging its R&D facilities and testing labs to bridge academic theory with real-world applications. As a regional hub for both domestic and international R&D talents, supported by the Applicant's global network and workforce, the Proposed Development will provide an invaluable collaborative platform for industry-academia partnerships. This synergy will incubate innovations, facilitate knowledge exchange, and

[7] According to the HKPSG, the average worker density for Industrial Estate (Special Industrial Use) and Science Park (Special Industrial Use) is 75m^2 and 15m^2 per worker respectively.

[8] Based on the worker density under HKPSG, the Applicant's experience and proposed GFA, it is devised that the Proposed Development is anticipated to have a staff population of (a) 94 general/industrial-related and back office staff for G/F to 2/F, (b) 624 researchers/R&D talents for 3/F to 6/F, and (c) 20 management and maintenance staffs (including cleaning and servicing) for the whole development. A discount factor of about 60% is adopted (i.e. 440 staffs) for conservative purpose.

nurture a new generation of I&T talents for Hong Kong.

Contribution to the I&T ecosystem

7.3.3 Beyond collaboration and partnership with NMUT, the proposed EV Mobility City could leverage and contribute to the I&T ecosystem of NM through a two-way collaboration model. The conference venues, seminar spaces, and training facilities of the proposed EV Mobility City could serve as platforms for industry stakeholders, researchers, and global enterprises to engage in knowledge exchange, networking, and collaborative innovation. Through hosting events and fostering partnerships, the proposed EV Mobility City will attract both Mainland and overseas firms to the area, bolstering the NM's reputation as a "new international I&T city". In return, it will benefit from the NM's expanding infrastructure and growing talent pools, fostering a sustainable cycle of growth.

7.4 The Current "G/IC" Zoning is Redundant and the Previously Planned School is No Longer Required

7.4.1 In light of the changing socio-economic circumstances and demographic trend in past decade, as well as the absence of concrete implementation plan for the planned primary school at the Site, the "G/IC" zoning of the Site has increasingly become obsolete and redundant.

7.4.2 As mentioned in **Section 3.3**, back in 2015, the Site was zoned "I", when the Applicant acquired the private lots wholeheartedly intended to establish an automotive dealership centre as a HQ in the N.T. Without the Applicant's knowledge, the Site was later rezoned to "G/IC" in 2016 with the intention to reserve sufficient land for a primary school in support of the wider Fanling/Sheung Shui New Town. Despite the initial proposal for a planned primary school, the Site has remained idled for nearly a decade since its acquisition in 2015, without implementation programme by the Government for the planned primary school in the foreseeable future. While the prolonged idleness underscores the redundancy of the "G/IC" zoning, it has also become apparent that the planned school at the Site is no longer pursued and the Site is not reserved for G/IC use anymore.

7.4.3 In view of the changing planning circumstance and the Site's current status, a prime opportunity has arose to free up the Site for other beneficial private developments and repurpose it for high-value uses, especially those in line with Government's policy objectives such as EV and green energy. By leveraging the Applicant's cross-border network and its strategic location (i.e. close proximity to NM, strategic transport infrastructure and BCPs), the proposed EV Mobility City is envisioned to serve as a regional hub for the Greater China region, which will not only enhance the Applicant's EV business but also foster cross-border collaboration, innovation, and knowledge transfer in the EV and low-altitude aerial vehicle sectors. Otherwise, it will just be a waste of valuable land resources which should be avoided in all respects.

7.5 Nurture I&T Talents in a Suitable Location with Supporting Facilities

7.5.1 Strategically positioned in Fanling, the Site is in close proximity with NM and enjoy high accessibility and connectivity brought by the planned strategic transport infrastructures. The locational advantage coupled with enhanced connectivity make the Site an optimal location for nurturing I&T talents, tipping a balance between a serene environment conducive to R&D and seamless urban accessibility.

7.5.2 Inspired by the "InnoCell" model of Hong Kong Science and Technology Parks, which is a proven success with high occupancy, ancillary accommodation, in form of “InnoCell” or “Talent Accommodation”, is also proposed under the indicative development proposal. These ancillary accommodations will deliver convenient on-site housing to the employees or personnel affiliated with the Applicant and its parent company as well as talents and affiliated personnel working/visiting the EV Mobility City. By mirroring the proven successful model, the ancillary accommodation will help enlarge the I&T talent pool in Hong Kong and support the Proposed Development’s role as a regional hub for innovation and collaboration.

7.6 Appropriate Development Quantum and Compatible with the Surrounding Developments

7.6.1 The proposed EV Mobility City, with a total PR of 5.0 and building height of about +100mPD, is considered compatible with the surrounding developments in terms of both development intensity and land use. Regarding development intensity, the public housing development in the immediate east has a PR of about 7.2 and building height ranging from +118mPD to +175mPD. The wider area also features high-rise developments, such as Dawning Views (about +115mPD), Wah Sum Estate (about +130mPD), Wah Ming Estate (about +120mPD) and Flora Plaza (about +130mPD) etc.

7.6.2 In terms of land use compatibility, the Proposed Development, which is a mainly research-focus facilities with ancillary accommodations, is considered not incompatible with the surrounding context. Instead, the modern and technology-based nature of the Proposed Development will uplift the image and condition of the existing areas, which are mainly occupied by some rural industrial warehouses and workshops.

7.7 A More Efficient and Effective Use of the Site

7.7.1 Currently occupied by various one-to-two storey temporary rural warehouses and structures, the Site is in fact underutilised and represent an inefficient use of land resources. Upon completion, the proposed EV Mobility City will optimise land use efficiency of the Site by reaching a PR of 5.0, yielding a total GFA of about 27,400m^2. Various complementary and compatible facilities related to EV and R&D will be co-located together, creating a better synergy and optimising land use efficiency. Thus, the Proposed Development will transform the Site from an

inefficient brownfield operation to a more efficient use for I&T use, which is consistent with the Government's strategic direction.

7.8 Environmental Improvement and Upgrading of the Area

7.8.1 Unlike traditional vehicle maintenance and fuelling facilities, the proposed EV Mobility City will be built upon clean/green energy and zero-emission principles. There will be no combustion engine emissions, fuel storage risks, or harmful industrial effluents. The design of the development aims to comply with stringent environmental standards and may incorporate environmentally friendly or solar energy systems, and waste reduction measures. As such, the development itself is non-polluting industry with innovation and technology in nature. On the contrary, it will contribute to an improvement and uplifting of the existing air and environmental quality in the local area.

7.8.2 In addition, while the Site is in close proximity with the adjacent public housing estate at Area 48 containing domestic towers and social welfare facilities, interface issues are not anticipated, as various technical assessment conducted have demonstrated that the Proposed Development will not result in adverse impact and that noise nuisance nor visual obstruction are not envisaged.

8. THE INDICATIVE DEVELOPMENT SCHEME IS TECHNICALLY FEASIBLE WITHOUT NO OR NO SIGNIFICANT ADVERSE TECHNICAL IMPACTS NOR INTERFACE ISSUE

8.1 Visual

8.1.1 As demonstrated in the Visual Impact Assessment ("VIA") in **Appendix 2**, the visual impact associated with the Proposed Development are considered acceptable in visual terms, and will be fully compatible and blend in well with the adjoining high-rise developments and the sub-urban townscape of Fanling.

8.2 Tree & Landscape

8.2.1 A Tree Survey was conducted under the Landscape Proposal in **Appendix 3**. As revealed in the Tree Survey, a total of 36 nos. of existing trees were surveyed. No OVT nor potential OVT is found within the Site. All of the trees surveyed will be felled. In terms of compensatory trees, 37 nos. of new trees will be provided, achieving a compensation ratio of not less than 1:1 in terms of quality and quantity.

8.3 Traffic

8.3.1 The Traffic Impact Assessment ("TIA") in **Appendix 4** demonstrates that all critical junctions, except Wo Hop Shek Interchange, will operate within their capacities in design year 2034 during peak hour with the proposed development plus the planned residential developments in the vicinity. The Wo Hop Shek Interchange will, with or without the Proposed Development, have insufficient capacity to accommodate the future traffic growth. Internal transport facilities would be provided in accordance with the requirements as stipulated in the HKPSG. The TIA, therefore, concludes that the traffic impact of the Proposed EV Mobility City are acceptable from traffic engineering point of view.

8.4 Noise

8.4.1 In terms of road traffic noise, the Fanling Highway and Fanling Bypass (Eastern Section) are identified as the major road traffic noise sources by the noise impact assessment ("NIA") at **Appendix 5**. Under the NIA, it is revealed that the predicted maximum road traffic noise level will exceed the stipulated 70dB(A) noise criterion. Nonetheless, with the implementation of proposed noise mitigation measures (i.e. acoustic fin and acoustic window (baffle type)), no noise sensitive receivers of the Proposed Development will be subject to exceedance of the traffic noise criterion of 70dB(A).

8.4.2 For fixed noise, the NIA also concludes that there will be no exceedance of noise criteria during day and evening time, and thus the Proposed Development would not be subject to adverse fixed noise impact.

8.5 Air Quality

8.5.1 As revealed in the Air Quality Impact Assessment ("AQIA") in **Appendix 5**, no existing and planned industrial source / chimney are identified within 200m of the Site. Sufficient horizontal buffer distance from nearby road sections are provided to comply with relevant buffer requirement as stipulated in HKPSG. Also, according to findings of site visit, adverse odour impact is not identified. In this regard, no adverse air quality impact is anticipated during operation phase.

8.5.2 For construction phase, relevant recommended pollution control and mitigation measures, such as those detailed in "Recommended Pollution Control Clauses for Construction Contracts" published by EPD and Air Pollution Control (Construction Dust) Regulation, will be followed and implemented. With the adoption of good practices, it is expected that construction fugitive dust and gaseous emission can be controlled, and thus no adverse air quality impact is anticipated during construction stage.

8.6 Land Contamination

8.6.1 Based on the land contamination appraisal, due to the history and previous usage of the Site, further investigation of potential land contamination impact is considered necessary. Further land contamination assessments will be prepared in subsequent stages, and that no construction works will be commenced before completion of these assessment and satisfaction/approval from EPD.

8.7 Air Ventilation

8.7.1 An Air Ventilation Assessment - Expert Evaluation ("AVA-EE") has been conducted for the Proposed Development (**Appendix 6** refers). Design features under indicative development scheme, including building setbacks between towers, open spaces, and high-level building separation between towers, are proposed to maintain good air ventilation performance. It is concluded that the Proposed Development would unlikely impose significant / worsened air ventilation impacts on the surrounding as compared with the Baseline Scheme.

8.8 Drainage & Sewerage

8.8.1 As revealed in the Drainage and Sewerage Impact Assessment ("DSIA") at **Appendix 7**, the Site is currently served by public drainage system and the proposal will result in reduced surface runoff. In addition, the assessment also concluded that the existing sewerage system would have sufficient capacity to cater the demand generated by the Proposed Development. As such, the Proposed Development will not result in significant adverse drainage and sewerage impact.

8.9 Summary of Technical Aspects

8.9.1 With the implementation of mitigation measures / pollution control measures, as

well as the carefully thought-out design in later detailed design stage, no insurmountable impact is expected to arise from the Proposed Development. It is therefore concluded that the indicative development scheme is technically feasible without no or no significant adverse technical impacts nor interface issue.

9. CONCLUSION AND SUMMARY

9.1.1 In light of the above, it is evident that the proposed amendment to the Approved Fanling/Sheung Shui OZP should be favourably considered by the TPB from the land use planning and technical points of view.

9.1.2 The TPB and the relevant government departments are respectfully requested to give favourable consideration to support the proposed amendment to the Approved Fanling/Sheung Shui in planning context based on the following grounds:

- In Line with Recent Government's Policies on Electric Vehicle, Green Energy and Low-altitude Economy;
- Long-term Planning & Economic Benefits and Investment Opportunities;
- Synergise and Catalyse the Development of Northern Metropolis;
- The Current "G/IC" Zoning is Redundant and the Previously Planned School is No Longer Required;
- Nurture I&T Talents in a Suitable Location with Supporting Facilities;
- Appropriate Development Quantum and Compatible with the Surrounding Developments;
- A More Efficient and Effective Use of the Site;
- Environmental Improvement and Upgrading of the Area; and
- The Indicative Development Scheme is Technically Feasible With No or No Significant Adverse Technical Impacts Nor Interface Issue.

9.1.3 Lastly, we would like to emphasise that the current proposal to establish the EV Mobility City, a regional hub of the Greater China region, represents a strategic initiative by the Applicant. This will not only bring in substantial capital investment, but, amidst the current economy downturn, also act as a vital and timely vote of confidence in Hong Kong's economy and future growth.

Appendix 1

Indicative Development Scheme

MAIN ENTRANCE

N

A

A'

B

B'

Residential Institution (Talent Accommodation)

Staff Quarters

Innovation & Technology

和合石村

Wo Hop Shek Village

京士豪庭

King's Hall Garden

大嶺西支路

WIP Nov 2024

Residential Institution (Talent Accommodation)

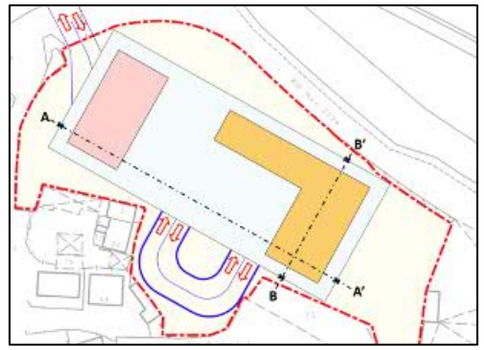
Staff Quarters

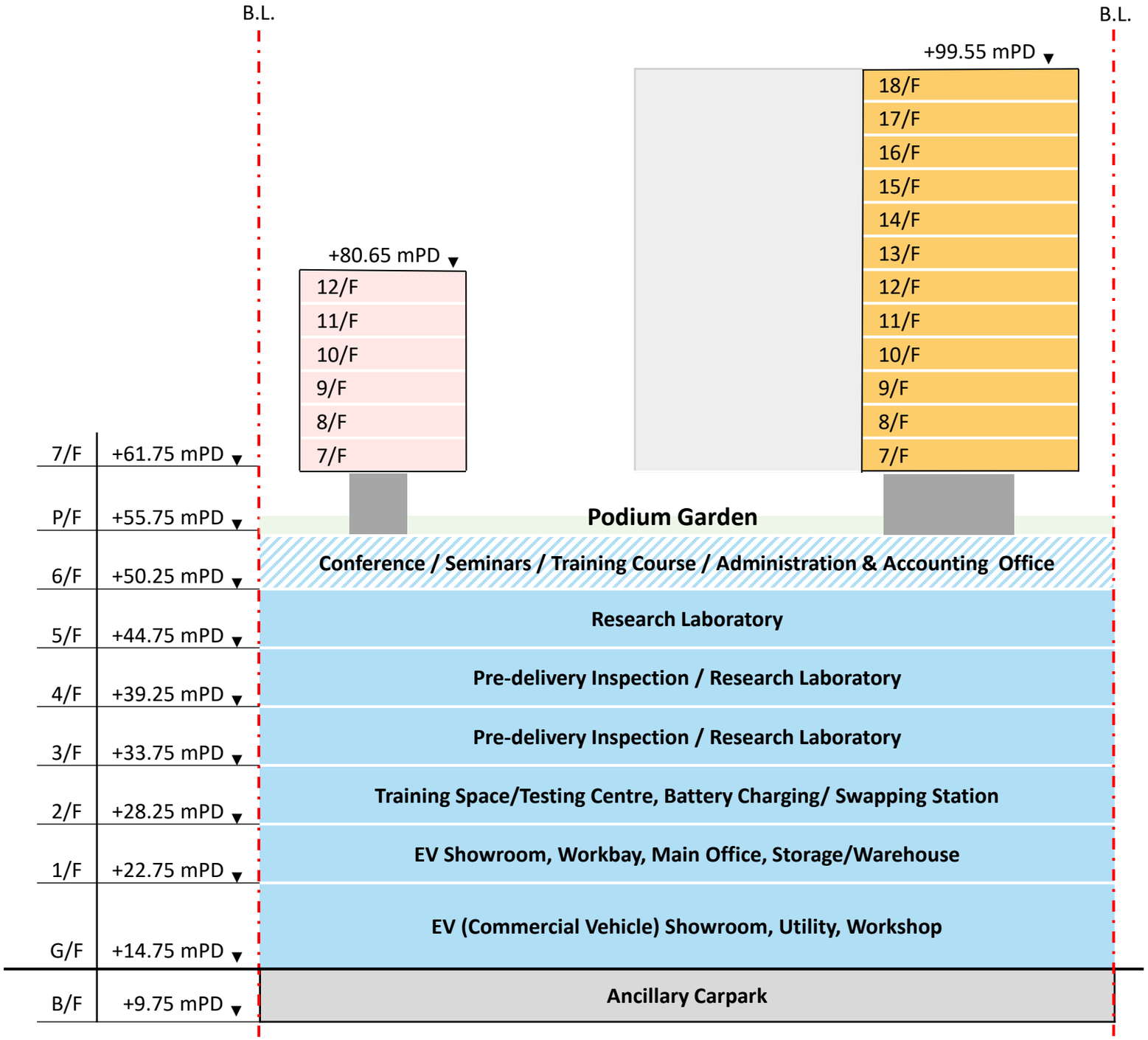
Podium Garden

EV Mobility City (Conference / Seminars / Training Course / Administration & Accounting Office)

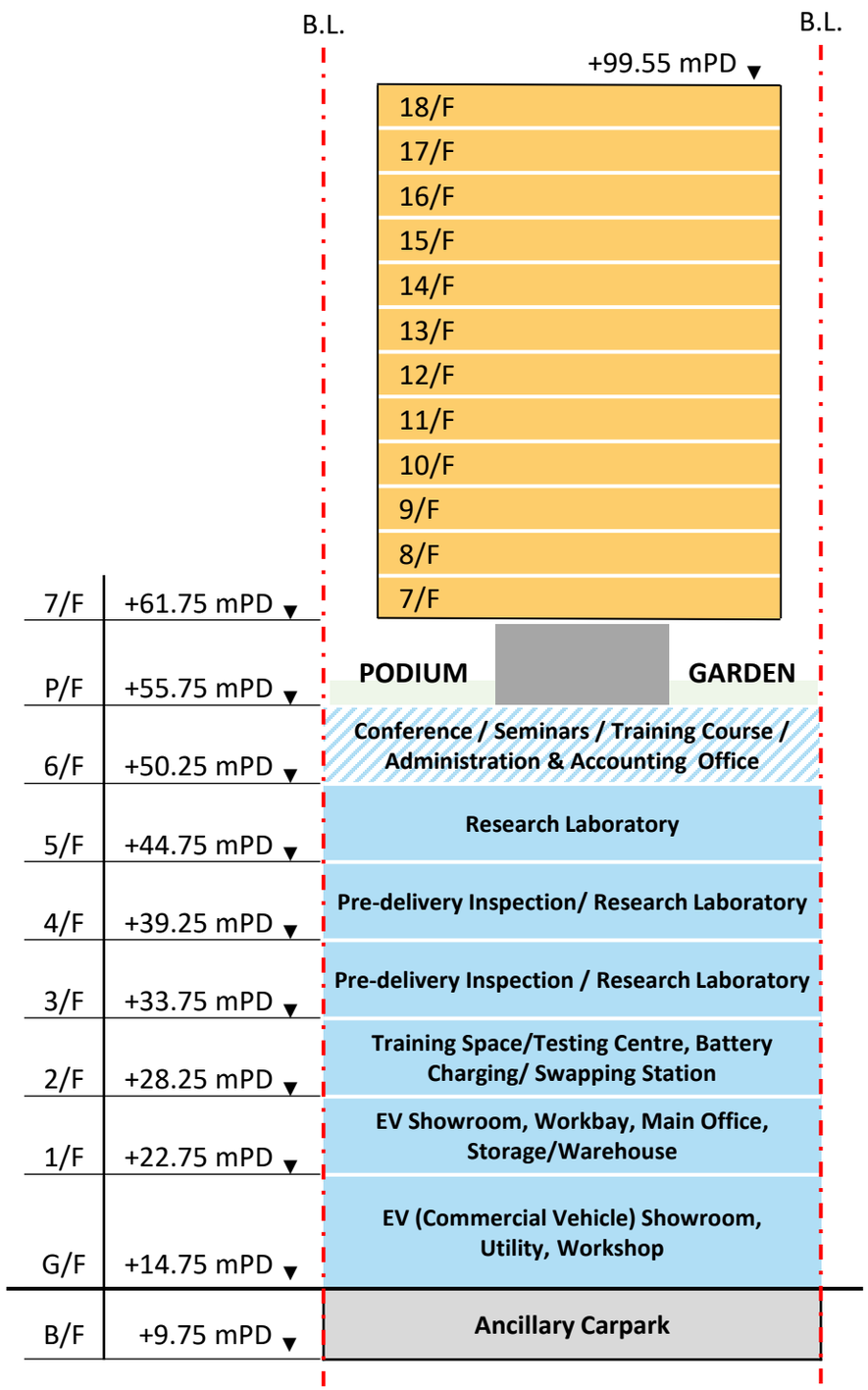
EV Mobility City (Innovation & Technology)

Ancillary Carpark





SECTION A-A'



SECTION B-B'

LIFT LOBBY / LIFT AREA
/ STAIRCASE

ANCILLARY CARPARK

B/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

EV (COMMERCIAL VEHICLE) SHOWROOM

WORKSHOP (WITH SUMP PIT)

UTILITY

G/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

STORAGE / WAREHOUSE

WORK BAY

EV SHOWROOM

MAIN OFFICE

1/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

TRAINING SPACE / TESTING CENTRE

BATTERY CHARGING/SWAPPING STATION

2/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

PRE-DELIVERY INSPECTION / RESEARCH LABORATORY

3/F & 4/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

RESEARCH
LABORATORY

5/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

CONFERENCE / SEMINARS / TRAINING COURSE /
ADMINISTRATION & ACCOUNTING OFFICE

6/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

PODIUM GARDEN

P/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

Staff Quarters
(Tower 1)

Residential Institution
(Talent Accommodation)
(Tower 2)

7-18/F PLAN

Appendix 2

Visual Impact Assessment

S12A AMENDMENT OF PLAN APPLICATION
APPROVED FANLING / SHEUNG SHUI OZP NO. S/FSS/28

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

VISUAL IMPACT ASSESSMENT

August 2025

Applicant:
Sime Darby Motor Services Limited

Prepared by:
KTA Planning Limited

S3165_VIA_V02

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S.12A AMENDMENT OF PLAN APPLICATION
Approved Fanling / Sheung Shui OZP No. S/FSS/28

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

Visual Impact Assessment

1. INTRODUCTION

1.1 Purpose

1.1.1 This Visual Impact Assessment ("VIA") report is prepared on behalf of Sime Darby Motor Services Limited ("the Applicant") in support of the S12A Amendment of Plan Application for the Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation ("Proposed Development") at various lots in D.D. 51 and adjoining Government Land, Fanling ("the Site") (**Figure 1.1** refers). The Site falls entirely within an area zoned "Government, Institution or Community" ("G/IC") on the Approved Fanling / Sheung Shui OZP ("Approved OZP") No. S/FSS/28.

1.1.2 To capitalise on the rapidly growing trends of EV and green energy, and more recently, the emerging low-altitude economy, the Applicant proposes to establish a "EV Mobility City" at the Site. The Proposed Development comprises (i) a 7-storey podium (excluding 1-level of basement) accommodating R&D and I&T related to on EV, green energy and low-altitude aerial vehicle, and associated business activities; and (ii) 2 domestic towers atop for provision of ancillary accommodation, comprising staff quarters (6-storey) and residential institution (12-storey). The indicative development scheme yields a total Plot Ratio ("PR") of 5.0 and Gross Floor Area ("GFA") of about 27,400m^2. The proposed building height will reach approx. +99.55mPD.

1.1.3 This VIA evaluates, in accordance with the "*Town Planning Board Guidelines on Submission of Visual Impact Assessment for Planning Applications to TPB*" ("TPB PG-No. 41"), the anticipated visual impact of the Proposed Development on public viewers relevant to the Site and concludes with recommendation on mitigation measures if necessary.

1.2 Report Structure

1.2.1 Following this introductory section, the methodology adopted in this assessment will be set out in **Section 2**. The baseline review of the assessment area is included in **Section 3**. **Section 4** includes the Indicative Development Scheme and discussion on the design considerations. Visual envelope, visually sensitive receivers and their representative viewpoints will be identified and analysed in **Section 5**, followed by assessment of the visual impacts, if any in **Section 6**. **Section 7** concludes this VIA.

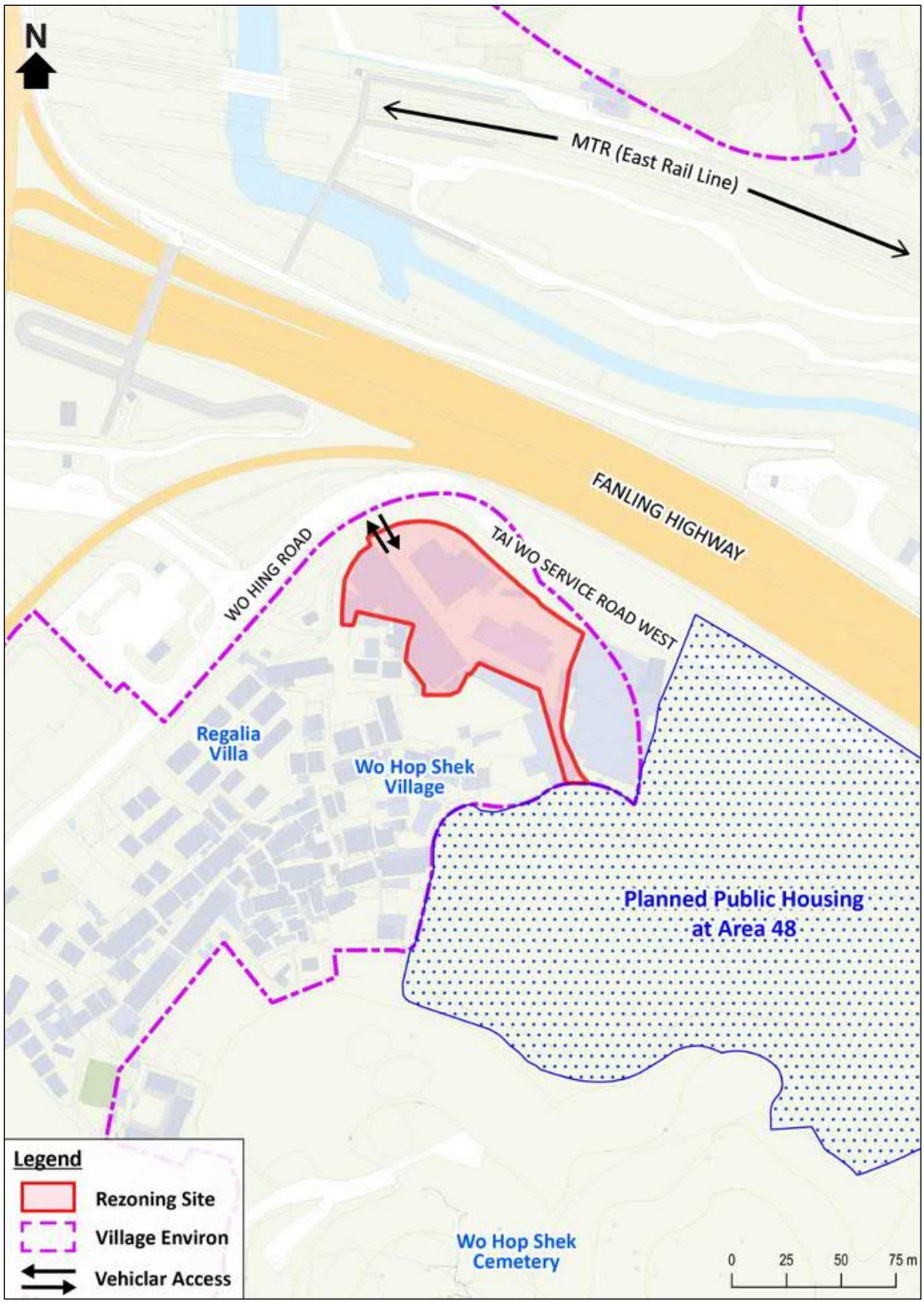


Figure 1.1: Site Location Plan

2. METHODOLOGY

2.1 Visual Impact Assessment Approach

2.1.1 This VIA aims at evaluating the potential visual impact of the Proposed Development on public visually sensitive receivers ("VSRs") as compared with the existing and planned/committed developments.

2.1.2 According to TPB PG-No. 41, the overall visual impact shall be assessed based on i) the sensitivity of the key public viewers; ii) visual resources and visual amenities likely to be affected; iii) the magnitude, extent and duration of impact and any resultant improvement or degradation in the visual quality and character of the surrounding area; and iv) the planning intention and known planned developments of the area. Visual impacts could be either beneficial or adverse.

2.1.3 The visual sensitivity of public viewers/VSRs is determined taking into account the activity of the VSR, the duration and distance over which the proposed development would remain visual, and the public perception of the value attached to the view being assessed. Visual sensitivity is qualitatively graded from high to low.

2.1.4 Visual changes could be positive or negative and they are not necessarily mutually exclusive. In considering the effect of visual changes, it covers the following four aspects:

- the total effect on the **Visual Composition** of the surrounding context;
- the degree of **Visual Obstruction** to key public viewing points;
- the visual **Effect on Public Viewer**/VSRs; and
- the **Effect on Visual Resources**.

2.1.5 The magnitude of visual changes will be qualitatively graded as Substantial, Moderate, Slight or Negligible.

2.1.6 The VIA will be undertaken in the following steps:

- A baseline review will be conducted to capture the existing visual elements in the surroundings and the planning context of the Site.

- The Indicative Development Scheme for the Site will be briefly presented.

- The Visual Envelope ("VE") will be determined based on the size and distance of the Proposed Development; and appropriate public viewpoints ("VPs") to represent the view from public VSRs will be identified.

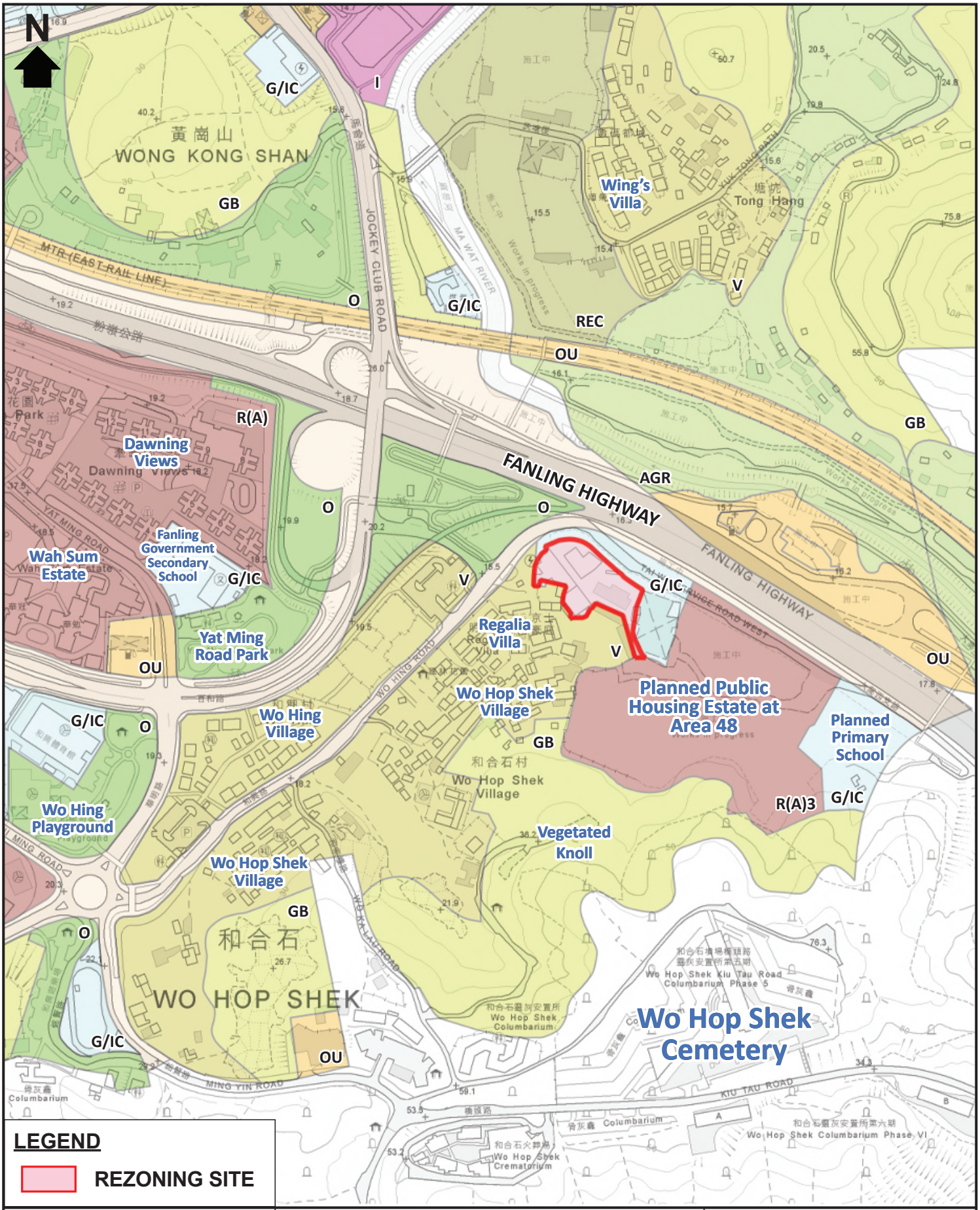
- Each VP and potential visual impacts of the Indicative Development Scheme on the VSRs will be analysed based on the photomontages prepared from the selected VPs.

- The overall visual impact will be assessed and conclusion on the visual acceptability of the Proposed Development will be made.

3. BASELINE REVIEW

3.1 Site Location and Existing Condition

3.1.1 The Site is situated in the fringe of Fanling New Town at various lots in D.D. 51 and adjoining Government land. It is located within the Wo Hop Shek area and is bounded by a workshop and planned public housing estate to its east; Wo Hop Shek Village and Regalia Villa to its south; Wo Hing Road to its west; and Tai Wo Service Road West and Fanling Highway to its north (**Figures 1.1** and **3.1** refers). The Site is currently occupied by temporary rural warehouses and structures (**Figure 3.2** refers).



LEGEND

REZONING SITE

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LAND USE CONTEXT PLAN

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

SCALE 1:5000

FIGURE 3.1

Extract plan based on the Survey Sheet Nos. 3-SW-13C & 18A

DATE: 12 July 2025

N

LEGEND

REZONING SITE

WIP Nov 2024

和合石村

Hop Shek Village

Regalia Villa

Car Park

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EXISTING USE AND SITE CONDITION PLAN

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

Visual Impact Assessment

FIGURE 3.2

Scale: 1:500

Date: 12 July 2025

3.2 Existing Visual Elements in the Surrounding Context

3.2.1 The Site is situated at the interface of urban / sub-urban setting intermixed with village-type houses, rural workshops and warehouses, vegetated vacant land and a planned high-rise public housing estate at Area 48. In a wider context, various high-rise residential housing estates can be found in the west, whereas the Wo Hop Shek Cemetery is located to the south of the Site beyond the vegetated knoll.

3.2.2 The visual outlook of an area is shaped by a combined composition of all the visual elements which come into sight of the viewers. Key visual elements in the surrounding context of the Site are included in **Figure 3.3** and summarised below:

Positive Attributes

- To the immediate south of the Site is a "Village Type Development" ("V") zone of Wo Hop Shek Village, which is primarily occupied by low-rise village-type developments. The low-rise nature of the Wo Hop Shek Village contributes to the visual permeability and openness of the area, as well as the village-type character.

- The densely vegetated knoll zoned "Green Belt" ("GB") is located to the further south of the Site. The lush greenery of the vegetated knoll are major visual resources, offering significant visual relief to the surrounding area. The vegetated knoll also serves as a landscape buffer, separating the Site and the Wo Hop Shek Cemetery in the further south.

- Various "Open Space" ("O") zones with lush greenery (i.e. Yat Ming Road Park and Wo Hing Playground) are located to the west and south-west of the Site. The existing greenery and open-air nature contribute to the visual attractiveness and visual openness, as well as providing spatial relief for the surrounding area.

- To the north of the Site across Fanling Highway are some vegetated land and village-type developments in the Tong Hang Chuen and Tong Hang Tung Chuen. The low-rise nature contribute to the visual openness.

- Lung Shan is located to the further north and north-east of the Site, with a top height of about +356mPD. The natural landscape coupled with lush trees and vegetation form an extensive green backdrop for the area and provide significant visual relief.

Negative Attributes

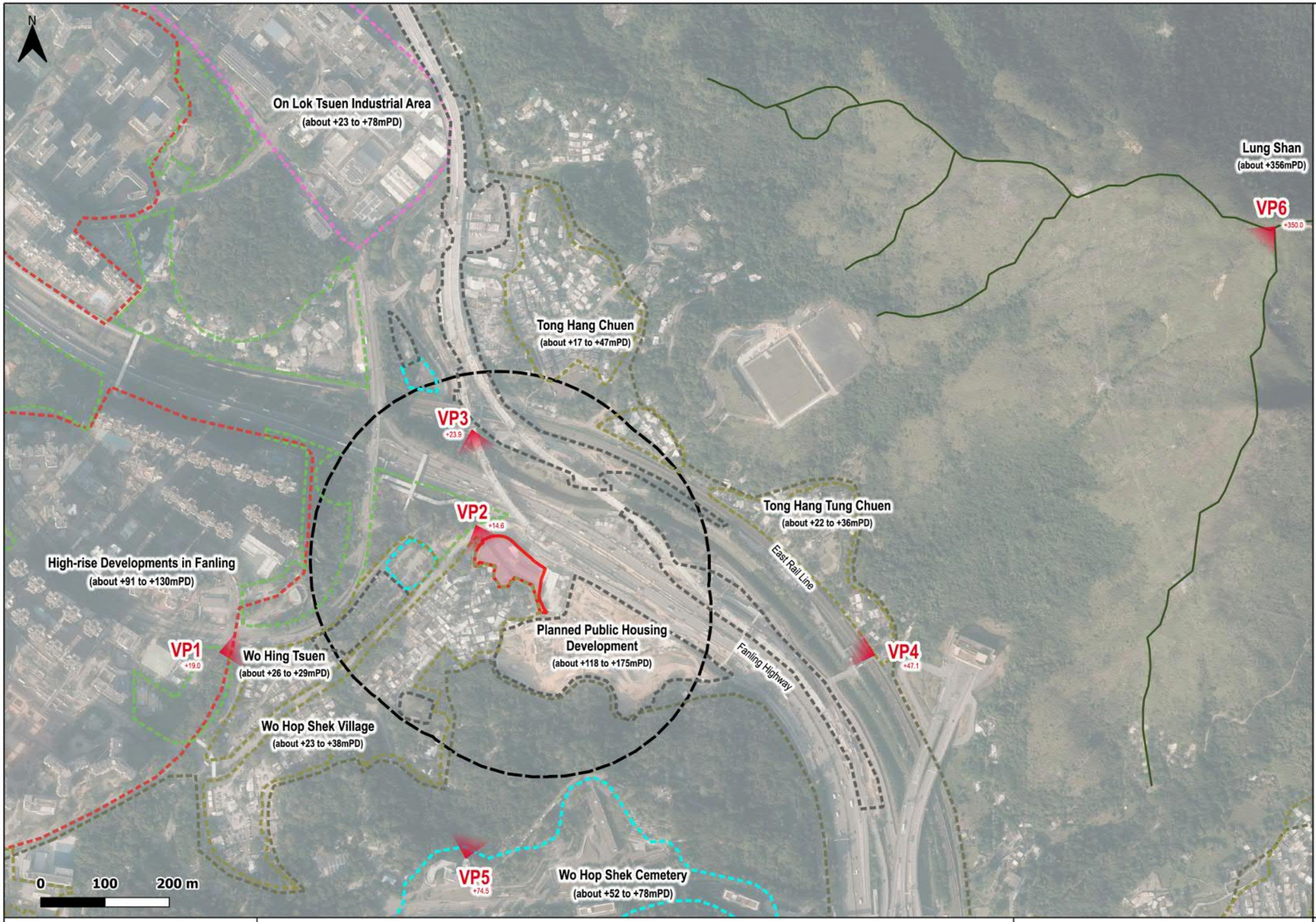
- The Fanling Highway and Fanling Bypass (under construction) are heavily trafficked road, offering limited visual interest to the Site.

- Several rural workshops and warehouses are situated to the immediate east and south of the Site. While these structures are low-rise in nature, their presence offer minimal visual interest and may be viewed as an unorganised eyesore;

- The planned high-rise public housing estate to the east (about +118 to +175mPD) and other existing high-rise residential developments in the wider area (e.g. Dawning Views (about +115mPD), Wah Sum Estate (about +130mPD), Wah Ming Estate (about +120mPD) and Flora Plaza (about +130mPD)) would affect the visual openness and permeability of the area and create visual obstruction.

- The Wo Hop Shek Cemetery is located to the further south of the Site beyond the vegetated knoll. Although the cemetery will provide visual openness for the area, the nature of use and the presence of crematorium and tomb may cause eyesore to the viewers in the surrounding area.

3.2.2 The existing visual quality of the Site can be regarded as fair in general. The Site is located at interface of urban / sub-urban setting intermixed with village-type houses, rural workshops and warehouses, vegetated vacant land and a planned high-rise public housing estate. Existing greenery of the vegetated knoll and green backdrop of Lung Shan provide visual relief to the area.



Legend

- Site Boundary
- 3H zone
- VP1 Crossing outside Wo Hing Playground
- VP2 Bus Stop along Wo Hing Road
- VP3 Footbridge near Tong Hang Chuen
- VP4 Footbridge near Tong Hang Tung Chuen
- VP5 Wo Hop Shek Cemetery
- VP6 Lung Shan Hiking Trail
- +00.0 Existing Levels (about)
- VP Viewing Points

Visual Element/ Resources/Detractors

- Ridgelines
- High-rise Developments
- Low-rise Developments
- Open Spaces
- G/IC
- Industrial
- Mountain Backdrop
- Vacant / WIP

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Key Visual Elements

Proposed EV Mobiltiy City with Ancillary Staff Quarters and Talent Accommodations at Various Lots in D.D. 51 and adjoining Government Land, Fanling

Visual Impact Assessment

Figure 3.3

Scale: 1:12,500

Date: 28 July 2025

3.3 Statutory Zoning Context

3.3.1 The Site falls entirely within an area zoned "G/IC" on the Approved OZP (**Figure 3.4** refers). According to the Statutory Notes of the Approved OZP, the planning intention of the "G/IC" zone is as follows:

"The zone is interned 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."

3.3.2 Under the Explanatory Statement of the Approved OZP, the subject "G/IC" zone is reserved for a planned primary school in support of the wider FSS area.

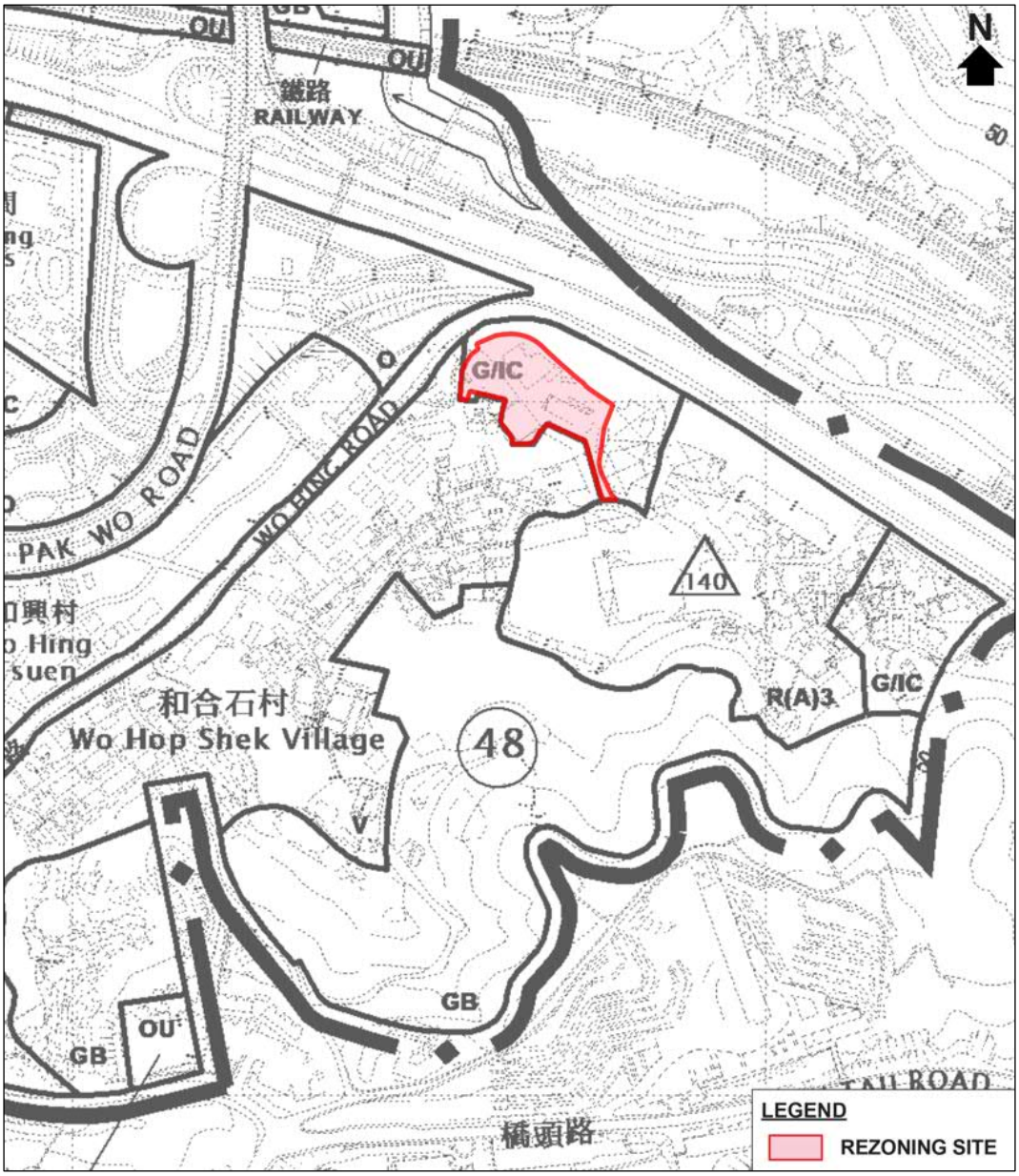


Figure 3.4: Zoning Context Plan (Extracted from Approved OZP)

4. THE PROPOSED DEVELOPMENT

4.1 The Indicative Development Scheme

4.1.1 The Indicative Development Scheme for the Proposed Development has been devised and is presented in **Appendix 1** of this Supporting Planning Statement. The set of architectural drawings, including Indicative Layout Plan, Diagrammatical Sections and Floor Plans, is devised for reference only and subject to detailed design at later stage.

4.1.2 Based on a site area of about 5,480m^2 and a total plot ratio of 5.0, the attainable total GFA is about 27,400m^2. **Table 4.1** below summarises the major development parameters of the Proposed Development while the proposed floor uses is presented in **Table 4.2**.

4.1.3 The Proposed Development consists of (i) 7-storey podium (excluding 1-level of basement) accommodating R&D and innovation & technology ("I&T") uses related to on EV, green energy and low-altitude aerial vehicle, and associated business activities ; and (ii) 2 domestic towers atop for provision of ancillary accommodation, comprising staff quarters (6-storey) and residential institution (12-storey). The PR and GFA of the podium and domestic towers are approx. 3.5 (19,180m^2) and 1.5 (8,220m^2) respectively.

Proposed Regional Hub for the EV Mobility City

4.1.4 As the core of the EV Mobility City, the 7-storey podium (atop 1-level of basement) has a PR of about 3.5 (equivalent to GFA of about 19,180m^2), comprising (i) 6-storey dedicated to R&D and I&T related uses and business, (ii) 1-storey of ancillary and supporting business and training facilities (i.e. conference, seminars, training course, and administration & accounting office), and (iii) 1-level of basement for ancillary carparking. A vehicular ramp is proposed in the southern part of the podium to provide vehicular access to and from B/F to 5/F.

4.1.5 To accommodate the showroom for commercial vehicles on G/F, where a higher headroom is required, a headroom of 8m is proposed, whereas a 5.5m floor-to-floor height for the remaining floors is proposed to facilitate the hoisting of new EV deliveries for undercarriage inspections, testing or battery swapping etc, ensuring they are in merchantable condition and suitable for registration and sale, as well as supporting the operational needs of the training centre, research laboratory, and conferencing facilities. The podium will have a building height of approx. +55.75mPD.

Proposed Ancillary Staff Quarters and Residential Institution for Talent Accommodation

4.1.6 To provide ancillary accommodation for the resident and local staffs, other employees of the Applicant and its parent company, as well as talents and affiliated personnel working/visiting the EV Mobility City, two domestic towers atop the podium are proposed for staff quarters and residential institution uses. These towers have a total GFA of about 8,220m^2 (equivalent to PR of 1.5). The building height of staff quarters

and residential institution are 6-storey (approx. +80.65mPD) and 12-storey (approx. +99.55mPD) respectively.

4.1.7 The nature of the ancillary accommodation is similar to the emerging concept of "InnoCell/Talent Accommodation" (人才公寓). Based on the assumed average room size, it is anticipated that the 2 domestic towers will provide about 138 rooms, with an estimated population of about 414 persons.

Table 5.1: Major Development Parameters

Development Parameters	Proposed Development
Site Area (about)	5,480 m^2
Total PR (about) - Domestic - Non-domestic	5.0 1.5 3.5
Total GFA (about) - Domestic - Non-domestic	27,400 m^2 8,220 m^2 19,180 m^2
Total No. of Blocks - Domestic Towers - Podium	3 2 1
Total No. of Storeys - Domestic Towers - Podium	 6-12 7 (basement excluded)
Building Height (mPD at Main Roof) (about) - Domestic Towers - Podium	 +80.65 to +99.55 mPD +55.75 mPD
No. of Rooms (Average Room Size) - Staff Quarters - Residential Institution	 48 (40m^2) 90 (70m^2)
No. of internal Transport Facilities - Parking Space (excl. bicycle) - Loading/unloading bay	 164 23
Private Open Space (about)	Not less than 414m^2
Estimated Population (1) (about)	414

Note

(1) The estimated population is based on an assumed household size of 3.0, which is considered as a prudent approach for technical assessment purpose only.

Table 5.2: Proposed Floors Uses

Floor	Proposed Uses
7/F - 18/F	Residential Institution (Talent Accommodation)
7/F - 12/F	Staff Quarters
P/F	Podium Garden
6/F	Conference / Seminars / Training Course / Administration & Accounting Office
5/F	Research Laboratory
3/F & 4/F	Pre-delivery Inspection / Research Laboratory
2/F	Training Space/Testing Centre, Battery Charging/ Swapping Station
1/F	EV Showroom, Workbay, Main Office, Storage/Warehouse
G/F	EV (commercial vehicle) showroom, Utility, Workshop
B/F	Ancillary Carpark

4.2 Key Design Features

4.2.1 In formulating the Indicative Development Proposal, the schematic design has taken into account the following considerations (**Figure 4.1** refers):

Stepped Building Height

4.2.2 To create a harmonious urban setting and ensure compatibility with surrounding developments, the building height of the Proposed Development has been carefully devised. The building height ("BH") of proposed towers ranges from +80.65mPD to +99.55mPD, which is compatible with the adjacent public housing development at Area 48 (about +118 to +175mPD) and other high-rise developments in the wider area, including Dawning Views (about +115mPD), Wah Sum Estate (about +130mPD), Wah Ming Estate (about +120mPD) and Flora Plaza (about +130mPD).

4.2.3 In addition, the adjacent public housing development at Area 48 has established a stepped height concept for the area with BH descending from southeast to northwest towards Wo Hop Shek Village and Fanling Highway. The indicative development scheme, with a descending building height profile of the towers towards Fanling Highway, will adhere to the established stepped building height profile (i.e. descending from southeast to northwest), ensuring a visually cohesive transition.

Building Layout and Disposition

4.2.4 With an aim to minimise and mitigate the potential traffic noise impact arising from the adjacent carriageway/highway, the proposed layout of the towers are carefully designed. A single-aspect design is adopted to avoid direct frontage onto the Fanling Highway and reduce direct noise exposure. Additionally, minimum setback of approx. 10m and 30m between the proposed towers and road kerb of Tai Wo Service Road West and Fanling Highway respectively have been incorporated to provide adequate buffer, further minimising noise disturbance.

Building Separation

4.2.5 To promote air ventilation and visual permeability, the Indicative Development Scheme has incorporated a minimum of approx. 15m building separation between the two towers. This design feature would help reducing the building mass of the development, fostering a quality-built environment, as well as maintaining the wind flow and visual corridors.

Appropriate Setback from Nearby Developments

4.2.6 The Site is bordered by village houses of Wo Hop Shek Village to its immediate south and rural-type workshop to its east. To ensure compatibility with these developments, minimum setbacks of about 5m from the southern boundary and about 20m from the eastern boundary have been adopted under the Indicative Development Scheme. These setbacks would provide sufficient spatial and visual buffers, thereby minimising the potential impacts on adjacent low-rise developments and enhancing the integration of the Proposed Development with its surroundings.

Provision of Amenity Area with Landscaping on the Private Lots Owned by the Applicant Falling within the "V" Zone

4.2.7 The private lots owned by the Applicant also include a strip of land in the south-east falling within the adjoining "V" zone. The strip of land in question does not form part of the Rezoning Site nor development site so as to avoid unnecessary implication. To achieve a better planning outcome and make better use of the land resources, the strip of land is proposed to be used as amenity area with enhanced landscaping. This area will serve as a green buffer, enhancing visual interest and improving the aesthetic appeal of the Site, while also providing a transitional space between the Proposed Development and adjoining village-type developments.

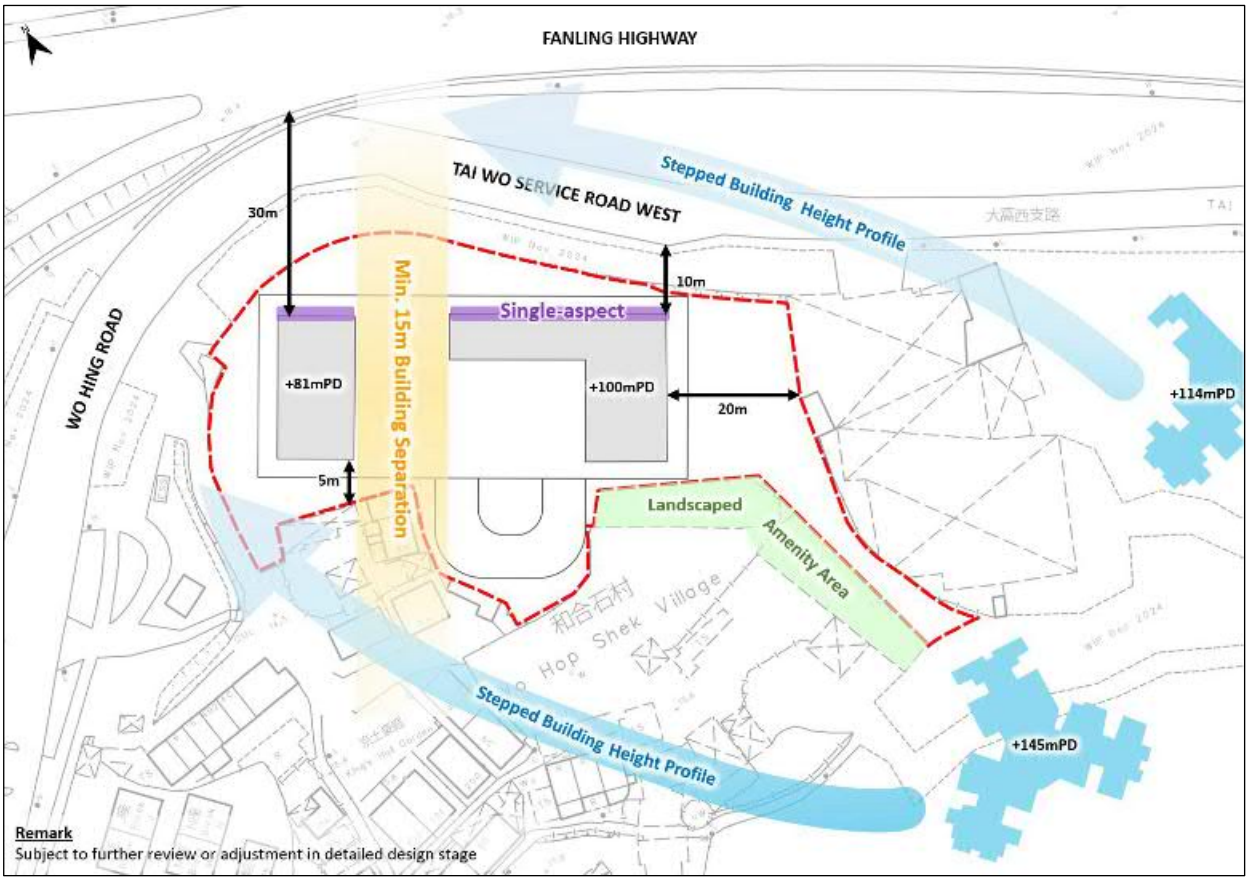


Figure 4.1: Key Design Features

5 IDENTIFICATION OF VISUAL SENSITIVE RECEIVERS AND SELECTION OF VIEWPOINTS

5.1 Identifying Visual Envelope and Visual Sensitive Receivers

5.1.1 The VE or the zone of visual influence of the Proposed Development is determined by the existing topography and buildings in the vicinity of the Site. As prescribed in the TPB PG-No. 41, the viewers will tend to see the building as part of a group rather than as a single building when the viewing distance equals to three times the height of the building from the Site (i.e. the 3H zone). Therefore, the 3H zone could be used as a starting reference in determining the assessment area. Since the actual maximum building height of the Proposed Development will be about 84.8m (or +99.55mPD), the assessment area covers a radial area of about 254.4m (i.e. 3H) from the building footprint (**Figure 5.1** refers).

5.1.2 Existing and planned development may block most of the view from close-up visual sensitive receivers ("VSRs") while buildings of similar height may hide the development even from distant. Therefore, the identification of VSRs in local scale is largely constrained by the existing built environment and terrain. Visually sensitive viewpoints on the east, and south-east are mainly defined by the existing built environment and terrain as existing/planned buildings may have totally blocked or partially hid the Proposed Development in distant scale. Only VSRs to the north, south and west of the Site may have exposed view to the Proposed Development in a close-up distance.

5.1.3 The VE covers the area where direct sight towards the Proposed Development is available and the identified VSRs within the assessment area is presented in **Figure 5.1**. Since protecting private view is not the purview of the TPB, this VIA focuses primarily on public VSR only and no private VSR, such as residents of private development and users of developments with restricted/exclusive accesses, will be identified.

5.2 Selection of Visual Sensitive Viewpoints

5.2.1 Representative VPs within the VE were selected for assessing the visual impact to the VSRs. Selected VPs shall cover public views from easily accessible and popular area from different directions. When selecting VPs, priority shall be given to major public open space, public focal points, open spaces, existing/planned pedestrian node, key pedestrian/vehicular corridor, and existing major vistas will be considered as major visual sensitive viewpoints.

5.2.2 In this VIA, a total of six VPs are selected for further assessment on the visual impact of the Proposed Development, which are summarised in **Table 5.1** and shown in **Figure 5.1**. The VPs included both close-up and distant views which cover the views from different directions.

Table 5.1: Selected Visually Sensitive Viewpoints

Viewpoint No.	Location
VP1	Pedestrian Crossing Outside Wo Hing Playground
VP2	Bus Stop along Wo Hing Road
VP3	Footbridge near Tong Hang Chuen
VP4	Footbridge near Tong Hang Tung Chuen
VP5	Wo Hop Shek Cemetery
VP6	Lung Shan Hiking Trail

VP1 – Pedestrian Crossing Outside Wo Hing Playground

5.2.3 This VP is taken at the pedestrian crossing outside Wo Hing Playground to the south-west of the Site with a distance of about 390m. It is a major junction among the Fanling South area, linking up various major developments in the locality such as Wo Hing Playground and Wo Hing Sports Centre, Wah Sum Estate, Wo Hing Tsuen, Yat Ming Road Park etc. With a level of approx. +19.0mPD, this VP captures the view of village-type houses of Wo Hing Tsuen, roadside greenery and mountain backdrop of Lung Shan. The VSRs of this VP will mainly be pedestrian at the crossing facility.

VP2 – Bus Stop along Wo Hing Road

5.2.4 VP2 is taken at a local bus stop located just about 20m to the immediate west of the Site. Wo Hing Road is a major road in the area with multiple bus and minibus stops running along this local carriageway, serving the local residents of Wo Ho Shek Village and Wo Hing Tsuen. With the level at about +14.6mPD, this VP mainly captures the view of the Site, roadside greenery, as well as the Fanling Bypass under construction. This VP is selected as a close-up viewpoint to assess the possible impact of the VSRs, viz. passengers waiting for the public transportation services at the bus stop.

VP3 – Footbridge near Tong Hang Chuen

5.2.5 This VP is taken at the footbridge across East Rail Line track near the Tong Hang Chuen with a distance of about 170m to the north-west of the Site. This footbridge is frequently used by the residents of Tong Hang Chuen, Wing's Villa and Cyber Domaine for crossing southward across the East Rail Line track to Wo Hop Shek Village and Wo Hing Tsuen. At the level of about +23.9mPD, the VP captures the view of lush greenery and the elevated Fanling Bypass under construction. The VSRs of this VP will mainly be pedestrians and cyclists using the footbridge.

VP4 – Footbridge near Tong Hang Tung Chuen

5.2.6 Similar to VP3, this VP is also located at a footbridge across East Rail Line track near the Tong Hang Tung Chuen with a viewing distance of about 535m. At the level of about +47.1mPD to the north-east of the Site, this VP mainly captures the view of East Rail Line track, Fanling Bypass under construction and lush greenery, with various high-rise developments clusters of Fanling South (e.g. Dawning View, Wah Sum

Estate and Flora Plaza) in the background. The VSRs of this VP will mainly be pedestrians and cyclists using the footbridge.

VP5 – Wo Hop Shek Cemetery

5.2.7 Established in 1950s, Wo Hop Shek Cemetery is the largest public cemetery in Hong Kong, spanning over 222.4ha of land. VP5 is taken near the Wo Hop Shek Columbarium Phase III, about 410m to the south-east of the Site. At the level of about +74.5mPD, this VP captures the panoramic view of Fanling South, comprising lush greenery and village-type developments in Wo Hop Shek Village, high-rise housing estates in Fanling South (e.g. Dawning View, Wah Sum Estate and Flora Plaza), as well as the mountain backdrop and ridgeline Lung Shan. This VP is selected to assess the impact of the VSRs, i.e. visitors to the cemetery.

VP6 – Lung Shan Hiking Trail

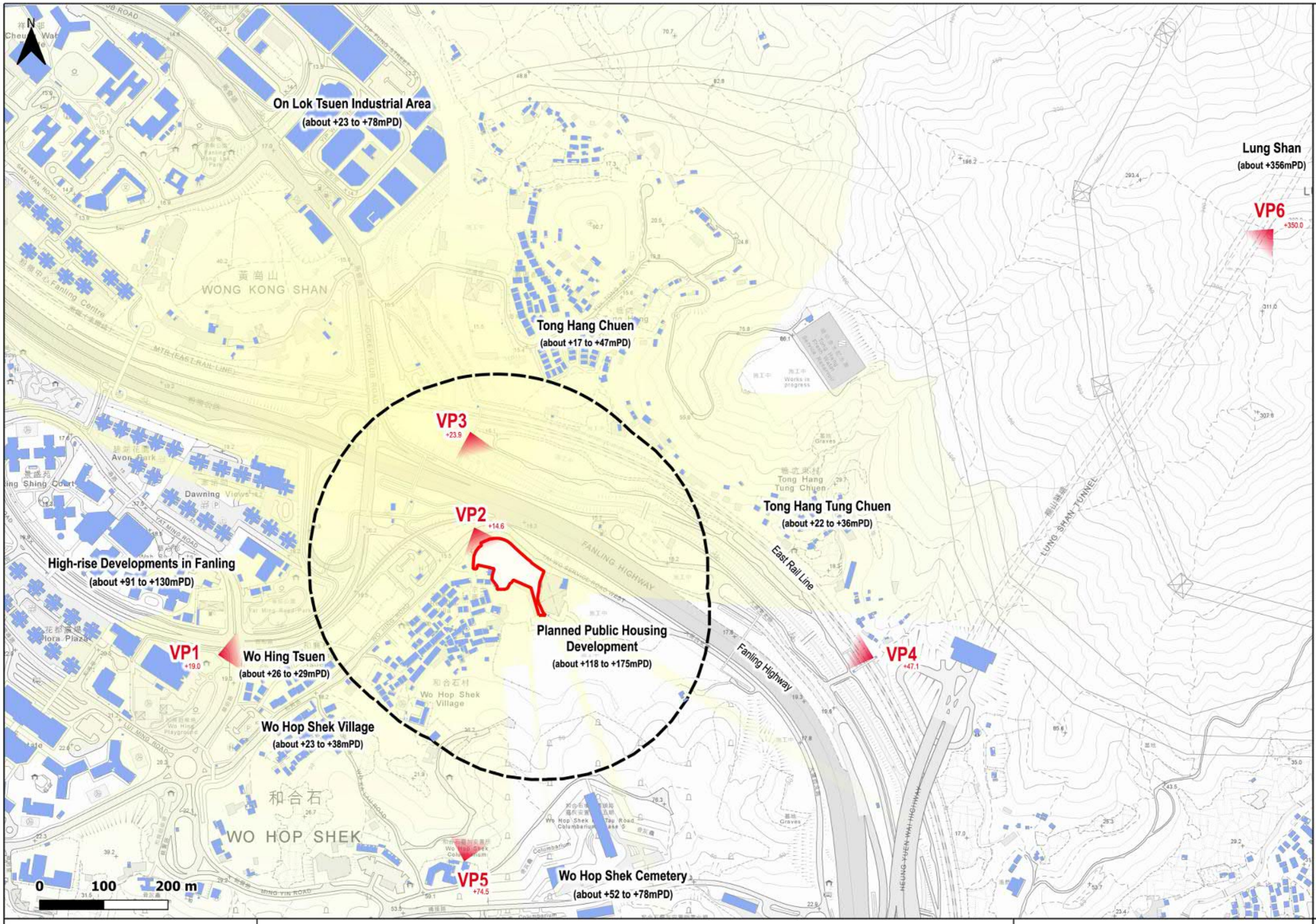
5.2.8 VP6 is taken at the hiking trail of Lung Shan with a viewing distance of about 1,250m to the north-east of the Site. The hiking trail at Lung Shan is known for its natural landscape and great scenery. With a level of about +350mPD, this VP offer a panoramic view of Fanling South, capturing the Wo Hop Skek Village and the Site, the high-rise residential cluster in Fanling South, and the vegetated knoll of Wo Hop Shek, as well as the ridgelines of Pak Tai To Yan and Wu Tip Shan. The potential VSRs will be mainly hikers engaging in active and passive recreational activities.

Table 5.2: Identified Visually Sensitive Viewpoints with Preliminary Analysis

Viewpoints	Distance / Direction (Approx.)	Height in mPD (Approx.)	Nature of VP	Popularity by Public	Visual Sensitivity[1]	Visual Quality[2]
VP1 Pedestrian Crossing outside Wo Hing Playground	390m / South-west	+19.0	Transient	Transient	Low	Fair
VP2 Bus Stop along Wo Hing Road	20m / west	+14.6	Transient	Frequent	Medium	Fair
VP3 Footbridge near Tong Hang Chuen	170m / North-west	+23.9	Transient	Transient	Low to medium	Fair
VP4 Footbridge near Tong Hang Tung Chuen	535m / North-east	+47.1	Transient	Transient	Low to medium	Good
VP5 Wo Hop Shek Cemetery	410m / South-east	+74.5	Transient	Transient / Frequent in Festival Periods	Medium	Good
VP6 Lung Shan Hiking Trail	1,250m/ North-east	+350.0	Active / Passive Recreation	Occasional	High	Good

[1] Visual sensitivity is determined by the types of activities the VSRs are engaging in and the duration and distance over which the proposed development would remain visible. For example, people engaging in active recreational activities such as playing basketball or football at the VP are less sensitive to visual change than passive recreational activities.

[2] Visual quality is assessed based on the openness and permeability of the view as well as the visibility of visual resources including prominent ridgelines, the harbour, natural coastlines, open sea horizon, skyline, scenic areas, valued landscape, special landmark, heritage features to be preserved.



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Visual Envelope and Location of Viewpoints

Proposed EV Mobiltiy City with Ancillary Staff Quarters and Talent Accommodations at Various Lots in D.D. 51 and adjoining Government Land, Fanling

Visual Impact Assessment

Figure 5.1

Scale: 1:12,500

Date: 28 July 2025

6 ASSESSMENT OF VISUAL IMPACTS

6.1 General

6.1.1 The primary objective of this VIA is for evaluating the visual impact of the Proposed Development in support of the current S12A Amendment of Plan Application. This VIA is conducted by comparing the existing condition and the Proposed Development with major planned and committed developments to assess the cumulative visual impacts. The assessment will focus on the visual composition, visual obstruction, effects on public views and effects on visual resources are focused on the changes to be brought about by the Proposed Development.

6.2 VP1 – Pedestrian Crossing Outside Wo Hing Playground

Visual Composition

6.2.1 This VP is taken at the pedestrian crossing outside Wo Hing Playground to the south-west of the Site with a distance of about 390m. As shown in the photomontage at **Figure 6.1**, it captures an rather open view, with the existing roadside greenery and village-type dwellings of Wo Hing Tsuen in the foreground, and the open sky-view and mountain backdrop of Lung Shan forming the background. While the Proposed Development will be partly shielded off by the existing roadside greenery in the foreground, the planned public housing development at Area 48 will be visible and become a major visual element dominating the views of this VP. The Proposed Development will not cause significant change to the visual composition as the view will be dominated by the planned public housing.

Visual Obstruction

6.2.2 While the Proposed Development will inevitably lead to partial visual obstruction to the mountain backdrop of Lung Shan, the existing open sky-view and ridgeline of Lung Shan will be preserved. In addition, the proposed buildings will form part of the sub-urban fabric for this VP, and that visual access towards existing greenery in the foreground will also not be affected. Therefore, it is concluded that the visual obstruction caused by the Proposed Development would be slight.

Effect on Public Viewers

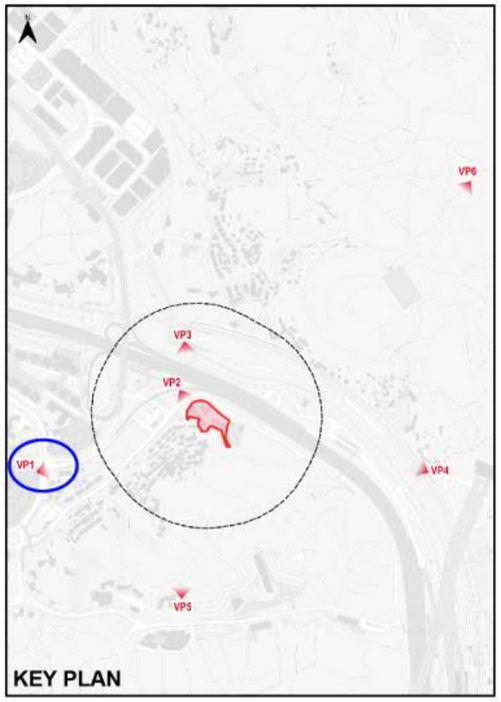
6.2.3 The VSRs of this VP will mainly be pedestrian at the crossing facility, which is transient in nature with a short duration. Given the transient nature of the VSRs and the distance between the VP and the Site, the sensitivity will be low in general. While the Proposed Development will be partially visible from this VP, it will form part of the sub-urban context following the implementation of planned public housing in the background. Hence, the effect on the visual experience will be slightly adverse.

Effect of Visual Resources

6.2.4 The roadside trees and vegetation, open sky-view, and Lung Shan are the key visual resources of this VP. The Proposed Development will inevitably obstruct the view

towards the mountain backdrop of Lung Shan. Yet, the open sky-view and ridgeline of Lung Shan, as well as the visual access towards the existing greenery in the foreground will not be affected. The visual openness of this VP will also be largely preserved. Thus, the Proposed Development would only slightly affect the visual resources of the area.

EXISTING CONDITION



KEY PLAN

PROPOSED DEVELOPMENT

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Viewpoint 1 - Pedestrian Crossing Outside Wo Hing Playground

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

Visual Impact Assessment

Figure 6.1

Date: 31 July 2025

6.3 VP2 – Bus Stop along Wo Hing Road

Visual Composition

6.3.1 VP2 is a close-up VP taken just about 20m to the immediate west of the Site. It captures the roadside trees & shrubs and Fanling Bypass (under construction) in the foreground, with a glimpse of Lung Shan and the open sky-view forming the natural backdrop. While the Proposed Development will be visible from this VP, it will be seen mostly in front of the planned public housing development as part of the high-rise townscape. With the implementation of planned public housing, the visual composition of this VP will be altered, and that the Proposed Development being formed or becoming part of the adjoining built environment is considered visually compatible with the high-rise residential towers in the vicinity.

Visual Obstruction

6.3.2 From **Figure 6.2**, while the Proposed Development will lead to loss of visual openness by obstructing the view to the sky, it should be noted that the existing open sky-view will nonetheless be obstructed, with or without the Proposed Development. In addition, the view towards the existing roadside greenery and Lung Shan will not be affected.

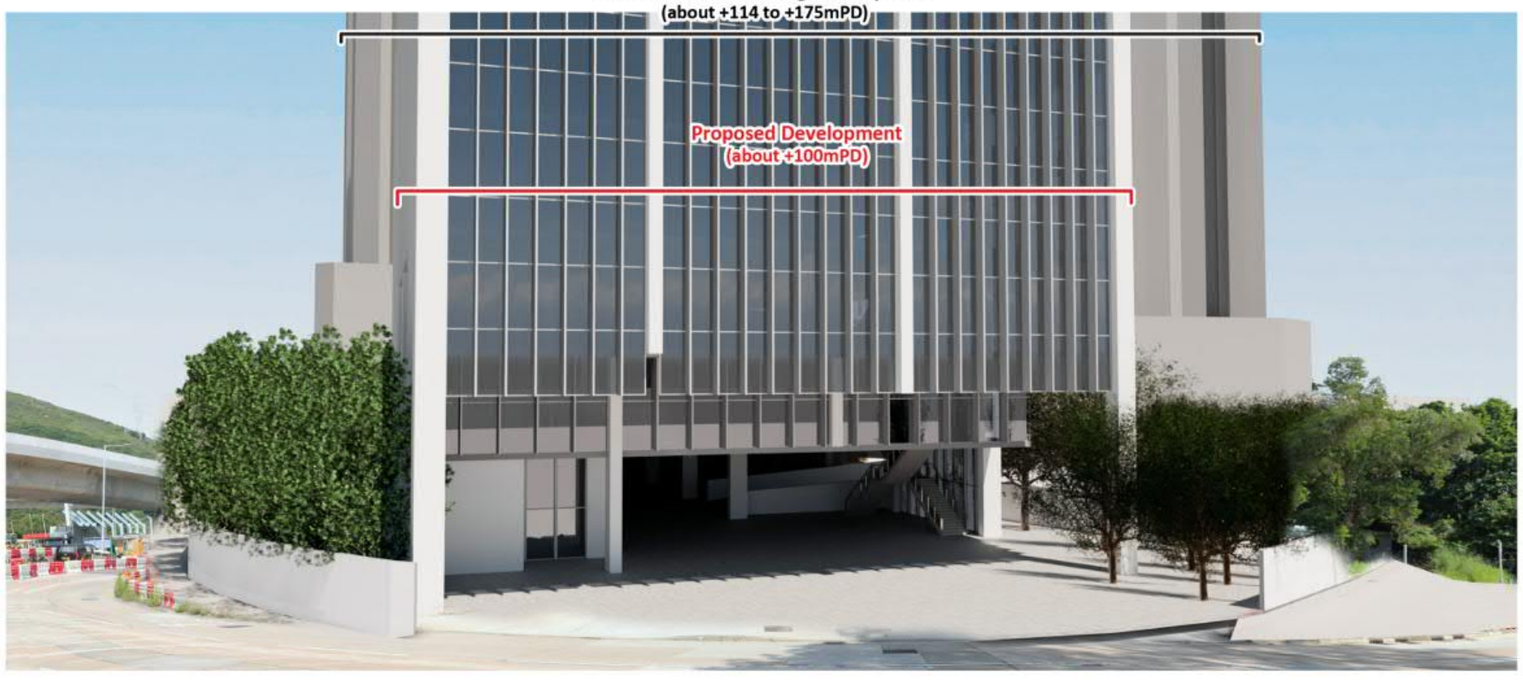
Effect on Public Viewers

6.3.3 Key VSRs of this VP will be passengers waiting for the public transportation services at this bus stop. The visual sensitivity of these VSRs will be medium since it is transient in nature but in close distance. While a sub-urban townscape will be resulted by the planned public housing for this VP, the Proposed Development will further bring the townscape view forward. The overall effect on the visual experience of these viewers would be slightly to moderately adverse.

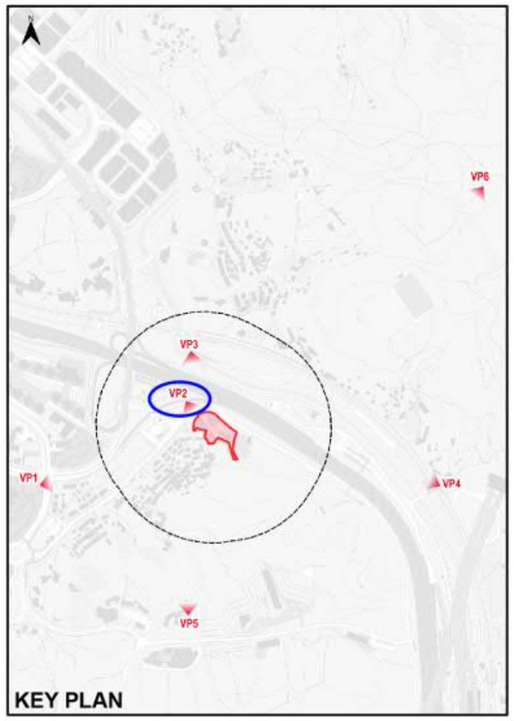
Effect of Visual Resources

6.3.4 The key visual resources of this VP include roadside greenery in the foreground, and mountain backdrop of Lung Shan and open sky-view at the back. With the implementation of planned public housing, the visual access towards latter two will be affected with or without the Proposed Development.

EXISTING CONDITION



PROPOSED DEVELOPMENT



KEY PLAN

KTA PLANNING LIMITED 規劃顧問有限公司

Viewpoint 2 - Bus Stop along Wo Hing Road

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

Visual Impact Assessment

Figure 6.2

Date: 31 July 2025

6.4 VP3 – Footbridge Near Tong Hang Chuen

Visual Composition

6.4.1 This VP is taken at the footbridge across East Rail Line track near the Tong Hang Chuen with a distance of about 170m to the north-west of the Site. As illustrated in the photomontage at **Figure 6.3**, the visual composition mainly comprises existing lush greenery and the elevated Fanling Bypass under construction in the foreground, and open sky-view at the back. While the lower portion of Proposed Development will be concealed by the existing greenery in the foreground, the upper part will be visible from this VP. With the implementation of planned public housing, the Proposed Development will be seen mostly in front of the high-rise towers of planned public housing (about +118 to +175mPD) as part of the high-rise townscape, and thus the visual composition of this VP will only be slightly altered.

Visual Obstruction

6.4.2 From **Figure 6.3**, with the implementation of planned public housing behind the Site, only a small portion of the existing sky-view will be obstructed by the Proposed Development. The view towards the lush greenery in the foreground will not be affected. Thus, the impact brought by the Proposed Development to the visual openness at this VP will be slight.

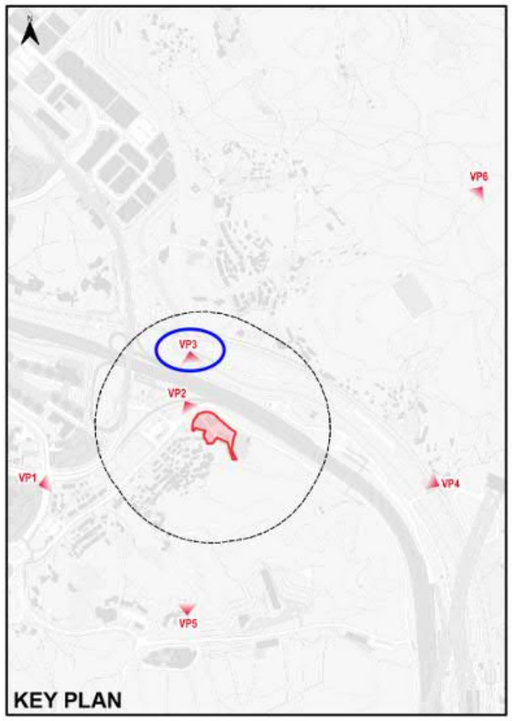
Effect on Public Viewers

6.4.3 The VSRs of this VP will be the pedestrians and cyclists using the footbridge which are transient in nature and their visual sensitivity is therefore low to medium. Although the upper part of Proposed Development will be visible from his VP, it would visually blend in with the adjoining high-rise public housing development, forming part of the sub-urban townscape. Hence, the effect on the visual experience will be slightly adverse.

Effect on Visual Resources

6.4.4 The key visual resources at this VP include existing lush greenery in the front and open sky-view at the back. With the implementation of planned public housing, only minimal obstruction towards the open sky-view will be resulted, while the lush greenery in the foreground will remain intact. The visual condition, quality and character will remain largely unchanged.

EXISTING CONDITION



KEY PLAN

Planned Public Housing Development
(about +114 to +175mPD)

PROPOSED DEVELOPMENT

PLANNING LIMITED
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Viewpoint 3 - Footbridge Near Tong Hang Chuen

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

Visual Impact Assessment

Figure 6.3

Date: 31 July 2025

6.5 VP4 – Footbridge near Tong Hang Tung Chuen

Visual Composition

6.5.1 Similar to VP3, this VP is also located at a footbridge across East Rail Line track near the Tong Hang Tung Chuen. It is a mid-range VP capturing an rather open view, with the rail track and footbridge ramp in the foreground, lush greenery, elevated Fanling Bypass under construction and hillslopes of Wo Hop Shek and Lung Shan taking up the middle-ground, and the high-rise residential cluster in Fanling South (e.g. Dawning View, Wah Sum Estate and Flora Plaza) and open sky-view forming the background. The Proposed Development will be partially concealed by the Fanling Bypass (under construction) and adjoining planned public housing. Only the upper portion of the Proposed Development will be visible from this VP, forming an extension to the planned public housing development. The Proposed Development would blend in with the high-rise urban townscape in the background, with minimal change to the overall visual composition to this VP.

Visual Obstruction

6.5.2 As illustrated in **Figure 6.3**, the Proposed Development will be seen next to the planned public housing development and only a negligible-level of sky-view will be affected. Upon completion, the Proposed Development will form part of the sub-urban fabric for this VP. Not least, visual access towards the lush greenery and hillslopes of Wo Hop Shek and Lung Shan in the middle-ground will remain unobstructed.

Effect on Public Viewers

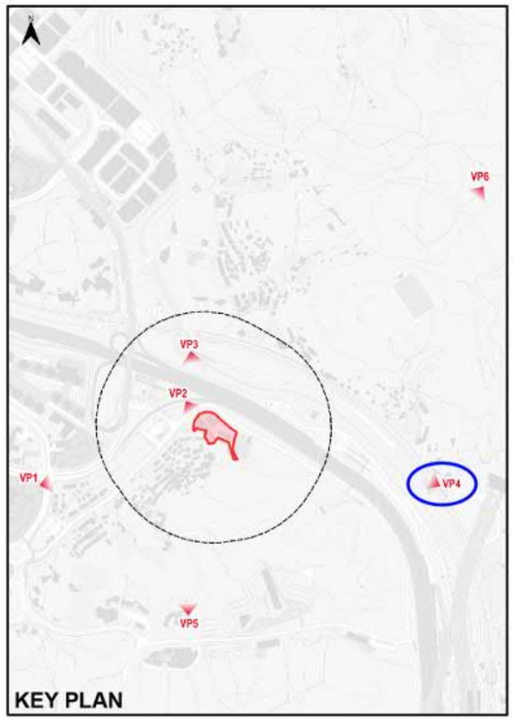
6.5.3 The Key VSRs identified at this VP are mainly pedestrians and cyclists using the footbridge. Given the transient nature, their visual sensitivity will be low to medium. While the Proposed Development is partially visible from this VP, it will only be seen as part of the building group with the adjacent public housing development, which has a higher development intensity. Therefore, the effect on the visual experience brought by the Proposed Development to the VSRs will be slightly adverse.

Effect on Visual Resources

6.5.4 The Proposed Development will not affect the access to visual resources from this VP (i.e. lush greenery and hillslopes of Wo Hop Shek and Lung Shan in the middle-ground), with only a minimal portion of the sky-view will be affected. The visual openness of this VP will be largely preserved. As such, the visual condition, quality and character will not be degraded by the Proposed Development.

EXISTING CONDITION

PROPOSED DEVELOPMENT



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Viewpoint 4 - Footbridge Near Tong Hang Tung Chuen

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

Visual Impact Assessment

Figure 6.4

Date: 31 July 2025

6.6 VP5 – Wo Hop Shek Cemetery

Visual Composition

6.6.1 This VP is taken at the Wo Hop Shek Columbarium Phase III, about 410m to the south-east of the Site. At the elevated level of about +74.5mPD, this VP captures a panoramic view of Fanling South. While the foreground is dominated by the lush greenery in Wo Hop Shek area, the high-rise housing estates in Fanling South (e.g. Dawning View, Wah Sum Estate and Flora Plaza) take up the middle-ground, with a natural blend of Lung Shan and open sky-view forming the natural backdrop. As depicted in the photomontage at **Figure 6.5**, the Proposed Development will be partially shielded off by the existing greenery. Not least, the visible portion of the Proposed Development will be seen as the extension to the adjacent planned public housing, which has a larger building mass. With the implementation of planned public housing, the Proposed Development would not result in significant change to the overall visual composition to this VP, as it would blend in seamlessly and form part of the existing sub-urban townscape of Fanling.

Visual Obstruction

6.6.2 While the Proposed Development will inevitably lead to minimal degree of visual obstruction towards the mountain backdrop, the existing open sky-view and ridgeline in the background will not be intercepted at all. The views towards the existing lush greenery in the foreground will also remain unobstructed. Therefore, the disruption to the visual openness would be very negligible from this VP.

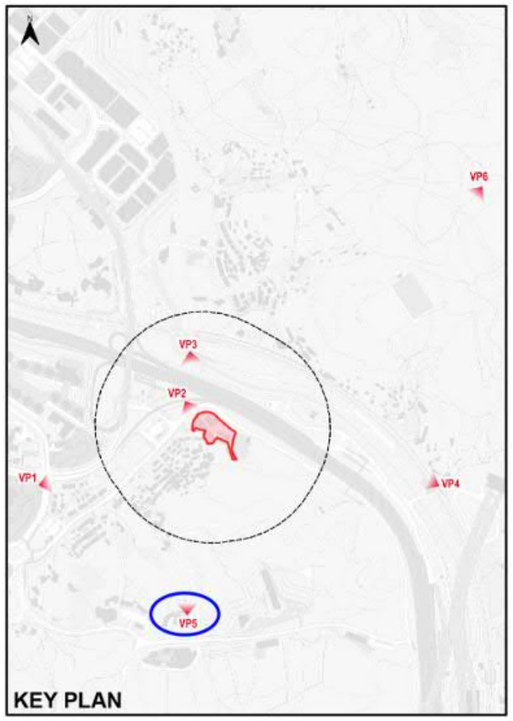
Effect on Public Viewers

6.6.3 As the VSRs identified at this VP would be mainly visitors to the cemetery, their visual sensitivity would be medium in general. Although the Proposed Development will be partially visible from this VP, a typical sub-urban townscape view with lush greenery dominating the foreground, would remain largely unchanged with minimal impact on the visual openness. Nonetheless, the Proposed Development will also blend in harmoniously with the planned high-rise public housing. Therefore, the effect on the visual experience of the VSRs will be slightly adverse.

Effect of Visual Resources

6.6.4 Key visual resources of this VP include lush greenery in the foreground and the natural blend of Lung Shan and open sky-view at the background. Given the Proposed Development will blend in harmoniously with sub-urban townscape with only minimal obstruction to the mountain backdrop without intruding the ridgeline, and that the lush greenery in the foreground will not be affected, the impact of Proposed Development on the visual condition, quality and character would be slight.

EXISTING CONDITION



KEY PLAN

PROPOSED DEVELOPMENT

PLANNING LIMITED 規劃顧問有限公司	Viewpoint 5 - Wo Hop Shek Cemetery	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	**Figure 6.5**
		Visual Impact Assessment	Date: 31 July 2025

6.7 VP6 – Lung Shan Hiking Trail

Visual Composition

6.7.1 This VP is a distant VP taken at the hiking trail of Lung Shan with a viewing distance of about 1,250m to the north-east of the Site. At the elevated level of about +350mPD, this VP captures an panoramic view over Fanling South, with natural landscape in the foreground, and the high-rise residential cluster and vegetated knoll of Wo Hop Shek taking up the middle-ground. The continuous ridgelines of Pak Tai To Yan and Wu Tip Shan and open sky-line form a natural backdrop. As illustrated in the photomontage in **Figure 6.6**, the Proposed Development will be visible from this VP. With a maximum building height of +100mPD, it will blend in well with the adjacent high-rise public housing development and form part of the existing sub-urban townscape in the background.

Visual Obstruction

6.7.2 As illustrated in **Figure 6.6**, while the Proposed Development would be visible from this VP, the visual access to the existing greenery, mountain backdrop and open sky line will be preserved. No obstruction to the continuous ridgelines in the background will be resulted and thus the disruption on visual openness of this VP will be negligible.

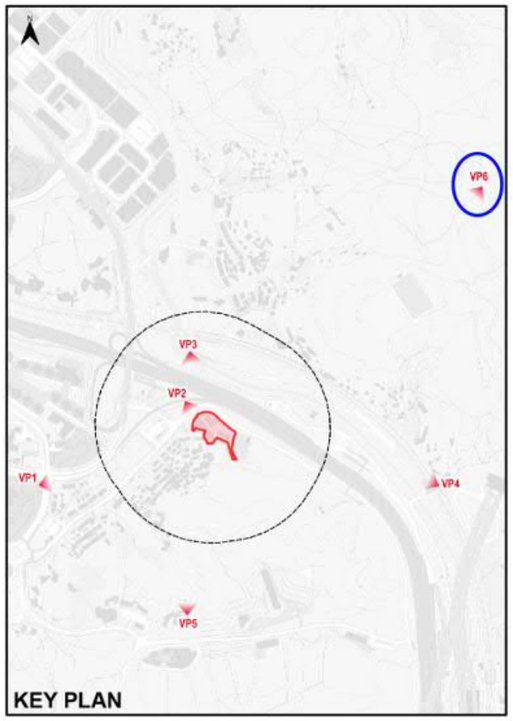
Effect on Public Viewers

6.7.3 The potential VSRs will mainly be hikers along the Lung Shan trail engaging in active and passive recreational activities. The VSRs might stop during their hiking activities to seek for high quality panoramic view of Fanling and thus their visual sensitivity will be high. Considering the Proposed Development will blend in well with the existing sub-urban townscape of Fanling South without obstructing the existing greenery and landscape, the effect on the visual experience of the VSRs will be slight.

Effect on Visual Resources

6.7.4 The Proposed Development will not affect access to the key visual resources at this VP (i.e. the natural landscape in the foreground and the continuous ridgelines and open sky-line at the backdrop). In this regard, there would not be any effect on the condition, quality, sky view and character of the assessment area.

EXISTING CONDITION



KEY PLAN

PROPOSED DEVELOPMENT

PLANNING LIMITED
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Viewpoint 6 - Lung Shan Hiking Trail

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

Visual Impact Assessment

Figure 6.6

Date: 31 July 2025

7 CONCLUSION

7.1.1 Based on the analysis on the appraisal of visual impact on Visual Composition, Visual Obstruction, Effect on Public Views and Effect on Visual Resources, **Table 7.1** below presents the overall visual impact caused by the Proposed Development to the identified VSRs represented in each VP. The visual impact associated with the Proposed Development is considered negligible to slightly adverse (at VPs 4 & 6), slightly adverse (at VPs 1, 3 & 5), and slightly to moderately adverse (at VP 2).

Table 7.1: Summary of Assessment of Visual Impact at the Viewpoints

Viewpoint	Location	Visual Impact due to Proposed Development
VP1	Pedestrian Crossing outside Wo Hing Playground	Slightly adverse
VP2	Bus Stop along Wo Hing Road	Slightly to moderately adverse
VP3	Footbridge near Tong Hang Chuen	Slightly adverse
VP4	Footbridge near Tong Hang Tung Chuen	Negligible to slightly adverse
VP5	Wo Hop Shek Cemetery	Slightly adverse
VP6	Lung Shan Hiking Trail	Negligible to slightly adverse

7.1.2 In light of the scale and existing height profiles of the adjacent planned high-rise public housing (about +118 to +175mPD) and the existing high-rise residential cluster in Fanling South (about +91 to +130mPD), the Proposed Development (about +100mPD) would only bring insignificant change to the visual character and composition of the area. It would mostly be seen in front of / as an extension to the adjoining planning public housing and blend in well with the existing sub-urban townscape of Fanling.

7.1.3 As shown in **Figures 6.4** and **6.6**, the Proposed Development would incur negligible to slightly adverse visual impact at VP4 and VP6, as it would be partially screened off by the planned developments and seamlessly form part of the sub-urban townscape of Fanling in the background. At VP4, major portions of the Proposed Development would be screened off by the planned public housing and Fanling Bypass under construction, without obstructing the visual access to lush greenery and hillslopes of Wo Hop Shek and Lung Shan. For VP6, the Proposed Development would completely blend in with the background without changing the visual composition, and that there will be no visual obstruction to the existing greenery, mountain backdrop and open sky-view.

7.1.4 For VPs 1, 3 and 5, the Proposed Development would result in slightly adverse impact as illustrated in **Figures 6.1, 6.3** and **6.5** respectively. While the Proposed Development would be visually compatible with the adjacent planned high-rise public housing, it would inevitably lead to some level of visual obstruction towards the

mountain backdrop and existing open sky-view, and slightly affect the visual openness from these VPs. That being said, the Proposed Development would mostly be seen in front of / as an extension to the planning public housing and blend in well with the existing sub-urban townscape of Fanling.

7.1.5 As a close-up viewpoint, the visual impact of VP6 is envisaged to be slightly to moderately adverse (**Figure 6.6** refers). With the implementation of the planned public housing, the existing open sky-view will be inevitably changed and the visual openness will be affected, with or without the Propose Development. However, considering the close distance between the Site and this VP, and that the Proposed Development will bring the sub-urban townscape forward, the overall effect on the VSRs of this VP will be slight to moderate. However, the Proposed Development would be visually compatible with the high-rise residential developments in local and wider context.

7.1.6 In view of the above, it is considered that the Proposed Development would be compatible to the surrounding and wider context, and is acceptable in visual terms.

Appendix 3

Landscape Proposal

S.12A APPLICATION FOR AMENDMENT OF PLAN –
PROPOSED EV MOBILITY CITY WITH
ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION
AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND,
FANLING, NEW TERRITORIES

Landscape Proposal

1st Submission

by

Landes Limited

Date: 13 August 2025

CONTENTS

1.0 Introduction
2.0 The Site and Its Context
3.0 The Proposed Development
4.0 Existing Vegetation
5.0 Landscape Proposal
- 5.1 Landscape Design Concept
- 5.2 Soil Depth for Planting
- 5.3 Irrigation
- 5.4 Communal Open Spaces
- 5.5 Site Coverage of Greenery
- 5.6 Future Maintenance

6.0 Planting Proposal

APPENDICES

Appendix A Tree Survey Plan, Tree Assessment Schedule and Photographic Record of Existing Trees
Appendix B Landscape Master Plan and Landscape Details
Appendix C Planting Plans
Appendix D Common Greenery and Open Space Provision
Appendix E Maintenance Schedule of Soft Landscape Works

1.0 INTRODUCTION

1.1 The proposed development with Innovation and Technology uses (The Proposed Development) is located at various lots in D.D. 51 and adjoining Government Land, Fanling, New Territories. This proposal is prepared as part of the rezoning application for the Proposed Redevelopment.

1.2 This report describes the concepts and principles underlying the Landscape Master Plan of the Proposed Development. It describes the proposed composite development and the associated landscape design. A more comprehensive package of proposals will be formulated at the detailed design stage of the Project.

1.3 This landscape proposal presents:

- The existing tree vegetation;
- The Landscape Master Plan;
- Site Coverage of Greenery;
- Communal Open Space Provision and
- Planting Proposal of the Proposed Development.

2.0 THE SITE CONTEXT

2.1 The Site is located at various lots in D.D. 51 and adjoining Government Land, Fanling, New Territories. To the south of the Site is Wo Hop Shek Cemetery while Tong Hang is located to the north of the Site. It is bounded by Tai Wo Service Road West to its east and north, which is the main pedestrian and vehicular access to the Site.

2.2 The Site was previously occupied by a local factory and temporary structures, and the majority of the area is hard-paved with concrete. It is a gently flat land, with a level of approximately +14.60mPD in the north and +14.90mPD in the south. Existing trees are mainly located around the periphery of the site, most of which are semi-mature and exhibit poor tree form and health conditions. Several mature specimens have also been identified. No Old and Valuable Trees (OVTs) or protected species have been identified in accordance with DEVB TCW No. 5/2020 – Registration and Preservation of Old and Valuable Trees, and the Forests and Countryside Ordinance (Cap. 96), respectively.

2.3 The landscape character of the Site and its surroundings is mixed, comprising residential developments such as Dawning View and Flora Plaza; public housing estates like Yan Shing Court and Cheong Shing Court; villages such as Wo Hop Shek San Tsuen and Tong Hang Tung Chuen; and cemetery grounds, including Wo Hop Shek Cemetery.

3.0 THE PROPOSED DEVELOPMENT

3.1 EV (R&D Centre) showroom, workshop, research laboratory, training centre, staff quarters and residential institution are proposed at the Application Site.

3.2 The development comprises a **12**-storey residential institution (talent accommodation) and a **6**-storey staff quarters, both situated on top of an **7**-storey EV Mobility City. A podium garden is proposed at the flat roof of the 7th floor, while ancillary facilities such as a carpark are located in the basement. Drawings of the proposed development can be referred to the building plans submitted with the planning application, and the development schedule is outlined as follows:

Table 1.0 Development Schedule

Site Area	About 5,480 m^2
Building Height	**99.55mPD (84.8m)**
Plot Ratio	5.0 (ND: 3.50 + D1.5)
GFA:	27,400 m^2
No. of Flat (SQ)	48 nos.
No. of Flat (RI)	90 nos.
No. of Population:	414 pax (household size of 3.0 assumed)

3.3 The vehicular road and footpath connect from Wo Hing Road at **+15.10**mPD to the central part of the proposed development at **+14.75**mPD. The formation level of the site follows the local topography in order to minimize the extent of site formation works. As the ground level needs to be recontoured and some vegetation will be affected by the site formation work, a detailed tree assessment will be provided in Paragraph **4.0** below.

4.0 EXISTING VEGETATION

4.1 A tree survey was carried out on **4 June 2025** in accordance with LAO PN No. 6/2023. A total of **36**, including **3** dead trees were recorded within the Application Site Boundary. The tree survey schedule, tree survey plan and photographic record of existing trees are shown in **Appendix A** and are outlined below:

Table 1.0 Species Composition of Existing Trees

No.	Scientific Name	Chinese Name	Qty	Tree No.
1	*Acacia auriculiformis*	耳果相思	1	T17
2	*Bischofia javanica*	秋楓	1	T14
3	*Ficus hispida*	對葉榕	3	T11, T26, T41
4	*Ficus microcarpa*	細葉榕	3	T20, T29, T43
5	*Ficus virens*	大葉榕	9	T27, T30, T35, T36, T37, T38, T39, T42, T46
6	*Leucaena leucocephala*	銀合歡	**9**	T6, T9, T10, T16, T19, T23, T24, T25, T28
7	*Macaranga tanarius var. tomentosa*	血桐	**7**	T12, T13, T15, T18, T21, T34, T40
	Dead tree	死樹	**3**	T22, T44, T45
		Total:	**36**	

4.2 The tree species recorded are mostly common species found in Hong Kong. A total of **7** species were identified, with heights ranging from **3** m to **14** m, crown spreads from **1** m to **15** m, and DBH (Diameter at Breast Height) from **95** mm to **696** mm. No Registered Old and Valuable Trees (OVTs) or protected species were recorded in this tree survey.

4.3 The Site is dominated by *Ficus virens* 大葉榕 (**9** nos.), *Leucaena leucocephala* 銀合歡 (**9** nos.) and *Macaranga tanarius var. tomentosa* 血桐 (**7** nos.) which are common hillside species in Hong Kong. They are probably propagated from the surrounding natural hillsides.

Impact of the Proposed Development

4.4 The impact of the Proposed Development is generally caused by site formation works, construction of new building, the vehicular access/EVA, removal of existing vegetation for construction elements, and related construction activities, including excavation works for E&M reserves and structural footings. The proposed building layout has been overlaid on the Tree Survey Plan in Appendix A to illustrate the impact on the existing trees.

Retention of Trees

4.5 The construction of the new building, which includes a basement, as well as associated traffic provisions, and the demolition of existing structures, will occupy nearly all outdoor areas within the Site. Due to the development activities and limited space remaining, it will not be feasible to retain any of the existing trees in situ.

Felling and Transplantation of Trees

4.6 For trees that will be in conflict with the proposed works shall be proposed to be transplanted if they fulfil all the criteria below:

a. Trees have high amenity value;
b. Trees with good form and health;
c. Suitable access;
d. Tree species able to be transplanted easily;
e. Trees have suitable size and;
f. Trees are young to semi-mature.

4.7 In this project, **36** existing trees (including **3** dead trees) within the Site Boundary are in direct conflict with the proposed works and cannot be retained in situ. None of the disturbed trees meet the criteria for transplantation.

4.8 **11** affected trees, namely **T14** – *Acacia auriculiformis*, **T11, T26, T41** – *Ficus hispida,* and **T12, T13, T15, T18, T21, T34, T40** – *Macaranga tanarius var. tomentosa* are common hillside species in Hong Kong. As they are propagated from the adjacent hillsides, their root systems are very susceptible to environmental changes. This renders them a relatively low survival rate after transplantation. Hence, all of these trees are also proposed to be felled.

4.9 Another **13** disturbed trees, namely **T14** – *Bischofia javanica*, **T20, T29, T43** – *Ficus microcarpa*, **T27, T30, T35, T36, T37, T38, T39, T42, T46** – *Ficus virens*, have exhibited poor tree form or health conditions. Transplanting these trees would require significant

deformation, which would likely result in irreversible damage to their form. It is proposed to fell these trees and compensate by planting high-quality replacements.

4.10 It is important to note that tree nos. **T20** – *Ficus microcarpa*, **T30**, and **T39** – *Ficus virens* are mature specimens with DBH over 500mm. Since these trees are growing on existing structures in conflict with the Proposed Development and they show signs of health deterioration, it is difficult to demonstrate that they are growing in sustainable and safe conditions. Therefore, their removal is also proposed.

4.11 Apart from the above, **3** dead trees, (i.e. **T22, T44** and **T45**) and **9** undesirable species – *Leucaena leucocephala*, (i.e. **T6, T9, T10, T16, T19, T23, T24, T25** and **T28**) are found within the Application Site. Its presence may pose potential danger to the occupants in future. It will be removed, for sake of public safety.

Table 2.0 Summary of Treatment to Existing Trees

Proposed Treatment to Existing Trees	**No. of Trees**
Number of Trees to be Retained	0
Number of Trees to be Felled	36 (including 9 undesirable species – *Leucaena leucocephala*)
Number of Trees to be Transplanted	0
Total Number of Trees in Survey	**36**

5.0 LANDSCAPE PROPOSAL

5.0.1 The aim of the landscape proposals is to respond to site conditions, development layout and nature of the proposed development and to provide a quality landscape scheme. The main factors to be taken into consideration are:

- Responsive to the site context, both in terms of landscape character and visual amenity;
- Creation of a green setting by maximising the opportunity for soft landscape;
- Establishment of pleasant landscape areas which meet the varying needs of users; and
- Minimization of future maintenance requirements.

5.0.2 Landscape drawings showing the proposed landscape treatment for the Proposed Development, and their underlying principles have been attached in **Appendix B** for ease of reference.

- Hong Kong Planning Standards and Guidelines;
- Technical Guidelines on Landscape Treatment for Slopes (GEO Publication No. 1/2011);
- Design Manual: Barrier Free Access 2008 (Building Department);
- DEVB TC W No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features;
- LAO Practice Note No. 6/2023 – Processing of Tree Preservation and Removal Proposals for Building Development in Private Projects – Compliance with Tree Preservation Clause under Lease;
- PlanD's PNPP No. 1/2019 – Processing and Compliance Checking of Landscape Submissions related to Planning Applications; and
- Guidance Notes for Application for Permission under Section 16 of the Town Planning Ordinance (Cap. 131).

5.1 Landscape Design Concept

5.1.1 The landscape concept mentioned below describe considerations, which has been considered as being general to the whole landscape design.

Integration of the Development with the Surrounding Context

5.1.2 The Site is surrounded by existing road corridors, namely Fanling Highway and Pak Wo Road to the east and north of the proposed development. Additionally, low-rise residential developments such as Regala Villa and Woodlands Garden, as well as the local village Wo Hop Shek San Tsuen, are located to the south of the Site. The buildings and associated vehicular access are strategically positioned at the central portion of the site. There are peripheral planting areas along the east, south, and west boundaries designated for new planting. These planting strips, consisting of ornamental trees, shrubs, and groundcover, are intended to create soft-planted edges along the site's periphery. Please refer to the Landscape Master Plans and Landscape Sections in **Appendix B**. This design will help provide a seamless transition between the development and the adjacent natural and built environment. The planting verges will be designed with adequate growing mediums to support the proposed vegetation, which will primarily be evergreen species.

Landscaped Garden at G/F and P/F

5.1.3 Landscape open spaces are proposed at ground floor (G/F) and podium floor (P/F) levels to cater to the recreational needs of both users and visitors. Several landscaped open spaces, including an entrance garden, a gathering courtyard, and an amphitheatre, are planned in vacant locations on the ground floor, creating inviting areas for social interaction and community activities. At the podium level, outdoor spaces comprising a multi-functional lawn, a yoga area, sitting gardens, fitness equipment zones, an outdoor dining area, and a viewing platform are designed to offer a variety of recreational and relaxation options. These gardens will be equipped with outdoor furniture and recreational facilities, and will feature a diverse selection of plants to create attractive green spaces. The refined paving materials and carefully curated plant combinations are intended to enhance the development’s visual appeal by adding richness in color, texture, and visual gradation, ensuring a vibrant and aesthetically pleasing environment for all users.

5.1.4 In addition to the aforementioned landscaped open spaces, a portion of the same private Lot No. 4250RP, located outside the application site and owned by the applicant, lies to the southwest of the site. This area is proposed to serve as an Amenity Area for the enjoyment of both occupants and visitors of the application site. The proposed Amenity Area will primarily feature green open spaces, including seating areas, and greenery, creating a tranquil and natural environment for relaxation, social interaction, and recreational activities. This will help enhance the overall landscape character and provide additional verdant space that integrates with the surrounding environment.

Planting Design

5.1.5 Due to the building configuration, proposed planting is mainly located in planting strips along the site boundary, which will also serve to create a landscape and visual buffer to the new building. This will provide a soft segregation between the Site and the surrounding environment. Species should be selected for their pollution tolerance, drought resistance, and capability to provide a strong visual buffer.

5.1.6 Where practicable and feasible, heavy standard trees, medium shrubs, and foliage plants are proposed. These soft landscape measures will soften the hard lines of the Proposed Development. The use of heavier standard-sized vegetation will provide a more immediate greening effect. Planting Plans are included in **Appendix C**.

5.2 Soil Depth for Planting

5.2.1 The requirement of soil depth is directly related to the planting design and its associated loading requirement upon structure. In general, the soil depth provided, with all drainage layers, water-proofing and protective screening exclusive is listed below:

Table 3.0 Planting Medium (Soil Depth)

Planting Type	**Soil Depth (Minimum)**
Tree/ Palm tree	1200mm
Shrub/ Climber	600mm
Groundcover/ Turf	300mm

5.3 Irrigation

5.3.1 The proposed irrigation system will be by tap water pipe for manual operation. Lockable water points will be provided at 40m centres covering the entire site. The proposed source of water supply is subject to final approval from the Water Services Department.

5.4 Communal Open Spaces

5.4.1 Recreational facilities like entrance garden, gathering courtyard and amphitheatre at G/F as well as multi-functional lawn, yoga place, sitting garden, fitness equipment, outdoor dinning area, viewing platform are provided at P/F level, in order to cater for the recreational need of the occupants and visitors.

5.4.2 It is expected that there will be about **414** occupants at the Proposed Development while the proposed area of the communal open spaces under application shall not be less than **414** m^2. Hence, the provision of the communal open space can meet the requirement set out in HKPSG, i.e. 1 m^2 per person. Please refer to the Communal Open Space Calculation in **Appendix D**.

5.5 Site Coverage of Greenery

5.5.1 The current landscape proposal aims to provide more greenery within the site boundary. The calculation of greening ratio in accordance with PNAP APP No. 152 is shown as follows and the common greenery calculation shall refer to **Common Greenery Provision in Appendix D**:

Table 4.0 Common Greenery Calculation

Required Common Greenery	
Site Area:	5,480.0m^2
Minimum Total Common Greenery:	5,480.0m^2 x 20% = 1,096.0m^2
Minimum Common Greenery at Primary Zone:	5,480.0m^2 x 10% = 548.0m^2
Provided Common Greenery	
Common Greenery Area at Primary Zone (G/F):	798.90m^2 (>548.0m^2)
Common Greenery Area at Other Areas (P/F)	456.60m^2
Total Common Greenery Area:	1,255.50m^2 (>1,096.0 m^2)
Total Green Coverage in Common Area	1,255.50/5,480.0 x 100% = **22.91%**

5.5.2 The proposed greenery at common area is approx. **1,255.50m²** which exceeds the required 20% greenery requirement, i.e. **1,096.0m²**. Besides, all the proposed greenery are easily accessible and visible by the users and visitors and is counted as "common greenery area at Primary Zone", i.e. **798.90m²** which also exceeds the required **548.0m²**.

5.6 Future Maintenance

Hard Landscape Elements

5.6.1 Maintenance for hard landscape elements shall be carried out by the future operator of the Proposed Development with maintenance intention as follows:

I – Routine Maintenance (Daily – Weekly)
a. Rubbish and litter removal
b. Sweeping and cleaning
c. Damage inspection and repair for site furniture and light bulb replacement

II – Annual/ Long Term Maintenance
a. Repainting
b. Resurfacing of worn pavements
c. Replacing worn parts site furniture, lighting fixture and other facilities
d. Replacement of worn landscape furniture.

Soft Landscape Element

5.6.2 The softworks contractor will be responsible for maintenance of the planting during the establishment period allowed for in the construction contract, usually for the first year after the beginning of the scheme's operational phase. This will ensure that the soft landscape measures are in healthy condition prior to the finished scheme being handed back to the future operator.

5.6.3 Ultimately the future operator will employ skilled maintenance staff to take care of all landscape areas within the Site.

5.6.4 The maintenance schedule for soft landscape works has been included in **Appendix E**. It is important to mention that tree risk assessment will be conducted at appropriate time to facilitate proper tree management and maintenance.

6.0 PLANTING PROPOSAL

6.1 In order to provide quality landscape for the Proposed Development, soft landscape works will be the major landscape element of the landscaping proposal and satisfy the following criteria:

- To screen the proposed building and reduce the visual impact to the nearby residents/ visitors;
- To meet the safety criteria required by the operator;
- To minimize future maintenance; and
- To be compatible with the hillside environment.

6.2 The proposed planting species list is shown as follows and details shall refer to the Planting Plans in **Appendix C.**

Table 5.0 Proposed Planting Schedule

Botanical Name	**Chinese Name**	**Size (mm)**	**Spacing (mm)**	**Native/ Exotic**
TREES		**Height x Spread x DBH (mm)**		
Bauhinia blakeana	洋紫荊	3500x1500x75	4000	Native
Pongamia pinnata	水黃皮	3500x1500x75	4000	Native
Sterculia lanceolata	假蘋婆	4000x1500x75	4000	Native
Sapium dicolor	山烏桕	3500x1500x75	4000	Native
SHRUBS		**Height x Spread (mm)**		
Codiaeum variegatum 'Glorisa'	紅葉洒金榕	450x400	300	Exotic
Duranta repens 'Golden'	黃金金露花	300x250	250	Exotic
Ixora chinensis	龍船花	500x450	300	Native
Philodendron selloum	春羽	500x500	500	Exotic
Rhapis humilus	小葉棕竹	300x150	150	Exotic

Rhaphiolepis indica	石斑木	450x300	250	Native
Rhododendron simsii	紅杜鵑	300x250	200	Native
GROUNDCOVERS		**Height x Spread (mm)**		
Dieffenbachia picta	白斑萬年青	400x350	300	Exotic
Lantana montevidensis	小葉馬櫻丹	400x350	300	Native
Ligustrum sinense	山指甲	350x300	250	Native
Nephrolepis auriculata	腎蕨	350x300	250	Native

6.3 In this study area, a total of **36** trees including **3** dead trees within the Application Site Boundary were recorded. **None** of the surveyed trees will be retained in-situ while all **36** trees inside the Site will be felled due to in conflict with the Proposed Development and the associated works.

6.4 In accordance with para. 42 of Guidance Notes of LAO PN No. 6/2023, the compensatory planting for removal of *Leucaena leucocephala* is not required, due to its aggressive and invasive growing habits. **37** heavy standard trees with average DBH approx. **75** mm are proposed to be planted to compensate the loss of **27** existing trees, excluding *Leucaena leucocephala*. All new trees within the Application Site Boundary will all be maintained by the Applicant.

6.5 In view of the above, the tree compensation proposal cannot achieve a ratio not less than 1:1 in terms of quality and quantity but only the follows:

Quantity of loss of trees:	27 nos. (excluding **9** *Leucaena leucocephala*)
Quantity of compensatory trees:	37 nos.
Quantity compensation ratio	approx. 1:1.37

Appendix A

Tree Survey Plan, Tree Assessment Schedule

and

Photographic Record of Existing Trees

LEGEND:

APPLICATION SITE BOUNDARY

T11 EXISTING TREES TO BE FELLED (WITHIN APPLICATION SITE)

+14.75 PROPOSED LEVEL

+14.00 EXSITING LEVEL

T6 T9 T10 T11 T12 T13 T14 T15 T16 T17 T18 T19 T20 T21 T46 T22 T23 T25 T24 T26 T39 T40 T41 T43 T42 T27 T44 T45 T28 T29 T30 T38 T37 T34 T36 T35

+15.10 +14.75 +14.60 +14.75 +14.75 +14.75 +14.90 +14.75 +14.75 +15.60 +14.30 +15.35 +14.75 +14.75

TOS+14.75 TOW+17.25 TOW+17.25 TOP+15.35

WIP Apr 2025 WIP Apr 2025

LIFT LOBBY/ LIFT AREA /STAIRCASE

EV (COMMERCIAL VEHICLE) SHOWROOM

WORKSHOP (WITH SUMP PIT)

UTILITY

ESS CUL HL HW TS

和合石村

Wo Hop Shek Village

京士豪庭

King's Hall Garden

N

0 10 20 30 40M

PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

TREE SURVEY PLAN

PROJECT No. C2516

DRAWING No. TS01

SCALE : 1:500

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-TS01

REV	DESCRIPTION	DATE

DESIGN BY : TEL

DRAWN BY : CAD

CHECKED BY : TEL

APPROVED BY : TEL

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Tree Treatment Schedule at
S.12A Application for Amendment of Plan - Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation
at Various Lots in D.D. 51 and Adjoining Government Land, Fanling, New Territories
Prepared by Ted Lam (R.L.A. No. R-073) on 04/06/2025
To be read in conjunction with Tree Survey Plan, dwg. no. C2516-TS01

Tree	Species					Proposed Treatment	Remark[1]
No.	Scientific Name	Chinese Name	Height (m)	DBH[2] (mm)	Crown Spread (m)	(Retain/Transplant/Fell)	
T17	***Acacia auriculiformis***	耳果相思	5.5	120	4.0	Fell	restricted root, leaning
T14	***Bischofia javanica***	秋楓	10.0	431	10.0	Fell	trunk base conflicted with wall
T22	***Dead tree***	死樹	3.0	172	2.0	Fell	decay trunk, decay branch
T44	***Dead tree***	死樹	3.0	124	1.0	Fell	decay trunk, decay branch
T45	***Dead tree***	死樹	5.0	130	1.5	Fell	decay trunk, decay branch
T11	***Ficus hispida***	對葉榕	4.0	105	5.0	Fell	trunk conflicted with wall and building
T26	***Ficus hispida***	對葉榕	5.0	180	7.0	Fell	trunk base conflicted with building, leaning
T41	***Ficus hispida***	對葉榕	8.0	350	9.0	Fell	trunk base conflicted with building, leaning
T20	***Ficus microcarpa***	細葉榕	12.0	692	14.0	Fell	tree grows on building, leaning, multiple trunk with included bark, dense exposed root on building
T29	***Ficus microcarpa***	細葉榕	5.0	232	6.0	Fell	tree grows on building, multiple trunk with included bark, cross branches
T43	***Ficus microcarpa***	細葉榕	5.5	103	6.0	Fell	tree grows on wall, multiple trunk with included bark
T27	***Ficus virens***	大葉榕	3.5	121	4.5	Fell	tree grows on surface drainage channel
T30	***Ficus virens***	大葉榕	12.0	696	14.0	Fell	tree grows on roof, multiple trunk with included bark, imbalanced crown
T35	***Ficus virens***	大葉榕	8.0	145	4.0	Fell	trunk base conflicted with building, branch conflicted with metal scaffold
T36	***Ficus virens***	大葉榕	8.0	148	4.5	Fell	trunk base conflicted with building, branch conflicted with metal scaffold
T37	***Ficus virens***	大葉榕	10.0	226	8.0	Fell	trunk conflicted with building
T38	***Ficus virens***	大葉榕	10.0	357	8.0	Fell	trunk conflicted with building
T39	***Ficus virens***	大葉榕	14.0	667	15.0	Fell	tree grows on wall, multiple trunk with included bark, dense exposed root on building
T42	***Ficus virens***	大葉榕	11.0	260	8.0	Fell	tree grows on wall, multiple trunk with included bark
T46	***Ficus virens***	大葉榕	3.5	96	4.0	Fell	trunk base conflicted with building, leaning
T6	***Leucaena leucocephala***	銀合歡	7.0	112	4.0	Fell	invasive species, trunk base conflicted with wall, leaning
T9	***Leucaena leucocephala***	銀合歡	11.0	311	10.0	Fell	invasive species, restricted root, leaning
T10	***Leucaena leucocephala***	銀合歡	10.0	293	7.0	Fell	invasive species, restricted root, decay trunk, leaning

Tree	Species				Proposed Treatment	Remark[1]
No.	Scientific Name	Chinese Name	Height (m)	DBH[2] (mm)	Crown Spread (m)	(Retain/Transplant/Fell)	
T16	***Leucaena leucocephala***	銀合歡	7.0	192	7.0	Fell	invasive species, restricted root, uproot, decay in trunk base
T19	***Leucaena leucocephala***	銀合歡	6.0	124	5.0	Fell	invasive species, cross trunks
T23	***Leucaena leucocephala***	銀合歡	6.0	167	6.0	Fell	invasive species, trunk base conflicted with fence, trunk crooked
T24	***Leucaena leucocephala***	銀合歡	5.5	115	6.0	Fell	invasive species, restricted root, leaning
T25	***Leucaena leucocephala***	銀合歡	5.0	111	4.0	Fell	invasive species, trunk base conflicted with building, leaning
T28	***Leucaena leucocephala***	銀合歡	5.5	135	6.5	Fell	invasive species, trunk base conflicted with building
T12	***Macaranga tanarius var. tomentosa***	血桐	7.5	184	8.0	Fell	trunk base conflicted with building, branch conflicted with fence
T13	***Macaranga tanarius var. tomentosa***	血桐	6.0	122	6.0	Fell	trunk base conflicted with wall, exposed dead wood at branch
T15	***Macaranga tanarius var. tomentosa***	血桐	5.5	116	6.0	Fell	restricted root, exposed dead wood at branch
T18	***Macaranga tanarius var. tomentosa***	血桐	4.5	126	6.0	Fell	trunk base conflicted with fence
T21	***Macaranga tanarius var. tomentosa***	血桐	8.0	295	7.0	Fell	trunk strangled by T20 aerial root, leaning
T34	***Macaranga tanarius var. tomentosa***	血桐	6.0	95	3.5	Fell	trunk base conflicted with wall, trunk bending
T40	***Macaranga tanarius var. tomentosa***	血桐	5.0	112	6.0	Fell	trunk base conflicted with building, leaning

Summary Table

Tree to be Retained	0
Tree to be Transplanted	0
Tree to be Felled	36 nos. (including 9 nos. of ***Leucaena leucocephala***)
Total Number of Existing Trees	36 nos.

[1] Please state whether the OVT, potentially registrable OVT, trees of rare or protected species, trees with ecological and historical significance, etc. within and/or adjacent to the site is likely to be affected by the proposed development.

[2] DBH of a tree refers to its diameter at breast height (i.e. measuprooted at 1.3m above ground level)

T6 (F)

T6 (F)

T6 (F)

T6 (F) - Trunk Base Conflicted With Wall

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

Photographic Record of Existing Trees

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PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

T9 (F)

T9 (F)

T9 (F)

T9 (F)

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

Photographic Record of Existing Trees

LanDes

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

T10 (F)

T10 (F)

T10 (F)

T10 (F) - Decay Trunk

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T11 (F)

T11 (F)

T11 (F)

T11 (F) - Trunk Conflicted With Building and Wall

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

Photographic Record of Existing Trees

LanDes

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

T12 (F)

T12 (F)

T12 (F)

T12 (F) - Branch Conflicted With Fence

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T13 (F)

T13 (F)

T13 (F)

T13 (F) - Exposed Dead Wood at Branch

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T14 (F)

T14 (F)

T14 (F)

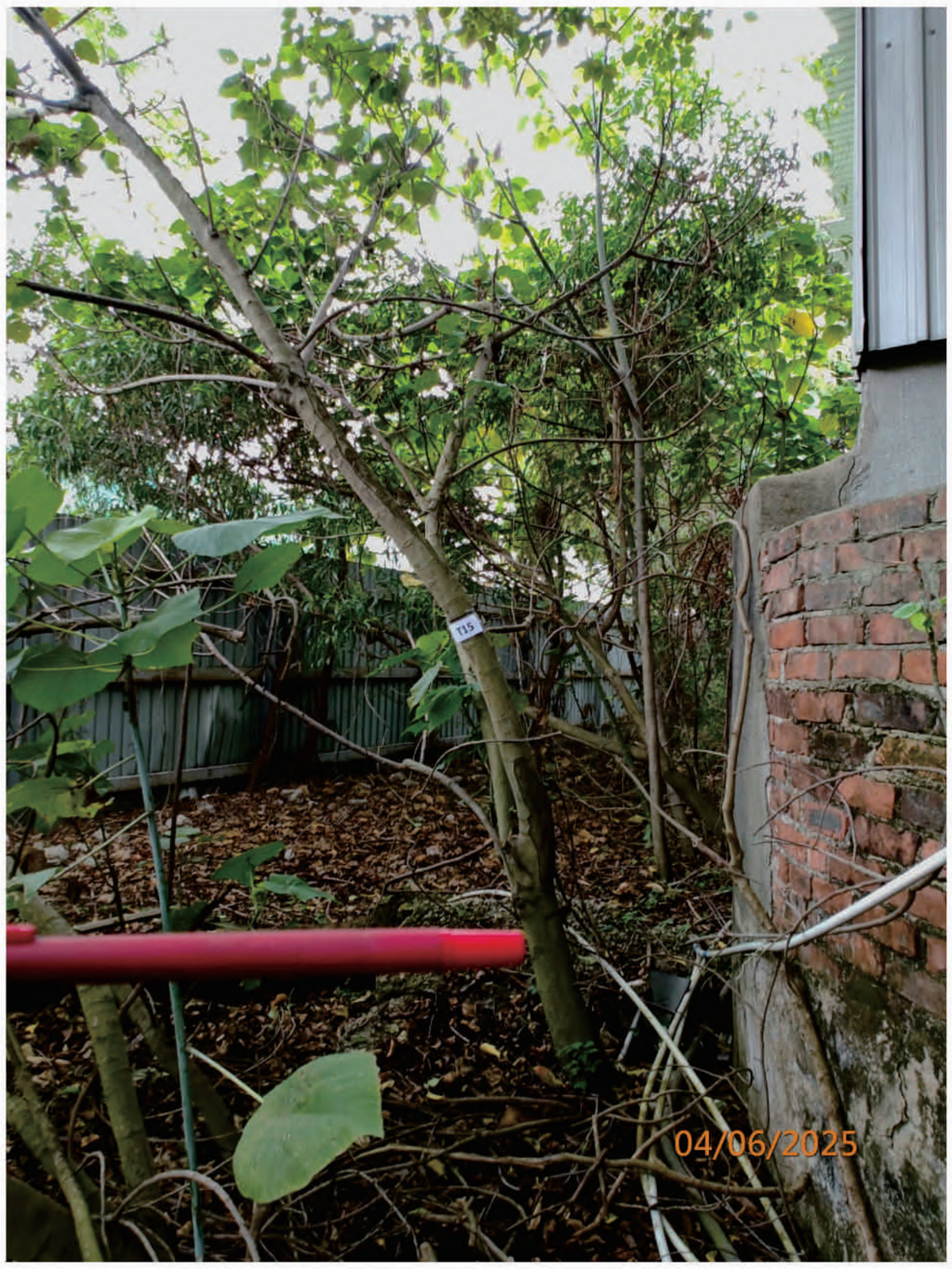
T14 (F) - Trunk Conflicted With Wall

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T15 (F)

T15 (F)



T15 (F)

T15 (F) - Exposed Dead Wood at Branch

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T16 (F)

T16 (F)

T16 (F)

T16 (F) - Uproot

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

Photographic Record of Existing Trees

LanDes

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

T17 (F)

T17 (F)

T17 (F)

T17 (F) - Restricted Root

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T18 (F)

T18 (F)

T18 (F)

T18 (F) - Trunk Base Conflicted With Fence

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T19 (F)

T19 (F)

T19 (F)

T19 (F) - Cross Trunks

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

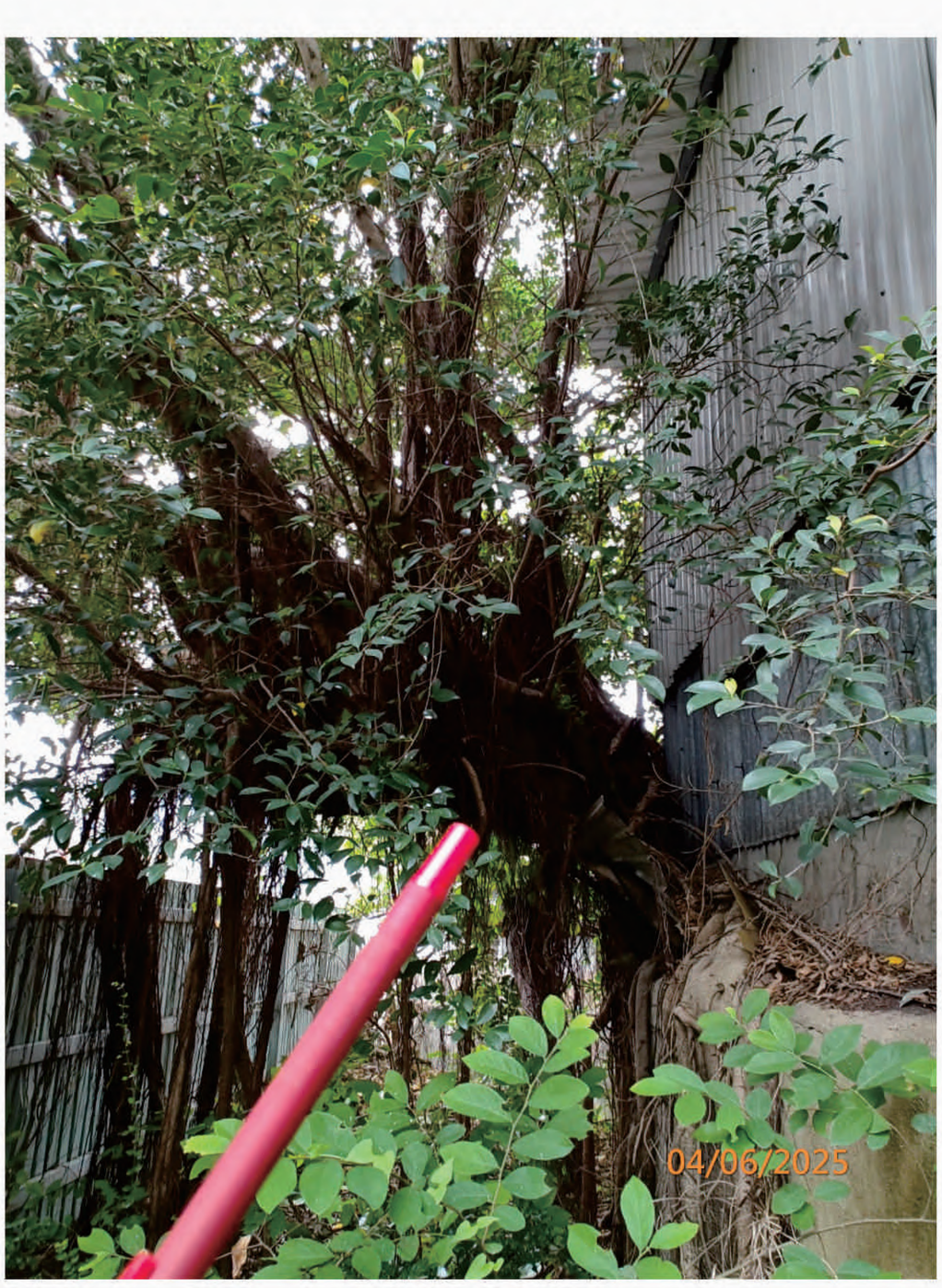
Photographic Record of Existing Trees

LanDes

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

T20 (F)

T20 (F)



T20 (F)

T20 (F) - Tree Grows on Building

LEGEND :

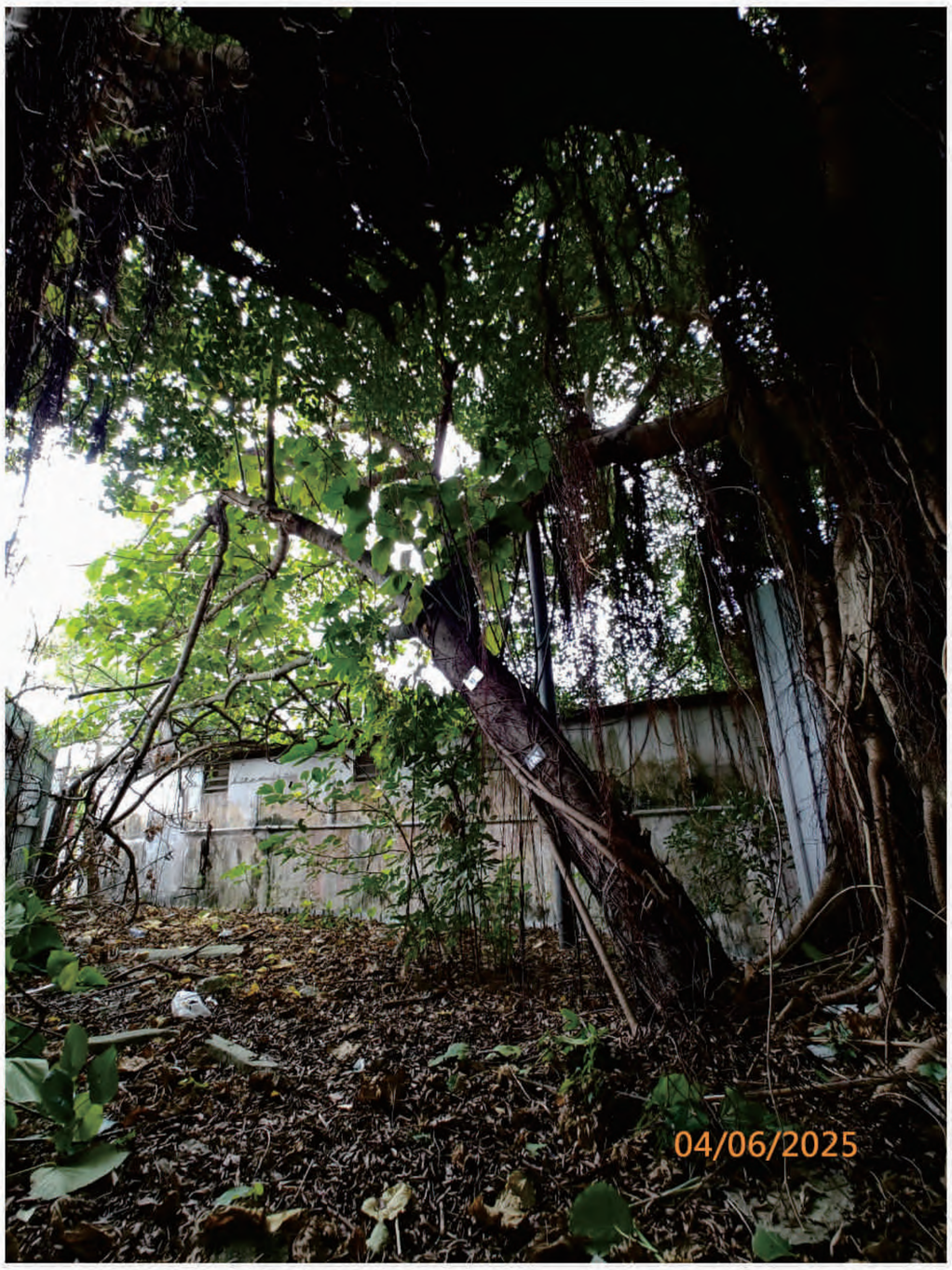
(R) - Retain , (F) - Fell , (T) - Transplant

Photographic Record of Existing Trees

LanDes

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

T21 (F)



T21 (F)

T21 (F)

T21 (F) - Trunk Strangled by T20 Aerial Root

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T22 (F)

T22 (F)

T22 (F)

T22 (F) - Decay Branch

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T23 (F)

T23 (F)

T23 (F)

T23 (F) - Trunk Base Conflicted With Fence

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T24 (F)

T24 (F)

T24 (F)

T24 (F) - Restricted Root

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T25 (F)

T25 (F)

T25 (F)

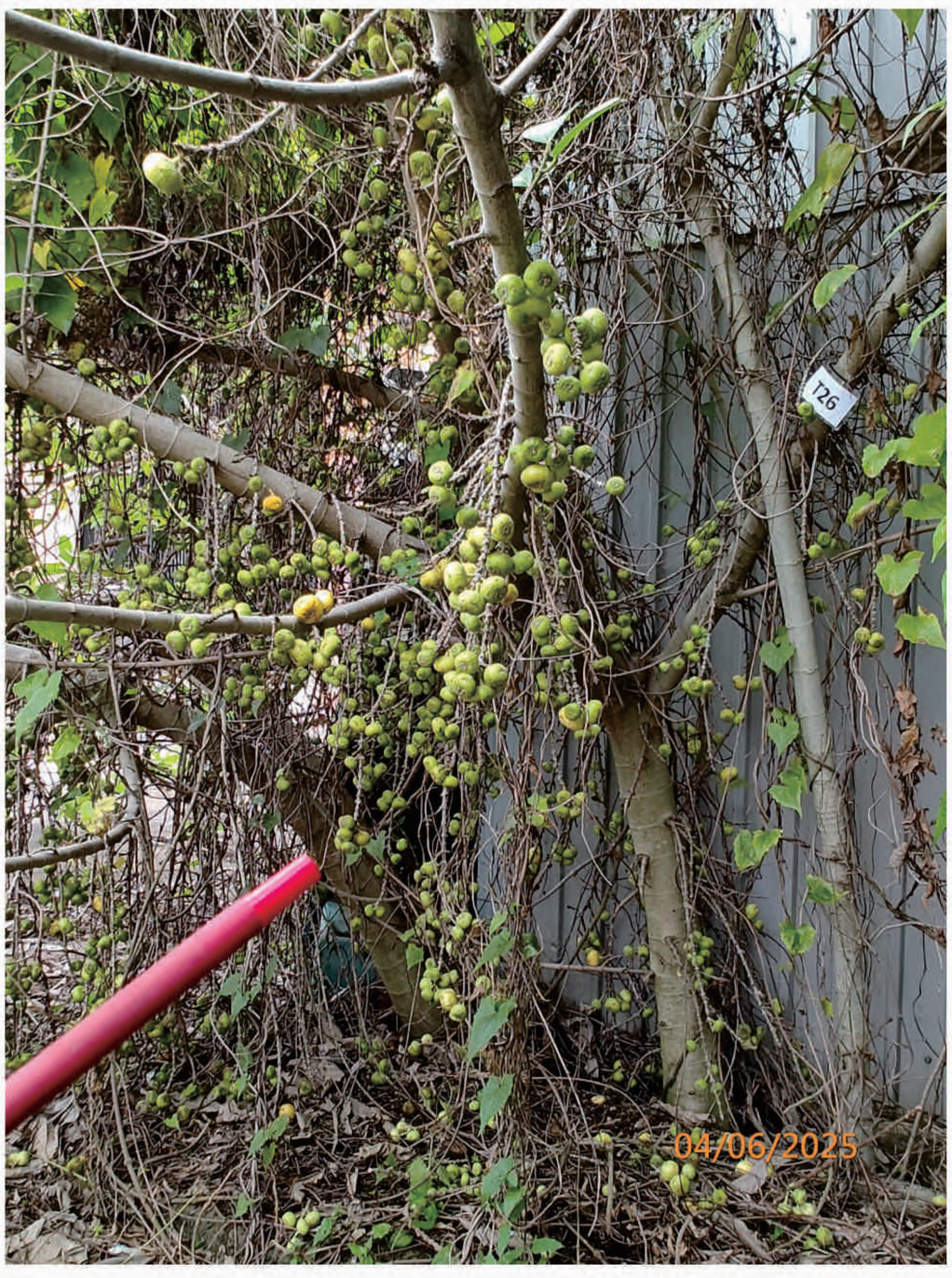
T25 (F) - Trunk Base Conflicted With Building

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T26 (F)

T26 (F)



T26 (F)

T26 (F) - Trunk Base Conflicted With Building

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

Photographic Record of Existing Trees

LanDes

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

T27 (F)

T27 (F)

T27 (F)

T27 (F) - Tree Grows on Surface Drainage Channel

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T28 (F)

T28 (F)

T28 (F)

T28 (F) - Trunk Base Conflicted With Building

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T29 (F)

T29 (F)

T29 (F)

T29 (F) - Tree Grows on Building

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T30 (F)

T30 (F)

T30 (F)

T30 (F) - Tree Grows on Roof

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T34 (F)

T34 (F)

T34 (F)

T34 (F)

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

Photographic Record of Existing Trees

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

LanDes

T35 (F)

T35 (F)

T35 (F)

T35 (F) - Branch Conflicted With Metal Scaffold

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T36 (F)

T36 (F)

T36 (F)

T36 (F) - Branch Conflicted With Metal Scaffold

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

Photographic Record of Existing Trees

LanDes

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

T37 (F)

T37 (F)

T37 (F)

T37 (F) - Trunk Conflicted With Building

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T38 (F)

T38 (F)

T38 (F)

T38 (F) - Trunk Conflicted With Building

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

Photographic Record of Existing Trees

LanDes

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

T39 (F)

T39 (F)

T39 (F)

T39 (F) - Tree Grows on Wall

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T40 (F)

T40 (F)

T40 (F)

T40 (F) - Trunk Base Conflicted With Building

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T41 (F)

T41 (F)

T41 (F)

T41 (F) - Trunk Base Conflicted With Fence

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T42 (F)

T42 (F)

T42 (F)

T42 (F) - Tree Grows on Wall

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T43 (F)

T43 (F)

T43 (F)

T43 (F) - Tree Grows on Wall

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T44 (F)

T44 (F)

T44 (F)

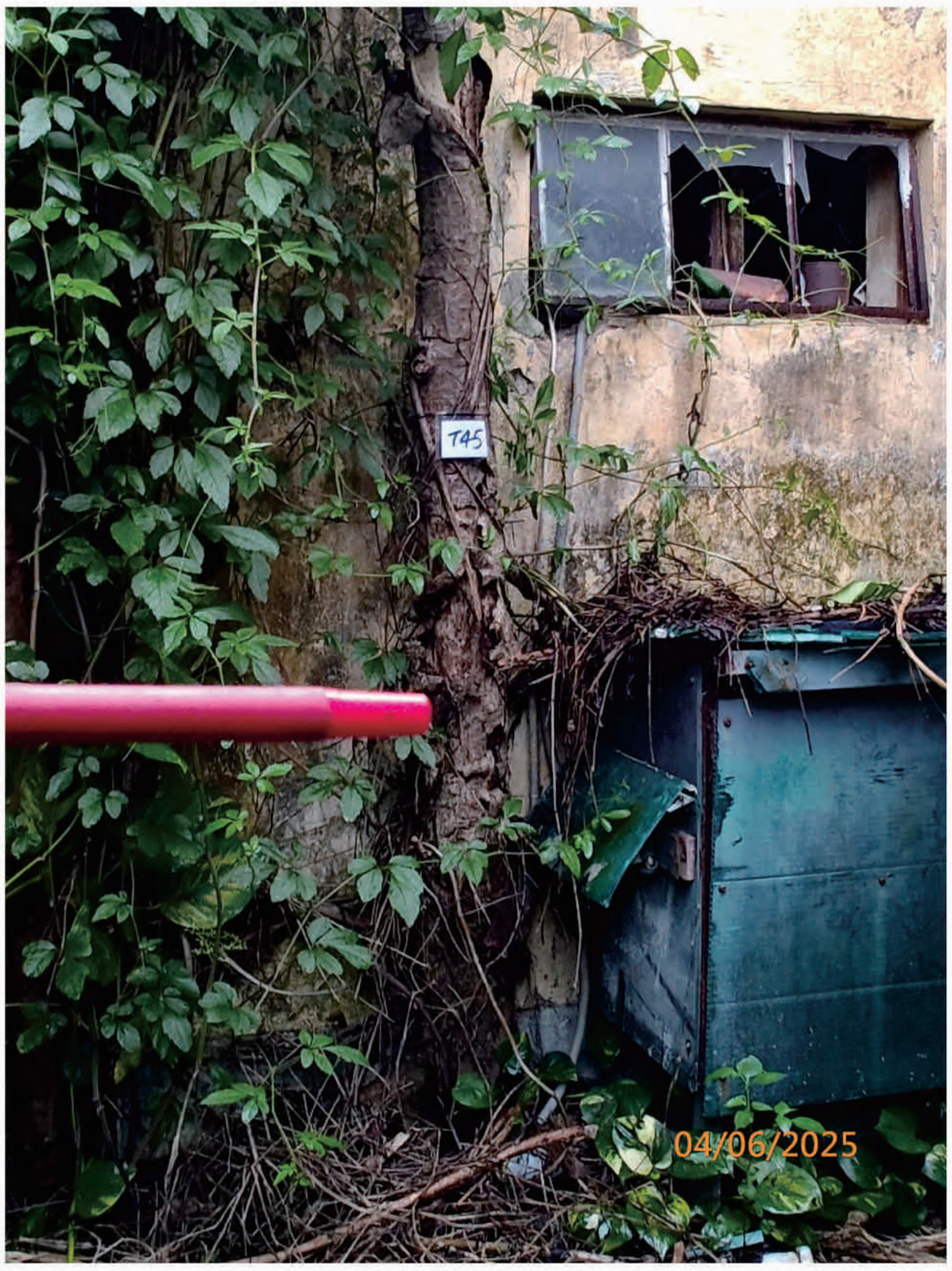
T44 (F) - Decay Branch

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T45 (F)

T45 (F)



T45 (F)

T45 (F) - Decay Branch

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

T46 (F)

T46 (F)

T46 (F)

T46 (F) - Trunk Base Conflicted With Building

LEGEND :

(R) - Retain , (F) - Fell , (T) - Transplant

Appendix B

Landscape Master Plan

And

Landscape Details

Tai Wo Service Road West

WIP Apr 2025

Tai Wo Service Road West

WIP Apr 2025

京士豪庭
King's Hall Garden

和合石村
Wo Hop Shek Village

Building Setback along the Southern Boundary for Provision of Buffer Planting (1.5m to 6.0m wide) to alleviate the Visual Intrusion of the Development and provide Visual Amenity to the Occupants and Neighbors

Provision of Recreational Facilities in Landscape Zones to cater for the Recreational Needs of the Occupants and Visitors

Amenity Area at Lot 4250 RP outside the Application Site for the Enjoyment of the Occupants and Visitors

0 10 20 30 40M

LEGEND:

- APPLICATION SITE BOUNDARY
- BUILDING LINE ABOVE
- EMERGENCY VEHICULAR ACCESS
- PROPOSED HEAVY STANDARD TREES
- PROPOSED SHRUBS AND GROUNDCOVERS
- +14.75 PROPOSED LEVEL
- PROPOSED PAVING
- ARTIFICIAL LAWN
- VEHICULAR ENTRANCE
- SEAT BENCH

KEY:

1. Entrance Garden
2. Trellis
3. Gathering Courtyard
4. Amphitheatre
5. Amenity Area at Lot 4250 RP outside Application Site (For Reference Only)
6. Multi-functional Lawn
7. Yoga Place
8. Sitting Garden
9. Movable Sand Bags
10. Fitness Equipment
11. Outdoor Dining Area
12. Viewing Platform

PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

LANDSCAPE MASTER PLAN (OVERALL VIEW)

PROJECT No. C2516

DRAWING No. LMP01

SCALE : 1:500

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-LMP01

REV	DESCRIPTION	DATE

DESIGN BY : TEL

DRAWN BY : CAD

CHECKED BY : TEL

APPROVED BY : TEL

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LEGEND:

- APPLICATION SITE BOUNDARY
- BUILDING LINE ABOVE
- EMERGENCY VEHICULAR ACCESS
- PROPOSED HEAVY STANDARD TREES
- PROPOSED SHRUBS AND GROUNDCOVERS
- +14.75 PROPOSED LEVEL
- PROPOSED PAVING
- VEHICULAR ENTRANCE
- SEAT BENCH

KEY:

1. **Entrance Garden**
2. **Trellis**
3. **Gathering Courtyard**
4. **Amphitheatre**
5. **Amenity Area at Lot 4250 RP outside Application Site (For Reference Only)**

PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

LANDSCAPE MASTER PLAN (G/F)

PROJECT No. C2516

DRAWING No. LMP02

SCALE : 1:500

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-LMP02

REV	DESCRIPTION	DATE

DESIGN BY : TEL

DRAWN BY : CAD

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APPROVED BY : TEL

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傳真: 2868 2203

0 10 20 30 40M

LEGEND:

- APPLICATION SITE BOUNDARY
- PROPOSED HEAVY STANDARD TREES
- PROPOSED SHRUBS AND GROUNDCOVERS
- +14.75 PROPOSED LEVEL
- PROPOSED PAVING
- ARTIFICIAL LAWN

N

KEY:

1. **Multi-functional Lawn**
2. **Yoga Place**
3. **Sitting Garden**
4. **Movable Sand Bags**
5. **Fitness Equipment**
6. **Outdoor Dining Area**
7. **Viewing Platform**

PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

LANDSCAPE MASTER PLAN (P/F)

PROJECT No. C2516

DRAWING No. LMP03

SCALE : 1:500

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-LMP03

REV	DESCRIPTION	DATE

DESIGN BY : TEL

DRAWN BY : CAD

CHECKED BY : TEL

APPROVED BY : TEL

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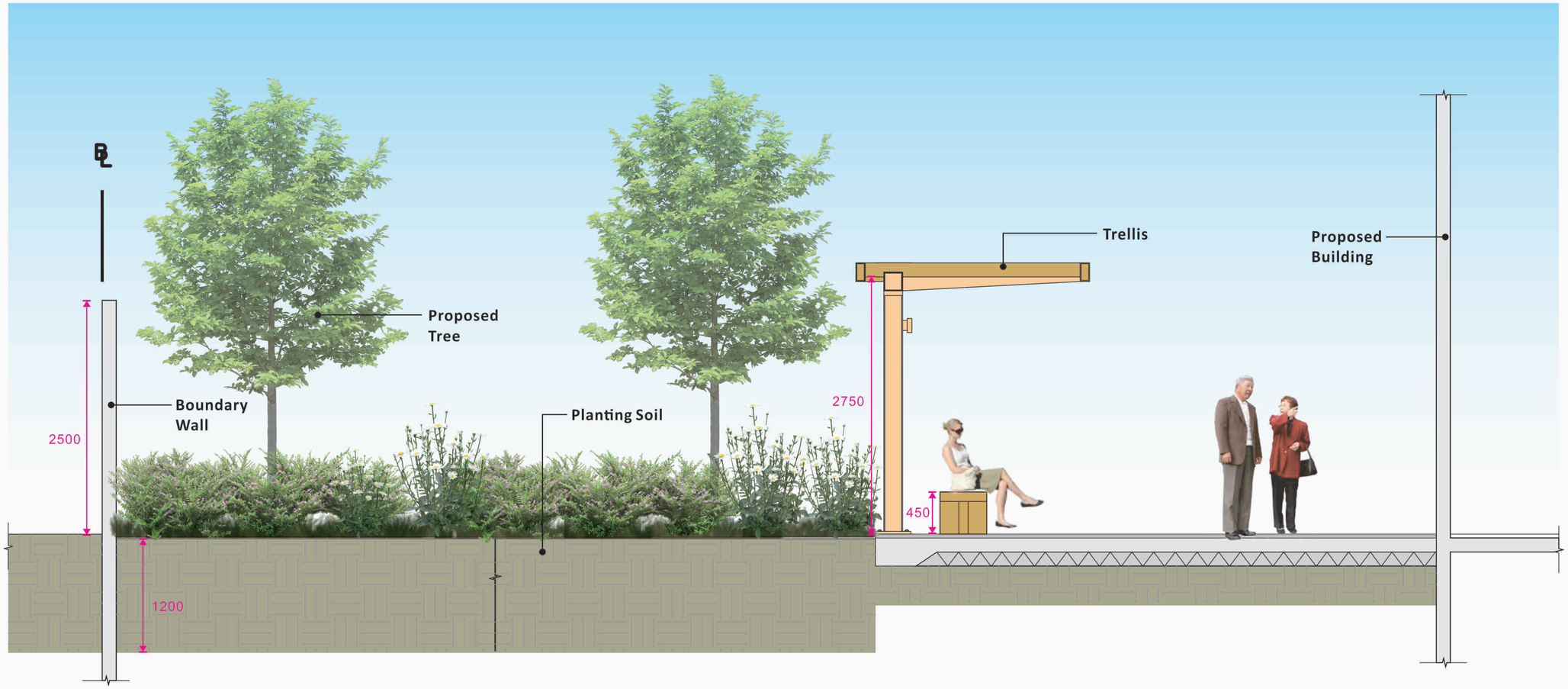
KEY PLAN



PROJECT :

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DRAWING TITLE :

LANDSCAPE SECTION

PROJECT No. C2516

DRAWING No. LD101

SCALE : 1:50

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-LD101

REV	DESCRIPTION	DATE

DESIGN BY : TEL

DRAWN BY : CAD

CHECKED BY : TEL

APPROVED BY : TEL

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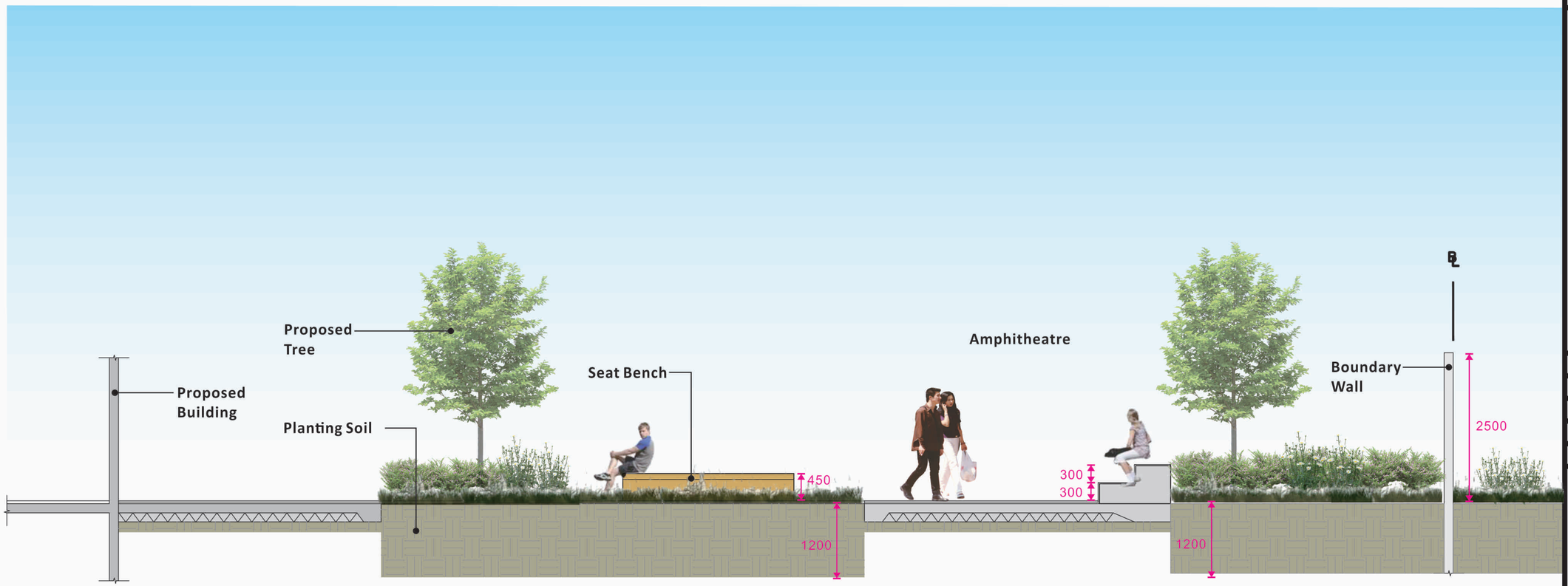
KEY PLAN



PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

LANDSCAPE SECTION

PROJECT No. C2516

DRAWING No. LD102

SCALE : 1:75

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-LD102

REV	DESCRIPTION	DATE

DESIGN BY : TEL

DRAWN BY : CAD

CHECKED BY : TEL

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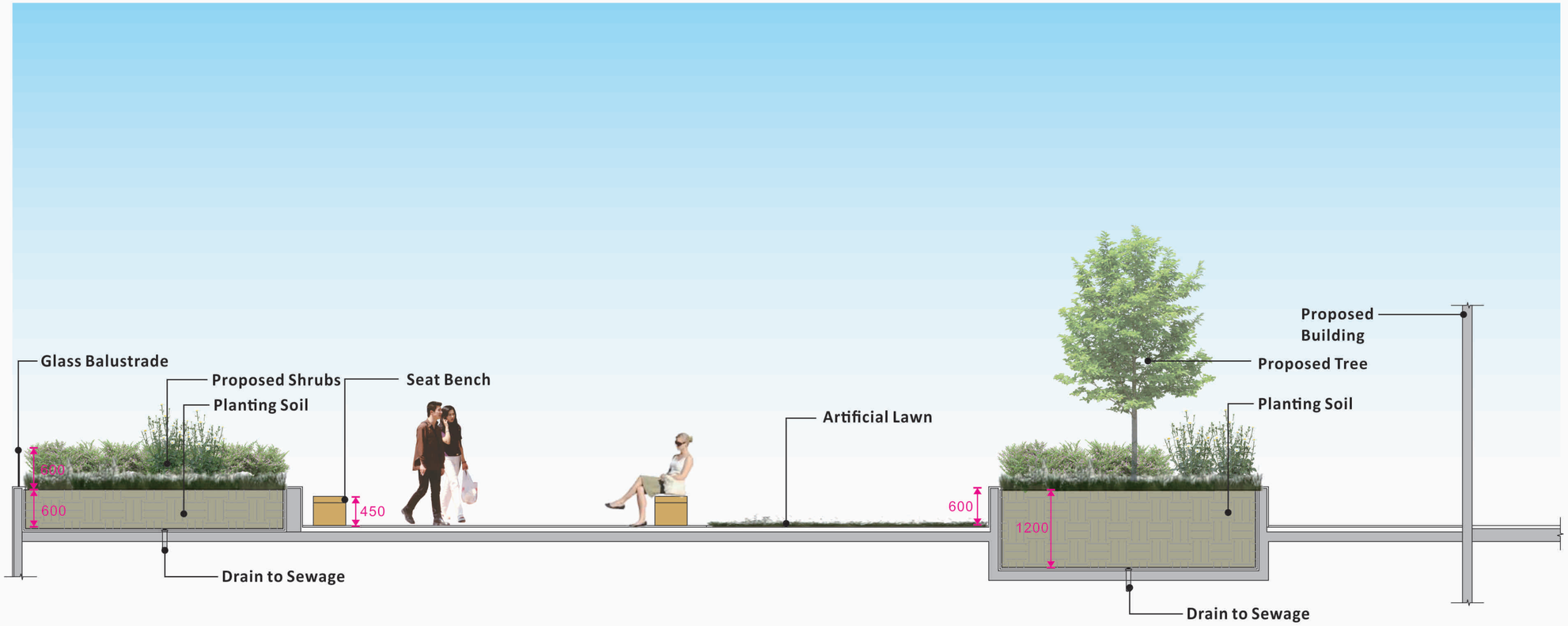
KEY PLAN



PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

LANDSCAPE SECTION

PROJECT No. C2516

DRAWING No. LD103

SCALE : 1:75

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-LD103

REV	DESCRIPTION	DATE

DESIGN BY : TEL

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Appendix C

Planting Plans

Quantity	Code	Chinese Name	Botanical Name	Native/Exotic	Height (mm)	Spread (mm)	DBH (mm)	Spacing (mm)	Remark
STANDARD TREES									
8	BB	洋紫荊	*Bauhinia blakeana*	Native	3500	1500	75	4000	Abundance of Foliage, Well-Formed, Full Spread Formed
8	PP	水黃皮	*Pongamia pinnata*	Native	3500	1500	75	4000	Abundance of Foliage, Well-Formed, Full Spread Formed
14	SL	假蘋婆	*Sterculia lanceolata*	Native	4000	1500	75	4000	Abundance of Foliage, Well-Formed, Full Spread Formed
7	SD	山烏桕	*Sapium dicolor*	Native	3500	1500	75	4000	Abundance of Foliage, Well-Formed, Full Spread Formed
SHRUBS									
-	Cov	紅葉洒金榕	*Codiaeum variegatum 'Glorisa'*	Exotic	450	400	-	300	-
-	Drg	黃金金露花	*Duranta repens 'Golden'*	Exotic	300	250	-	250	-
-	Ich	龍船花	*Ixora chinensis*	Native	500	450	-	300	-
-	Pse	春羽	*Philodendron selloum*	Exotic	500	500	-	500	-
-	Rh	小葉棕竹	*Rhapis humilus*	Exotic	300	150	-	150	-
-	Rhi	石斑木	*Rhaphiolepis indica*	Native	450	300	-	250	-
-	Rhs	紅杜鵑	*Rhododendron simsii*	Native	300	250	-	200	-
GROUNDCOVERS									
-	Dip	白斑萬年青	*Dieffenbachia picta*	Exotic	400	350	-	300	-
-	Lam	小葉馬櫻丹	*Lantana montevidensis*	Native	400	350	-	300	-
-	Lis	山指甲	*Ligustrum sinense*	Native	350	300	-	250	-
-	Nau	腎蕨	*Nephrolepis auriculata*	Native	350	300	-	250	-

PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

PLANTING SCHEDULE

PROJECT No. C2516

DRAWING No. PS01

SCALE : N.T.S.

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-PS01

REV	DESCRIPTION	DATE

DESIGN BY : TEL

DRAWN BY : CAD

CHECKED BY : TEL

APPROVED BY : TEL

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LEGEND:

APPLICATION SITE BOUNDARY

PROPOSED HEAVY STANDARD TREES

PROPOSED SHRUBS AND GROUNDCOVERS

+14.75 PROPOSED LEVEL

+14.75 +55.75 +14.75 +55.75 +55.75 +14.75 +14.75 +14.75

3 SL · 5 SL · 2 SL · 6 BB · 2 SD · 2 SL · 4 PP · 2 SL · 5 SD · 2 BB · 4 PP

WIP Apr 2025 · WIP Apr 2025 · ESS · CUL · TS · HL · HW · R

和合石村
Wo Hop Shek Village

京士豪庭
King's Hall Garden

大窩口

3 · 3A · 4 · 4A · 4C · 7A · 7B · 8 · 8A · 8B · 8D · 8E · 9 · 10 · 200 · 201 · 202

15.1 · 14.3 · 15.4 · 15.6 · 17.0

N

0 10 20 30 40M

PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

PLANTING PLAN

PROJECT No. C2516

DRAWING No. PT01

SCALE : 1:500

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-PT01

REV	DESCRIPTION	DATE

DESIGN BY : TEL

DRAWN BY : CAD

CHECKED BY : TEL

APPROVED BY : TEL

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Appendix D

Common Greenery and Open Space Provision

LEGEND:

APPLICATION SITE BOUNDARY

UNCOVERED GREENERY AT PRIMARY ZONE

UNCOVERED GREENERY AT OTHER AREA

+14.75 PROPOSED LEVEL

41.8 SQ.M.

75.0 SQ.M.

14.7 SQ.M.

139.6 SQ.M.

14.9 SQ.M.

405.4 SQ.M.

7.4 SQ.M.

238.2 SQ.M.

34.8 SQ.M.

226.0 SQ.M.

57.7 SQ.M.

RESIDENTIAL INSTITUTION (TALENT ACCOMMODATION)

LIFT LOBBY/ LIFT AREA STAIRCASE

STAFF QUARTERS

WIP Apr 2025

和合石村

o Hop Shek Village

Required Greenery	Area	Unit
Site Area:	5,480.00	m^2
Required Area at Primary Zone:	548.00	m^2
Required Total Greenery:	1,096.00	m^2
Allowable Greenery Features:	328.80	m^2
Provided Greenery at Primary Zone	**Area**	**Unit**
Uncovered Planitng Area at G/F	798.90	m^2
Greenery at Primary Zone	**798.90**	m^2
	(>548.00)	m^2
Greenery Ratio at Primary Zone	**14.58%**	
Provided Greenery at Other Areas	**Area**	**Unit**
Uncovered Planitng Area at P/F	456.60	m^2
Greenery Ratio at Other Areas	**8.33%**	
Total Greenery	**1,255.50**	m^2
	(>1,096.00)	m^2
Greenery Ratio	**22.91%**	

0 10 20 30 40M

PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

GREENERY PROVISION

PROJECT No. C2516

DRAWING No. GC01

SCALE : 1:500

DATE OF ISSUE : JUN 2025

CAD FILENAME : C2516-GC01

REV	DESCRIPTION	DATE

DESIGN BY : TEL

DRAWN BY : CAD

CHECKED BY : TEL

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4. READ THIS DWG. IN CONNECTION WITH GEN. ARCH. PLANS, STRUCT. PLANS, AND OTHER RELATED DWGS.

LanDes

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LEGEND:

APPLICATION SITE BOUNDARY

COMMUNAL OPEN SPACE

+14.75 PROPOSED LEVEL

Target Population: = 414 persons

Required Open Space
in accordance with HKPSG: 414 sq.m.
(1 sq.m. per person)

Provided Open Space: 419.6 sq.m.
(>414 sq.m.)

89.4 SQ.M.

330.2 SQ.M.

RESIDENTIAL INSTITUTION (TALENT ACCOMMODATION)

LIFT LOBBY/ LIFT AREA /STAIRCASE

STAFF QUARTERS

+14.75

+55.75

WIP Apr 2025

京士豪庭
King's Hall Garden

和合石村
Wo Hop Shek Village

大嶺下

0 10 20 30 40M

PROJECT :

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING, NEW TERRITORIES

DRAWING TITLE :

OPEN SPACE PROVISION

PROJECT No. C2516

DRAWING No. OS01

SCALE : 1:500

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Appendix E

Maintenance Schedule

Of

Soft Landscape Works

OPERATIONS	SPRING			SUMMER			AUTUMN			WINTER			REMARKS
	March	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	
DISEASE CONTROL INSPECTION	O	O	O	O	O	O	O	O	O	O	O	O	Treatment immediately after detection
FERTILIZATION Applications	O						O						
GENERAL PLANT INSPECTION	O	O	O	O	O	O	O	O	O	O	O	O	Treatment immediately after detection
IRRIGATION Watering operation	D	D	D	D	D	D	D	D	D	D	D	D	Early morning / late afternoon, as appropriate
PROTECTION Inspection of fence, tree grates, guards, stakes & ties	O			O			O			O			Inspection also after heavy storms and adverse weather. Treatments immediately after detection
FIRMING UP of plants & supports	O			O			O			O			Inspection also after heavy storms and adverse weather. Firm-up operations immediately after detection
WEEDING Weeding operation & litter collection	O	O	O	O	O	O	O	O	O	O	O	O	Additional litter inspection & collection after heavy use
THINNING INSPECTION	O						O						Thinning operations in appropriate pruning season
MULCH Topping up	O						O						And following run off caused by rain / wind storm
PRUNING	O						O						As appropriate
FORKING OVER	O						O						As appropriate
TREE RISK ASSESSMENT	O												As appropriate

KEY:
D = once daily W = once weekly 2W = twice weekly
Bi-W = Bi-weekly O = once R = repeat if necessary

Appendix 4

Traffic Impact Assessment

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT

Traffic Impact Assessment
Final Report

15th August, 2025

Prepared by: CKM Asia Limited

Prepared for: Sime Darby Motor Services Limited
c/o KTA Planning Limited

Proposed EV Mobility City
with Ancillary Staff Quarters and Talent Accommodation
at Various Lots in D.D. 51 and Adjoining Government Land
Wo Hing Road / Tai Wo Service Road West,
Fanling, NT

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Proposed EV Mobility City
with Ancillary Staff Quarters and Talent Accommodation
at Various Lots in D.D. 51 and Adjoining Government Land
Wo Hing Road / Tai Wo Service Road West,
Fanling, NT

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Proposed EV Mobility City
with Ancillary Staff Quarters and Talent Accommodation
at Various Lots in D.D. 51 and Adjoining Government Land
Wo Hing Road / Tai Wo Service Road West,
Fanling, NT

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1.0 INTRODUCTION

Background

1.1 The Subject Site is located near Wo Hop Shek Village to the south of Wo Hing Road / Tai Wo Service Road West in Fanling, and its location is shown in **Figure 1.1**.

1.2 The Applicant, i.e. Sime Darby Motor Services Limited ("SDMS"), is a well-established motor vehicle dealer and distributor in Hong Kong, and has over 50 years of history in retail, distribution, assembly, servicing, and car rental businesses.

1.3 SDMS intends to develop the Subject Site, which is currently occupied by warehouses, into a Research and Development ("R&D") centre focusing on electric vehicle ("EV") technology, namely the "EV Mobility City" (hereinafter "Proposed EV Mobility City").

1.4 According to the Approved Fanling / Sheung Shui Outline Zoning Plan No. S/FSS/28 ("Approved OZP"), the Subject Site is zoned "Government, Institution or Community." To facilitate future development of the Subject Site, s12A Rezoning Application is being submitted.

1.5 Against this background, CKM Asia Limited, a traffic and transportation planning consultancy firm, was commissioned to conduct a Traffic Impact Assessment ("TIA") for the Proposed EV Mobility City in support of the s12A Rezoning Application.

Structure of Report

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

Chapter 2 - Describes the existing situation;
Chapter 3 - Provides details on the Proposed EV Mobility City;
Chapter 4 - Describes the traffic impact analysis; and
Chapter 5 - Gives the overall conclusion.

2.0 EXISTING SITUATION

The Subject Site

2.1 The Subject Site is located to the south of Wo Hing Road / Tai Wo Service Road West near Wo Hop Shek Village in Fanling. It has a site area of approximately 5,480m^2, and is now being occupied by warehouses. The existing vehicular access to the Subject Site is from Wo Hing Road.

The Road Network

2.2 Wo Hing Road is a Local Distributor which runs between the roundabout of Wah Ming Road / Lui Ming Road / Ming Yin Road / Wo Hing Road in the west, and continues as Tai Wo Service Road West in the east. It is a single carriageway 2 lane road.

2.3 Tai Wo Service Road West is a Rural Road which runs between Wo Hing Road to the north, and continues south towards Hong Lok Yuen Road. It is a single carriageway 2 lane road.

2.4 Wah Ming Road is a District Distributor which runs between the northern and southern junctions with Pak Ro Road. It is a single carriageway road with 3 to 4 traffic lanes between Pak Wo Road and the roundabout of Wah Ming Road / Lui Ming Road / Ming Yin Road / Wo Hing Road.

2.5 Pak Wo Road is a District Distributor which runs from Sheung Shui in the north, and Fanling in the south. It is generally a dual carriageway 2 lane road. It connects Fanling Highway at the Wo Hop Shek Interchange near the Subject Site providing regional access.

Pedestrian and Cycling Facilities

2.6 Footpaths are provided along the southern side of Tai Wo Service Road West fronting the Subject Site, and along both sides of other nearby roads, such as Wo Hing Road, Pak Wo Road and Wah Ming Road.

2.7 At-grade pedestrian crossings are provided along Wo Hing Road. Signalised pedestrian crossings, and grade separated crossings are provided across Pak Wo Road, Wah Ming Road and Fanling Highway.

2.8 Cycle track is provided along Wo Hing Road fronting the Subject Site connecting with Pak Wo Road and the network within Fanling, Sheung Shui, and to Tai Po.

Existing Traffic Flows

2.9 To quantify the existing traffic flows, manual classified counts were conducted during the AM and PM peak periods, i.e. from 0800 to 1000 hours and 1700 to 1900 hours, at selected junctions and road links found within the Area of Influence ("AOI") on Monday, 26th May 2025, and Tuesday, 27th May 2025. Table 2.1 presents the surveyed junctions and road links.

TABLE 2.1 SURVEYED JUNCTINONS AND ROAD LINKS

Ref.	Survey Locations
	Junctions
J01	Junction of Tai Wo Service West / Kiu Tau Road
J02	Junction of Wo Hing Road / Unnamed Road
J03	Roundabout of Wah Ming Road / Lui Ming Road / Ming Yin Road / Wo Hing Road
J04	Southern Junction of Pak Wo Road / Yat Ming Road / Wah Ming Road
J05	Northern Junction of Pak Wo Road / Yat Ming Road / Wah Ming Road
J06	Wo Hop Shek Interchange
J07	Wo Hing Road / Existing Site Access
	Road Links
L01	Tai Wo Service Road West (Wo Hing Road – Kiu Tau Road)
L02	Wo Hing Road (Pak Wo Road – Tai Wo Service Road West)
L03	Pak Wo Road (Wo Hop Shek Interchange – Wah Ming Road)
L04	Unnamed Road (Pak Wo Road – Wo Hing Road

2.10 **Figure 2.1** shows the Area of Influence ("AOI") and the locations of the surveyed junctions and road links. **Figures 2.2 – 2.7** shows the existing junction layouts.

2.11 The traffic counts were classified by vehicle type to enable traffic flows in passenger car units ("pcu") to be calculated. The AM peak hour is found to be 0730 to 0830 hours, and the PM peak hour is found to be 1730 to 1830 hours respectively. **Figure 2.8** presents the existing AM and PM peak hour traffic flow established in pcu/hour.

Performance of the Surveyed Junctions

2.12 Performance of the surveyed junctions were calculated based on the existing traffic flows, and the analyses were undertaken using the methods outlined in Volume 2 of Transport Planning and Design Manual ("TPDM"), which is published by the Transport Department. Table 2.2 summarises the analysis results, and the detailed calculations are found in **Appendix A**.

TABLE 2.2 EXISTING JUNCTION PERFORMANCE

Ref.	Junctions	Type of Junction	Parameter	AM Peak Hour	PM Peak Hour
J01	Tai Wo Service West / Kiu Tau Road	Priority	RFC	0.033	0.038
J02	Wo Hing Road / Unnamed Road	Priority	RFC	0.373	0.268
J03	Wah Ming Road / Lui Ming Road / Ming Yin Road / Wo Hing Road	Roundabout	RFC	0.306	0.253
J04	Pak Wo Road / Yat Ming Road / Wah Ming Road (Southern Junction)	Signal	RC	53%	77%
J05	Pak Wo Road / Yat Ming Road / Wah Ming Road (Northern Junction)	Signal	RC	63%	119%
J06	Wo Hop Shek Interchange	Signal	RC	32%	50%
J07	Wo Hing Road / Site Access	Priority	RFC	0.000	0.000

Note: RFC - Ratio of Flow to Capacity RC – Reserve Capacity

2.13 The above results indicate the surveyed junctions operate with capacities.

Performance of the Surveyed Road Links

2.14 Performance of the surveyed road links, in terms of Peak Hourly Flows / Design Flow Ratio ("P/Df") is calculated, and the analysis results are summarized in Table 2.3.

TABLE 2.3 EXISTING P/Df OF SURVEYED ROAD LINKS

Ref.	Road Link	Config.	Direction	Design Flow (pcu/hr)	P/Df	
					AM Peak Hour	PM Peak Hour
L01	Tai Wo Service Road West (Wo Hing Road – Kiu Tau Road)	Single-2	Northbound	1,160	0.146	0.145
			Southbound	1,160	0.138	0.136
L02	Wo Hing Road (Pak Wo Road – Tai Wo Service Road West)	Single-2	Northbound	1,000	0.249	0.178
			Southbound	1,400	0.396	0.255
L03	Pak Wo Road (Wo Hop Shek Interchange – Wah Ming Road)	Dual-2	Northbound	3,050	0.372	0.305
			Southbound	3,050	0.275	0.242
L04	Unnamed Road (Pak Wo Road – Wo Hing Road	Single-2	Eastbound	1,000	0.209	0.151
			Westbound	1,000	0.564	0.336

Existing Public Transport Services

2.15 The Subject Site is located close to public transport services, including franchised bus and green mini-bus ("GMB") routes operate along Tai Wo Service Road West, Wo Hing Road, Pak Wo Road and Lui Ming Road. Table 2.4 presents the details.

TABLE 2.4 ROAD–BASED PUBLIC TRANSPORT SERVICES OPERATING IN VICINITY OF THE SUBJECT SITE

Route	Origin - Destination	
KMB 61S	Tuen Mun City Centre ↔ Wo Hop Shek (Kiu Tau Road)	(c)
KMB 70K	Fanling (Wah Ming) ↺ Ching Ho	
KMB 70S	Hung Hom Station ↔ Wo Hop Shek	(c)
KMB 73	Fanling (Wah Ming) ↔ Tai Po Industrial Estate	
	Fanling (Wah Ming) ↔ Tai Po Central	(a)
KMB 73A	Fanling (Wah Ming) ↔ Yu Chui Court	
KMB 73B	Chuen On Road (Nethersole Hospital) ↺ Sheung Shui	
KMB 73S	Fanling Station ↔ Wo Hop Shek (Kiu Tau Road)	(c)
KMB 74S	Ping Tin ↔ Wo Hop Shek	(c)
KMB 76S	Fanling Station ↔ Wo Hop Shek	(c)
KMB 78	Sha Tau Kok → Sheung Shui (Tai Ping)	(a)
KMB 78B	Queen's Hill → Sheung Shui (Choi Yuen)	(a)
	Sheung Shui (Choi Yuen) → Queen's Hill	(a)
KMB 78S	Shueng Shui → Sha Tau Kok	(a)
	Sha Tau Kok → Shueng Shui	(a)
KMB 261X	Fanling (Cheung Wah) ↔ So Kwun Wat	(a)
KMB 264R	Tin Yiu ↔ Tai Po Market Station	(a)
KMB 270A	Sheung Shui ↔ Tsim Sha Tsui East (Mody Road)	
KMB 270B	Sheung Shui ↔ Olympic Station	
	Sheung Shui → Charming Garden	(a)
	Charming Garden → Sheung Shui	(a)
KMB 270C	Fanling (Luen Wo Hui) → Tsim Sha Tsu East (Mody Road)	(a)
	Tsim Sha Tsu East (Mody Road) → Fanling (Luen Wo Hui)	(a)
KMB 270D	Fanling (Luen Wo Hui) → Sham Shui Po	(a)
	Sham Shui Po (Yen Chow Street) → Fanling (Luen Wo Hui)	(a)
KMB 270P	Sheung Shui → Kowloon Station	(a)
KMB 270R	Hong Kong Coliseum → Fanling (Luen Wo Hui)	(c)
KMB 270S	Tsim Sha Tsui East (Mody Road) → Fanling (Luen Wo Hui)	(a)

TABLE 2.4 ROAD–BASED PUBLIC TRANSPORT SERVICES OPERATING IN VICINITY OF THE SUBJECT SITE (CONT'D)

Route	Origin - Destination	
KMB 273	Fanling (Wah Ming) ↺ Fanling Station	
KMB 273A	Sheung Shui (Choi Yuen) ↺ Fanling (Wah Ming)	
KMB 273D	Sheung Shui ↺ Fanling (Wah Ming)	
KMB 273S	Fanling (Fai Ming Road) → Fanling Station	(a)
	Fanling Station → Fanling (Wah Ming)	(a)
KMB 274	Sheung Shui→ Wu Kai Sha Station	(a)
KMB 276C	Tin Shui Wai Station ↔ Fanling (Cheung Wah)	(a)
KMB 277A	Sha Tau Kok ↔ Lam Tin Station	(a)
KMB 277E	Sheung Shui (Tin Ping) ↔ Lam Tin Station	
KMB 277P	Sheung Shui (Tin Ping) → Lam Tin Station	(a)
	Lam Tin Station → Sheung Shui (Tin Ping)	(a)
KMB 278A	Queen's Hill ↔ Tsuen Wan (Nina Tower)	
KMB 278P	Sheung Shui (Tin Ping) → Tsuen Wan (Nina Tower	(a)
KMB 278X	Sheung Shui ↔ Tsuen Wan (Nina Tower)	
KMB 279S	Tsing Yi (Cheung Ching Estate) ↔ Wo Hop Shek	(c)
KMB 279X	Fanling (Luen Wo Hui) ↔ Tsing Yi Station	
KMB 373	Fanling (Luen Wo Hui) → Central (Hong Kong Station)	(a)
	Central (Hong Kong Station) → Fanling (Luen Wo Hui)	(a)
KMB 673A	Sheung Shui → Central (Rumsey Street)	(a)
	Central (Rumsey Street) →Sheung Shui	(a)
KMB 673P	Sheung Shui → Central (Rumsey Street)	(a)
KMB/CTB 678	Sheung Shui → Causeway Bay (Eastern Hospital Road)	(a)
	Causeway Bay (Eastern Hospital Road) → Sheung Shui	(a)
KMB 978	Fanling (Wah Ming) ↔ Exibition Centre Station	
KMB W3	Sheung Shui ↔ Jordan (West Kowloon Station)	
KMB T270	Fanling (Cheung Wah) → Tsim Sha Tsui East (Mody Road)	(a)
	Tsim Sha Tsui East (Mody Road) → Fanling (Cheung Wah)	(a)
KMB T277	Sheung Shui → Lam Tin Station	(a)
	Lam Tin Station → Sheung Shui	(a)
KMB SP7	Kai Tak Sports Park → Sheung Shui	(c)
KMB N73	Shatin Central ↔ Lok Ma Chau	(b)
KMB N273	Sheung Shui (Choi Yuen) ↺ Fanling (Wah Ming)	(b)
KMB N373	Fanling (Luen Wo Hui) ↔ Central (Macau Ferry)	(b)
LWB A43	Fanling (Luen Wo Hui) ↔ Airport (Ground Transportation Centre)	
LWB E43	Fanling (Wah Ming) → Tung Chung Development Pier	(a)
	Tung Chung Development Pier → Fanling (Wah Ming)	(a)
LWB X43	Asiaworld Expo → Fanling (Luen Wo Hui)	(c)
LWB N42A	Fanling (Luen Wo Hui) ↔ Tung Chung Station	(b)
LWB NA43	Fanling (Luen Wo Hui) ↔ HZMB Hong Kong Port	(b)
CTB B7	Sheung Shui Po Wan Road ↔ Heung Yuen Wai Port	
GMB 55K	Sha Tau Kok → Sheung Shui Station	(a)
GMB 501A	Yung Shing Court ↺ Luen Wo Hui	(a)
GMB 501C	Yung Shing Court ↺ Luen Wo Hui	
GMB 501S	Sheung Shui (Luen Wo Hui)↔ Kwun Tong (Yue Man Square)	(b)
GMB 502	Ching Ho Estate ↔ Alice Ho Miu Ling Nethersole Hospital	
GMB 505	Sheung Shui Station↔ Yu Chui Court	
GMB 506	Chi Fuk Circuit ↺ Ma Sik Road	
GMB 616S	Mong Kok ↔ Lok Ma Chau Control Point	(b)
RMB	Mong Kok ↔ Sheung Shui	(b)

Note: KMB – Kowloon Motor Bus CTB – Citybus LWB – Long Win Bus
GMB – Green Minibus RMB – Red Minibus

(a) Regular special services during peak period.
(b) Overnight services.
(c) Special services on specific days only.

Historic Traffic Growth

2.16 Annual averages daily traffic ("AADT") between 2016 and 2023 of roads located near the Subject Site was obtained from the Annual Traffic Census ("ATC") published by Transport Department, and are summarized in Table 2.5.

TABLE 2.5 HISTORIC TRAFFIC INFORMATION FROM THE ATC

Station	5302	5501	5702	6084	6206	Overall
Road	Wo Hing Road	Pak Wo Road	Tai Wo Service Road West	Fanling Highway	Jockey Club Road	
From	Unnamed Road	Yat Ming Road	Kau Lung Hang Flyover near Kiu Tau Road	Wo Hop Shek Intercahnge	Lok Yip Street	
To	Ming Yin Road	Wo Hop Shek Interchange	Wo Hing Road	Kau Lung Hang Lo Wai	Wo Hop Shek Interchange	
Year	Average Annual Daily Traffic ("AADT")					
2016	5,680	16,270	3,930	109,350	41,900	177,130
2017	5,590	16,010	3,870	101,920	38,380	165,770
2018	5,760	16,410	3,960	106,100	41,730	173,960
2019	6,580	17,280	3,940	110,310	37,440	175,550
2020	*6,310*	*19,060*	*3,400*	*105,020*	*36,370*	*170,160*
2021	*6,560*	*19,820*	*3,630*	*110,130*	*37,380*	*177,520*
2022	*6,360*	*19,210*	*3,520*	*100,940*	*36,240*	*166,270*
2023	6,580	19,670	3,600	114,310	34,840	179,000
Average Annual Growth (2016 – 2023) =						+0.2%

Note: * - Estimated by Growth Factor

2.17 Table 2.5 shows that the traffic growth in vicinity is +0.2% per annum. It should be noted that the AADT for years 2020, 2021 and 2022 are disregarded due to the impact of the COVID-19 pandemic, but shown for reference only.

3.0 THE PROPOSED EV MOBILITY CITY

Proposed EV Mobility City

3.1 The Proposed EV Mobility City include EV R&D centre, showrooms, sales offices, after-sales servicing, training and testing units, ancillary offices, training centre, and other EV Related Business. In addition, ancillary staff quarter and residential institution, referred to as "talent housing" for qualified working staff and employees will also be provided.

3.2 Table 3.1 summarises development parameters of the Proposed EV Mobility City.

TABLE 3.1 PARAMETERS OF THE PROPOSED EV MOBILITY CITY

Use	Development Parameters
Staff Quarter (7/F – 12/F)	Gross Floor Area = 1,920m^2 Number of Units = 48 nos. Average Unit Size = About 40m^2
Residential Institution (7/F – 18/F)	Gross Floor Area = 6,300m^2 Number of Units = 90 nos. Average Unit Size = About 70m^2 Domestic Plot Ratio = 1.15
Conference / Seminars / Training Course / Administration & Accounting Office ("C/S/TC/AAO") (6/F)	Gross Floor Area = 2,340m^2
EV Related Business (G/F – 5/F)	Gross Floor Area = About 14,040m^2

Proposed Internal Transport Facilities

3.3 The internal transport facilities provided for the proposed uses comply with the recommendation of the Hong Kong Planning Standards and Guidelines ("HKPSG"). As for bicycle parking spaces, reference is made to the Transport Department's Guideline.

3.4 Staff Quarter is subsidized accommodation by the Applicant to support the development of the Proposed EV Mobility City. Hence, internal transport facilities are provided in accordance to the HKPSG recommendation for "*Subsidised Housing*", and the details are summarized in Table 3.2.

3.5 Residential Institution is accommodation for employees and personnel affiliated with the Applicant, and the average flat size is 70m^2 per unit. Hence, the HKPSG recommendation for "*Private Housing* - 70m^2" is adopted. Details are summarized in Table 3.3.

3.6 Conference / Seminars / Training Course / Administration & Accounting Office is assumed to be "*office*" space. Hence, the HKPSG recommendation for "*Office*" is adopted, and the details are summarized in Table 3.4.

3.7 EV Related Business is similar to "*Vehicle Repair Workshops"* defined in the HKPSG, and parking spaces are provided accordingly. For loading / unloading bays, the provision is as per HKPSG recommendation for "*General Industrial Use*". Table 3.5 summarises the details.

TABLE 3.2 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR STAFF QUARTER

Internal Transport Facilities	HKPSG / TD Recommendations	Proposed Provision
Car Parking Space (Residential)	HKPSG Recommendation: Global Parking Standard ("GPS") = 1 space per 4 – 7 flats Demand Adjustment Ratio ("R1") = 0.52 Accessibility Adjustment Ratio ("R2") = 1.0 for Outside a 500m-radius of rail station Parking Requirement = GPS x R1 x R2 [see Note 1] For 48 flats with 3 persons/flat: Minimum: 48 ÷ 7 x 0.52 x 1.0 = 3.6, say 4 nos. Maximum: 48 ÷ 4 x 0.52 x 1.0 = 6.2, say **7 nos.**	7 nos. =HKPSG Maximum, OK
Car Parking Space (Visitor)	HKPSG Recommendation: Up to 5 spaces per block For 1 block: Maximum: 1 x 5 = **5 nos.**	5 nos. =HKPSG Maximum, OK
Motorcycle Parking Space	HKPSG Recommendation: 1 space per 110 – 250 flats [see Note 1] For 48 flats with 3 persons/flat: Minimum: 48 ÷ 250 = 0.2, say 1 no. Maximum: 48 ÷ 110 = 0.4, say **1 no.**	1 no. =HKPSG Maximum, OK
"Shared-use" Light Goods Vehicle and Light Bus Parking Space	HKPSG Recommendation: 1 space per 260 flats [see Note 1] For 48 flats with 3 persons/flat: 48 ÷ 260 = 0.2, say **1 no.**	1 no. =HKPSG, OK
"Shared-use" Medium / Heavy Goods Vehicle and Coach Parking Space / Loading / Unloading Bay	HKPSG Recommendation: 2 spaces around each residential blocks For 1 block: 1 x 2 = **2 nos.**	2 nos. =HKPSG, OK
Bicycle Parking Space	Transport Department Guideline: 1 space per 5 flat for residents, and 1 space per 45 flat for visitors For 48 flats: For Residents: 48 ÷ 5 = 9.6, say 10 nos. For Visitors: 48 ÷ 45 = 1.1, say 2 nos. TOTAL: 10 + 2 = **12 nos**.	12 nos. = TD Guideline, OK

Note 1: "One person / two persons" flats, if any, can be excluded from the calculation of the overall parking provision of private car, motorcycle parking spaces and shared-use spaces for LGV and light bus.

TABLE 3.3 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR RESIDENTIAL INSTITUTION

Internal Transport Facilities	HKPSG / TD Recommendations	Proposed Provision
Car Parking Space (Residential)	HKPSG Recommendation: Global Parking Standard ("GPS") = 1 space per 4 – 7 flats Demand Adjustment Ratio ("R1") = 1.2 for 40 < Flat Size ≤ 70 m^2 GFA Accessibility Adjustment Ratio ("R2") = 1.0 for Outside a 500m-radius of rail station Development Intensity Adjustment Ratio ("R3") = 1.1 for 1.00 < Plot Ratio ≤ 2.00 Parking Requirement = GPS x R1 x R2 x R3 For 90 flats @ 70m^2 GFA and Plot Ratio =1.15: Maximum: 90 ÷ 7 x 1.2 x 1.0 x 1.1 = 17.0, say 17 nos Maximum: 90 ÷ 4 x 1.2 x 1.0 x 1.1 = 29.7, **say 30 nos.**	30 nos. = HKPSG Maximum, OK
Car Parking Space (Visitor)	HKPSG Recommendation: 5 spaces per block with more than 75 units per block For 1 block 1 x 5 = **5 nos.**	5 nos. = HKPSG Maximum, OK
Motorcycle Parking Space	HKPSG Recommendation: 1 space per 100 – 150 flats For 90 flats Minimum: 90 ÷ 150 = 0.6, say 1 no. Maximum: 90 ÷ 100 = 0.9, **say 1 no.**	1 no. = HKPSG Maximum, OK
Goods Vehicle Loading / Unloading Bay	HKPSG Recommendation: Minimum 1 loading / unloading bay for goods vehicles for every 800 flats or part thereof. For 1 block: 1 x 1 = **1 no.**	1 no. = HKPSG, OK
Bicycle Parking Space	Transport Department Guideline: 1 space per 5 flat for residents, and 1 space per 45 flat for visitors For 90 flats: For Residents: 90 ÷ 5 = 18 nos. For Visitors: 90 ÷ 45 = 2 nos. TOTAL: 18 + 2 = **20 nos**.	20 nos. = TD Guideline, OK

TABLE 3.4 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR CONFERENCE / SEMINARS / TRAINING COURSE / ADMINISTRATION & ACCOUNTING OFFICE

Internal Transport Facilities	HKPSG / TD Recommendations	Proposed Provision
Car Parking Space	HKPSG Recommendation: For the first 15,000 m^2 GFA: 1 space per 150 – 200 m^2 For 2,340 m^2 GFA: Minimum: 2,340 ÷ 200 = 11.7, say 12 nos. Maximum: 2,340 ÷ 150 = 15.6, **say 16 nos.**	16 nos. =HKPSG Maximum, OK
Motorcycle Parking Space	HKPSG Recommendation: 5% - 10% of car parking spaces For 31 car parking spaces: Minimum: 16 x 5% = 0.8, say 1 nos. Maximum: 16 x 10% = 1.6, **say 2 nos.**	2 nos. =HKPSG Maximum, OK
Goods Vehicle Loading / Unloading Bay	HKPSG Recommendation: 1 loading / unloading bay for goods vehicles for every 2,000 – 3,000 m^2 GFA For 2,340 m^2 GFA: Minimum: 2,340 ÷ 3,000 = 0.8, say 1 nos. 35% HGV = 1 x 35% = 0.35, say 1 no. 65% LGV = 1 – 1 = 0 no. Maximum: 2,340 ÷ 2,000 = 1.2, say **2 nos.** 35% HGV = 2 x 35% = 0.7, say **1 no.** 65% LGV = 2 – 1 = **1 nos.**	2 nos., including 1 HGV & 1 LGV =HKPSG Maximum, OK
Bicycle Parking Space	Transport Department Guideline: 1 space per 500 – 600m^2 GFA For 2,340 m^2 GFA: Minimum: 2,340 ÷ 600 = 3.9, say 4 nos. Maximum: 2,340 ÷ 500 = 4.7, **say 5 nos.**	5 nos. = TD Guideline Maximum, OK

TABLE 3.5 PROVISION OF INTERNAL TRANSPORT FACILITIES FOR EV RELATED BUSINESS

Internal Transport Facilities	HKPSG / TD Recommendations	Proposed Provision
Parking Space	HKPSG Recommendation: Minimum of 2 spaces for each workshop unit, **or** 0.75 space per workspace, **or** 150m^2 of GFA whichever is higher. (*"Vehicle Repair Workshops," Ch12, HKPSG)* Proposed EV Mobility City with 14,040m^2 GFA Number of workshop unit and workspace are yet to be determined; hence, provision is calculated based on GFA. For G/F with around 1,200m^2 GFA serving large commercial vehicles (HGV and Coach): 1,200 ÷ 150 = 8.0, **say 8 nos.** @ 12.0m (L) x 3.5m (W) x Min. 4.7m (H) (Shared-Use by HGV & Coach) For remaining GFA = 14,040 – 1,200 = 12,840m^2 for light commercial vehicles, and light vehicles: 12,840 ÷ 150 = 85.6, **say 86 nos.** @ 8.0m (L) x 3.5m (W) x Min. 3.8m (H) (Shared-Use by LGV, Light Bus, Taxi and Private Car)	8 nos. for HGV / Coach, and 86 nos. for LGV / Light Bus / Taxi / Private Car = HKPSG, OK
Goods Vehicle Loading / Unloading & Parking	HKPSG Recommendation: 1 goods vehicle bay per 700 - 900 m^2 GFA, 50% of which should be for parking of goods vehicles, and is divided into 65% LGV and 35% HGV *(General Industrial Use (GIU)– Industrial (I), Ch8, HKPSG)* Proposed EV Mobility City with 14,040m^2 GFA Minimum: 14,040 ÷ 900 = 15.6, **say 16 nos.** 35% HGV = 16 x 35% = 5.6, say **6 nos.** 65% LGV = 16 – 6 = 10 **nos.** Maximum: 14,040 ÷ 700 = 20.1, **say 21 nos.** 35% HGV = 21 x 35% = 7.4, say **8 nos.** 65% LGV = 21 – 8 = **13 nos.**	21 nos., with 8 HGV, and 13 LGV = HKPSG maximum, OK
Bicycle Parking Space	Transport Department Guideline: 1 space per 2,500 – 2,700m^2 GFA For 14,040 m^2 GFA: Minimum: 14,040 ÷ 2,700 = 5.2, say 6 nos. Maximum: 14,040 ÷ 2,500 = 5.6 say **6 nos.**	6 nos. = TD Guideline Maximum, OK

Overall Provision of Internal Transport Facilities

3.8 Table 3.6 summarises the overall provision of internal transport facilities, which meets the high-end recommendation of the HKPSG and the Transport Department's Guideline.

TABLE 3.6 OVERALL PROVISION OF INTERNAL TRANSPORT FACILITIES

Internal Transport Facilities	TOTAL	Number of Spaces			
		Staff Quarter	Residential Institution	C/S/TC/AAO	EV Related Business Use
Car Parking Space (Residential) @ 5.0m (L) x 2.5m (W) x Min. 2.4m (H)	**53** (Note 1)	7	30	16	/
Car Parking Space (Visitors) @ 5.0m (L) x 2.5m (W) x Min. 2.4m (H)	**10** (Note 1)	5	5	/	/
Motorcycle Parking Space @ 2.4m (L) x 1.0m (W) x Min. 2.4m (H)	**4**	1	1	2	/
"Shared-use" LGV / Light Bus Parking Space @ 8.0m (L) x3.5m (W) x Min. 3.6m (H)	**87**	1	/	/	86
"Shared-use" M/HGV & Coach Parking Space @ 12.0m (L) x3.5m (W) x Min. 4.7m (H)	**8**	/	/	/	8
"Shared-use" M/HGV & Coach Parking Space / L/UL Bay @ 12.0m (L) x3.5m (W) x Min. 4.7m (H)	**2**	2	/	/	/
LGV L/UL Bay-@ 7.0m (L) x3.5m (W) x Min. 3.6m (H)	**14**	/	/	1	13
HGV L/UL Bay-@ 11.0m (L) x 3.5m (W) x Min. 4.7m (H)	**10**	/	1	1	8
Bicycle Parking Space	**33**	12	10	5	6

Note 1: Out the total of 63 car parking spaces, 2 nos. are accessible type @ 5.0m (L) x 3.5m (W) x Min. 2.4m (H)
C/S/TC/AAO - Conference / Seminars / Training Course / Administration & Accounting Office

Vehicular Access

3.9 The existing vehicular access on Wo Hing Road serving the Subject Site will remain unchanged. **Figure 3.1** shows location of the vehicular access, and visibility assessment meeting the requirement as stipulated in the TPDM.

Internal Transport Layout

3.10 The indicative internal transport layout is presented in **Figures 3.2 – 3.8**.

Traffic Generation

3.11 Traffic generation for various uses within the Proposed EV Mobility City is estimated based on (i) trip rates obtained from the TPDM, and (ii) trip rate derived from traffic survey at similar existing developments. Details are described in below paragraphs.

Staff Quarter, Residential Institution and Conference / Seminars / Training Course / Administration & Accounting Office

3.12 Table 3.7 presents the trips rate for staff quarter, residential institution and conference / seminars / training course / administration & accounting office from the TPDM.

TABLE 3.7 ADOPTED TPDM TRIP RATES

Proposed Use	TPDM Category	Unit	Adopted Trip Rates			
			AM Peak Hour		PM Peak Hour	
			Generation	Attraction	Generation	Attraction
Staff Quarter	Subsidised Housing (40m^2)	pcu/hr/flat	0.0432	0.0326	0.0237	0.0301
Residential Institution	Private Housing (70m^2)	pcu/hr/flat	0.0888	0.0515	0.0356	0.048
C/S/TC/AAO	Office	pcu/hr/100m^2	0.2361	0.3257	0.1928	0.151

Note: C/S/TC/AAO - Conference / Seminars / Training Course / Administration & Accounting Office

3.13 For staff quarter and residential institution, the mean trip rates of TPDM are adopted in view that the residents are employees and does not involve external commuting. Hence, the use of mean trip rates is considered conservative. For conference / seminars / training course / administration & accounting office, to be conservative, the upper limit trip rates of TPDM are adopted.

EV Related Business

3.14 Since the TPDM does not provide trip rates for uses similar to the EV Related Business, or "*Vehicle Repair Workshops*", traffic generation surveys were conducted at selected existing standalone service centres ("SSC") operated by the Applicant, and the results are used to derive the appropriate trip rates. These existing service centres consist of showrooms, office, vehicle service centre etc. which are similar to the proposed EV Related Business. Table 3.8 summarizes the details of these surveyed standalone service centres.

TABLE 3.8 DETAILS OF THE SURVEYED STANDALONE SERVICE CENTRES

Address	Vehicle Type Served	Approximate Gross Floor Area	Operation Hours (Monday – Friday)
374 Castle Peak Road – Tsuen Wan, Tsuen Wan ("TWSSC")	Light Vehicles (Private Cars)	13,663m^2	0800 – 1900
33 & 96 Kam Pok Road, Yuen Long ("YLSSC")	Commercial Vehicles (LGV, HGV, Light Buses and Coaches)	6,032m^2	0845 - 1915

3.15 In view that the TWSSC is located in Tsuen Wan town centre where there is good public transport service, its convenient location is a key attraction to car owners bringing their vehicles in for service, and it TWSSC has similar size to the EV Related Business.

3.16 The YLSSC is located in an area similar to the Subject Site, and is alike the EV Related Business.

3.17 Hence, the 2 surveyed locations are considered suitable reference to derive the trip rates for the EV Related Business. Table 3.9 summarizes the survey results, and the derived trip rates.

TABLE 3.9 RESULTS OF TRAFFIC GENERATION SURVEYS AND DERIVED TRIP RATES

Survey Location	Approximate GFA	Observed Number of Trips (pcu/hr)			
		AM Peak Hour		PM Peak Hour	
		Generation	Attraction	Generation	Attraction
TWSSC	13,663m^2	4	23	26	20
YLSSC	6,032m^2	4	10	13	10
TOTAL	**19,695m^2**	**8**	**33**	**39**	**30**
Derived Trip Rates (pcu/hr/100 m^2)		**0.0406**	**0.1676**	**0.1980**	**0.1523**

Overall Traffic Generation

3.18 Based on the development parameters presented in Table 3.1, and the trip rates presented in Tables 3.7 and 3.9, the estimated traffic generation for the Proposed EV Mobility City is summarised in Table 3.10.

TABLE 3.10 ESTIMATED TRAFFIC GENERATION OF THE PROPOSED EV MOBILITY CITY

Use	Parameters	Estimated Traffic Generation (pcu/hr)			
		AM Peak Hour		PM Peak Hour	
		Generation	Attraction	Generation	Attraction
Staff Quarter	48 units	2	2	1	1
Residential Institution	90 units	8	5	3	4
C/S/TC/AAO	2,340m^2	6	8	5	4
EV Business Related	14,040m^2	6	24	28	21
TOTAL		**22**	**39**	**37**	**30**
		61 (2-way)		**67 (2-way)**	

Note: C/S/TC/AAO - Conference / Seminars / Training Course / Administration & Accounting Office

4.0 TRAFFIC IMPACT

Design Year

4.1 The Proposed EV Mobility City is expected to be completed in 2031. Hence, the design year adopted is 2034, i.e. 3 years after completion.

Traffic Forecasting

4.2 Year 2034 traffic flows used for the capacity analysis are derived based on the following:

(i) the 2025 existing traffic flow,
(ii) with reference to the 2031 traffic flows from the NTE1 Base District Traffic Model ("BDTM") which is produced by Transport Department,
(iii) the estimated traffic growths from 2031 to 2034,
(iv) the expected traffic generation associated with other known planned / committed major developments,
(v) the planned traffic improvement works to be carried by other projects, and
(vi) the expected traffic generation associated to the Proposed EV Mobility City

4.3 Traffic growth from 2031 to 2034 are derived with reference to the "*Hong Kong Population Projections*" published by the Census and Statistics Department ("C&SD") available in the public domain and is presented in Table 4.1.

TABLE 4.1 POPULATION PROJECTIONS BY C&SD

Year	HK Resident Population (in Thousands)
2031	7,820.2
2034	7,945.1
Average Annual Growth (2031 – 2034)	**0.5%**

4.4 Table 4.1 shows an annual growth rate of 0.5% and this is adopted to develop the 2034 traffic model which is used to produce the 2034 traffic flows.

Other Known Planned / Committed Major Developments in the Vicinity

4.5 Traffic generated by other known planned / committed major developments which are obtained from the available public domain including "*Monthly Digest*" published by Buildings Department, and the Town Planning Board's Statutory Planning Portal 3 by Planning Department, etc. included in the design year traffic flows. These developments are presented in Table 4.2.

TABLE 4.2 LIST OF OTHER KNOWN PLANNED / COMMITTED MAJOR DEVELOPMENTS

Ref.	Developments	Development Parameters (Approx.)
A.	Fanling North New Development Area (including Proposed Minor Relaxation of Plot Ratio and Building Height approved under TPB No. A/KTN/54, A/FLN/28, & A/FLN/30) [(1)]	Public Housing: 15,939 flats Private Housing: 8,990 flats G/IC: 32,837 m^2 GFA Other non-domestic use (e.g. retail, kindergarten etc.): 129,657 m^2 GFA Primary and Secondary Schools: 8 nos.
B.	Proposed Public Housing Development at Queen's Hill Extension [(2)]	Public Housing: 4,000 flats G/IC
C.	New Territories East Cultural Centre in Area 11, Sha Tau Kok Road – Lung Yeuk Tau, Fanling [(3)]	67,000 m^2 CFA with 2,500 seats Public Vehicle Park

TABLE 4.2 LIST OF OTHER KNOWN PLANNED / COMMITTED MAJOR DEVELOPMENTS (CONT'D)

Ref.	Developments	Development Parameters (Approx.)
D.	Public Housing Development at San Wan Road [4]	Public Housing: 450 flats G/IC, Kindergarten, Primary School and Secondary School
E.	Mixed Housing Development Project at Pak Wo Road (TPB No. A/FSS/254) [5][8]	Public Housing: 510 flats Subsidized Sale Flat: 696 flats Elderly Housing: 261 flats RCHE: 210 beds Retail: 6,500 m^2 GFA Public Vehicle Park
F.	Public Housing Development at Fanling Area 17 [7]	Public Housing: 8,300 flats G/IC, Social Welfare Facilities, Kindergarten, Community Hall, Retail, Market
G.	Subsidized Sale Flats at Jockey Club Road [5][7]	Subsidized Sale Flat: 644 flats Retail: 3,000 m^2 CFA Public Vehicle Park
H.	Public Housing Development at Sheung Shui Areas 4 and 30 Site 1 & 2 (including Proposed Minor Relaxation of Plot Ratio and Building Height approved under TPB No. A/FSS/280) [7][8]	Public Housing: 3,644 flats Retail: 1,100 m^2 CFA G/IC Public Vehicle Park
I.	Public Housing Development at Po Shek Wu Road [7]	Public Housing: 1,800 flats Retail: 3,000 m^2 CFA Kindergarten
J.	Proposed Flat Development and Social Welfare Facility (Residential Care Home for the Elderly) at Ma Sik Road, Fanling (TPB No. A/FSS/294) [8]	Private Housing: 1,898 Flats RCHE: 120 beds [9] Public Vehicle Park
K.	Proposed Social Welfare Facility (Residential Care Home for the Elderly) and Flat at Tin Ping Road, Sheung Shui (TPB No. A/FSS/279) [8]	RCHE: 143 beds Private Housing: 28 flats
L.	Proposed Minor Relaxation of Domestic PR Restriction for Permitted Residential Development with Commercial Uses at 1 Luen Fat Street, Fanling (TPB No. A/FSS/282) [8]	Private Housing: 119 flats Commercial: 161 m^2 GFA
M.	Proposed Shop and Services (Showroom) and Office (Wholesale Conversion of an Existing Industrial Building) at 5 Lok Yip Road, Fanling (TPB No. A/FSS/283) [8]	Retail: 4,075 m^2 GFA
N.	Proposed Shop and Services, Eating Place and Other Uses at 33 On Lok Mun Street, Fanling (TPB No. A/FSS/284) [8]	Retail: 2,392 m^2 GFA
O.	Public Housing Development at Ching Hiu Road [9]	Private Housing: 620 flats G/IC, & Social Welfare Facilities
P.	Public Housing Development at Fanling Area 48 (TPB No. A/FSS/295) [8][10]	Public Housing: 4,620 flats Primary School Social Welfare Facilities, and Retail
Q.	Wo Hop Shek Cemetery Phases 2, 3 and 4 Columbarium, and Wo Hop Shek Crematorium Expansion [11]	Columbarium: 280,000 niches Cremators: 10 nos.

Source:

(1) Rural and New Town Planning Committee ("RNTPC") Paper No. A/FLN/30
(2) North Committees Meetings Discussion Paper 9/2022. *"Proposed Public Housing Development at Queen's Hill Extension"*. Dated 15 May 2022. North District Council.
(3) LC Paper No. CB(2)614/2022(01). Legislative Council.
(4) Planning Brief. Hong Kong Housing Authority.
<https://www.pland.gov.hk/pland_en/access/pec/planning_brief/San%20Wan%20Road%20PB.pdf>
(5) HKHS Annual Report 2022. Hong Kong Society.

(6) Paper 2/2023. "粉嶺第 17 區公營房屋發展計劃". Dated 16 January 2023. North District Council.
(7) North Committees Meetings Discussion Paper 5/2019. "Public Housing Development Programmes at Sites 1 and 2 in Sheung Shui Areas 4 and 30, a Site to the North of Po Shek Wu Road and a Site on Jockey Club Road, Fanling, and Proposed Amendments to the Approved Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/22." Dated 21 January 2019. North District Council.
(8) Statutory Planning Portal 2. Town Planning Board.
(9) Paper 4/2023. "上水清曉路公營房屋發展之工地平整及基礎設施工程." Dated 16 January 2023. North District Council.
(10) LC Paper No. CB(1)158/2022(03). Legislative Council.
(11) Paper 24/2024. "和合石墳場興建火葬場、骨灰安置所第二期和第三期計劃及相關道路改善和排污設 施工程 (工務計劃項目第 5874TH 號)." Dated 9 July 2024. North District Council

Future Road Network

4.6 Traffic improvement works have been planned for implementation within the AOI by the Government, and those identified are summarized in **Table 4.3**.

TABLE 4.3 PLANNED TRAFFIC IMPROVEMENT WORKS WITHIN THE AOI

Planned Traffic Improvements	Status
Fanling Bypass Eastern Section [(1)]	Under Construction
Realignment and upgrading of Tai Wo Service Road West [(1)(2)]	Under Construction
Improvement at Southern Junction of Pak Wo Road / Yat Ming Road / Wah Ming Road (J04) [(3)]	Under Planning

(1) Project Number 7835CL. "*Remaining Phase of Site Formation and Engineering Infrastructure Works at Kwu Tung North and Fanling North New Development Area - Detailed Design and Site Investigation*" Civil Engineering and Development Department. <https://www.cedd.gov.hk/eng/our-projects/major-projects/index-id-87.html>
(2) A/FSS/295. "*Proposed Minor Relaxation of Maximum Gross Floor Area and Building Heigth for Proposed Public Housing Development at Fanling Area 48.*" Town Planning Board.
(3) PWP Item No. 5874H. *"Road Improvement Works at Wo Hop Shek Cemetery for Phases 2 and 3 Columbarium Development."* Civil Engineering and Development Department.

4.7 The above listed traffic improvements are expected to be implemented prior to completion of the Proposed EV Mobility City, and are adopted in the 2034 traffic model. Information of the above traffic improvement works are found in **Appendix B**.

2034 Traffic Flows

4.8 Year 2034 traffic flows with the Proposed EV Mobility City are derived as follows:

2034 Traffic Flows with the Proposed EV Mobility City = *2034 Traffic Flows without the Proposed EV Mobility City + Traffic Generated by the Proposed EV Mobility City*

4.9 **Figures 4.1 and 4.2** show the 2034 AM and PM peak hour traffic flows for the scenarios without and with the Proposed EV Mobility City respectively.

2034 Junction Capacity Analysis

4.10 Year 2034 junction capacity analysis for the scenarios without and with the Proposed EV Mobility City are summarised in Table 4.4 and detailed calculations are found in the **Appendix A**.

TABLE 4.4 2034 JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction	Parameter	Without the Proposed EV Mobility City		With the Proposed EV Mobility City	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
J01	Tai Wo Service West / Kiu Tau Road	Priority	RFC	0.035	0.184	0.035	0.184
J02	Wo Hing Road / Unnamed Road	Priority	RFC	0.557	0.413	0.587	0.438
J03	Wah Ming Road / Lui Ming Road / Ming Yin Road / Wo Hing Road	Round-about	RFC	0.415	0.348	0.428	0.356
J04	Pak Wo Road / Yat Ming Road / Wah Ming Road (Southern Junction)	Signal (Note 1)	RC	25%	31%	22%	28%
J05	Pak Wo Road / Yat Ming Road / Wah Ming Road (Northern Junction)	Signal	RC	24%	67%	23%	65%
J06	Wo Hop Shek Interchange	Signal	RC	9%	24%	6%	21%
J07	Wo Hing Road / Site Access	Priority	RFC	0.000	0.000	0.050	0.055

Note 1: With planned traffic improvement works to be implemented by Others.
RFC - Ratio of Flow to Capacity RC – Reserve Capacity

4.11 Table 4.4 shows that, except for J06 during the AM peak hour, the junctions analyzed have capacity to accommodate the expected traffic growth to 2034, and the traffic generated by the Proposed EV Mobility City.

4.12 For J06, it is expected to operate unsatisfactory during the AM peak hour for both scenarios without and with the Proposed EV Mobility City.

Proposed Traffic Improvement at J06

4.13 To improve the operational condition of J06, local traffic improvement is proposed, and is shown in **Figure 4.3**. Table 4.5 shows results of the junction capacity analyses for J06 with the proposed traffic improvement implemented for the scenario with the Proposed EV Mobility City.

TABLE 4.5 2034 JUNCTION PERFORMANCE FOR J06 WITH LOCAL TRAFFIC IMPROVEMENT

Ref.	Junction	Type of Junction	Parameter	With the Proposed EV Mobility City	
				AM Peak Hour	PM Peak Hour
J06	Wo Hop Shek Interchange	Signal	RC	16%	21%

2034 Road Link Capacity Analysis

4.14 Year 2034 road link capacity analysis for the scenarios without and with the Proposed EV Mobility City are summarised in Table 4.6.

TABLE 4.6 YEAR 2034 P/Df OF ROAD LINKS

Ref.	Road Link	Config.	Direction	Design Flow (pcu/hr)	P/Df			
					Without the Proposed EV Mobility City		With the Proposed EV Mobility City	
					AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
L01	Tai Wo Service Road West (Wo Hing Road – Kiu Tau Road)	Single-2	Northbound	1,160	0.332	0.265	0.351	0.297
			Southbound	1,160	0.287	0.276	0.320	0.302
L02	Wo Hing Road (Pak Wo Road – Tai Wo Service Road West)	Single-2	Northbound	1,000	0.334	0.234	0.341	0.245
			Southbound	1,400	0.514	0.358	0.531	0.371
L03	Pak Wo Road (Wo Hop Shek Interchange – Wah Ming Road)	Dual-2	Northbound	3,050	0.431	0.353	0.435	0.356
			Southbound	3,050	0.296	0.267	0.296	0.267
L04	Unnamed Road (Pak Wo Road – Wo Hing Road	Single-2	Eastbound	1,000	0.295	0.227	0.309	0.239
			Westbound	1,000	0.774	0.474	0.789	0.500

Config. – Configuration

4.15 Table 4.6 shows that the road links analyzed have capacity to accommodate the expected traffic growth to 2034, and the traffic generated by the Proposed EV Mobility City.

5.0 SUMMARY

5.1 The Subject Site is located at Various Lots in D.D. 51 and Adjoining Government Lot in Fanling near Wo Hop Shek Village. It is currently occupied by warehouses.

5.2 The Applicant is a well-established vehicle dealer and distributor in Hong Kong, who intends to develop the Subject Site into a research and development centre focusing on electric vehicle technology, i.e. Proposed EV Mobility City, which also includes staff quarter, residential institution, ancillary office and training centre.

5.3 The proposed internal transport provision follows the high-end recommendation of the HKPSG, and TD's Guideline include the following:

i) 53 residential car parking spaces,
ii) 10 visitor car parking spaces,
iii) 4 motorcycle parking spaces,
iv) 87 "shared-use" LGV / light bus parking spaces,
v) 8 "shared-use" M/HGV / coach parking spaces,
vi) 2 "shared-use" M/HGV / coach parking spaces / loading / unloading bays,
vii) 14 LGV loading / unloading bays,
viii) 10 HGV loading / unloading bays, and
ix) 33 bicycle parking spaces.

5.4 Manual classified counts were conducted in May 2025 at selected junctions and road links located in the AOI to establish the existing traffic flows during the AM and PM peak hours. The design year 2034 traffic flows were derived with reference to the BDTM, and have also taken into account the traffic generation and planned traffic improvement works associated with other known planned / committed major developments located in the vicinity.

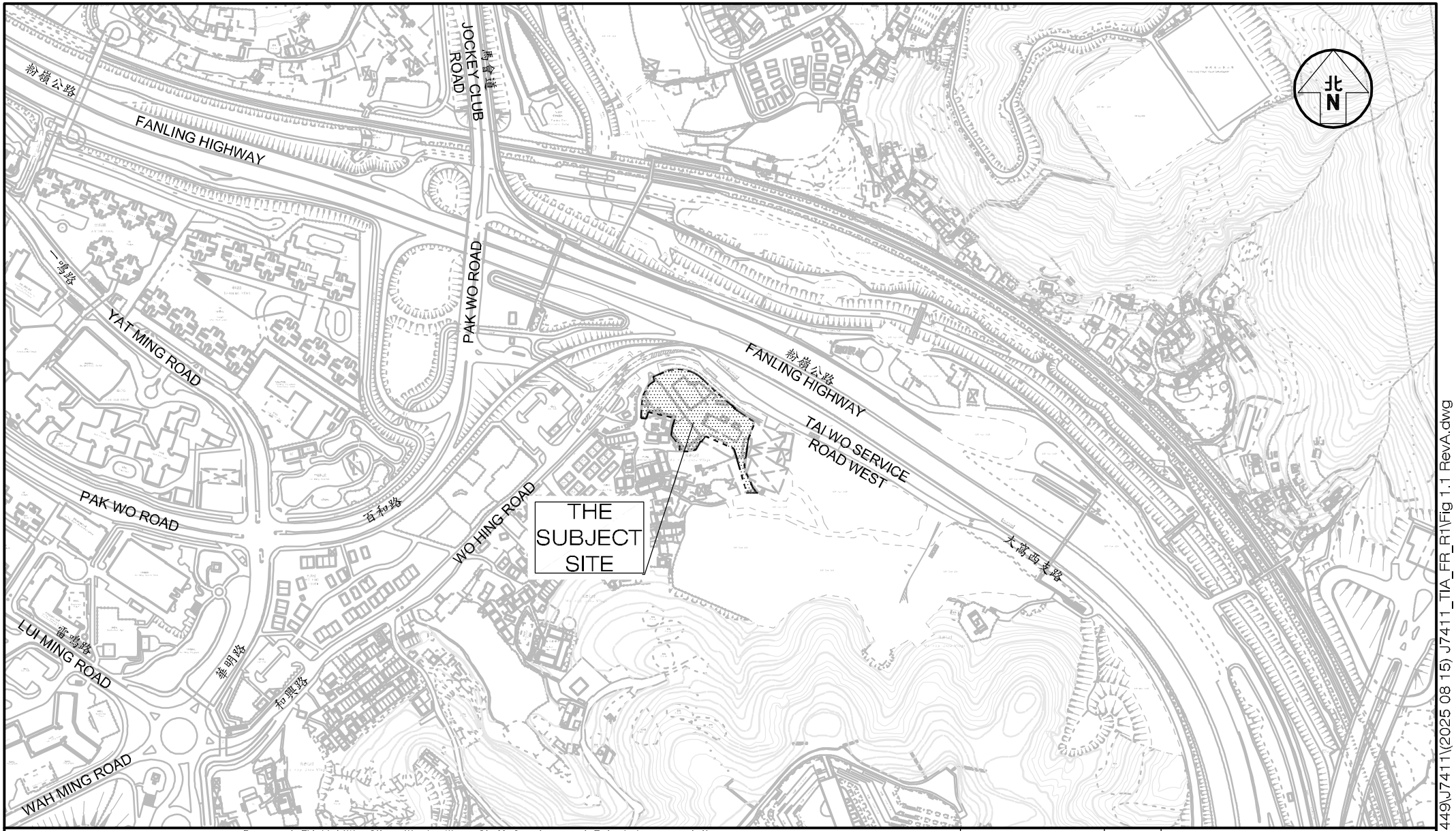
5.5 Traffic generation for the Proposed EV Mobility City is calculated based on the trip rates adopted from the TPDM, and derived trip rates from traffic generation surveys at referenced developments. The Proposed EV Mobility City is expected to generate some 61 and 67 pcu (2-way) during the AM and PM peak hours respectively.

5.6 The traffic analysis found the surveyed junctions and road links currently operate with capacity, and will have sufficient capacity to accommodate the expected traffic growth to 2034 and the traffic generated by the Proposed EV Mobility City, except Wo Hop Shek Interchange (J06).

5.7 The Wo Hop Shek Interchange (J06) is expected to operate unsatisfactorily in 2034 during the AM peak hour in both scenarios without and with the Proposed EV Mobility City. Traffic improvement is proposed which will enhance the operational condition to a satisfactory level.

5.8 In view of the above, it is concluded that the Proposed EV Mobility City is acceptable from traffic engineering viewpoint.

FIGURES



Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 1.1 / Revision A
Figure Title	LOCATION OF THE SUBJECT SITE	Designed by M C Y / Drawn by S C Y / Checked by K C	Scale in A4 1 : 5,000 / Date 15 AUG 2025

CKM Asia Limited
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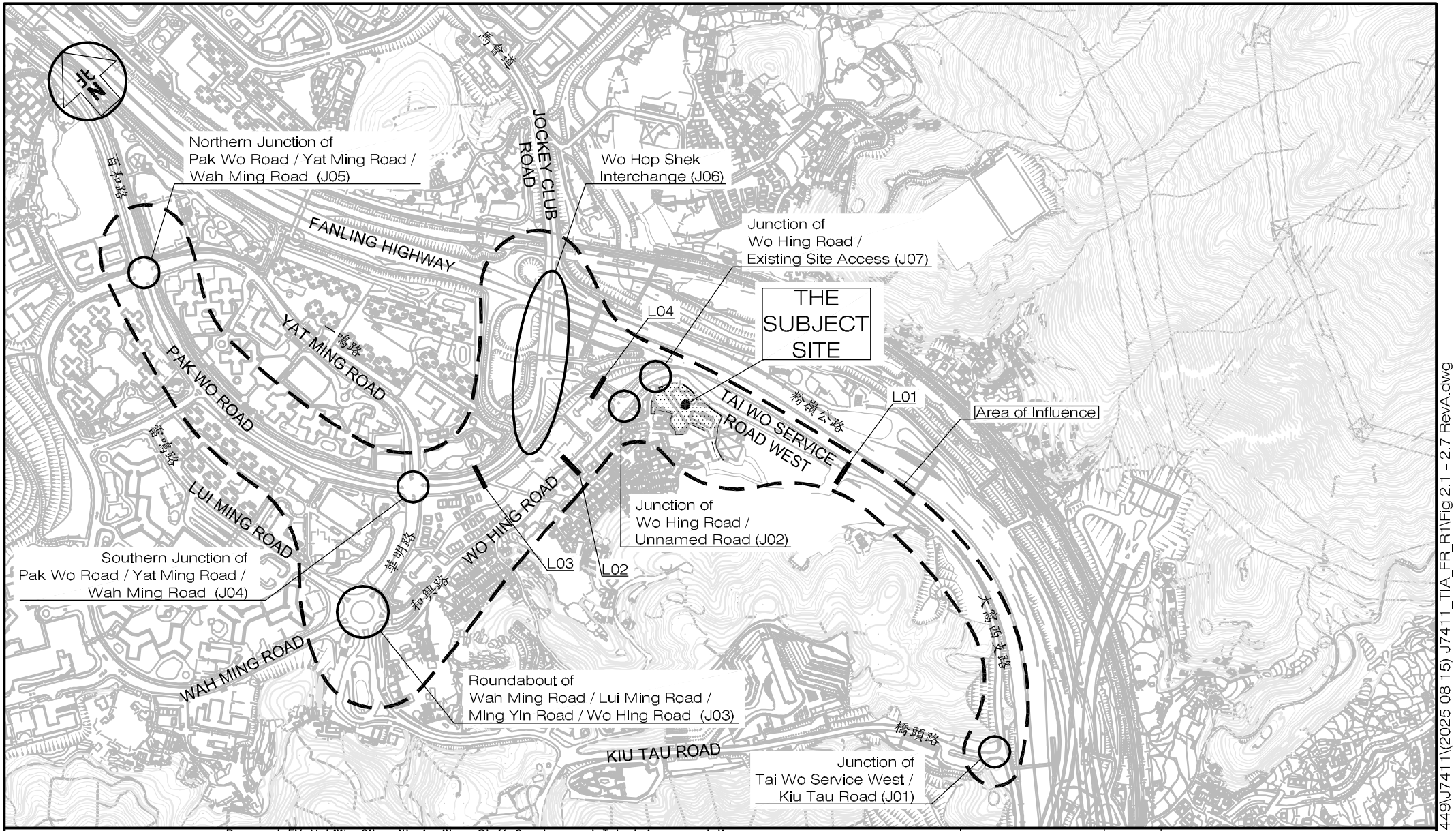

Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 2.1 / Revision A
Figure Title	AREA OF INFLUENCE ("AOI") AND LOCATION OF SURVEYED JUNCTIONS AND ROAD LINKS		Designed by W C H / Drawn by S C Y / Checked by K C
			Scale in A4 1 : 8,000 / Date 15 AUG 2025

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Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 2.2 / Revision A
Figure Title	EXISTING JUNCTION LAYOUT – TAI WO SERVICE WEST / KIU TAU ROAD (J01)		Designed by W C H / Drawn by S C Y / Checked by K C
			Scale in A4: 1 : 800 / Date: 15 AUG 2025

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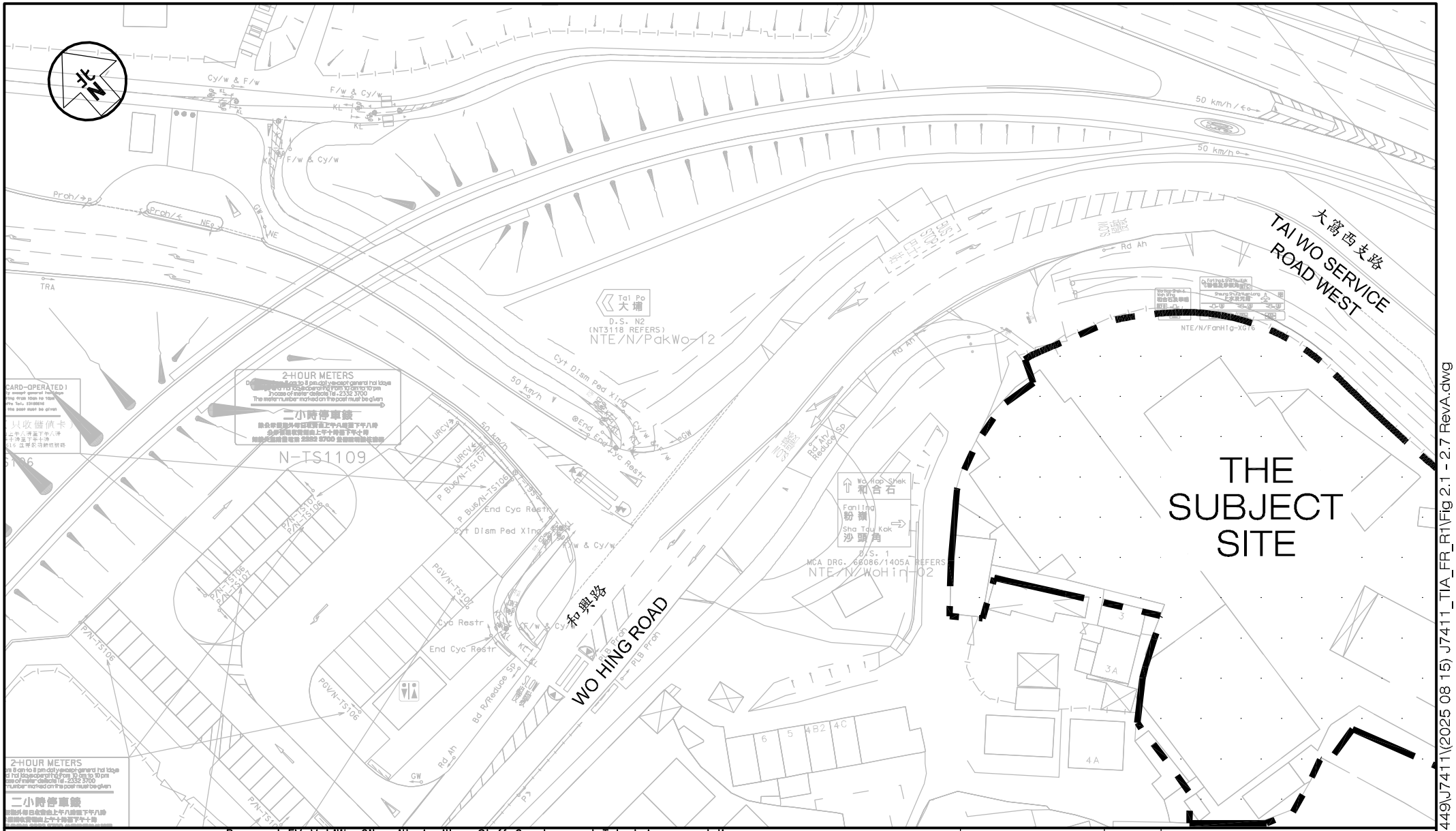

Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 2.3 / Revision A
Figure Title	EXISTING JUNCTION LAYOUT – WO HING ROAD / UNNAMED ROAD (J02) AND WO HING ROAD / EXISTING SITE ACCESS (J07)		Designed by W C H / Drawn by S C Y / Checked by K C; Scale in A4 1 : 800; Date 15 AUG 2025

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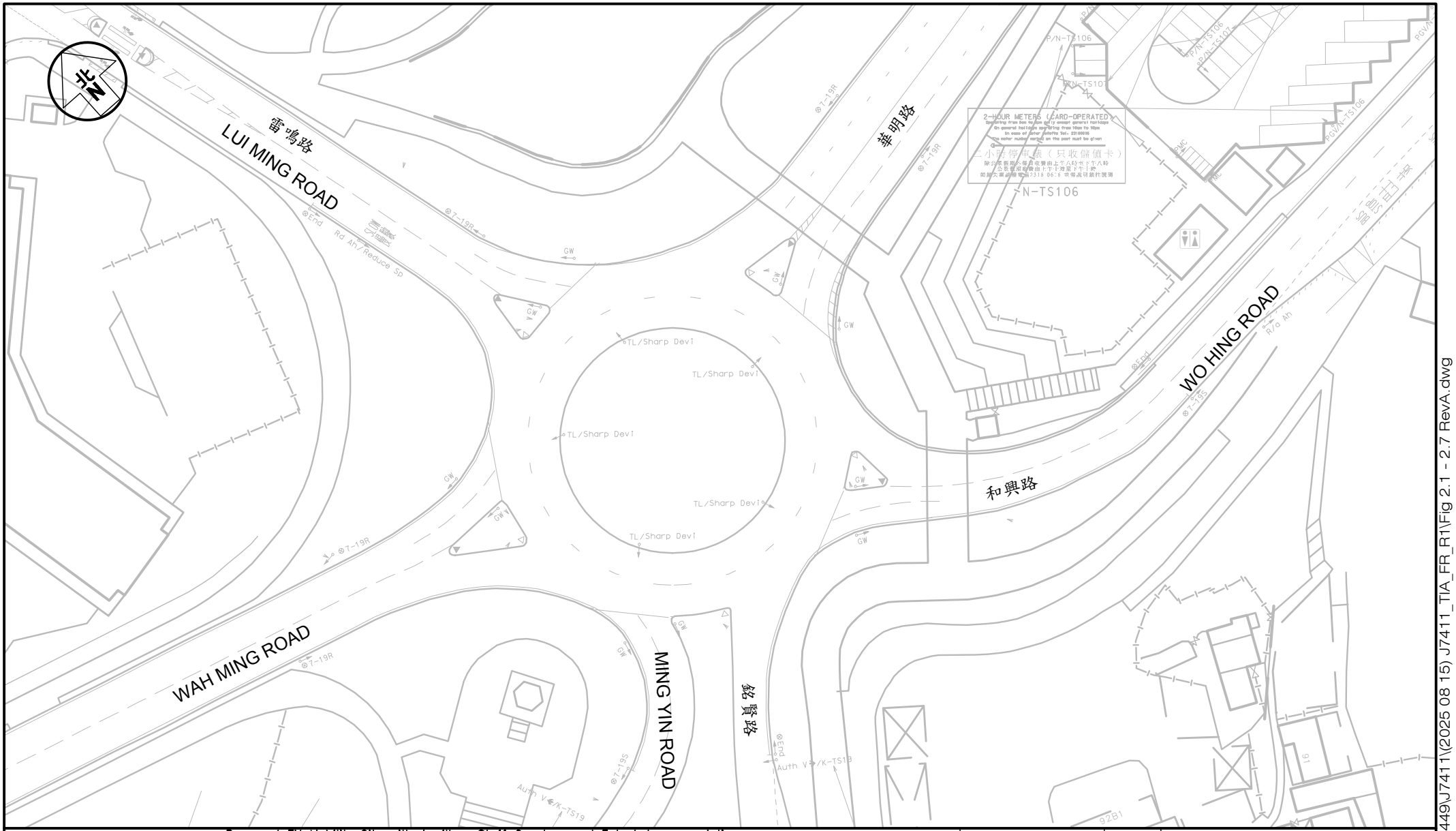

Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 2.4 / Revision A
Figure Title	EXISTING JUNCTION LAYOUT – WAH MING ROAD / LUI MING ROAD / MING YIN ROAD / WO HING ROAD (J03)		Designed by W C H / Drawn by S C Y / Checked by K C / Scale in A4 1 : 800 / Date 15 AUG 2025

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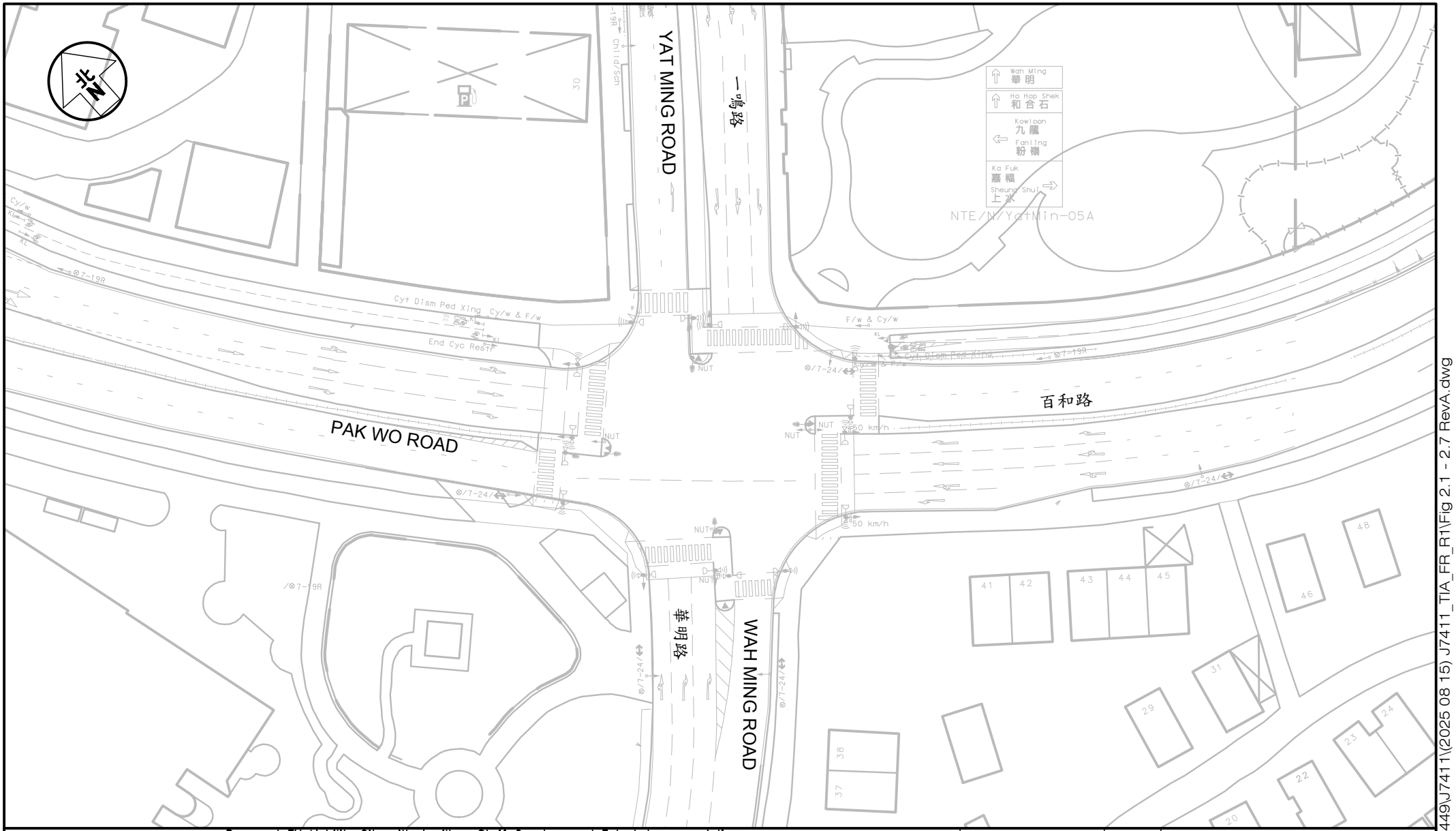

Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 2.5 / Revision A
Figure Title	EXISTING JUNCTION LAYOUT – PAK WO ROAD / YAT MING ROAD / WAH MING ROAD (SOUTHERN JUNCTION) (J04)		Designed by W C H / Drawn by S C Y / Checked by K C / Scale in A4 1 : 800 / Date 15 AUG 2025

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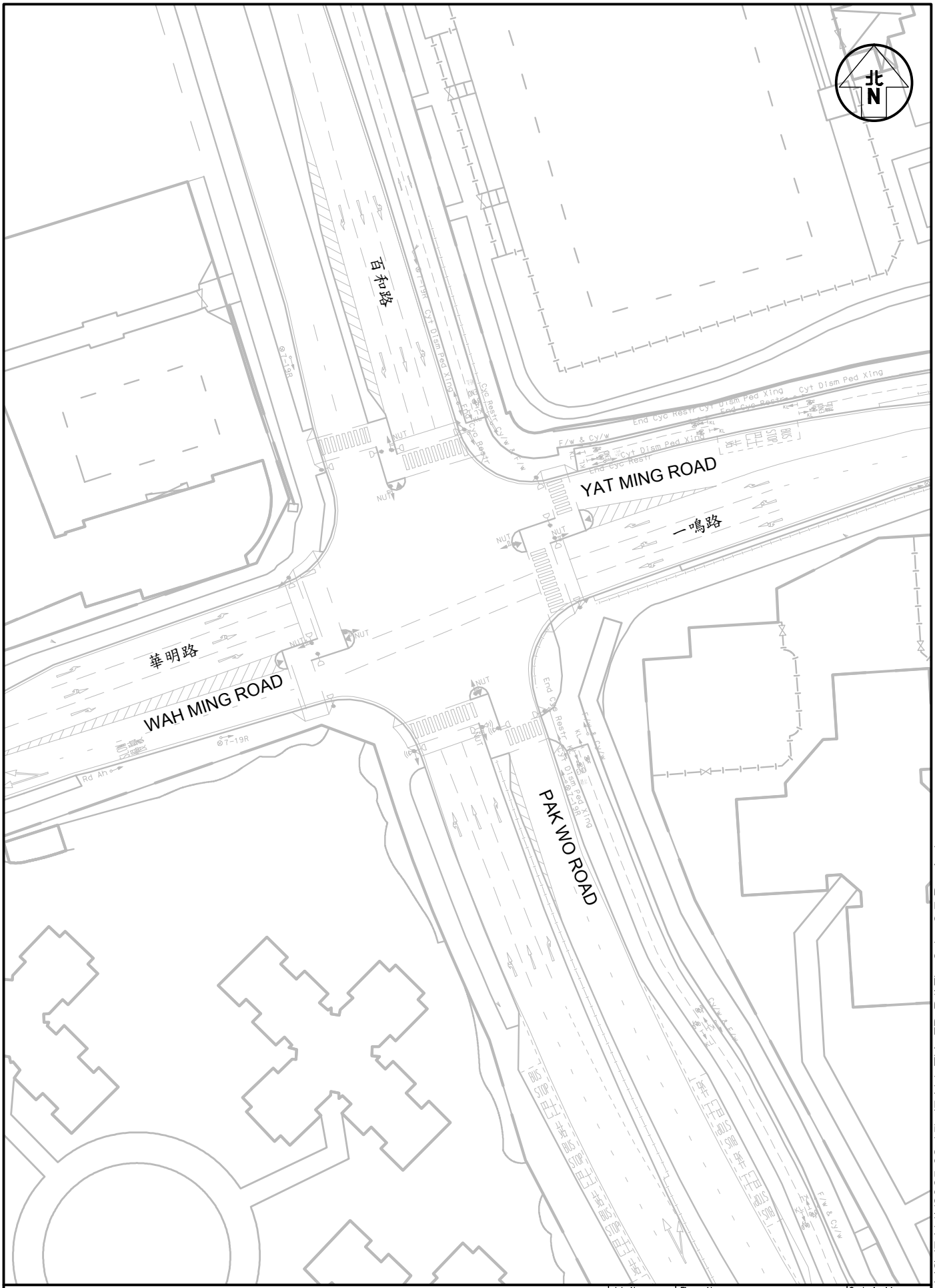

Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	Job No. J7411	Figure No. 2.6		Scale in A4 1 : 800
		Designed by W C H	Drawn by S C Y	Checked by K C	Revision A	Date 15 AUG 2025
Figure Title	EXISTING JUNCTION LAYOUT - PAK WO ROAD / YAT MING ROAD / WAH MING ROAD (NORTHERN JUNCTION) (J05)	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk			

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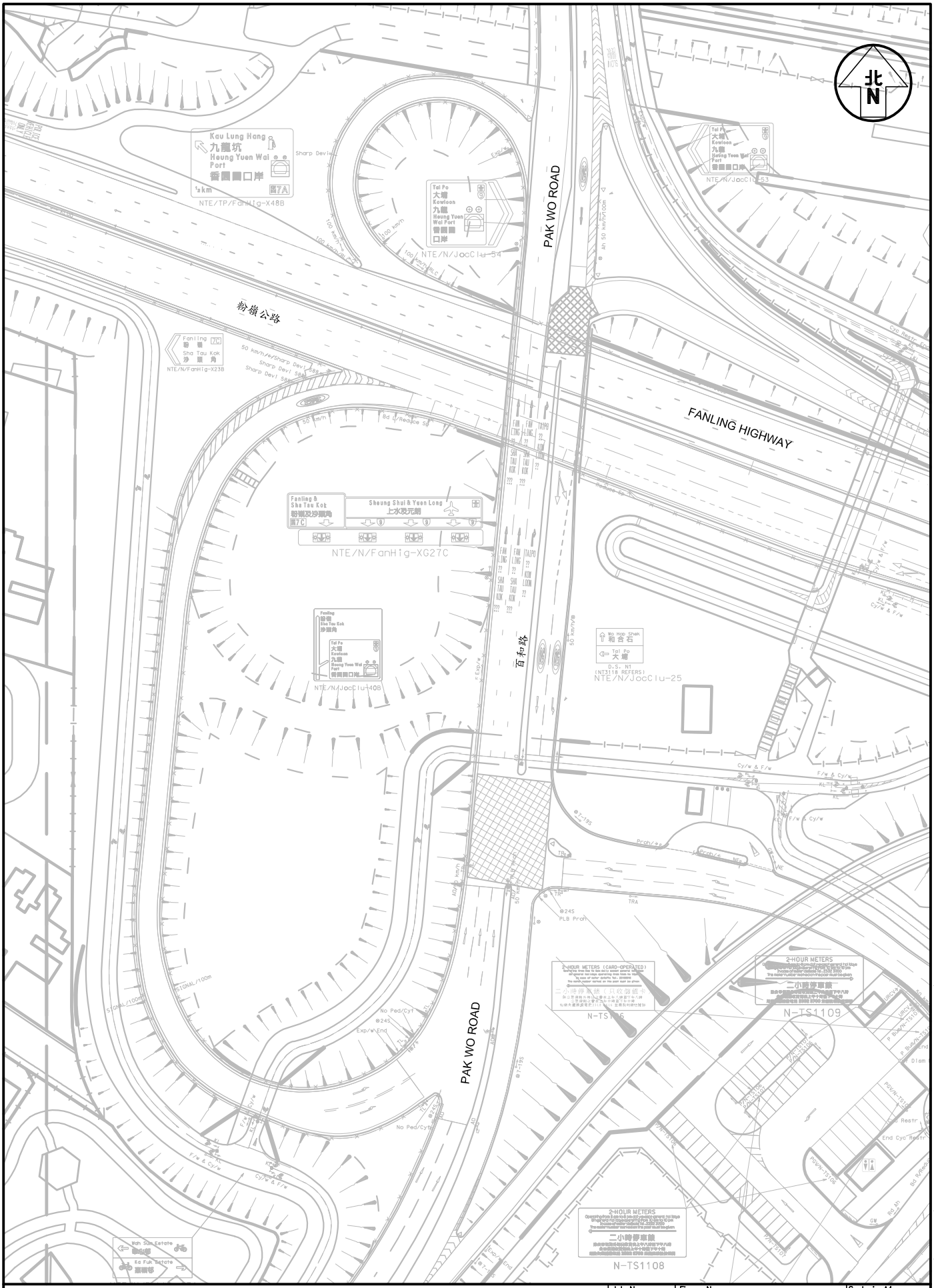

Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	Job No. J7411	Figure No. 2.7		Scale in A4 1 : 800
		Designed by W C H	Drawn by S C Y	Checked by K C	Revision A	Date 15 AUG 2025
Figure Title	EXISTING JUNCTION LAYOUT – WO HOP SHEK INTERCHANGE (J06)	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk			

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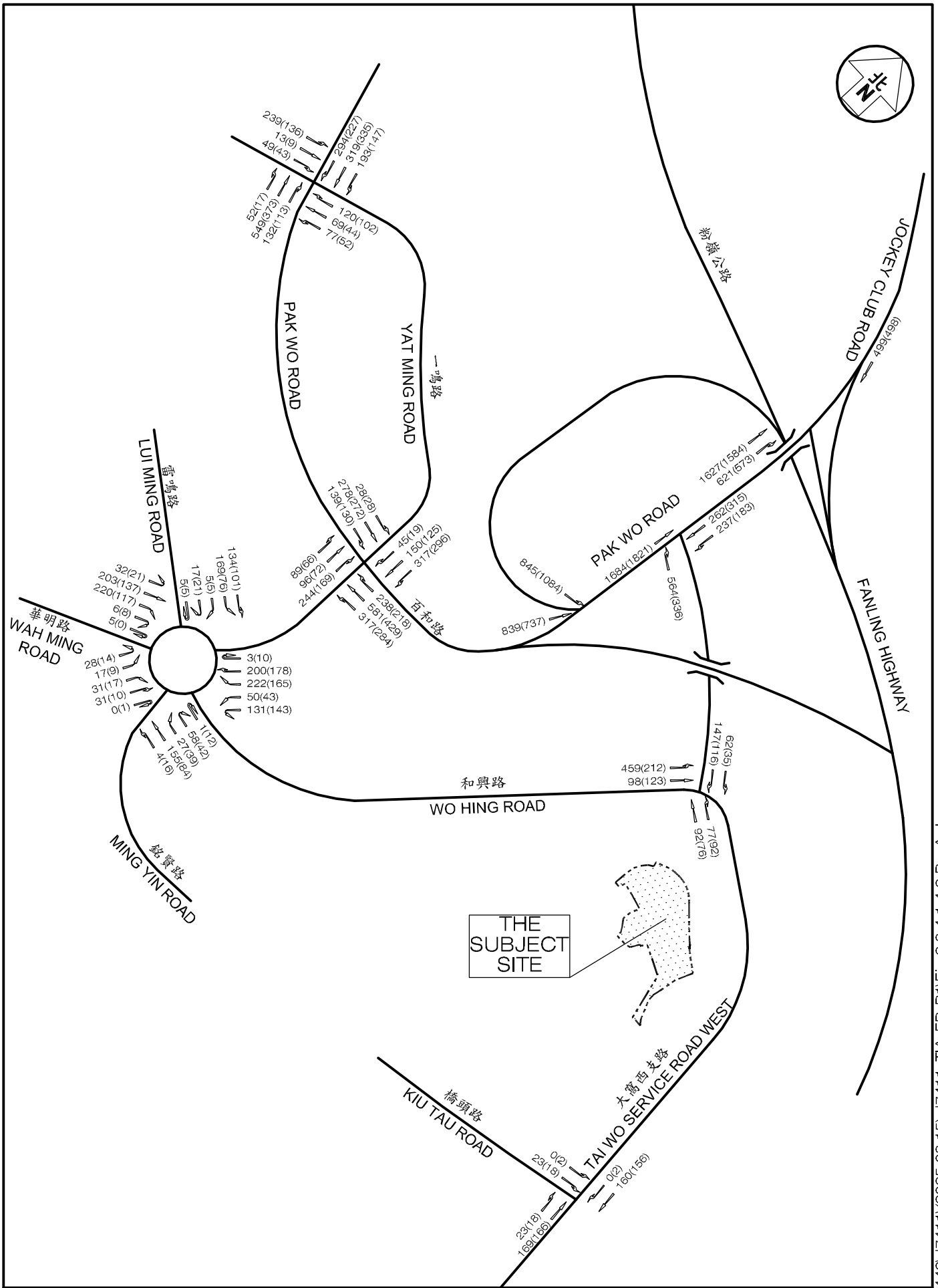

Project Title: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Wo Hing Road / Tai Wo Service Road West, Fanling, NT	Job No. J7411	Figure No. 2.8			Scale in A4 N.T.S.
	Designed by M C Y	Drawn by S C Y	Checked by K C	Revision A	Date 15 AUG 2025
Figure Title: EXISTING PEAK HOUR TRAFFIC FLOW	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk				

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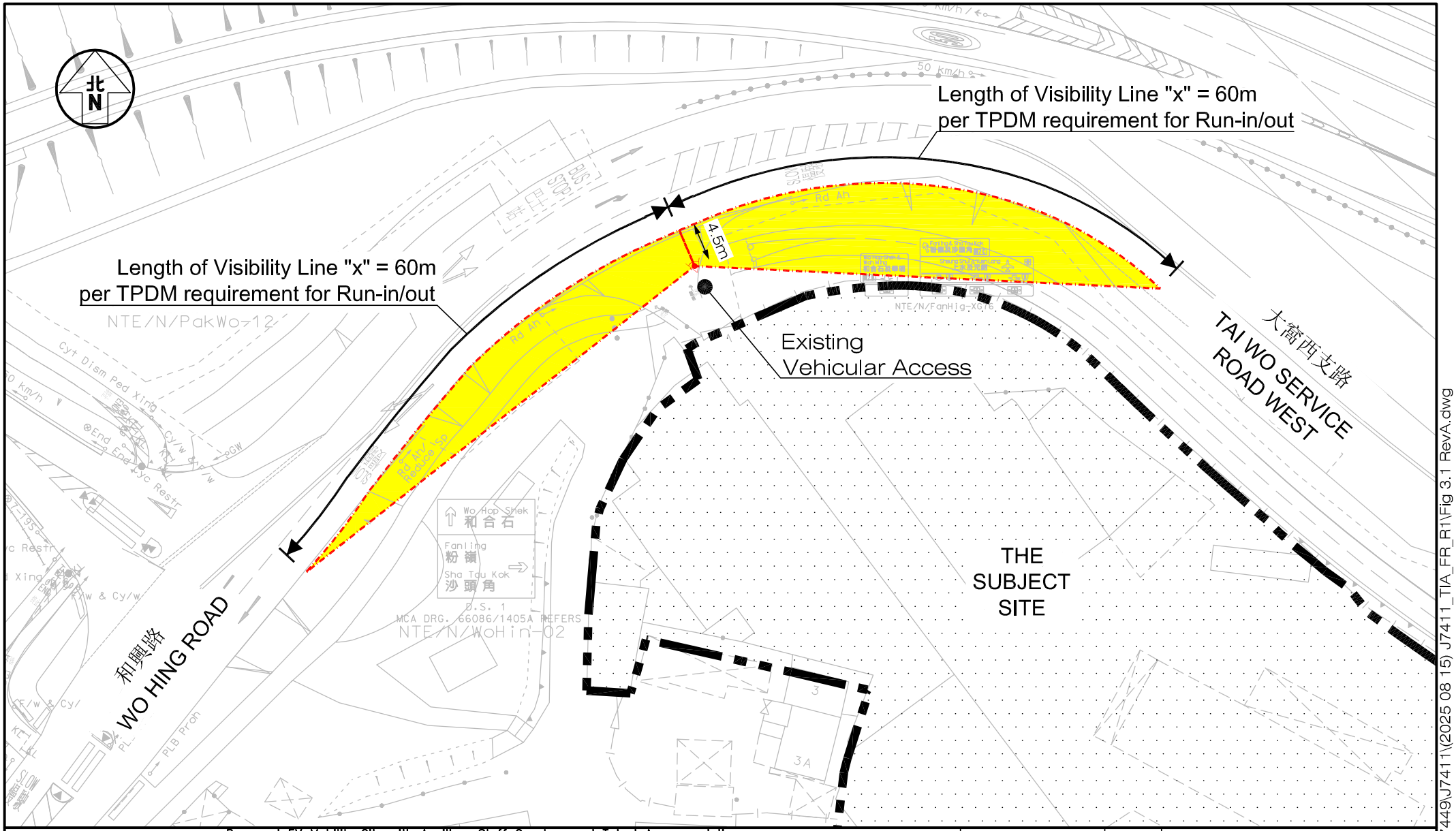

Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 3.1	Revision A
Figure Title	VISIBILITY ASSESSMENTS AT EXISTING VEHICULAR ACCESSES ON WO HING ROAD		Designed by W C H / Drawn by S C Y / Checked by K C	
			Scale in A4 1 : 500 / Date 15 AUG 2025	

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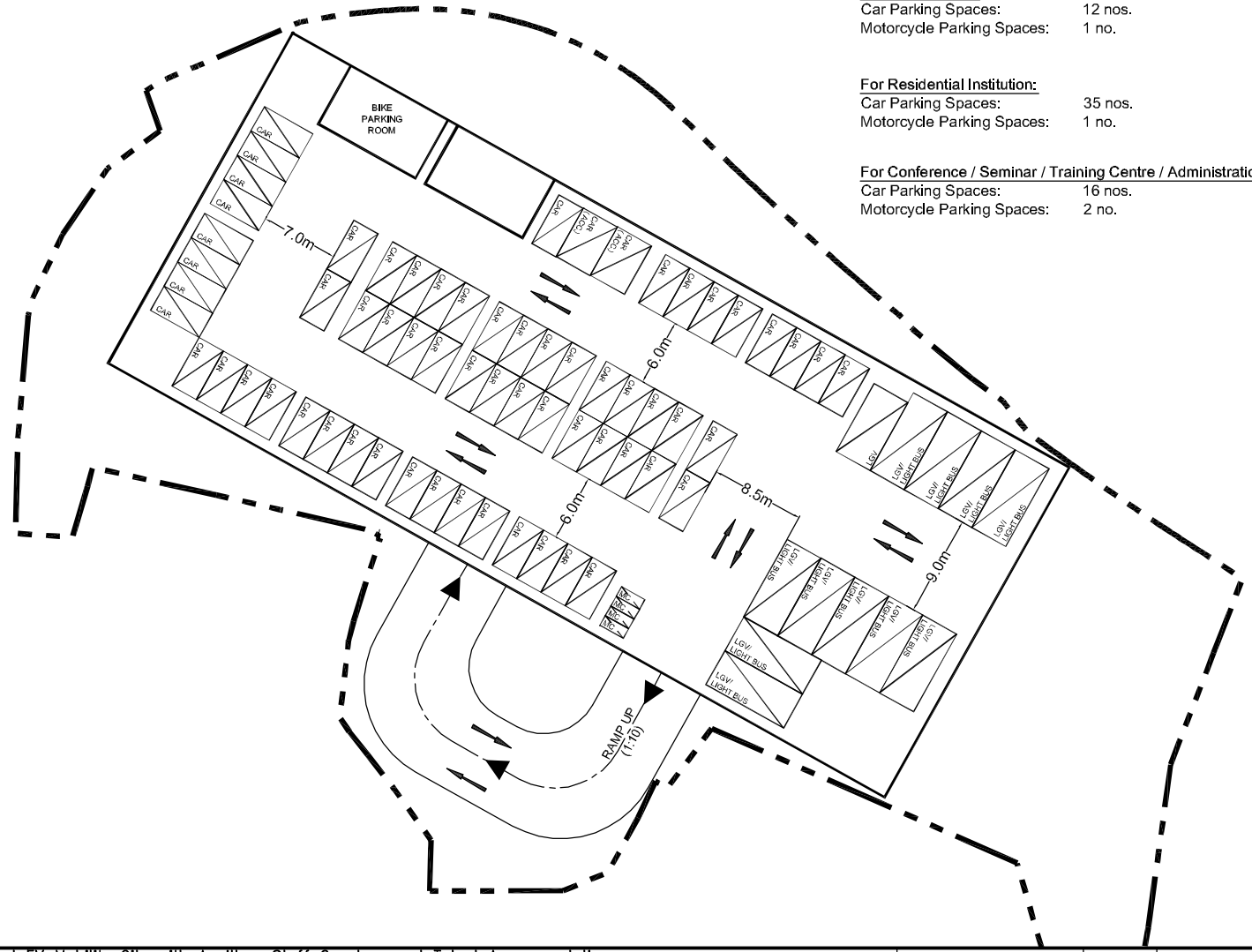
For EV Mobility City:
LGV / LB Parking Spaces: 10 nos.

For Staff Quarter:
Car Parking Spaces: 12 nos.
Motorcycle Parking Spaces: 1 no.

For Residential Institution:
Car Parking Spaces: 35 nos.
Motorcycle Parking Spaces: 1 no.

For Conference / Seminar / Training Centre / Administration & Accounting Office
Car Parking Spaces: 16 nos.
Motorcycle Parking Spaces: 2 no.



Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 3.2	Revision A
Figure Title	INDICATIVE INTERNAL TRANSPORT LAYOUT BASEMENT FLOOR (B/F)		Designed by W C H / Drawn by S C Y / Checked by K C	
			Scale in A4 1 : 600 / Date 15 AUG 2025	

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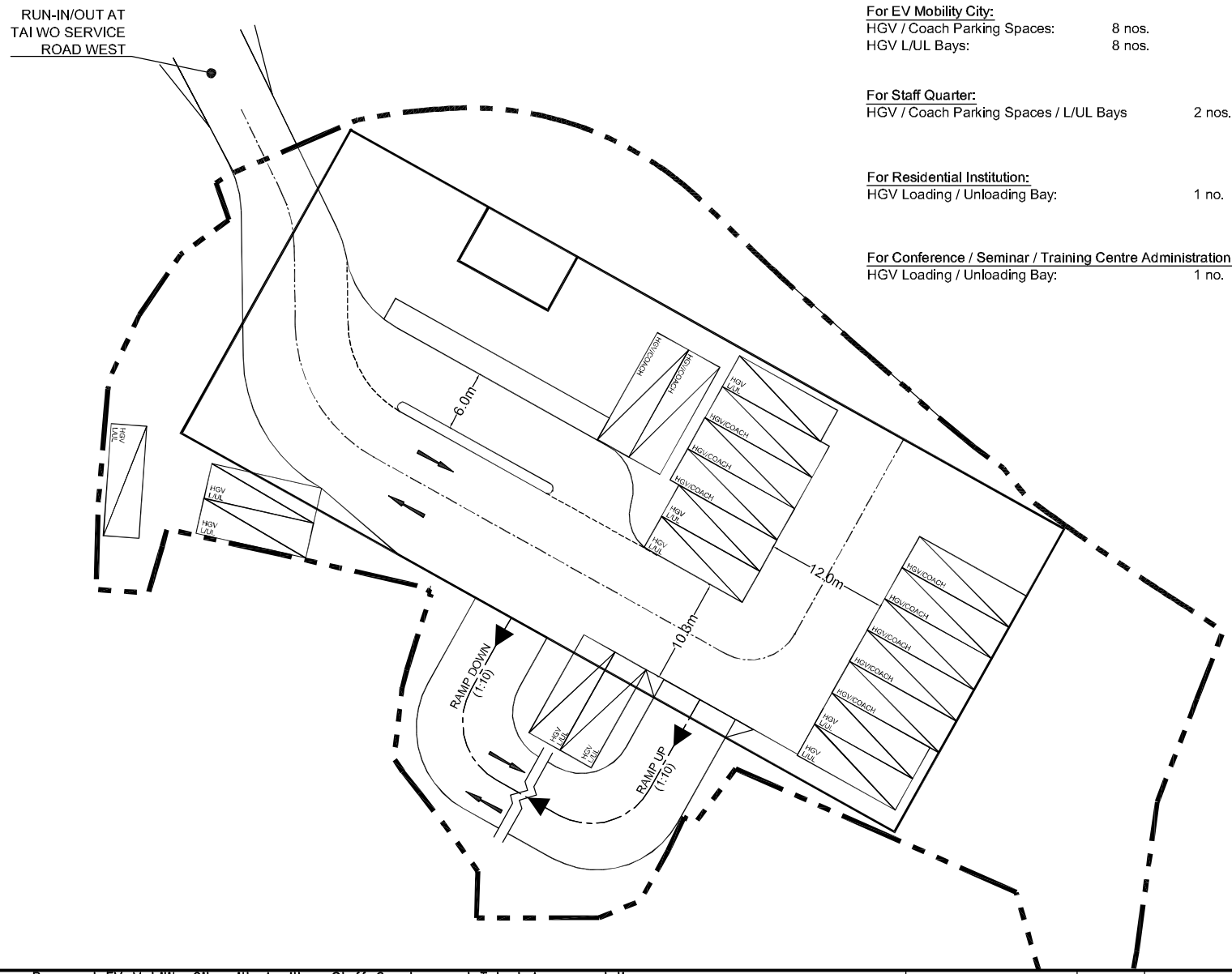

Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 3.3	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Figure Title	INDICATIVE INTERNAL TRANSPORT LAYOUT GROUND FLOOR (G/F)		Designed by W C H / Drawn by S C Y / Checked by K C Scale in A4 1 : 600 / Date 15 AUG 2025		

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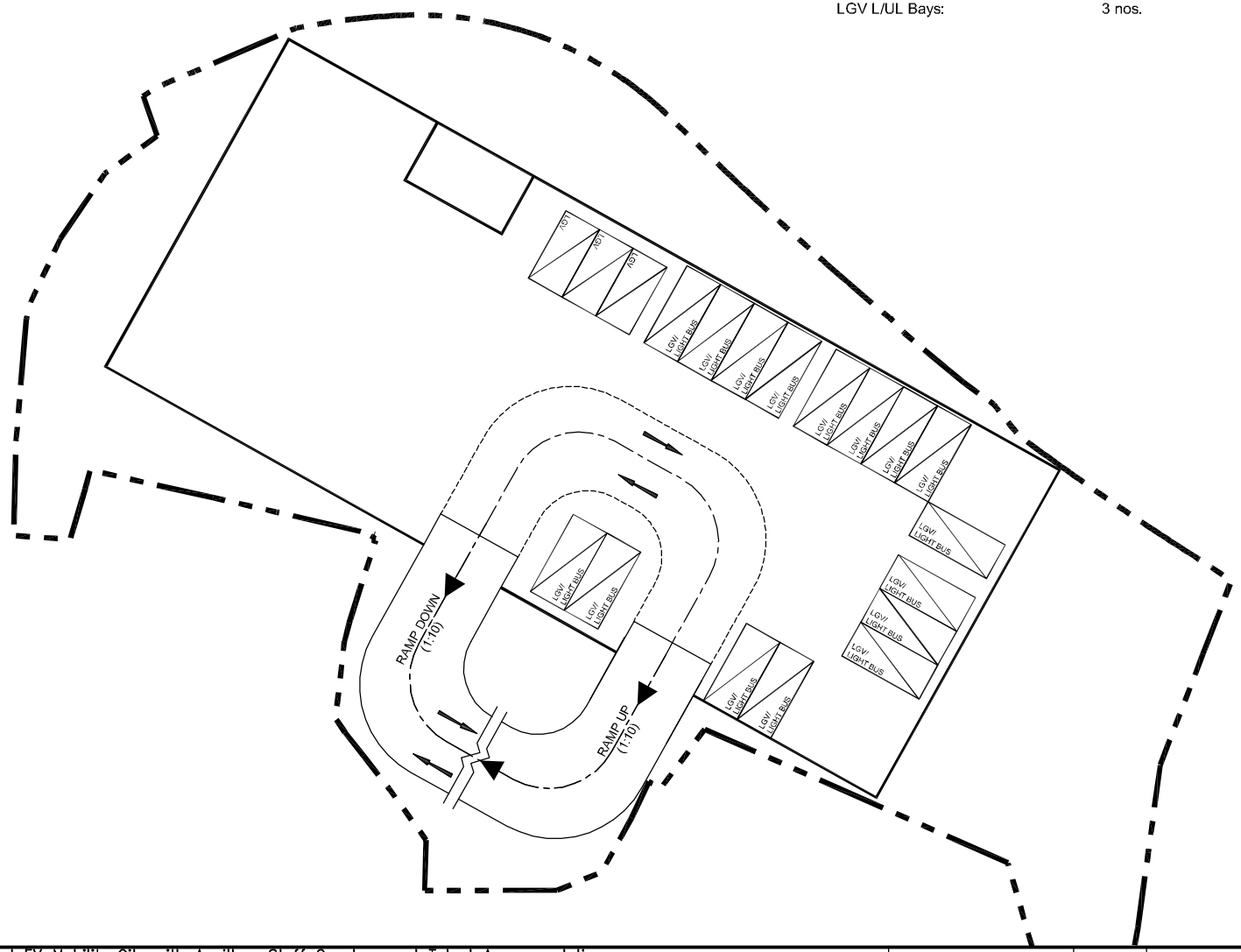
For EV Mobility City

LGV / LB Parking Spaces:	16 nos.
LGV L/UL Bays:	3 nos.



Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 3.4 / Revision A
Figure Title	INDICATIVE INTERNAL TRANSPORT LAYOUT FIRST FLOOR (1/F)		Designed by W C H / Drawn by S C Y / Checked by K C / Scale in A4 1 : 600 / Date 15 AUG 2025

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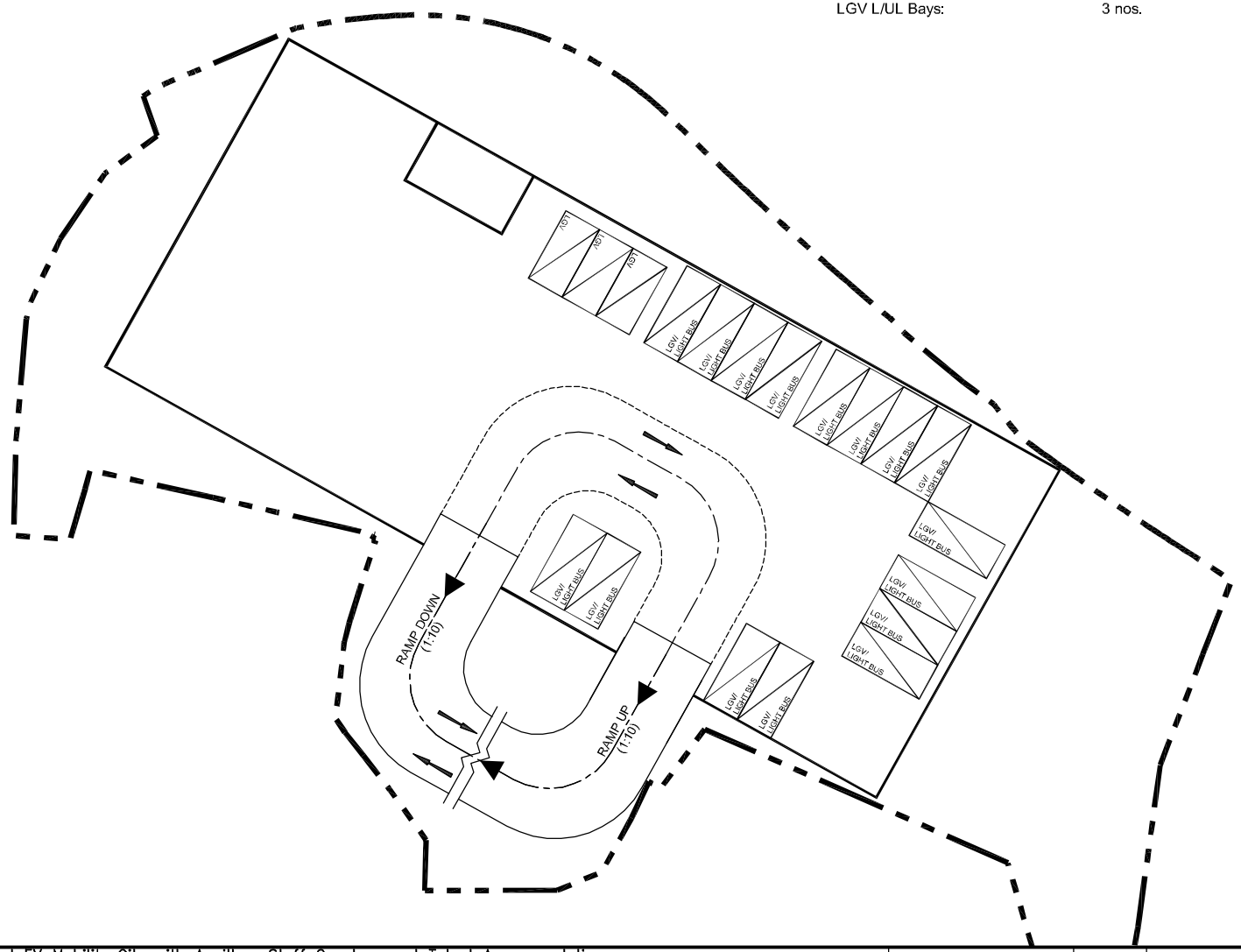
For EV Mobility City

LGV / LB Parking Spaces:	16 nos.
LGV L/UL Bays:	3 nos.



Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 3.5	Revision A
Figure Title	INDICATIVE INTERNAL TRANSPORT LAYOUT SECOND FLOOR (2/F)		Designed by W C H / Drawn by S C Y / Checked by K C	
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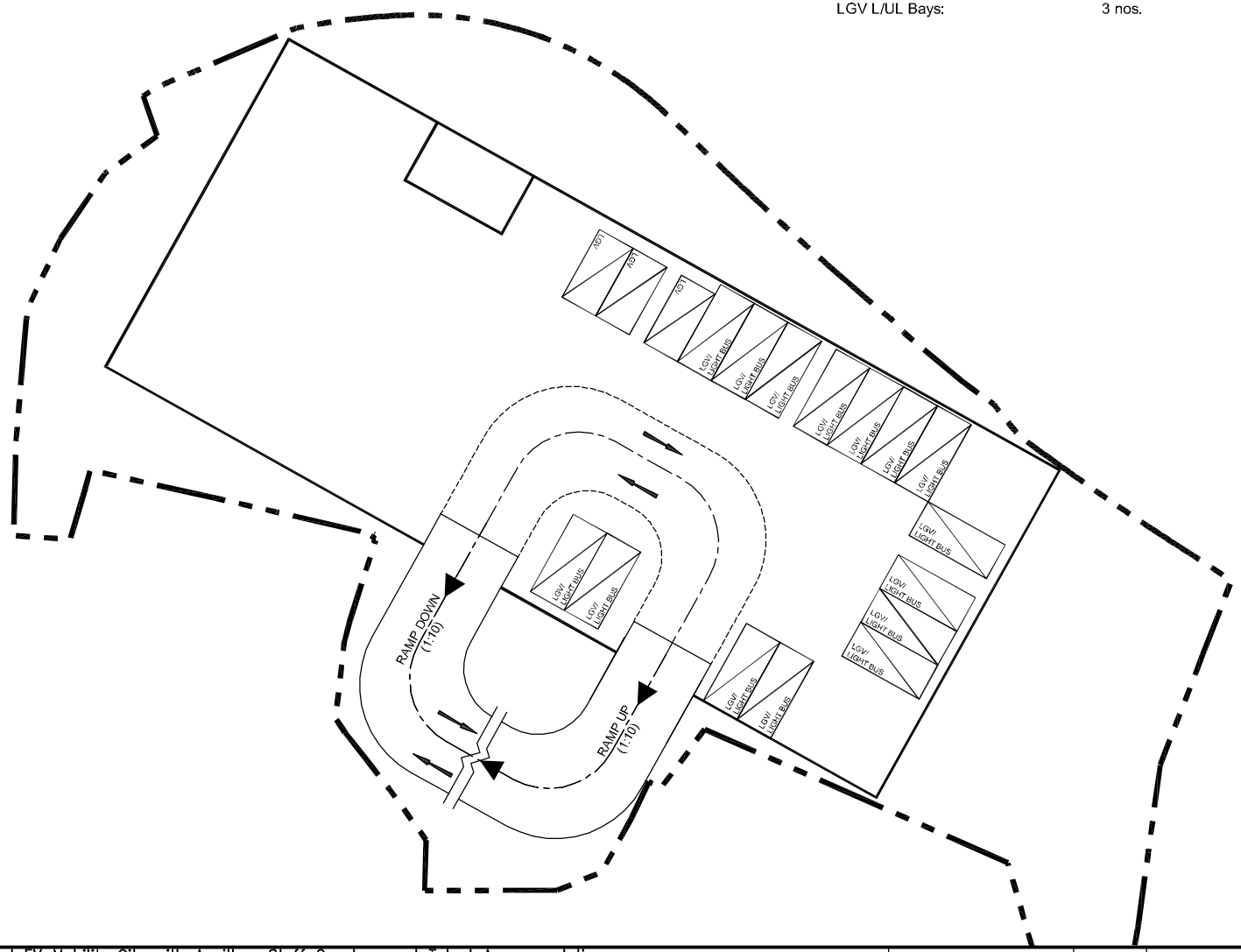
For EV Mobility City

LGV / LB Parking Spaces:	15 nos.
LGV L/UL Bays:	3 nos.



Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 3.6	Revision A
Figure Title	INDICATIVE INTERNAL TRANSPORT LAYOUT THIRD FLOOR (3/F)		Designed by W C H / Drawn by S C Y / Checked by K C	
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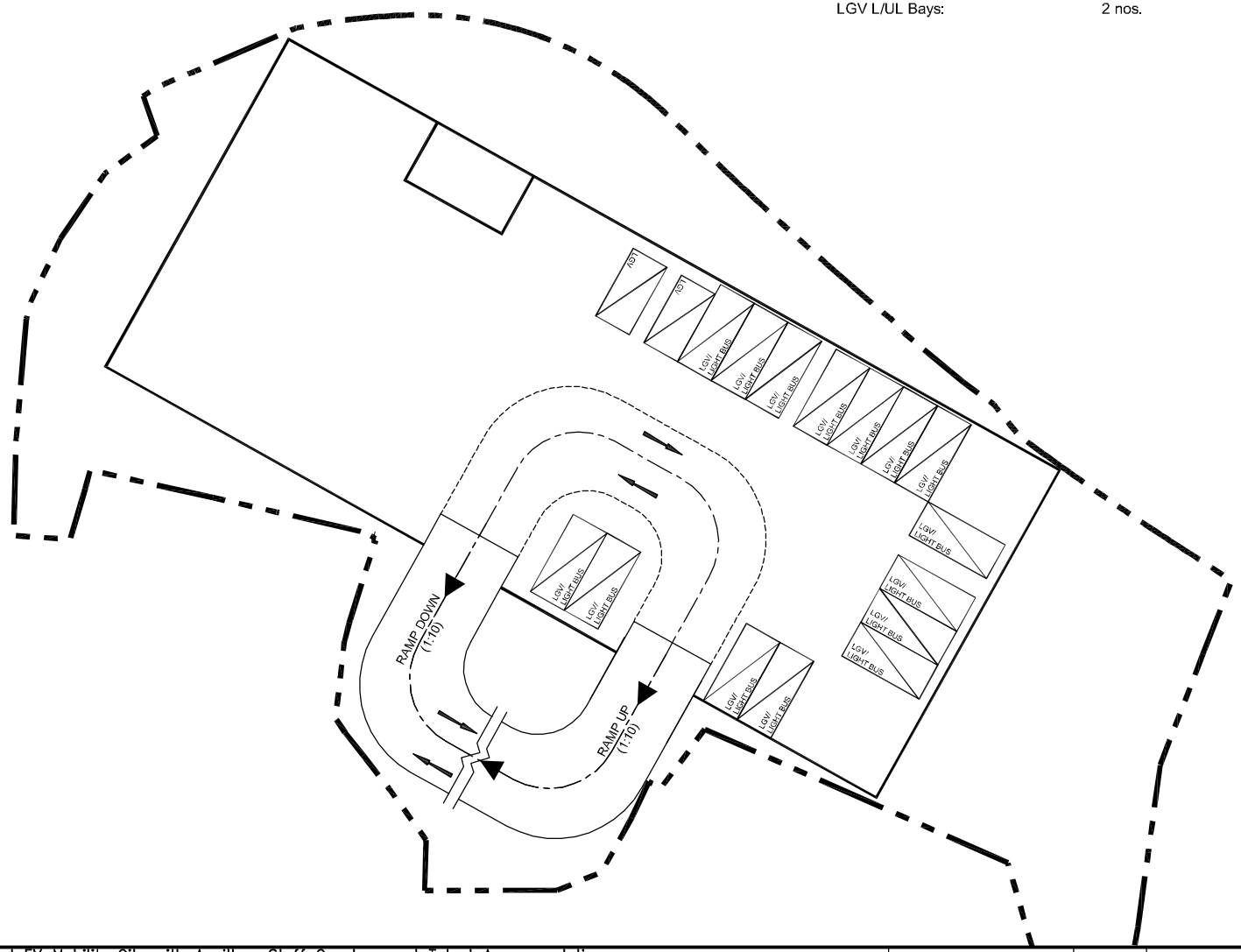
For EV Mobility City

LGV / LB Parking Spaces:	15 nos.
LGV L/UL Bays:	2 nos.



Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 3.7	Revision A
Figure Title	INDICATIVE INTERNAL TRANSPORT LAYOUT FOURTH FLOOR (4/F)		Designed by W C H / Drawn by S C Y / Checked by K C	
			Scale in A4 1 : 600 / Date 15 AUG 2025	

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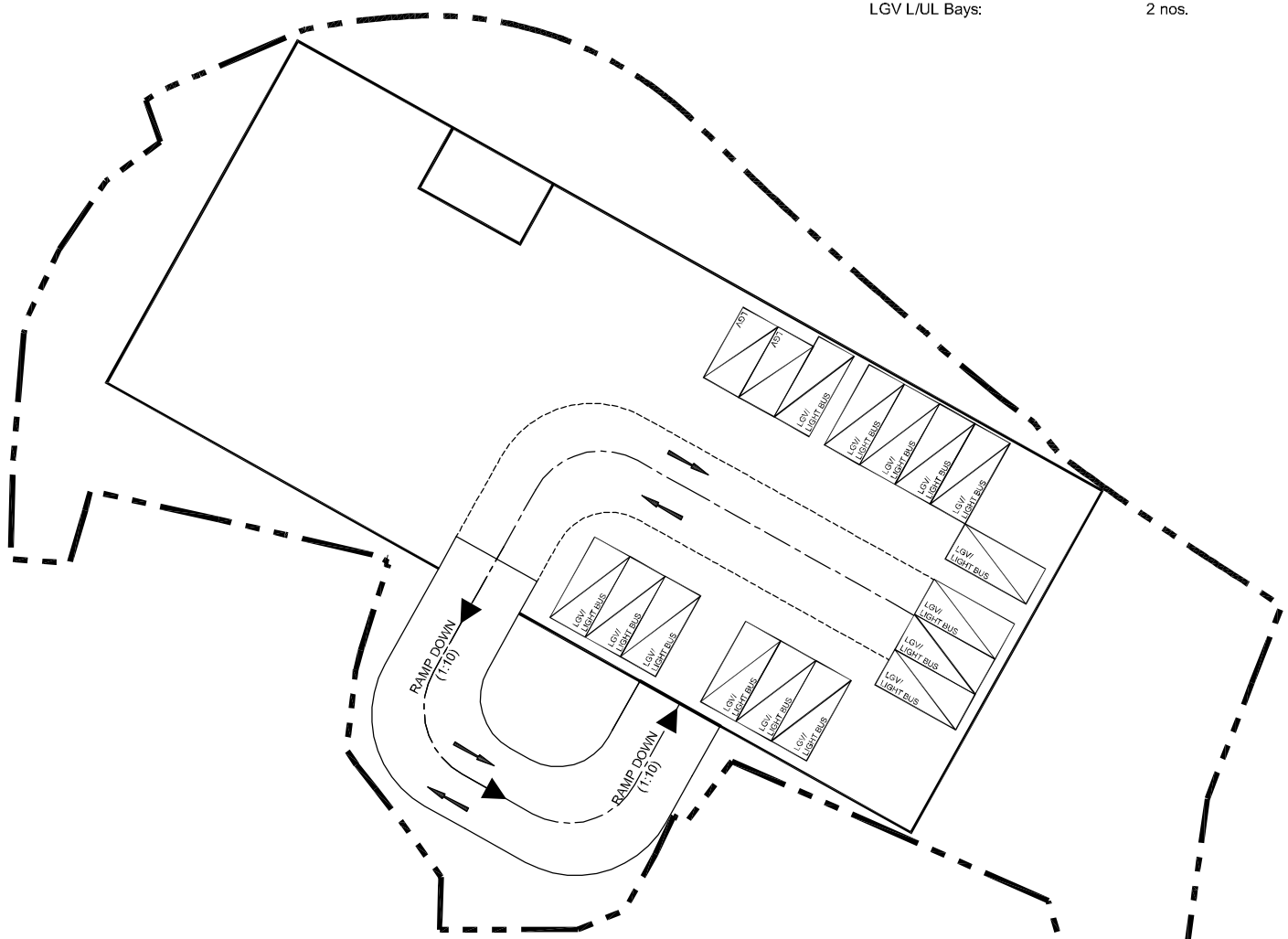
For EV Mobility City

LGV / LB Parking Spaces:	15 nos.
LGV L/UL Bays:	2 nos.



Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	Figure No. 3.8	Revision A	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk
Figure Title	INDICATIVE INTERNAL TRANSPORT LAYOUT FIFTH FLOOR (5/F)		Designed by W C H / Drawn by S C Y / Checked by K C Scale in A4 1 : 600 / Date 15 AUG 2025		

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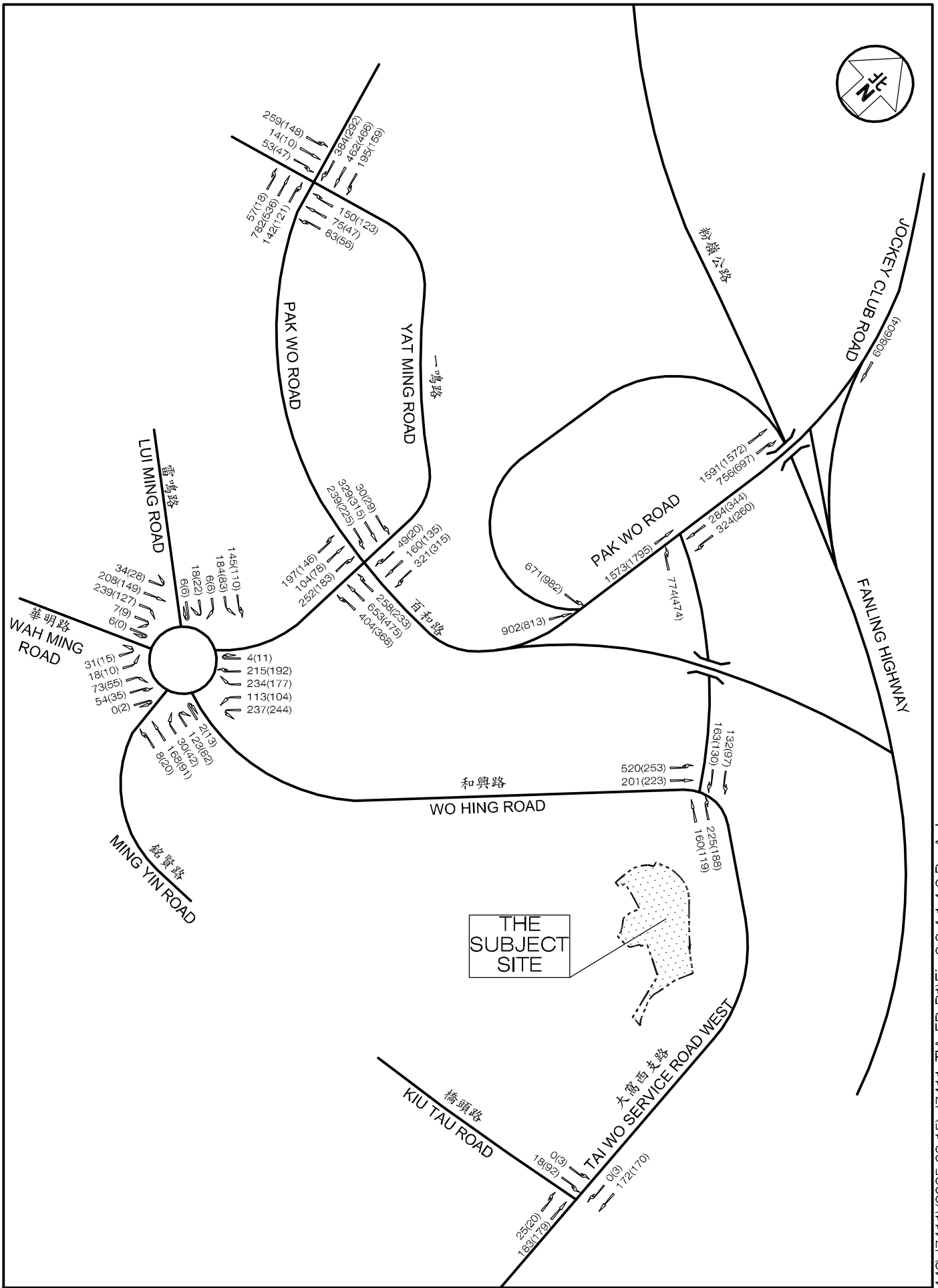

Project Title: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Wo Hing Road / Tai Wo Service Road West, Fanling, NT	Job No. J7411	Figure No. 4.1			Scale in A4 N.T.S.
	Designed by M C Y	Drawn by S C Y	Checked by K C	Revision A	Date 15 AUG 2025

Figure Title: YEAR 2034 PEAK HOUR TRAFFIC FLOW WITHOUT THE PROPOSED EV MOBILITY CITY

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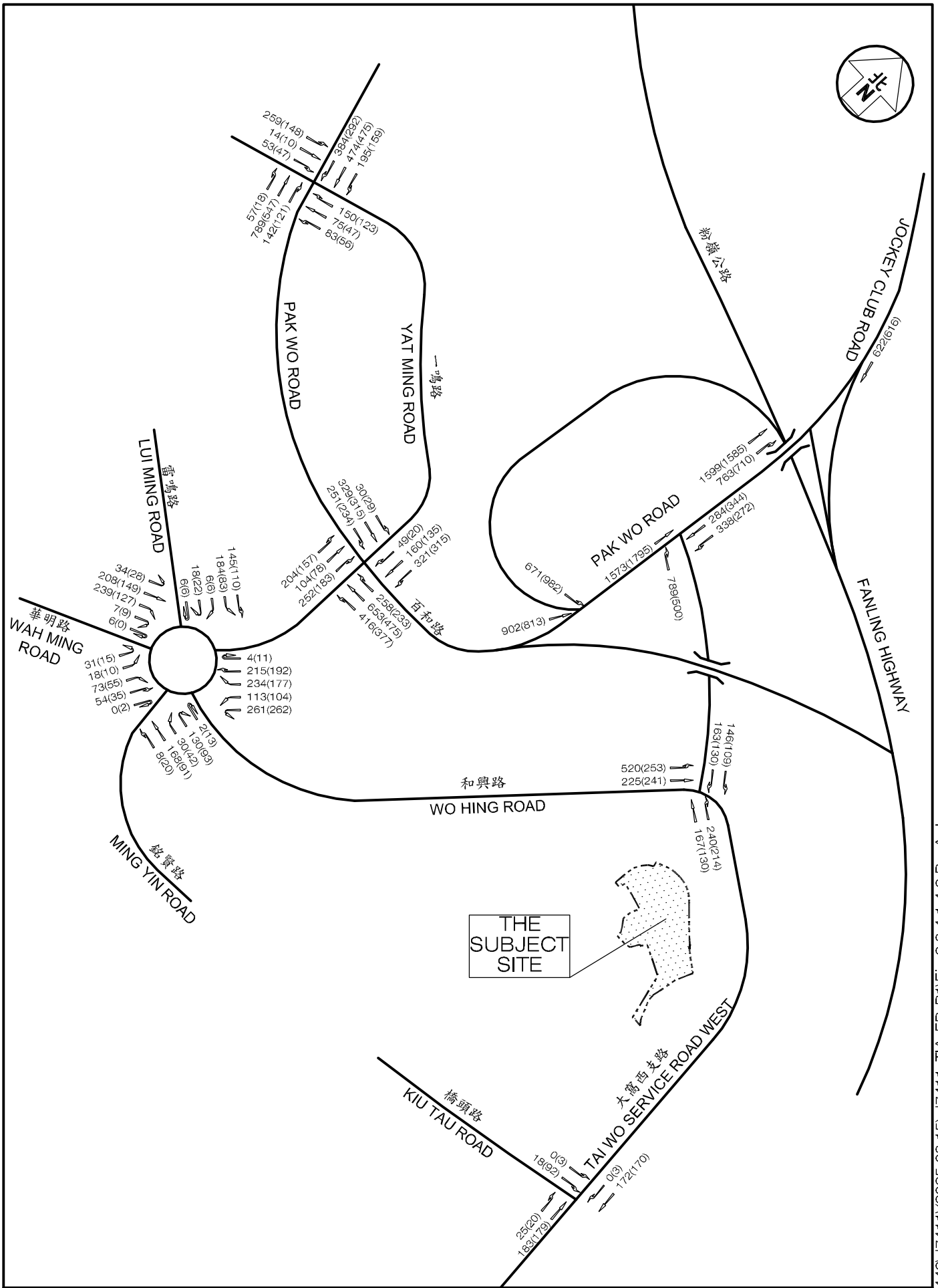

Project Title: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Wo Hing Road / Tai Wo Service Road West, Fanling, NT	Job No. J7411	Figure No. 4.2			Scale in A4 N.T.S.
	Designed by M C Y	Drawn by S C Y	Checked by K C	Revision A	Date 15 AUG 2025

Figure Title

YEAR 2034 PEAK HOUR TRAFFIC FLOW WITH THE PROPOSED EV MOBILITY CITY

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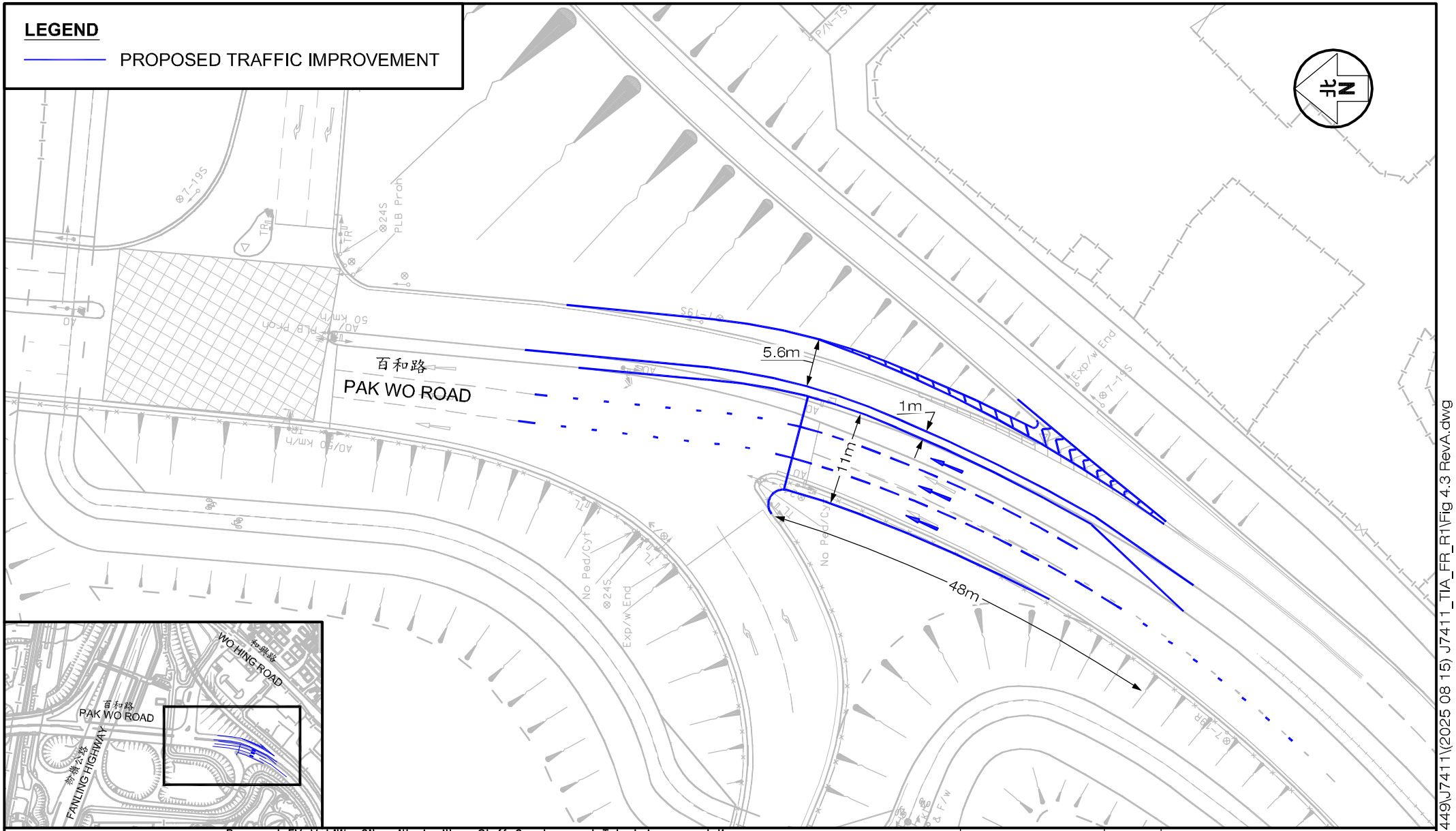
LEGEND

PROPOSED TRAFFIC IMPROVEMENT



Project Title	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land Wo Hing Road / Tai Wo Service Road West, Fanling, NT	J7411	
Figure Title	PROPOSED TRAFFIC IMPROVEMENT AT WO HOP SHEK INTERCHNAGE (J06)	Figure No. 4.3	Revision A
		Designed by W C H / Drawn by S C Y / Checked by K C	
		Scale in A4 1 : 500	Date 15 AUG 2025

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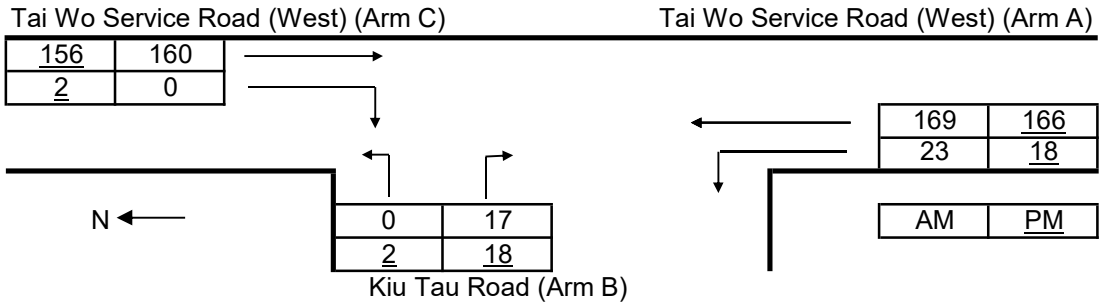
APPENDIX A -
Junction Capacity Analysis

Priority Junction Analysis

Junction:	Tai Wo Service Road (West) / Kiu Tau Road			Job Number:	J7411
Scenario:	Existing Condition				J1 - P. 1
Design Year:	2025	Designed By: MCY	Checked By: WCH	Date:	15 August 2025



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	7.3	V-rBA	50	w-BA	3.8	D	0.8932
	W-CR	0.0	V-lBA	50	w-BC	3.8	E	0.9502
			V-rBC	50	w-CB	0.0	F	0.6392
			V-rCB	90			Y	0.4963

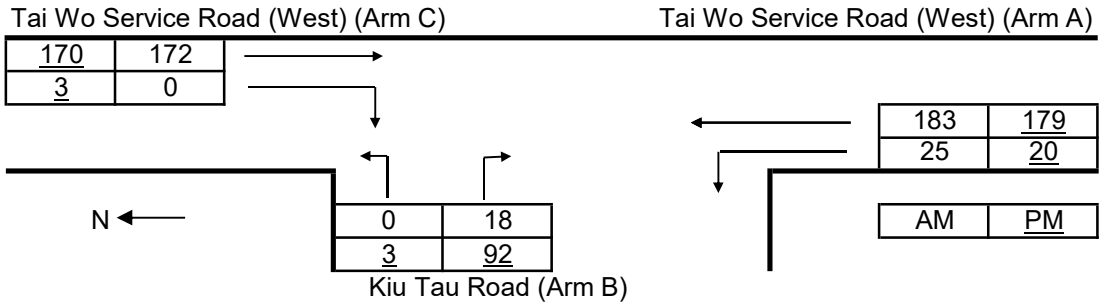
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	160	156	Q-BA	515	516
q-CB	0	2	Q-BC	677	678
q-AB	23	18	Q-CB	454	455
q-AC	169	166	Q-BAC	515	528
q-BA	17	18			
q-BC	0	2			
f	0.000	0.100			

Ratio-of-flow to Capacity	AM	PM
B-A	0.033	0.035
B-C	0.000	0.003
C-B	0.000	0.004
B-AC	0.033	0.038

Priority Junction Analysis

Junction:	Tai Wo Service Road (West) / Kiu Tau Road			Job Number:	J7411
Scenario:	Without Proposed EV Mobility City				J1 - P. 2
Design Year:	2034	Designed By: MCY	Checked By: WCH	Date:	15 August 2025



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	7.30	V-rBA	50	w-BA	3.80	D	0.8932
	W-CR	0.00	V-lBA	50	w-BC	3.80	E	0.9502
			V-rBC	50	w-CB	0.00	F	0.6392
			V-rCB	90			Y	0.4963

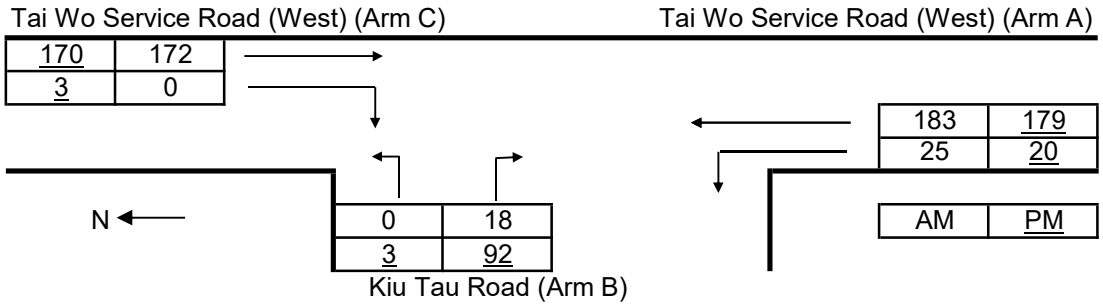
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	172	170	Q-BA	511	512
q-CB	0	3	Q-BC	675	676
q-AB	25	20	Q-CB	452	453
q-AC	183	179	Q-BAC	511	516
q-BA	18	92			
q-BC	0	3			
f	0.000	0.032			

Ratio-of-flow to Capacity	AM	PM
B-A	0.035	0.180
B-C	0.000	0.004
C-B	0.000	0.007
B-AC	0.035	0.184

Priority Junction Analysis

Junction:	Tai Wo Service Road (West) / Kiu Tau Road			Job Number:	J7411
Scenario:	With Proposed EV Mobility City				J1 - P. 3
Design Year:	2034	Designed By: MCY	Checked By: WCH	Date:	15 August 2025



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

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Geometry :	Input		Input		Input		Calculated	
	W	7.30	V-rBA	50	w-BA	3.80	D	0.8932
	W-CR	0.00	V-lBA	50	w-BC	3.80	E	0.9502
			V-rBC	50	w-CB	0.00	F	0.6392
			V-rCB	90			Y	0.4963

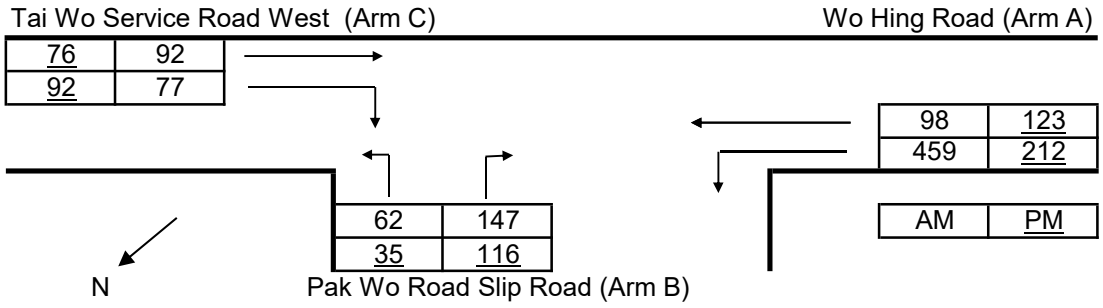
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	172	170	Q-BA	511	512
q-CB	0	3	Q-BC	675	676
q-AB	25	20	Q-CB	452	453
q-AC	183	179	Q-BAC	511	516
q-BA	18	92			
q-BC	0	3			
f	0.000	0.032			

Ratio-of-flow to Capacity	AM	PM
B-A	0.035	0.180
B-C	0.000	0.004
C-B	0.000	0.007
B-AC	0.035	0.184

Priority Junction Analysis

Junction:	Wo Hing Road / Tai Wo Service Road West			Job Number:	J7411
Scenario:	Existing Condition				J2 - P. 1
Design Year:	2025	Designed By: MCY	Checked By: WCH	Date:	15 August 2025



The predictive equations of capacity of movement are:

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E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

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w-BA, etc = lane width to vehicle

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v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	8.30	V-rBA	50	w-BA	3.70	D	0.8849
	W-CR	3.70	V-lBA	50	w-BC	3.70	E	0.9414
			V-rBC	50	w-CB	3.70	F	1.1222
			V-rCB	250			Y	0.4963

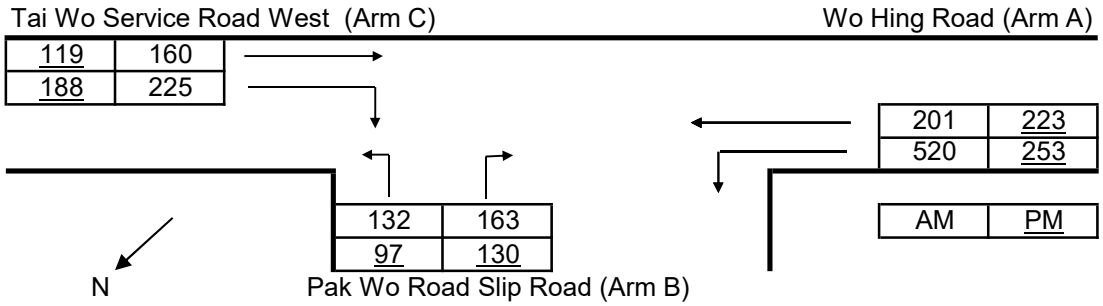
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	92	76	Q-BA	529	539
q-CB	77	92	Q-BC	654	666
q-AB	459	212	Q-CB	723	768
q-AC	98	123	Q-BAC	561	564
q-BA	147	116			
q-BC	62	35			
f	0.297	0.232			

Ratio-of-flow to Capacity	AM	PM
B-A	0.278	0.215
B-C	0.095	0.053
C-B	0.106	0.120
B-AC	0.373	0.268

Priority Junction Analysis

Junction:	Wo Hing Road / Tai Wo Service Road West			Job Number:	J7411
Scenario:	Without Proposed EV Mobility City				J2 - P. 2
Design Year:	2034	Designed By: MCY	Checked By: WCH	Date:	15 August 2025



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	W-CR	3.70	V-lBA	50	w-BC	3.70	E	0.9414
			V-rBC	50	w-CB	3.70	F	1.1222
			V-rCB	250			Y	0.4963

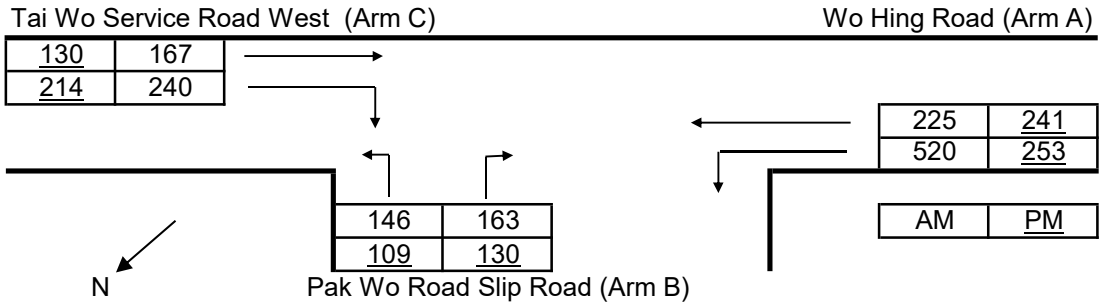
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	160	119	Q-BA	468	494
q-CB	225	188	Q-BC	632	646
q-AB	520	253	Q-CB	690	740
q-AC	201	223	Q-BAC	530	549
q-BA	163	130			
q-BC	132	97			
f	0.447	0.427			

Ratio-of-flow to Capacity	AM	PM
B-A	0.348	0.263
B-C	0.209	0.150
C-B	0.326	0.254
B-AC	0.557	0.413

Priority Junction Analysis

Junction:	Wo Hing Road / Tai Wo Service Road West			Job Number:	J7411
Scenario:	With Proposed EV Mobility City				J2 - P. 3
Design Year:	2034	Designed By:	MCY	Checked By: WCH	Date: 15 August 2025



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			V-rBC	50	w-CB	3.70	F	1.1222
			V-rCB	250			Y	0.4963

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	167	130	Q-BA	460	484
q-CB	240	214	Q-BC	628	643
q-AB	520	253	Q-CB	685	736
q-AC	225	241	Q-BAC	527	546
q-BA	163	130			
q-BC	146	109			
f	0.472	0.456			

Ratio-of-flow to Capacity	AM	PM
B-A	0.354	0.268
B-C	0.232	0.169
C-B	0.350	0.291
B-AC	0.587	0.438

Roundabout Analysis

Junction: Wah Ming Road Roundabout — Job Number: J7411
Scenario: Existing Condition — J3 - P. 1
Design Year: 2025 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	3	131	50	222	200				606	459
From B	58	1	4	155	27				245	513
From C	31	31	0	28	17				107	693
From D	203	220	6	5	32				466	373
From E	134	169	5	17	5				330	558
From F										
From G										
From H										
Total	429	552	65	427	281				1754	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	10	143	43	165	178				539	255
From B	42	12	16	84	39				193	436
From C	17	10	1	14	9				51	556
From D	137	117	8	0	21				283	772
From E	101	76	5	21	5				208	851
From F										
From G										
From H										
Total	307	358	73	284	252				1274	

Legend

Arm	Road (in clockwise order)
A	Wah Ming Road SB
B	Wo Hing Road
C	Ming Yin Road
D	Wah Ming Road EB
E	Lui Ming Road
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	9.0	7.0	42.0	8.0	45	54	0.4
From B	7.5	4.0	21.5	6.0	45	54	0.9
From C	8.0	8.0	15.0	7.5	45	61	0.0
From D	8.0	6.0	22.0	11.0	45	50	0.3
From E	8.5	5.0	22.0	9.0	45	38	0.6
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_2	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	8.111	0.223	1.409	0.942	2458	0.776	1980	2130	606	539	0.306	0.253
From B	5.221	0.223	1.409	0.920	1582	0.605	1170	1213	245	193	0.209	0.159
From C	8.000	0.223	1.409	0.876	2424	0.769	1657	1749	107	51	0.065	0.029
From D	7.264	0.223	1.409	0.935	2201	0.726	1805	1534	466	283	0.258	0.184
From E	6.559	0.223	1.409	0.977	1988	0.684	1568	1373	330	208	0.210	0.152
From F												
From G												
From H												

Roundabout Analysis

Junction: Wah Ming Road Roundabout — Job Number: J7411
Scenario: Without Proposed EV Mobility City — J3 - P. 2
Design Year: 2034 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	4	237	113	234	215				803	522
From B	123	2	8	168	30				331	609
From C	73	54	0	31	18				176	806
From D	208	239	7	6	34				494	525
From E	145	184	6	18	6				359	716
From F										
From G										
From H										
Total	553	716	134	457	303				2163	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	11	244	104	177	192				728	303
From B	82	13	20	91	42				248	529
From C	55	35	2	15	10				117	636
From D	149	127	9	0	28				313	935
From E	110	83	6	22	6				227	967
From F										
From G										
From H										
Total	407	502	141	305	278				1633	

Legend

Arm	Road (in clockwise order)
A	Wah Ming Road SB
B	Wo Hing Road
C	Ming Yin Road
D	Wah Ming Road EB
E	Lui Ming Road
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	9.0	7.0	42.0	8.0	45	54	0.4
From B	7.5	4.0	21.5	6.0	45	54	0.9
From C	8.0	8.0	15.0	7.5	45	61	0.0
From D	8.0	6.0	22.0	11.0	45	50	0.3
From E	8.5	5.0	22.0	9.0	45	38	0.6
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	w

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_3	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	8.111	0.223	1.409	0.942	2458	0.776	1934	2094	803	728	0.415	0.348
From B	5.221	0.223	1.409	0.920	1582	0.605	1117	1161	331	248	0.296	0.214
From C	8.000	0.223	1.409	0.876	2424	0.769	1581	1695	176	117	0.111	0.069
From D	7.264	0.223	1.409	0.935	2201	0.726	1702	1424	494	313	0.290	0.220
From E	6.559	0.223	1.409	0.977	1988	0.684	1463	1295	359	227	0.245	0.175
From F												
From G												
From H												

Roundabout Analysis

Junction:	Wah Ming Road Roundabout			Job Number:	J7411
Scenario:	With Proposed EV Mobility City				J3 - P. 3
Design Year:	2034	Designed By:	MCY	Checked By: WCH	Date: 15 August 2025

AM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	4	261	113	234	215				827	522
From B	130	2	8	168	30				338	609
From C	73	54	0	31	18				176	813
From D	208	239	7	6	34				494	532
From E	145	184	6	18	6				359	723
From F										
From G										
From H										
Total	560	740	134	457	303				2194	

PM Peak

Arm	To A	To B	To C	To D	To E	To F	To G	To H	Total	q_c
From A	11	262	104	177	192				746	303
From B	93	13	20	91	42				259	529
From C	55	35	2	15	10				117	647
From D	149	127	9	0	28				313	946
From E	110	83	6	22	6				227	967
From F										
From G										
From H										
Total	418	520	141	305	278				1662	

Legend

Arm	Road (in clockwise order)
A	Wah Ming Road SB
B	Wo Hing Road
C	Ming Yin Road
D	Wah Ming Road EB
E	Lui Ming Road
F	
G	
H	

Geometric Parameters

Arm	e (m)	v (m)	r (m)	L (m)	D (m)	∅ (°)	S
From A	9.0	7.0	42.0	8.0	45	54	0.4
From B	7.5	4.0	21.5	6.0	45	54	0.9
From C	8.0	8.0	15.0	7.5	45	61	0.0
From D	8.0	6.0	22.0	11.0	45	50	0.3
From E	8.5	5.0	22.0	9.0	45	38	0.6
From F							
From G							
From H							

Predictive Equation $Q_E = K(F - f_c q_c)$

Q_E	Entry Capacity
q_c	Circulating Flow across the Entry
K	= 1-0.00347(∅-30)-0.978[(1/r)-0.05]
F	= $303x_2$
f_c	= $0.210t_D(1+0.2x_2)$
t_D	= 1+0.5/(1+M)
M	= exp[(D-60)/10]
x_2	= v+(e-v)/(1+2S)
S	= 1.6(e-v)/L

Limitation

e	Entry Width	4.0 - 15.0 m
v	Approach Half Width	2.0 - 7.3 m
r	Entry Radius	6.0 - 100.0 m
L	Effective Length of Flare	1.0 - 100.0 m
D	Inscribed Circle Diameter	15 - 100 m
∅	Entry Angle	10° - 60°
S	Sharpness of Flare	0.0 - 3.0

Ratio-of-Flow to Capacity (RFC)

							Q_E		Entry Flow		RFC	
Arm	x_4	M	t_D	K	F	f_c	AM	PM	AM	PM	AM	PM
From A	8.111	0.223	1.409	0.942	2458	0.776	1934	2094	827	746	0.428	0.356
From B	5.221	0.223	1.409	0.920	1582	0.605	1117	1161	338	259	0.303	0.223
From C	8.000	0.223	1.409	0.876	2424	0.769	1576	1688	176	117	0.112	0.069
From D	7.264	0.223	1.409	0.935	2201	0.726	1697	1416	494	313	0.291	0.221
From E	6.559	0.223	1.409	0.977	1988	0.684	1458	1295	359	227	0.246	0.175
From F												
From G												
From H												

Signal Junction Analysis

Junction: Pak Wo Road / Yat Ming Road / Wah Ming Road — Job Number: J7411

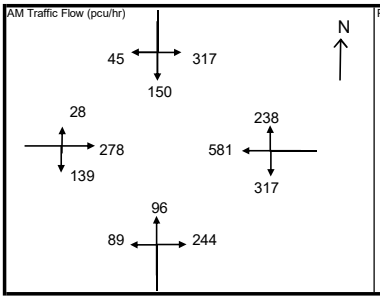
Scenario: Existing Condition — J4 - P. 1

Design Year: 2025 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

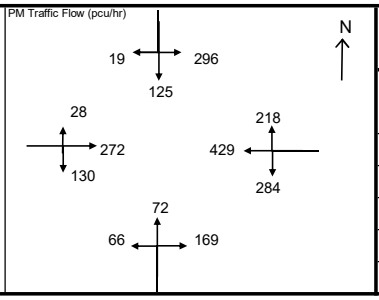
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Pak Wo Road EB	LT+SA	A1	1	3.40	15.0		16	1924	147	0.076	0.076	23	1911	143	0.075	
	SA	A2	1	3.30				2085	159	0.076			2085	157	0.075	
	RT	A3	1	3.30	15.0		100	1895	139	0.073		100	1895	130	0.069	0.069
Pak Wo Road WB	LT	B1	2	3.00	15.0		100	1741	317	0.182	0.182	100	1741	284	0.163	0.163
	SA	B2	2	3.00				2055	282	0.137			2055	223	0.109	
	SA+RT	B3	2	3.00	20.0		0	2055	299	0.145		7	2044	222	0.109	
	RT	B4	2	3.00	15.0		100	1868	238	0.127		100	1868	202	0.108	
Yat Ming Road SB	LT	C1	3	3.40	15.0		100	1777	218	0.123	0.123	100	1777	196	0.110	0.110
	LT+SA	C2	3	3.30	20.0		40	2024	249	0.123		32	2036	225	0.111	
	RT	C3	3	3.30	15.0		100	1895	45	0.024		100	1895	19	0.010	
Wah Ming Road NB	LT+SA	D1	4	3.40	15.0		65	1836	136	0.074	0.074	68	1831	97	0.053	0.053
	SA+RT	D2	4	3.30	25.0		67	2004	149	0.074		62	2010	107	0.053	
	RT	D3	4	3.30	20.0		100	1940	144	0.074		100	1940	103	0.053	

pedestrian phase	E(p)	1		min crossing time =	6	sec GM +	12	sec FGM =	18	sec		
	F(p)	2,3,4		min crossing time =	6	sec GM +	12	sec FGM =	18	sec		
	G(p)	3		min crossing time =	5	sec GM +	8	sec FGM =	13	sec		
	H(p)	1,2,4		min crossing time =	8	sec GM +	15	sec FGM =	23	sec		
	I(p)	2		min crossing time =	5	sec GM +	7	sec FGM =	12	sec		
	J(p)	1,3,4		min crossing time =	9	sec GM +	17	sec FGM =	26	sec		
	K(p)	4		min crossing time =	5	sec GM +	6	sec FGM =	11	sec		
	L(p)	1,2,3		min crossing time =	5	sec GM +	10	sec FGM =	15	sec		

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

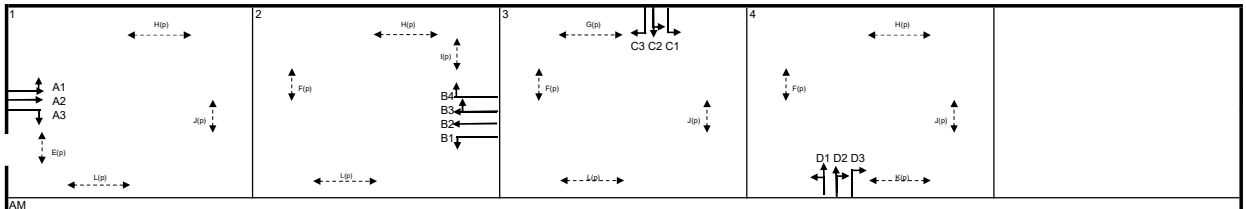


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)+(1+1.5f/r)$

Note:

	AM Peak Hour		PM Peak Hour	
	1+2+3+4		1+2+3+4	
Sum y	0.455		0.395	
L (s)	27		27	
C (s)	120		120	
practical y	0.698		0.698	
R.C. (%)	53%		77%	



AM G=	I/G =	9	G =	I/G =	6	G =	I/G =	7	G =	I/G =	9	G =	I/G =						
PM G=	I/G =	9	G =	I/G =	6	G =	I/G =	7	G =	I/G =	9	G =	I/G =						

Signal Junction Analysis

Junction: Pak Wo Road / Yat Ming Road / Wah Ming Road — Job Number: J7411

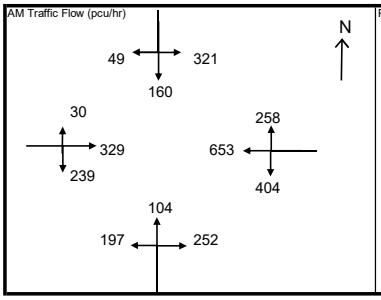
Scenario: Without Proposed EV Mobility City — J4 - P. 2

Design Year: 2034 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

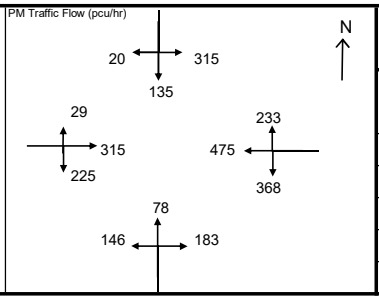
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Pak Wo Road EB	LT+SA	A1	1	3.40	15.0		15	1926	172	0.089	0.089	21	1915	165	0.086	
	SA	A2	1	3.30	0.0			2085	187	0.090			2085	179	0.086	
	RT	A3	1	3.30	15.0		100	1895	239	0.126		100	1895	225	0.119	0.119
Pak Wo Road WB	LT	B1	2	3.00	15.0		100	1741	404	0.232	0.232	100	1741	368	0.211	0.211
	SA	B2	2	3.00				2055	313	0.152			2055	244	0.119	
	SA+RT	B3	2	3.00	20.0		0	2055	340	0.165		7	2044	248	0.121	
	RT	B4	2	3.00	15.0		100	1868	258	0.138		100	1868	216	0.116	
Yat Ming Road SB	LT	C1	3	3.40	15.0		100	1777	225	0.127	0.127	100	1777	210	0.118	0.118
	LT+SA	C2	3	3.30	20.0		40	2024	256	0.126		33	2035	240	0.118	
	RT	C3	3	3.30	15.0		100	1895	49	0.026		100	1895	20	0.011	
Wah Ming Road NB	LT+SA	D1	4	3.40	15.0		100	1777	197	0.111	0.111	100	1777	146	0.082	0.082
	SA+RT	D2	4	3.30	25.0		48	2027	195	0.096		46	2029	144	0.071	
	RT	D3	4	3.30	20.0		100	1940	161	0.083		100	1940	117	0.060	

pedestrian phase	E(P)	1		min crossing time =	6	sec GM +	12	sec FGM =	18	sec
	F(P)	2,3,4		min crossing time =	6	sec GM +	12	sec FGM =	18	sec
	G(P)	3		min crossing time =	5	sec GM +	8	sec FGM =	13	sec
	H(P)	1,2,4		min crossing time =	8	sec GM +	15	sec FGM =	23	sec
	I(P)	2		min crossing time =	5	sec GM +	7	sec FGM =	12	sec
	J(P)	1,3,4		min crossing time =	9	sec GM +	17	sec FGM =	26	sec
	K(P)	4		min crossing time =	5	sec GM +	6	sec FGM =	11	sec
	L(P)	2,3,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

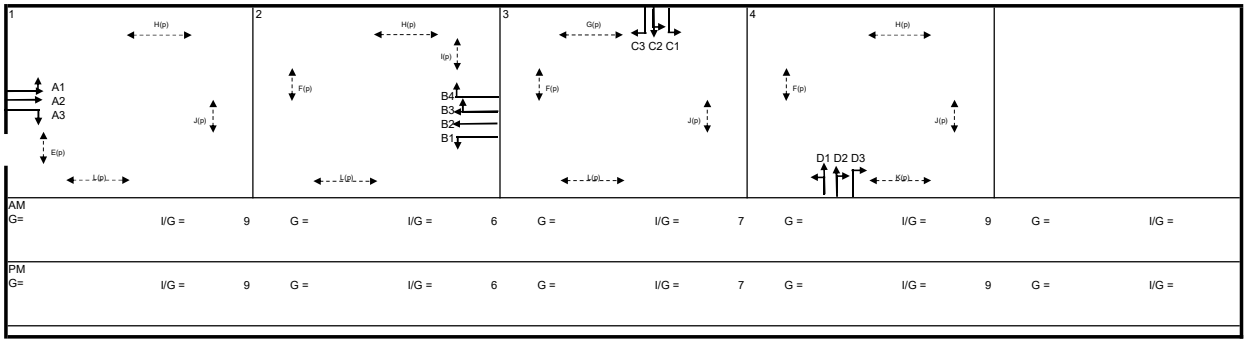


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)+(1+1.5f/r)$

Note:

	AM Peak Hour		PM Peak Hour	
	1+2+3+4		1+2+3+4	
Sum y	0.559		0.530	
L (s)	27		27	
C (s)	120		120	
practical y	0.698		0.698	
R.C. (%)	25%		31%	



AM G=		I/G =	9	G =		I/G =	6	G =		I/G =	7	G =		I/G =	9	G =		I/G =	
PM G=		I/G =	9	G =		I/G =	6	G =		I/G =	7	G =		I/G =	9	G =		I/G =	

Signal Junction Analysis

Junction: Pak Wo Road / Yat Ming Road / Wah Ming Road — Job Number: J7411

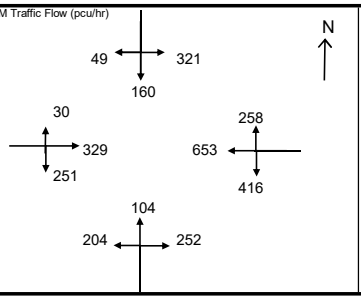
Scenario: With Proposed EV Mobility City — J4 - P. 3

Design Year: 2034 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

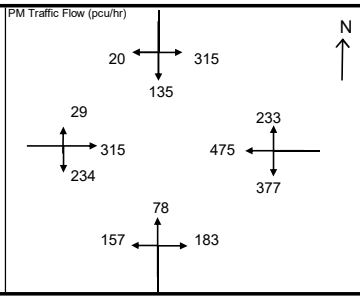
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Pak Wo Road EB	LT+SA	A1	1	3.40	15.0		15	1926	172	0.089		21	1915	165	0.086	
	SA	A2	1	3.30	0.0			2085	187	0.090	0.090		2085	179	0.086	
	RT	A3	1	3.30	15.0		100	1895	251	0.132		100	1895	234	0.123	0.123
Pak Wo Road WB	LT	B1	2	3.00	15.0		100	1741	416	0.239	0.239	100	1741	377	0.217	0.217
	SA	B2	2	3.00				2055	313	0.152			2055	244	0.119	
	SA+RT	B3	2	3.00	20.0		0	2055	340	0.165		7	2044	248	0.121	
	RT	B4	2	3.00	15.0		100	1868	258	0.138		100	1868	216	0.116	
Yat Ming Road SB	LT	C1	3	3.40	15.0		100	1777	225	0.127	0.127	100	1777	210	0.118	0.118
	LT+SA	C2	3	3.30	20.0		40	2024	256	0.126		33	2035	240	0.118	
	RT	C3	3	3.30	15.0		100	1895	49	0.026		100	1895	20	0.011	
Wah Ming Road NB	LT+SA	D1	4	3.40	15.0		100	1777	204	0.115	0.115	100	1777	157	0.088	0.088
	SA+RT	D2	4	3.30	25.0		48	2027	198	0.098		47	2028	148	0.073	
	RT	D3	4	3.30	20.0		100	1940	158	0.081		100	1940	113	0.058	

pedestrian phase	E(P)	1		min crossing time =	6	sec GM +	12	sec FGM =	18	sec
	F(P)	2,3,4		min crossing time =	6	sec GM +	12	sec FGM =	18	sec
	G(P)	3		min crossing time =	5	sec GM +	8	sec FGM =	13	sec
	H(P)	1,2,4		min crossing time =	8	sec GM +	15	sec FGM =	23	sec
	I(P)	2		min crossing time =	5	sec GM +	7	sec FGM =	12	sec
	J(P)	1,3,4		min crossing time =	9	sec GM +	17	sec FGM =	26	sec
	K(P)	4		min crossing time =	5	sec GM +	6	sec FGM =	11	sec
	L(P)	2,3,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

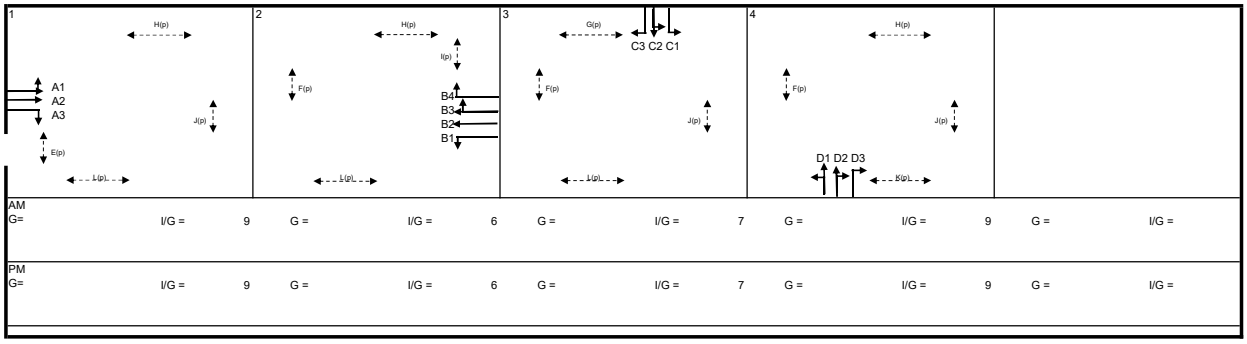


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)+(1+1.5f/r)$

Note:

	AM Peak Hour		PM Peak Hour	
	1+2+3+4		1+2+3+4	
Sum y	0.570		0.547	
L (s)	27		27	
C (s)	120		120	
practical y	0.698		0.698	
R.C. (%)	22%		28%	



AM G=	I/G =	9	G =	I/G =	6	G =	I/G =	7	G =	I/G =	9	G =	I/G =			
PM G=	I/G =	9	G =	I/G =	6	G =	I/G =	7	G =	I/G =	9	G =	I/G =			

Signal Junction Analysis

Junction: Pak Wo Road / Yat Ming Road / Wah Ming Road — Job Number: J7411

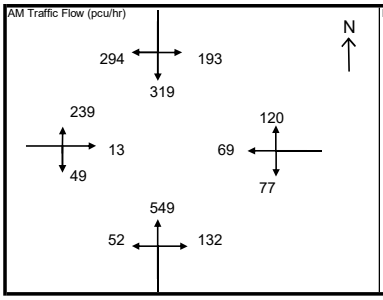
Scenario: Existing Condition — J5 - P. 1

Design Year: 2025 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

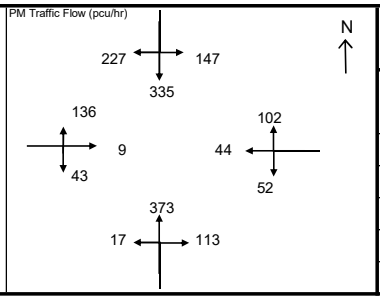
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Pak Wo Road SB	LT+SA	A1	1	3.50	15.0		61	1852	291	0.157	0.157	61	1852	266	0.144	0.144
	SA	A2	1	3.00				2055	322	0.157			2055	296	0.144	
	RT	A3	1	3.00	20.0		100	1912	294	0.154		100	1912	227	0.119	
Pak Wo Road NB	LT+SA	B1	2	3.50	15.0		18	1930	288	0.149	0.149	9	1947	188	0.097	0.097
	SA	B2	2	3.40				2095	313	0.149			2095	202	0.096	
	RT	B3	2	3.40	20.0		100	1949	132	0.068		100	1949	113	0.058	
Yat Ming Road WB	LT+SA	C1	3	3.50	15.0		92	1799	84	0.047	0.047	83	1814	63	0.035	0.035
	SA+RT	C2	3	3.00	25.0		34	2014	94	0.047		52	1993	69	0.035	
	RT	C3	3	3.00	20.0		100	1912	88	0.046		100	1912	66	0.035	
Wah Ming Road EB	LT	D1	4	3.40	15.0		100	1777	121	0.068	0.068	100	1777	70	0.039	0.039
	LT+SA	D2	4	3.30	15.0		90	1913	131	0.068		88	1916	75	0.039	
	RT	D3	4	3.30	20.0		100	1940	49	0.025		100	1940	43	0.022	

pedestrian phase	E(p)	1		min crossing time =	5	sec GM +	9	sec FGM =	14	sec
	F(p)	2,3,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec
	G(p)	3		min crossing time =	5	sec GM +	6	sec FGM =	11	sec
	H(p)	1,2,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec
	I(p)	2		min crossing time =	5	sec GM +	6	sec FGM =	11	sec
	J(p)	1,3,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec
	K(p)	4		min crossing time =	5	sec GM +	6	sec FGM =	11	sec
	L(p)	1,2,3		min crossing time =	5	sec GM +	10	sec FGM =	15	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

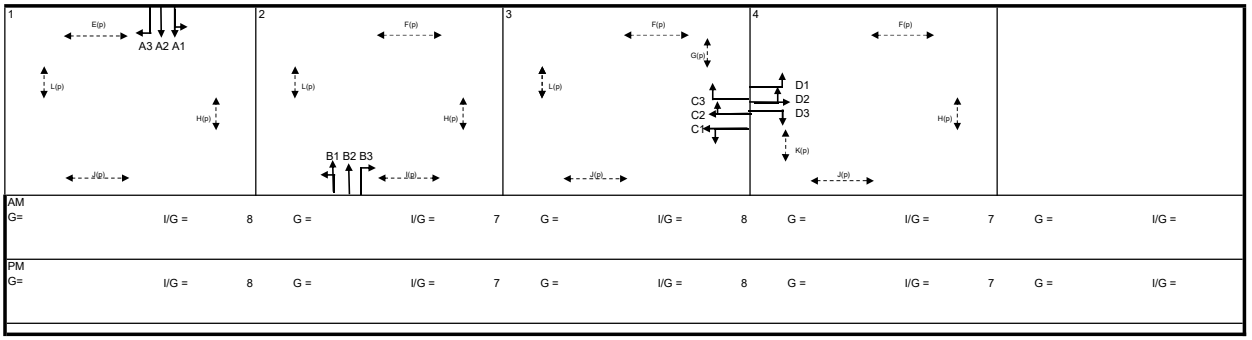


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

Note:

	AM Peak Hour		PM Peak Hour	
	1+2+3+4		1+2+3+4	
Sum y	0.421		0.314	
L (s)	26		26	
C (s)	110		110	
practical y	0.687		0.687	
R.C. (%)	63%		119%	



AM	G=		I/G =	8	G =		I/G =	7	G =		I/G =	8	G =		I/G =	7	G =		I/G =
PM	G=		I/G =	8	G =		I/G =	7	G =		I/G =	8	G =		I/G =	7	G =		I/G =

Signal Junction Analysis

Junction: Pak Wo Road / Yat Ming Road / Wah Ming Road — Job Number: J7411

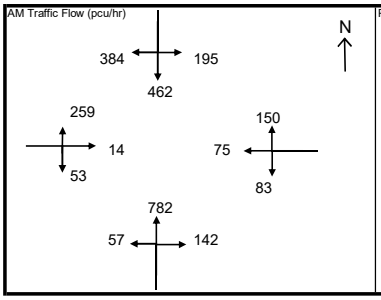
Scenario: Without Proposed EV Mobility City — J5 - P. 2

Design Year: 2034 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

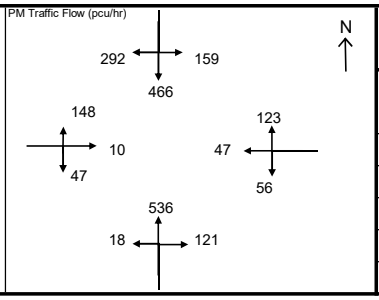
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Pak Wo Road SB	LT+SA	A1	1	3.50	15.0		48	1852	401	0.217	0.217	47	1877	362	0.193	0.193
	SA	A2	1	3.00				2055	445	0.217			2055	396	0.193	
	RT	A3	1	3.00	20.0		100	1912	384	0.201		100	1912	292	0.153	
Pak Wo Road NB	LT+SA	B1	2	3.50	15.0		14	1938	403	0.208	0.208	7	1951	267	0.137	0.137
	SA	B2	2	3.40				2095	436	0.208			2095	287	0.137	
	RT	B3	2	3.40	20.0		100	1949	142	0.073		100	1949	121	0.062	
Yat Ming Road WB	LT+SA	C1	3	3.50	15.0		86	1809	97	0.054		78	1823	72	0.039	
	SA+RT	C2	3	3.00	25.0		44	2002	108	0.054		60	1984	78	0.039	
	RT	C3	3	3.00	20.0		100	1912	103	0.054	0.054	100	1912	76	0.040	0.040
Wah Ming Road EB	LT	D1	4	3.40	13.0		100	1753	131	0.075	0.075	100	1753	75	0.043	0.043
	LT+SA	D2	4	3.30	15.0		90	1913	142	0.074		88	1916	83	0.043	
	RT	D3	4	3.30	20.0		100	1940	53	0.027		100	1940	47	0.024	

pedestrian phase	E(p)	1		min crossing time =	5	sec GM +	9	sec FGM =	14	sec
	F(p)	2,3,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec
	G(p)	3		min crossing time =	5	sec GM +	6	sec FGM =	11	sec
	H(p)	1,2,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec
	I(p)	2		min crossing time =	5	sec GM +	6	sec FGM =	11	sec
	J(p)	1,3,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec
	K(p)	4		min crossing time =	5	sec GM +	6	sec FGM =	11	sec
	L(p)	1,2,3		min crossing time =	5	sec GM +	10	sec FGM =	15	sec

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

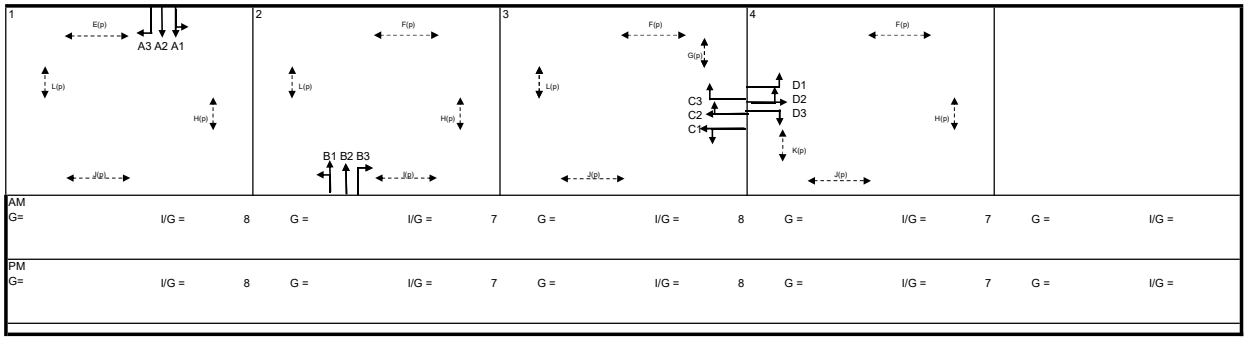


S=1940+100(W–3.25) S=2080+100(W–3.25)

S_M=S÷(1+1.5f/r) S_M=(S–230)÷(1+1.5f/r)

Note:

	AM Peak Hour		PM Peak Hour	
	1+2+3+4		1+2+3+4	
Sum y	0.553		0.412	
L (s)	26		26	
C (s)	110		110	
practical y	0.687		0.687	
R.C. (%)	24%		67%	



AM	G=		I/G =	8	G =		I/G =	7	G =		I/G =	8	G =		I/G =	7	G =		I/G =
PM	G=		I/G =	8	G =		I/G =	7	G =		I/G =	8	G =		I/G =	7	G =		I/G =

Signal Junction Analysis

Junction: Pak Wo Road / Yat Ming Road / Wah Ming Road — Job Number: J7411

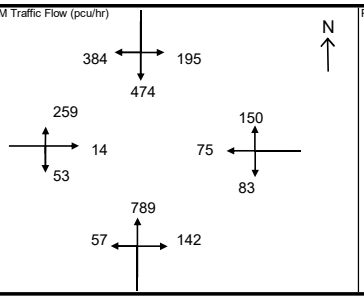
Scenario: With Proposed EV Mobility City — J5 - P. 3

Design Year: 2034 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

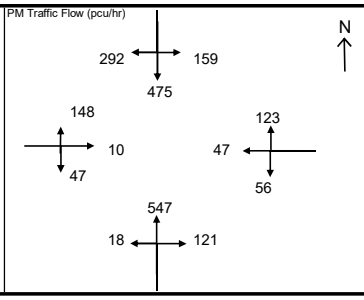
Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Pak Wo Road SB	LT+SA	A1	1	3.50	15.0		48	1852	407	0.220	0.220	46	1879	366	0.195	0.195
	SA	A2	1	3.00				2055	451	0.219			2055	401	0.195	
	RT	A3	1	3.00	20.0		100	1912	384	0.201		100	1912	292	0.153	
Pak Wo Road NB	LT+SA	B1	2	3.50	15.0		14	1938	407	0.210	0.210	7	1951	272	0.139	0.139
	SA	B2	2	3.40				2095	439	0.210			2095	293	0.140	
	RT	B3	2	3.40	20.0		100	1949	142	0.073		100	1949	121	0.062	
Yat Ming Road WB	LT+SA	C1	3	3.50	15.0		86	1809	97	0.054		78	1823	72	0.039	
	SA+RT	C2	3	3.00	25.0		44	2002	108	0.054		60	1984	78	0.039	0.039
	RT	C3	3	3.00	20.0		100	1912	103	0.054	0.054	100	1912	76	0.040	
Wah Ming Road EB	LT	D1	4	3.40	13.0		100	1753	131	0.075	0.075	100	1753	75	0.043	0.043
	LT+SA	D2	4	3.30	15.0		90	1913	142	0.074		88	1916	83	0.043	
	RT	D3	4	3.30	20.0		100	1940	53	0.027		100	1940	47	0.024	

pedestrian phase	E(p)	1		min crossing time =	5	sec GM +	9	sec FGM =	14	sec	
	F(p)	2,3,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	G(p)	3		min crossing time =	5	sec GM +	6	sec FGM =	11	sec	
	H(p)	1,2,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	I(p)	2		min crossing time =	5	sec GM +	6	sec FGM =	11	sec	
	J(p)	1,3,4		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	
	K(p)	4		min crossing time =	5	sec GM +	6	sec FGM =	11	sec	
	L(p)	1,2,3		min crossing time =	5	sec GM +	10	sec FGM =	15	sec	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

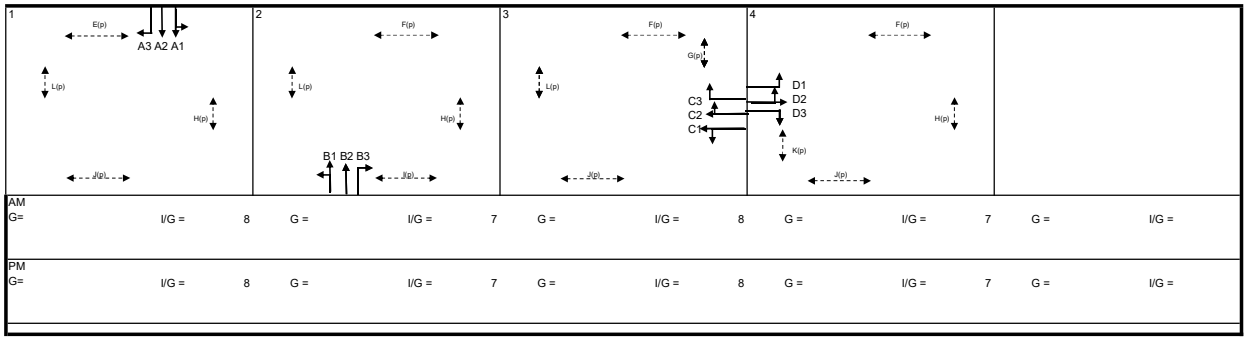


S=1940+100(W–3.25) S=2080+100(W–3.25)

S_M=S÷(1+1.5f/r) S_M=(S–230)÷(1+1.5f/r)

Note:

	AM Peak Hour		PM Peak Hour	
	1+2+3+4		1+2+3+4	
Sum y	0.558		0.416	
L (s)	26		26	
C (s)	110		110	
practical y	0.687		0.687	
R.C. (%)	23%		65%	



AM G=	I/G =	8	G =	I/G =	7	G =	I/G =	8	G =	I/G =	7	G =	I/G =				
PM G=	I/G =	8	G =	I/G =	7	G =	I/G =	8	G =	I/G =	7	G =	I/G =				

Signal Junction Analysis

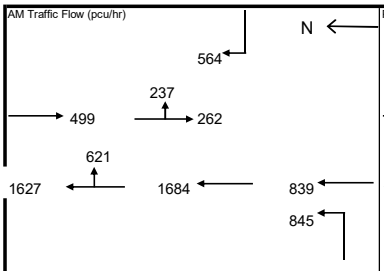
Junction: Wo Hop Shek Interchange — Job Number: J7411

Scenario: Existing Condition — J6 - P. 1

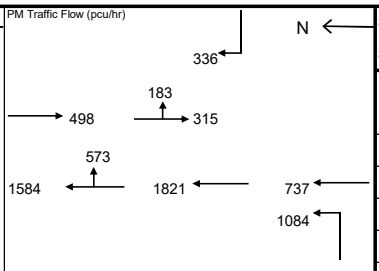
Design Year: 2025 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak					PM Peak				
							Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Pak Wo Road NB	SA	A1	1	3.30				1945	404	0.208			1945	355	0.183	
	SA	A2	1	3.40				2095	435	0.208			2095	382	0.182	
Fanling Highway	LT	B1	2,3	4.00	30.0		100	1919	407	0.212		100	1919	522	0.272	
Slip Road NB	LT	B2	2,3	4.00	35.0		100	2066	438	0.212		100	2066	562	0.272	
Pak Wo Road NB	SA	C1	1,2	3.00				1915	535	0.279			1915	579	0.302	
	SA	C2	1,2	3.00				2055	574	0.279			2055	621	0.302	
	SA	C3	1,2	3.00				2055	575	0.280			2055	621	0.302	
Pak Wo Road NB	RT	D3	1,3	3.00	15.0		100	1868	621	0.332	0.332	100	1868	573	0.307	0.307
Jockey Club Road SB	SA	E1	2	4.50				2065	499	0.242	0.242		2065	498	0.241	0.241
Pak Wo Road SB	LT	F1	1,2	3.40	20.0		100	1819	237	0.130		100	1819	183	0.101	
	SA	F2	1,2	3.30				2085	262	0.126			2085	315	0.151	
Wo Hing Road WB	RT	G1	3	3.30	20.0		100	1809	275	0.152		100	1809	164	0.091	
	RT	G2	3	3.30	15.0		100	1895	289	0.153		100	1895	172	0.091	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

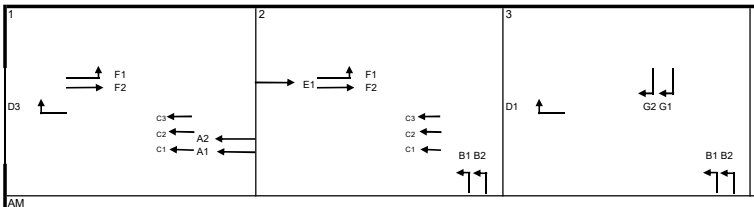


$S_M = S \div (1+1.5f/r)$ S=1940+100(W–3.25)

$S_M = (S-230) \div (1+1.5f/r)$ S=2080+100(W–3.25)

Note:

	AM Peak Hour		PM Peak Hour	
	1,3+2	1+2+3	1,3+2	1+2+3
Sum y	0.574	0.601	0.548	0.514
L (s)	12	17	12	17
C (s)	140	140	140	140
practical y	0.823	0.791	0.823	0.791
R.C. (%)	43%	32%	50%	54%



AM																
G=	I/G =	8	G =	I/G =	6	G =	I/G =		G =	I/G =		G =	I/G =			
AMG=	I/G =	8	G =	I/G =	6	G =	I/G =	6	G =	I/G =		G =	I/G =			
PM																
G=	I/G =	8	G =	I/G =	6	G =	I/G =		G =	I/G =		G =	I/G =			
G =	I/G =	8	G =	I/G =	6	G =	I/G =	6	G =	I/G =		G =	I/G =			

Signal Junction Analysis

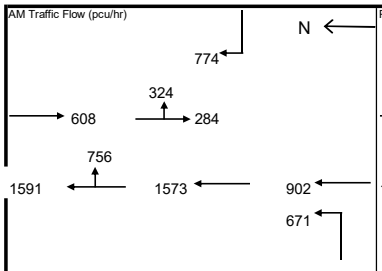
Junction: Wo Hop Shek Interchange — Job Number: J7411

Scenario: Without Proposed EV Mobility City — J6 - P. 2

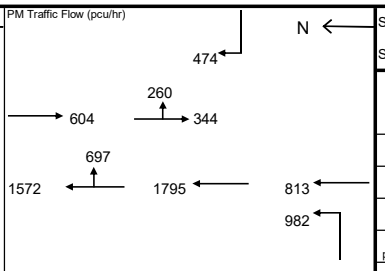
Design Year: 2034 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Pak Wo Road NB	SA	A1	1	3.30				1945	434	0.223			1945	391	0.201	
	SA	A2	1	3.40				2095	468	0.223			2095	422	0.201	
Fanling Highway	LT	B1	2,3	4.00	30.0		100	1919	323	0.168		100	1919	473	0.246	
Slip Road NB	LT	B2	2,3	4.00	35.0		100	2066	348	0.168		100	2066	509	0.246	
Pak Wo Road NB	SA	C1	1,2	3.00				1915	500	0.261			1915	571	0.298	
	SA	C2	1,2	3.00				2055	537	0.261			2055	612	0.298	
	SA	C3	1,2	3.00				2055	536	0.261			2055	612	0.298	
Pak Wo Road NB	RT	D3	1,3	3.00	15.0		100	1868	756	0.405	0.405	100	1868	697	0.373	0.373
Jockey Club Road SB	SA	E1	2	4.50				2065	608	0.294	0.294		2065	604	0.292	0.292
Pak Wo Road SB	LT	F1	1,2	3.40	20.0		100	1819	324	0.178		100	1819	260	0.143	
	SA	F2	1,2	3.30				2085	284	0.136			2085	344	0.165	
Wo Hing Road WB	RT	G1	3	3.30	20.0		100	1809	378	0.209		100	1809	231	0.128	
	RT	G2	3	3.30	15.0		100	1895	396	0.209		100	1895	243	0.128	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

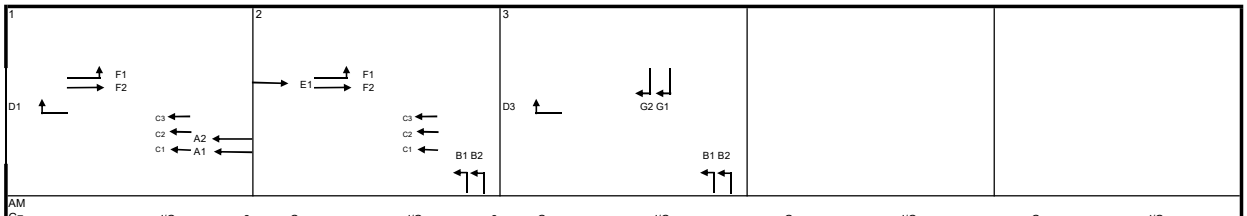


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)+(1+1.5f/r)$

	AM Peak Hour 1,3+2	AM Peak Hour 1+2+3	PM Peak Hour 1,3+2	PM Peak Hour 1+2+3
Sum y	0.699	0.727	0.666	0.622
L (s)	12	17	12	17
C (s)	140	140	140	140
practical y	0.823	0.791	0.823	0.791
R.C. (%)	18%	9%	24%	27%

Note:



AM																			
G=		I/G =	8	G =		I/G =	6	G =		I/G =		G =		I/G =		G =		I/G =	
G =		I/G =	8	G =		I/G =	6	G =		I/G =	6	G =		I/G =		G =		I/G =	
PM																			
G=		I/G =	8	G =		I/G =	6	G =		I/G =		G =		I/G =		G =		I/G =	
G =		I/G =	8	G =		I/G =	6	G =		I/G =	6	G =		I/G =		G =		I/G =	

Signal Junction Analysis

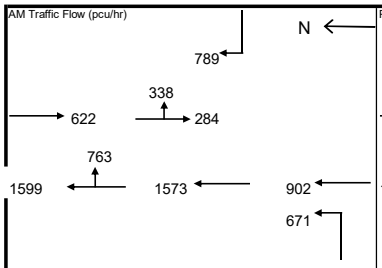
Junction: Wo Hop Shek Interchange — Job Number: J7411

Scenario: With Proposed EV Mobility City — J6 - P. 3

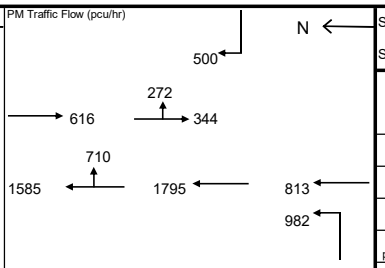
Design Year: 2034 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Pak Wo Road NB	SA	A1	1	3.30				1945	434	0.223			1945	391	0.201	
	SA	A2	1	3.40				2095	468	0.223			2095	422	0.201	
Fanling Highway	LT	B1	2,3	4.00	30.0		100	1919	323	0.168		100	1919	473	0.246	
Slip Road NB	LT	B2	2,3	4.00	35.0		100	2066	348	0.168		100	2066	509	0.246	
Pak Wo Road NB	SA	C1	1,2	3.00				1915	500	0.261			1915	571	0.298	
	SA	C2	1,2	3.00				2055	537	0.261			2055	612	0.298	
	SA	C3	1,2	3.00				2055	536	0.261			2055	612	0.298	
Pak Wo Road NB	RT	D3	1,3	3.00	15.0		100	1868	763	0.408	0.408	100	1868	710	0.380	0.380
Jockey Club Road SB	SA	E1	2	4.50				2065	622	0.301	0.301		2065	616	0.298	0.298
Pak Wo Road SB	LT	F1	1,2	3.40	20.0		100	1819	338	0.186		100	1819	272	0.150	
	SA	F2	1,2	3.30				2085	284	0.136			2085	344	0.165	
Wo Hing Road WB	RT	G1	3	3.30	15.0		100	1768	390	0.221		100	1768	247	0.140	
	RT	G2	3	3.30	10.0		100	1813	399	0.220		100	1813	253	0.140	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

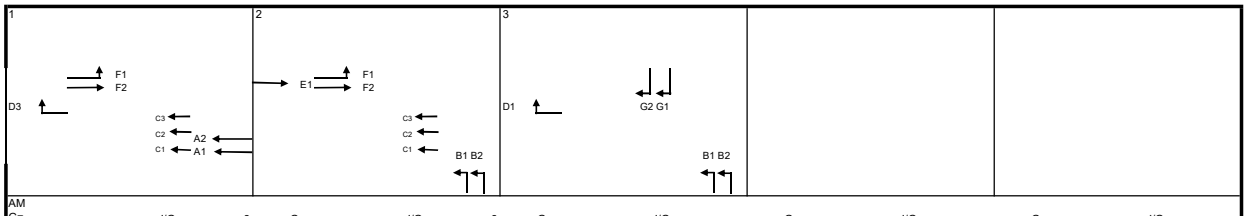


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)+(1+1.5f/r)$

Note:

	AM Peak Hour 1,3+2	AM Peak Hour 1+2+3	PM Peak Hour 1,3+2	PM Peak Hour 1+2+3
Sum y	0.710	0.745	0.678	0.639
L (s)	12	17	12	17
C (s)	140	140	140	140
practical y	0.823	0.791	0.823	0.791
R.C. (%)	16%	6%	21%	24%



AM G=	I/G =	8	G =	I/G =	6	G =	I/G =		G =	I/G =		G =	I/G =						
G =	I/G =	8	G =	I/G =	6	G =	I/G =	6	G =	I/G =		G =	I/G =						
PM G=	I/G =	8	G =	I/G =	6	G =	I/G =		G =	I/G =		G =	I/G =						
G =	I/G =	8	G =	I/G =	6	G =	I/G =	6	G =	I/G =		G =	I/G =						

Signal Junction Analysis

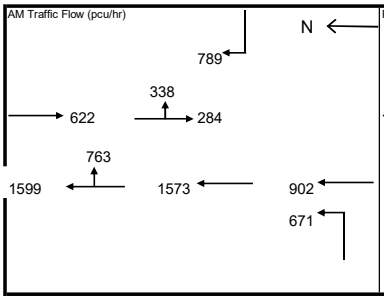
Junction: Wo Hop Shek Interchange — Job Number: J7411

Scenario: With Proposed EV Mobility City (With Traffic Improvement) — J6 - P. 4

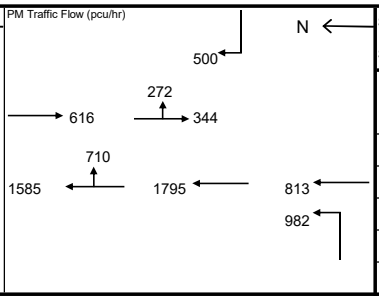
Design Year: 2034 — Designed By: MCY — Checked By: WCH — Date: 15 August 2025

Approach		Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	AM Peak Turning %	AM Peak Sat. Flow (pcu/hr)	AM Peak Flow (pcu/hr)	AM Peak y value	AM Peak Critical y	PM Peak Turning %	PM Peak Sat. Flow (pcu/hr)	PM Peak Flow (pcu/hr)	PM Peak y value	PM Peak Critical y
Pak Wo Road NB	SA	A1	1	3.75				1990	288	0.145			1990	260	0.131	
	SA	A2	1	3.65				2120	307	0.145			2120	277	0.131	
	SA	A3	1	3.65				2120	307	0.145			2120	276	0.130	
Fanling Highway	LT	B1	2,3	4.00	30.0		100	1919	323	0.168		100	1919	473	0.246	
Slip Road NB	LT	B2	2,3	4.00	35.0		100	2066	348	0.168		100	2066	509	0.246	
Pak Wo Road NB	SA	C1	1,2	3.00				1915	500	0.261			1915	571	0.298	
	SA	C2	1,2	3.00				2055	537	0.261			2055	612	0.298	
	SA	C3	1,2	3.00				2055	536	0.261			2055	612	0.298	
Pak Wo Road NB	RT	D3	1,3	3.00	15.0		100	1868	763	0.408	0.408	100	1868	710	0.380	0.380
Jockey Club Road SB	SA	E1	2	4.50				2065	622	0.301	0.301		2065	616	0.298	0.298
Pak Wo Road SB	LT	F1	1,2	3.40	20.0		100	1819	338	0.186		100	1819	272	0.150	
	SA	F2	1,2	3.40				2095	284	0.136			2095	344	0.164	
Wo Hing Road WB	RT	G1	3	3.30	15.0		100	1768	390	0.221		100	1768	247	0.140	
	RT	G2	3	3.30	10.0		100	1813	399	0.220		100	1813	253	0.140	

AM Traffic Flow (pcu/hr)



PM Traffic Flow (pcu/hr)

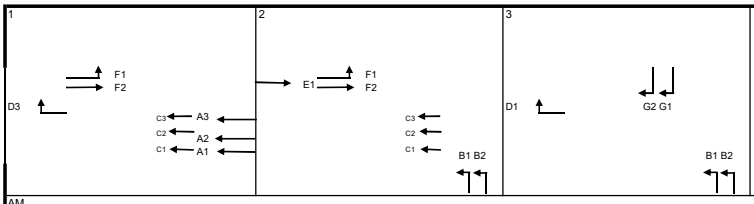


$S=1940+100(W-3.25)$ $S=2080+100(W-3.25)$

$S_M=S\div(1+1.5f/r)$ $S_M=(S-230)\div(1+1.5f/r)$

Note:

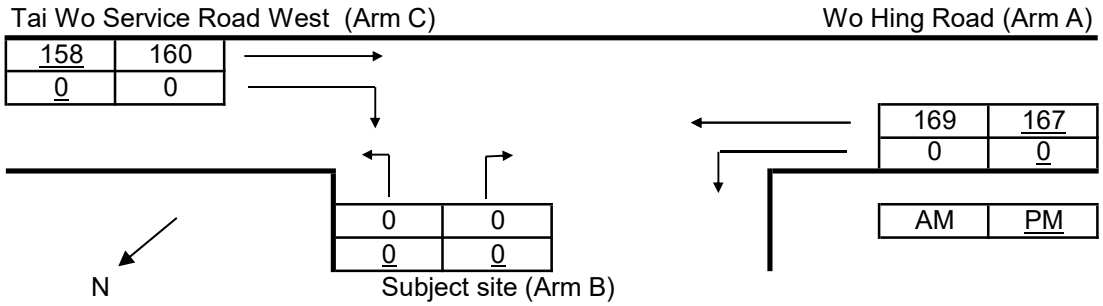
	AM Peak Hour 1,3+2	AM Peak Hour 1+2+3	PM Peak Hour 1,3+2	PM Peak Hour 1+2+3
Sum y	0.710	0.667	0.678	0.569
L (s)	12	17	12	17
C (s)	140	140	140	140
practical y	0.823	0.791	0.823	0.791
R.C. (%)	16%	19%	21%	39%



AM G=	I/G =	8	G =	I/G =	6	G =	I/G =		G =	I/G =		G =	I/G =										
AM G=	I/G =	8	G =	I/G =	6	G =	I/G =	6	G =	I/G =		G =	I/G =										
PM G=	I/G =	8	G =	I/G =	6	G =	I/G =		G =	I/G =		G =	I/G =										
G =	I/G =	8	G =	I/G =	6	G =	I/G =	6	G =	I/G =		G =	I/G =										

Priority Junction Analysis

Junction:	Wo Hing Road / Tai Wo Service Road West			Job Number:	J7411
Scenario:	Existing Condition				J7 - P. 1
Design Year:	2025	Designed By: MCY	Checked By: WCH	Date:	15 August 2025



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	8.50	V-rBA	60	w-BA	7.30	D	1.2020
	W-CR	4.00	V-lBA	60	w-BC	7.30	E	1.2706
			V-rBC	60	w-CB	3.70	F	0.9504
			V-rCB	60			Y	0.4963

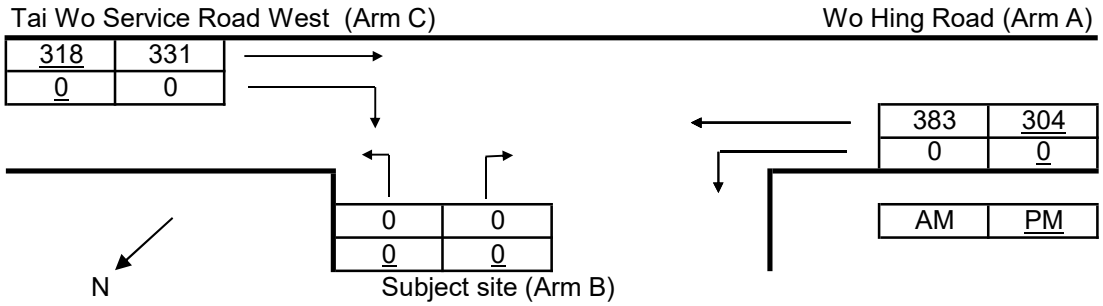
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	160	158	Q-BA	762	763
q-CB	0	0	Q-BC	908	908
q-AB	0	0	Q-CB	679	679
q-AC	169	167	Q-BAC	762	763
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.000	0.000

Priority Junction Analysis

Junction:	Wo Hing Road / Tai Wo Service Road West			Job Number:	J7411
Scenario:	Without Proposed EV Mobility City				J7 - P. 2
Design Year:	2034	Designed By: MCY	Checked By: WCH	Date:	15 August 2025



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	8.50	V-rBA	60	w-BA	3.00	D	0.8402
	W-CR	4.00	V-lBA	60	w-BC	3.00	E	0.8882
			V-rBC	60	w-CB	3.70	F	0.9504
			V-rCB	60			Y	0.4963

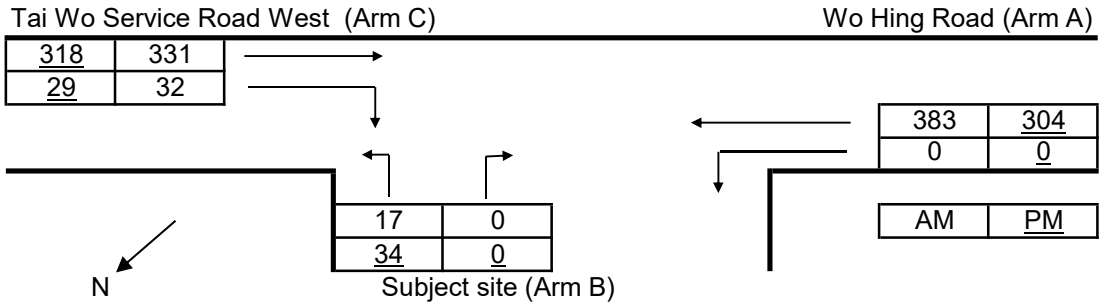
Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	331	318	Q-BA	484	497
q-CB	0	0	Q-BC	600	613
q-AB	0	0	Q-CB	642	656
q-AC	383	304	Q-BAC	484	497
q-BA	0	0			
q-BC	0	0			
f	0.000	0.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.000	0.000
C-B	0.000	0.000
B-AC	0.000	0.000

Priority Junction Analysis

Junction:	Wo Hing Road / Tai Wo Service Road West			Job Number:	J7411
Scenario:	With Proposed EV Mobility City				J7 - P. 3
Design Year:	2034	Designed By: MCY	Checked By: WCH	Date:	15 August 2025



The predictive equations of capacity of movement are:

Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]

Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]

Q-CB = F[745 - 0.364Y(q-AC + q-AB)]

The geometric parameters represented by D, E, F are:

D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-lBA - 150)]

E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]

F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]

where Y = 1 - 0.0345W

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W	8.50	V-rBA	60	w-BA	3.00	D	0.8402
	W-CR	4.00	V-lBA	60	w-BC	3.00	E	0.8882
			V-rBC	60	w-CB	3.70	F	0.9504
			V-rCB	60			Y	0.4963

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	331	318	Q-BA	477	491
q-CB	32	29	Q-BC	600	613
q-AB	0	0	Q-CB	642	656
q-AC	383	304	Q-BAC	600	613
q-BA	0	0			
q-BC	17	34			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.028	0.055
C-B	0.050	0.044
B-AC	0.028	0.055

APPENDIX B -
Planned Traffic Improvement by Others

JOCKEY CLUB ROAD

EXISTING PT SERVICES PRESUMED TO STOP AT FUTURE BBI:
227E, 227P, 227X, 264R, 265S, 270A, 270B, 270P, 278P,
278X, 673, 678, N42A, N42P, T277

(3) PROPOSED BUS LAY-BY
(TO TAI PO)

PROPOSED SIGNALISED
PEDESTRIAN CROSSING

PROPOSED RUN-IN ACCESS
FOR PROPOSED DEVELOPMENT

FANLING HIGHWAY

TAI WO SERVICE
ROAD WEST

(1) PROPOSED FEEDER
SERVICE LAY-BY

(4) RELOCATED BUS STOP

(5) PROPOSED TAXI STAND

(2) PROPOSED BUS LAY-BY
(TO FANLING / SHEUNG SHUI)

27.4m
15m
10m
20m
11m
13.8m
10m
10m
414m
10m
20m
30m
13m
20m

PROPOSED EVA FOR
PROPOSED DEVELOPMENT

PROPOSED SEPERATE RUN-IN
FOR ACCESS TO SCHOOL

(7) PROPOSED GENERAL LAY-BY

(6) PROPOSED PUBLIC
CUL-DE-SAC

TAI WO SERVICE ROAD EAST

和合石村
Wo Hop Shek Village

0 10 20 30 40 50
METRES
1 : 2000

LEGEND :

SITE BOUNDARY

FUTURE TRAFFIC ARRANGEMENT

Rev	Description	By	Date
B	GENERAL AMENDMENT	WTL	02/23
A	GENERAL AMENDMENT	WTL	11/22

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

PROPOSED TRAFFIC ARRANGEMENT FOR PROPOSED SITE

Drawing no.	Rev.
CE47/T04/TTIA/302	B

Drawn	Date	Checked	Approved
WTL	MAY 2023	-	DC

Scale	Status
1:2000 (A3)	-

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土木工程處
CIVIL ENGINEERING OFFICE

Date : 6/6/2023
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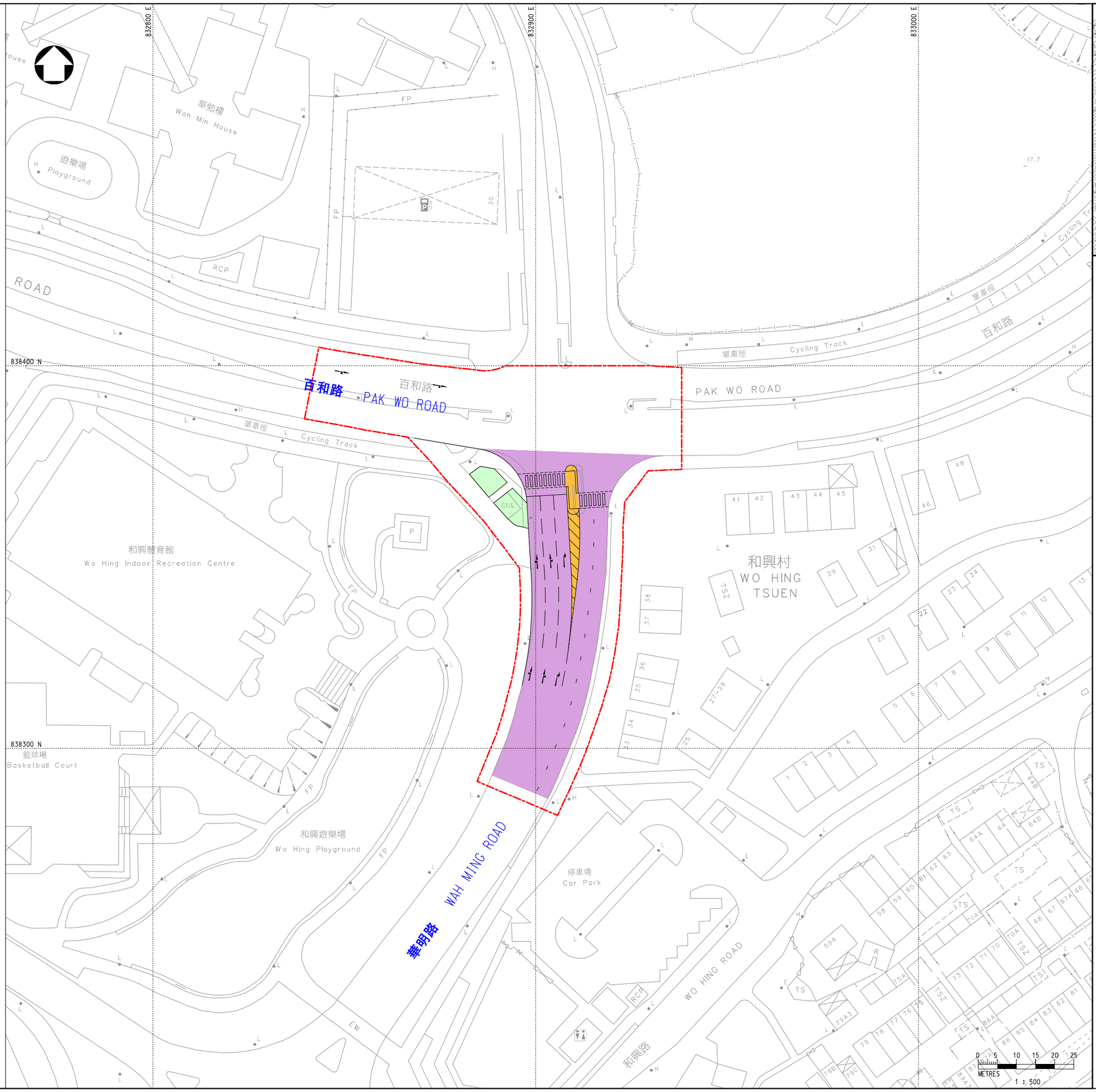
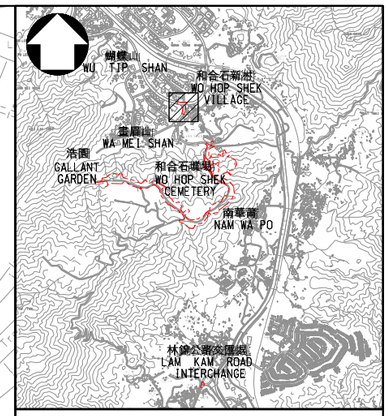
圖例:
LEGEND:

- 施工區界限 LIMIT OF WORKS AREA
- 擬建行車道 PROPOSED CARRIAGEWAY
- 擬建行人路 PROPOSED FOOTPATH
- 擬建中央分隔帶/安全島 PROPOSED CENTRAL MEDIAN/ REFUGE ISLAND
- 擬建美化市容地帶 PROPOSED AMENITY AREA
- 擬建行人過路處 PROPOSED PEDESTRIAN CROSSING





索引圖 KEY PLAN

比例 SCALE 1:30000

註釋
NOTES:

1. 現有行車道的部份路段/範圍將會分階段暫時封閉。
   SECTIONS OF THE EXISTING CARRIAGEWAYS WILL BE TEMPORARILY CLOSED IN PHASES.
2. 如有需要，施工區界限內之現有行車道、行人路和中央分隔帶/安全島的部份路段/範圍或會分階段暫時封閉。
   SECTIONS OF THE EXISTING CARRIAGEWAYS, FOOTPATHS AND CENTRAL RESERVES/REFUGE ISLANDS WITHIN THE LIMIT OF WORKS AREA MAY BE TEMPORARILY CLOSED IN PHASES AS AND WHEN REQUIRED.

Consultant

wsp

Client

土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
土木工程處 土地工程部
LAND WORKS DIVISION
CIVIL ENGINEERING OFFICE

Project title

合約編號：CE58/2018(HY)

和合石墳場第二期及第三期骨灰安置所發展相關的道路改善工程 - 勘察研究、設計及建造

AGREEMENT NO.CE58/2018 (HY)

ROAD IMPROVEMENT WORKS AT WO HOP SHEK CEMETERY FOR PHASE 2 AND 3 COLUMBARIUM DEVELOPMENT - INVESTIGATION, DESIGN AND CONSTRUCTION

Drawing title

擬建工程平面圖
三張之第二張
LOCATION PLAN FOR PROPOSED WORKS (SHEET 2 OF 3)

Scale	
1 : 500	
Original Size	
A1	
Drawing no. CE58/DC/011	Rev. -

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Date : 2024-07-04
Filename : X:\2514322A (CE58-2018 WHS)\02_Drawing\Report\DC\CE58_DC_011.dgn

Appendix 5

Environmental Assessment

Prepared for

Sime Darby Motor Services Limited

Prepared by

Ramboll Hong Kong Limited

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING

ENVIRONMENTAL ASSESSMENT

Date	**August 2025**
Prepared by	**Susan CHAN** **Environmental Consultant**
Signed	
Approved by	**Billy FAN** **Principal Consultant**
Signed	
Project Reference	**SDMFLD51EI00**
Document No.	**R9793_v1.0**

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1. INTRODUCTION

1.1 Project Background

1.1.1 The Application Site currently falls within the " Government, Institution or Community" ("G/IC") zone, according to the Approved Fanling / Sheung Shui Outline Zoning Plan ("Approved OZP") No. S/FSS/28. The Applicant proposed to rezone from "G/IC" to "Other Specified Uses (Innovation and Technology)" ("OU(I&T)") zone, given the unique nature of the EV and low-altitude aerial vehicles industries with R&D and business needs.

1.1.2 Ramboll Hong Kong Limited is commissioned by the applicant to prepare an Environmental Assessment (EA) in support of the planning application. The EA report will assess the major environmental issues (i.e. environmental noise, air quality, construction phase environmental impact and land contamination) of the Application Site and the surrounding area.

1.2 Application Site and its Environ

1.2.1 The Application is located in the south of Fanling Site, comprising various lots in D.D.51. The Application Site is bounded by roads on two sides. Tai Wo Service Road West is to the immediate north, and other existing and planned carriageways (Fanling Highways and Fanling Bypass Eastern Section) are further to the north. Wo Hing Road is located on the western side of the Application Site.

1.2.2 The area to the immediate southeastern to east is zoned "Residential (Group A) 3" ("R(A)3") and the area to the immediate southwestern to south is zoned "V" zone.

1.2.3 The location and its environs are shown in **Figure 1.1**.

1.3 Proposed Development

1.3.1 R&D and innovation & technology related uses on EV, staff ancillary and communal facilities, and staff quarters or offices uses are proposed at the Application Site.

1.3.2 There is an 7-storey podium building, comprising 6 storeys for R&D and innovations & technology related uses (including research laboratory, pre-delivery inspection, training space/testing centre, battery charging/swapping station, EV showrooms, workbay, main office, storage/warehouse, utility and workshop) and 1 storeys of ancillary and supporting business and training facilities (i.e. conference, seminars, training course, and administration & accounting office). There will be a vehicular ramp in the south providing car access to each floor level of the building. There will be one 12 storeys residential institution (talent accommodation) and one 6 storeys staff quarters atop of an 7-storey podium building.

1.3.3 The tentative completion year is 2031.

1.3.4 Layout and floor plans of the Proposed Development are given in **Appendix 1.1.**

1.4 Appraisal of Environmental Impact

Noise

1.4.1 The Application Site is bounded by roads on two sides. Especially, the Fanling Highway and the proposed elevated Fanling Bypass (Eastern Section) to the north of the Application Site will generate significant impact. The potential road traffic noise impact has been assessed in this study. Direct noise mitigation measures have been recommended to minimise the potential road traffic noise impact.

1.4.2 Onsite survey has been conducted in June 2025 to identify any environmental nuisance. Noisy facilities have been identified within 300m assessment area, including a covered warehouse and a towing company. Quantitative fixed noise impact assessment has been conducted to evaluate the potential fixed noise impact.

1.4.3 The development is not environmentally polluting in nature. Should there be any fixed noisy facilities (e.g. fan system, HVAC for retail, GIC, office, showroom/exhibition related uses, clubhouse, hotel) provided in future, it will be designed to follow the HKPSG requirement (i.e. acceptable noise level minus 5 decibels) to ensure that there is no adverse impact on any noise sensitive use in the surrounding.

1.4.4 The nearest segment of existing MTR East Rail Line is located over 180m from the Application Site. Given that the buffer separation well exceeds the recommendation (150m) in the HKPSG and no NSR will be facing the existing MTR East Rail Line directly, no adverse railway noise impact on the proposed development is anticipated.

Air Quality

1.4.5 With respect to the potential vehicular emission impact, the Application Site is affected by open road emissions from nearby carriageways such as Tai Wo Service Road West, Fanling Highways, Fanling Bypass Eastern Section and Wo Hing Road.

1.4.6 The potential odour sources within the 200m assessment area are identified and assessed.

1.4.7 There is absence of chimney emission observed in the surrounding.

1.4.8 A qualitative air quality impact assessment is prepared to address the potential air quality impact that would be generated from the aforementioned emissions.

Construction Phase Environmental Impact

1.4.9 The major air quality impact during construction should be fugitive dust impact in relation to dusty activity & emission from dusty materials and gaseous & particulate matter (PM) emissions form the construction vehicles and powered mechanical equipment (PME). Best management practice and practical mitigation measures will be adopted where appropriate.

1.4.10 Construction noise is usually generated by using powered mechanical equipment. It will be controlled with reference to relevant technical memorandum. Best Management practice will be adopted where appropriate to suppress the impact.

1.4.11 For water quality aspect, during construction of the Proposed Development, water pollution is likely due to sediments, construction runoff and drainage, sewage effluent and liquid spillage if not mitigated. Best management practice will be adopted. No sewage effluent discharge will be allowed. ProPECC PN 2/24 on construction site drainage will be observed and followed.

1.4.12 Waste generation during construction will be sorted and handled in compliance with the Waste Disposal Ordinance and regulations.

1.4.13 With adequate mitigation measures incorporated during construction of the project, no significant construction phase environmental impact is anticipated. Further discussion on construction phase environmental impact is also included in **Section 5**.

1.5 Organisations of the Report

1.5.1 This Environmental Assessment report contains the following chapters: -

- Chapter 2 to evaluate and assess potential road traffic noise impact on the Proposed Development at the Application Site, and propose practicable noise mitigation measures to attenuate the impact;

- Chapter 3 to evaluate and assess potential fixed noise impact on the Proposed Development at the Application Site, and propose practicable noise mitigation measures to attenuate the impact;
- Chapter 4 to evaluate the potential air quality impact on the Proposed Development at the Application Site, and propose practicable mitigation measures to attenuate the impact;
- Chapter 5 to generally discuss potential environmental noise, fugitive dust, water, waste impact during construction of the project and propose effective and practicable mitigation measures to attenuate the impact; and
- Chapter 6 to discuss the likeliness of land contamination due to historical use of the Application Site and necessity of further investigation.

2. TRAFFIC NOISE IMPACT ASSESSMENT

2.1 Introduction

2.1.1 This road traffic noise impact assessment is prepared to address potential road traffic noise impact on the noise sensitive uses of the Proposed Development and to recommend mitigation measures where practicable to attenuate the impact.

2.2 Assessment Criteria

2.2.1 Noise standards are recommended in the Hong Kong Planning Standards and Guidelines (HKPSG) for planning against noise impact from road traffic.

2.2.2 The Proposed Development comprises staff quarters and residential institution. Staff ancillary and supporting business and training facilities and innovation & technology facilities will be air-conditioned and will not rely on opened window for ventilation.

2.2.3 Under the HKPSG, the criterion for road traffic noise impact on domestic premises (habitable rooms) is $L_{10(1\text{-hour})}$ 70dB(A). This criterion applies to uses which rely on opened windows for ventilation.

2.3 Assessment Methodology

2.3.1 In this assessment, the potential noise impact arising from nearby existing and future road carriageways on the Proposed Development has been assessed based on the proposed master layout plan (MLP)**.**

2.3.2 It involved the prediction of future noise impacts on Noise Sensitive Receivers (NSRs) arising from traffic flows along existing and future road carriageways situated within or in the vicinity of the Application Site. Calculation of predicted road traffic noise were based on the worst case peak hour traffic flows projected within a 15-year period from the target completion year (Year 2031) of the proposed development.

2.3.3 For worst-case scenario evaluation, the assessment year was chosen to be year 2046, which has the maximum forecasted traffic flow within the 15-year period. The year 2046 traffic forecast data is prepared by Project Traffic Consultant and attached in **Appendix 2.1.**

2.3.4 The U.K. Department of Transport's procedure "Calculation of Road Traffic Noise" (CRTN) was used to predict the hourly $L_{10(1\text{-hour})}$ noise levels generated from road traffic at selected representative NSRs. Practicable environmental mitigation measures have been recommended, where necessary. The predicted noise levels were compared with the relevant HKPSG noise standards.

2.3.5 In this assessment, all roads are assumed of impervious surface except for Fanling Bypass Eastern Section (Road ID: 48 and 49) and part of Tai Wo Service Road West, Pak Wo Road, Fanling Highway Slip Road and Fanling Highway (i.e. Road ID: 1 to 4, 16, 29 and 52) as indicated in **Appendix 2.2**, where pervious surface is assumed. Speed limit of 50 km/hr is assumed for most of the roads, 70km/hr is assumed for part of Jocky Club Road (i.e. Road ID: 24, 26, 28), 80km/hr is assumed Fanling Bypass Eastern Section and part of Fanling Highway (i.e. Road ID: 48, 49 and 53) and 100km/hr is assumed for part of Fanling Highway (i.e. Road ID: 21, 22, 29, 31, 32, 36 and 52).

2.4 Noise Sensitive Receivers

2.4.1 A number of Noise Sensitive Receivers (NSRs), which are likely to be subject to worst road traffic noise impact of the corresponding habitable rooms, were selected for the

assessment. All assessment points were taken at 1.2 m above the floor and 1 m away from the façade of the staff quarters and residential institution.

2.4.2 **Figure 2.1** illustrates the locations of the selected representative NSRs for road traffic noise impact assessment.

2.5 Design Constraints

2.5.1 Due to the heavy traffic flows of Fanling Highway and Fanling Bypass (Eastern Section) (under construction), no noise sensitive uses would be located at the façade of the staff quarters and residential institution facing Fanling Highway and Fanling Bypass directly.

2.6 Noise Mitigation Measures Incorporated under Base Case Scenario

2.6.1 As mentioned in **Section 2.5.1**, it is identified that the major road traffic noise sources are Fanling Highway and Fanling Bypass (Eastern Section). To address the potential road traffic noise impact, building setback, podium building and orientation of dwellings have been duly considered in the buildings design and arrangement to reduce the road traffic noise impact as far as practicable.

2.6.2 The staff quarters and residential institution are erected atop a 7-storey podium, which is approximately 41m high. This would increase the separation distance between the carriageway and the noise sensitive receivers of the dwellings and screening of the nearby roads would be provided.

2.7 Road Traffic Noise Impact Assessment Result (Base Case)

2.7.1 The predicted road traffic noise impact on the selected representative noise sensitive receivers (NSRs) without direct noise mitigation measures have been assessed. The predicted results are shown in **Appendix 2.3**. According to the predicted results, there are exceedances of road traffic noise standard at various locations of the staff quarters and residential institution, which is up to 10 dB(A) and 9 dB(A) under AM peak scenario and PM peak scenario respectively.

2.8 Proposed Noise Mitigation Measures

Vertical Acoustic Fin

2.8.1 Full-height acoustic fins of 1.5m long are proposed at strategic locations to reduce the view angle to the traffic noise sources. The locations of the proposed vertical acoustic fins are shown in **Figure 2.2**. The noise reduction effect is determined by using CRTN methodology taking into account the view angle correction but would not be higher than 3 dB(A) for conservatism.

2.8.2 It is noted that erection of vertical acoustic fins near NSRs would possibly induce noise reflection and would particularly create a semi-enclosure area if two consecutive fins are near to each other and hence inducing possible multi-reflection effects. In order to minimise the potential multi-reflection effects at NSRs, repetitive fins close to each other is avoided and sound absorptive material (SAM) (with noise reduction coefficient (NRC) of not less than 0.9) is proposed at the surface of the vertical acoustic fins facing window opening where necessary and practicable.

Acoustic Window (Baffle Type) [AW(BT)]

2.8.3 According to "Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact" (ProPECC PN 5/23), there are configurations of AW(BT) with opening of around 0.5 m^2 (600mm x 870mm) and 1.1 m^2 (750mm x 1500mm), inner sliding door with gap width of 100mm to 175mm and overlapping length of at least 100mm. Noise reduction of 6 dB(A) and 7 dB(A) are

achievable with the referenced room area of 8m^2 and 18m^2. Further, addition of sound absorptive material (SAM) of Noise Reduction Coefficient (NRC) ≥ 0.7 at top and outer opening side of the mullion can offer an additional 1.5 dB(A). Moreover, additional 1 dB(A) reduction can offer for tilting the AW(BT) with not less than 30° horizontal incident angle to the dominant line source. Additional 2 dB(A) reduction can offer for adding 1.5m long full-height noise effective fin while tiling not less than 60°. Altogether, 8.5 dB(A) and 11.5 dB(A) are assumed as the noise reduction levels and adopted in this study for habitable room of staff quarters and residential institution using AW(BT) with tilting not less than 30° horizontal incident angle to the dominant line source and AW(BT) adding 1.5m long full-height noise effective fin while tiling not less than 60°, respectively by following the design and referenced room area of the AW(BT). The locations of the proposed AW(BT) are shown in **Figure 2.2**.

Table 2.1 Design of Acoustic Window (Baffle Type) from ProPECC PN 5/23

ID	With Acoustic Fin	Referenced Room Area	Noise Reduction Level
AW(BT)-1	Yes	18m^2	11.5 dB(A)
AB(BT)-2	No	8m^2	8.5 dB(A)

2.9 Road Traffic Noise Impact Assessment Result (Mitigated)

2.9.1 The predicted road traffic noise impact on the selected representative NSRs based on the proposed noise mitigation measures discussed above have been assessed. The predicted results are shown in **Appendix 2.4**.

2.9.2 With the implementation of the proposed noise mitigation measures, the predicted results at all representative NSRs could comply with the relevant standard. Therefore, no adverse road traffic noise impact on the Proposed Development would be anticipated.

2.10 Conclusion

2.10.1 Road traffic noise impact assessment has been carried out for the Proposed Development. The noise mitigation measures are tentative only and subject to future scheme refinement. With the implementation of the proposed noise mitigation measures, no adverse road traffic noise impact on the Proposed Development anticipated. The feasibility of meeting relevant road traffic noise standard is demonstrated.

3. FIXED NOISE IMPACT ASSESSMENT

3.1 Introduction

3.1.1 This fixed noise impact assessment is prepared to address potential fixed noise impact on the Proposed Development arising from the existing and planned fixed noise sources. Practicable noise mitigation measures would be recommended where necessary.

3.2 Identification of Fixed Noise Sources

3.2.1 Only two fixed noise sources have been identified through desktop review and site survey conducted in June 2025. Location of identified fixed noise sources are shown in **Figure 3.1** and the photo records of site survey of the identified fixed noise are shown in **Appendix 3.1**.

Brilliant Towing Company

3.2.2 Brilliant Towing Company is located immediately to the southeast of the Application Site. Minor activities (e.g. tyre replacement) and parking of lorries were observed during site survey. By considering the minor activities observed, the noise Sound Power Level (SWL) of 97.0 dB(A) based on the findings in "Redevelopment of Lai Sun Yuen Long Centre at Nos.21-35 Wang Yip Street East, YLTL 362" (Approved Planning Application: A/YL/304) has been referenced and adopted in this assessment. No nighttime operation was observed.

K. Kee Engineering Company Limited

3.2.3 According to the Preliminary Environmental Review Report under the Approved Planning Application (Application No.: A/FSS/295) for a proposed public housing development, a covered warehouse was identified. According to the observation during site survey. 5 electric hoists were observed and only 1 of the electric hoisted was being operated during the site visit. The SWL of 95.0 dB(A) of the electric hoist in "Technical Memorandum on Noise from Construction Work Other Than Percussive Piling" has been referenced and adopted in this assessment. It is assumed that 5 electric hoists would be operated at the same time as a worst-case scenario. No nighttime operation was observed.

3.2.4 The SWLs of the identified fixed noise sources are shown in **Appendix 3.2**.

3.3 Assessment Criteria

3.3.1 According to the "*Technical Memorandum For The Assessment Of Noise From Places Other Than Domestic Premises, Public Places Or Construction Sites*" (IND-TM) issued under the Noise Control Ordinance (NCO), the airborne noise shall comply with the Acceptable Noise Level (ANL), which depends on the Area Sensitive Rating (ASR).

3.3.2 According to the IND-TM, four (4) types of areas are defined and including: Rural Area, Low Density Residential Area, Urban Area and Area Other Than Those Above. The Application Site is located in Fanling area and considered not rural, low density residential nor urban.

3.3.3 According to the Annual Traffic Census 2023, the Annual Average Daily Traffic (AADT) for Fanling Highway was over 114,000 (i.e. Station 6084). The Fanling Highway therefore acts as an Influencing Factor (IF, with AADT over 30,000). ASR "B" is applicable to the facades, which do not have direct lines of sight and not affected by the IF (i.e. Fanling Highway). ASR "C" would be assigned to the facades directly affected by Fanling Highway. The ASR and ANLs according to IND-TM are tabulated below.

Table 3.1 Area Sensitivity Rating of NSRs

Type of Area Containing NSR	Degree to which NSR is affected by Influencing Factors (IFs)		
	Not Affected	Indirectly Affected	Directly Affected
i. Rural area, including country parks, or village type development	A	B	B
ii. Low density residential area consisting of low-rise or isolated high-rise developments	A	B	C
iii. Urban area	B	C	C
iv. Area other than those above	B	B	C

Table 3.2 Acceptable Noise Level

Time Period	ASR "B", Leq (30 min), dB(A)	ASR "C", Leq (30 min), dB(A)
Day & Evening (0700 – 2300 hours)	65	70

3.4 Assessment Methodology

3.4.1 Standard acoustic principles were adopted for prediction of cumulative fixed noise impact. The shortest horizontal distances between noise sensitive receivers (NSRs) of the Proposed Development and identified fixed noise sources were assessed as a conservative assessment approach.

3.4.2 The assessment has taken into account the distance attenuation, screen effect, tonality and façade effect where appropriate. Prediction of the fixed source noise level can be represented by the formula below:

$$SPL_{NSR} = SWL_{source} + Corr_{dist} + Corr_{bar} + Corr_{ton} + Corr_{fac}$$

where

SPL_{NSR} = Predicted Noise level at the Representative NSR [$Leq_{(30\ min)}$ dB(A)]

SWL_{source} = Sound Power Level of the Identified Fixed Noise Sources [dB(A)]

$Corr_{dist}$ = Distance Correction [-20 x Log (Distance between NSR and Source) – 8]

$Corr_{bar}$ = Barrier Correction [-10dB(A) where applicable]

$Corr_{ton}$ = Tonality Correction [+3dB(A), where applicable]

$Corr_{fac}$ = Façade Correction [+3dB(A)]

3.5 Representative Noise Sensitive Receivers

3.5.1 Representative NSRs of the staff quarters and residential institution nearest to the identified noise sources have been selected for the assessment. Assessment points are taken at 1.2m above floor and 1m away from façade.

3.5.2 The 7-storey podium would be served by central air-conditioning and not rely on openable windows for ventilation. Therefore, no NSR would be identified and adverse fixed noise source noise impact would not be anticipated.

3.5.3 **Figure 3.2** shows the location of the representative NSRs.

3.6 Fixed Noise Impact Assessment Result (Base Case)

3.6.1 The predicted cumulative noise level at the representative NSRs under base case scenario (i.e. no noise mitigation measures incorporated) has been calculated and summarized in **Table 3.3**. Detailed calculation is shown in **Appendix 3.3.**

3.6.2 According to the result, no exceedance of the relevant noise criteria during day & evening time found.

Table 3.3 Maximum Predicted Fixed Noise Levels for the Representative NSRs (Base Case)

NSR	ASR	Noise Criteria, dB(A)	Predicted Noise Level, dB(A)
		Day & Evening Time	Day & Evening Time
F01	C	70	68
F02	C	70	67
F03	C	70	61

3.7 Fixed Noise from Podium of the Proposed Development

3.7.1 In addition to the above noise sources, the Proposed Development includes a 7-storey podium accommodating innovation & technology (I&T) uses and staff ancillary and supporting business and training facilities, which would be served with central air-conditioning. It is noted that the detailed design is subject to finetuning and after respective contractors engaged. In all circumstances, requirement to meet HKPSG standard with respect to fixed noise impact will be explicated in the tender document so that future contractors will strictly follow.

3.8 Conclusion

3.8.1 A fixed noise impact assessment has been carried out. No adverse noise impact on the representative NSRs is envisaged without noise mitigation measure in place.

3.8.2 In order to avoid adverse noise impact of the future fixed noise sources onsite on the surrounding NSRs, the future contractor shall ensure that the equipment within the Proposed Development would be designed and installed to meet the HKPSG criteria.

4. AIR QUALITY IMPACT ASSESSMENT

4.1 Introduction

4.1.1 This section evaluates the air quality impact during operation of the project. Table 3.1 in Chapter 9 of the HKPSG has been referenced for provision of buffer separation from identified air pollution sources in the surrounding.

4.2 Legislative Requirements and Evaluation Criteria

Assessment Criteria

4.2.1 The principal legislation for the management of air quality in Hong Kong is the *Air Pollution Control Ordinance (APCO)* (Cap. 311). The Hong Kong AQOs enacted on 11 April 2025 are listed in **Table 4.1** below.

Table 4.1 Hong Kong Air Quality Objectives

Pollutants	Average Time	Standard [i] (µg/m³)	No. of exceedances allowed
SO_2	10-min	500	3
	24-Hour	40	3
RSP (PM_{10}) [ii]	24-Hour	75	9
	Annual	30	NA
FSP ($PM_{2.5}$) [iii]	24-Hour	37.5	18
	Annual	15	NA
NO_2	1-Hour	200	18
	24-Hour	120	9
	Annual	40	NA
Ozone (O_3)	8-Hour	160	9
	Peak Season	100	NA
Carbon Monoxide (CO)	1-Hour	30,000	0
	8-Hour	10,000	0
	24-Hour	4,000	0
Lead (Pb)	Annual	0.5	NA

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 (PM_{10}) means suspended particles in air with a nominal aerodynamic diameter of 10 µm or less.

[iii] Fine suspended particulates ($PM_{2.5}$) means suspended particles in air with a nominal aerodynamic diameter of 2.5 µm or less.

Air Pollution Control (Construction Dust) Regulation

4.2.2 Notifiable and regulatory works are under the control of Air Pollution Control (Construction Dust) Regulation. Notifiable works include site formation, reclamation, demolition, foundation and superstructure construction for buildings and road construction. Regulatory works include building renovation, road opening and resurfacing, slope stabilisation, and other activities including stockpiling, dusty material handling, excavation, concrete production, etc. The Project is expected to include notifiable works (site formation, demolition, foundation and superstructure construction for buildings) and regulatory works (dusty material handling and excavation). Contractors and site agents are required to inform EPD and adopt dust

reduction measures to minimize dust emissions, while carrying out construction works, to the acceptable level.

Air Pollution Control (Non-road Mobile Machinery)(Emission) Regulation

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

Air Pollution Control (Fuel Restriction) Regulations

4.2.4 The Air Pollution Control (Fuel Restriction) Regulations were 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. In November 2024, the Regulations were amended to further tighten the control requirements of liquid fuels and remove the restrictions on the use of liquid and solid fuel in Sha Tin Fuel Restriction Area. The Regulations do 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. Gaseous fuel, conventional solid fuel with a sulphur content not exceeding 1% by weight or liquid fuel with a sulphur content not exceeding 0.001% by weight and a viscosity not more than 6 centistokes at 40°C, such as Ultra Low Sulphur Diesel (ULSD) are permitted to be used in commercial and industrial processes.

Recommended Pollution Control Clauses for Construction Contracts

4.2.5 The Recommended Pollution Control Clauses (RPCC) are generally good engineering practice to minimize inconvenience and environmental nuisance to nearby residents and other sensitive receivers. The Contractor shall undertake environmental protection measures to reduce the environmental impacts arising from the execution of the Works and to minimise the effects on the air, noise, water quality as well as nuisance of waste within and outside the Site, on transport routes and at the loading, dredging and dumping areas.

Hong Kong Planning Standards and Guidelines

4.2.6 Section 3 in Chapter 9 of the Hong Kong Planning Standards and Guidelines (the HKPSG) presents the principal framework for planning against air pollution and a summary of common pollution sources, which includes industrial processes, motor vehicles, construction and reclamation sites, odour sources, dusty uses, etc. The recommended buffer distances are reproduced in **Table 4.2** and **Table 4.3**.

Table 4.2 HKPSG's Recommended Minimum Buffer Distance from Roads

Type of Road	Buffer Distance	Permitted Uses
Trunk Road (including expressway) and Primary Distributor	> 20 m	Active and passive recreation uses
	3 – 20 m	Passive recreational uses
	< 3 m	Amenity areas
District Distributor	> 10 m	Active and passive recreational uses
	< 10 m	Passive recreational uses

Type of Road	Buffer Distance	Permitted Uses
Local Distributor	> 5 m	Active and passive recreational uses
	< 5 m	Passive recreational uses
Under Flyovers	-	Passive recreational uses

Table 4.3 HKPSG's Recommended Minimum Buffer Distance from Industrial Chimneys

Difference in Height between Industrial Chimney Exit and the Site	Buffer Distance	Permitted Uses
< 20 m	> 200 m	Active and passive recreation uses
	5 – 200 m	Passive recreational uses
20 m – 30 m	> 100 m	Active and passive recreational uses
	5 – 100 m	Passive recreational uses
30 m – 40 m	> 50 m	Active and passive recreational uses
	5 – 50 m	Passive recreational uses
> 40 m	> 10 m	Active & Passive recreational uses

4.3 Existing Air Quality

4.3.1 The nearest air quality monitoring station (AQMS) to the Application Site is the North AQMS. The five most recent years of air quality monitoring data, 2019 to 2023, from the North general Air Quality Monitoring Station (AQMS) are summarized in **Table 4.4**. According to the AQMS monitoring data presented in **Table 4.4**, exceedances in annual average FSP concentrations in Year 2023 and 8-hour average O_3 concentration were recorded between Year 2019 and 2023, while all other pollutants have compiled with the AQOs.

4.3.1.1 As the tentative year of completion of the Proposed Development is 2031, the year of 2030 hourly background concentrations from the PATH v3.0 model has been adopted for the purpose of this assessment, which is considered as a more conservative approach. The data for Year 2030 was extracted from the *Pollutants in the Atmosphere and the Transport over Hong Kong*-model version 3.0 (PATH v3.0) developed and released by EPD in January 2024 (Grids (37, 51) and (38, 51)). According to **Table 4.4** there would be no exceedance of AQOs for the future background air quality pollutants except O_3.

Table 4.4 EPD Air Quality Monitoring Data in North AQMS and PATH-v3.0 (Grids (37, 51) and (38, 51), Year 2030)

Pollutant	Averaging time	Parameter	AQO (μg/m³)	Concentration [1] (μg/m³)						
				2019	2020	2021	2022	2023	PATH in Year 2030 (37, 51)	PATH in Year 2030 (38, 51)
RSP (PM_{10})	24-hour	10th highest	75	-	55	62	50	57	51	52
	Annual	Maximum	30	-	-	25	23	27	20	20
FSP ($PM_{2.5}$)	24-hour	19th highest	37.5	-	29	29	28	28	30	32
	Annual	Maximum	15	-	-	15	14	**15**	12	13

Pollutant	Averaging time	Parameter	AQO (μg/m³)	Concentration [1] (μg/m³)						
				2019	2020	2021	2022	2023	PATH in Year 2030 (37, 51)	PATH in Year 2030 (38, 51)
NO_2	1-hour	19th highest	200	-	112	135	115	116	51	57
	24-hour	10th highest	120	-	54	70	58	58	19	22
	Annual	Maximum	40	-	-	36	31	30	12	12
SO_2	10-minute	4th highest	500	-	19	18	27	27	28	28
	24-hour	4th highest	40	-	8	7	7	7	7	6
O_3	8-hour	10th highest	160	-	**166**	**187**	**197**	**164**	**174**	**167**
	Peak Season	Maximum	100	N.A.	N.A.	97	98	95	**121**	**119**
CO	1-Hour	Maximum	30,000	-	1830	2150	1710	2390	534	537
	8-Hour	Maximum	10,000	-	1238	1550	1304	1231	494	503
	24-hour	Maximum	4,000	N.A.	1022	1213	994	1001	458	457

Notes:
[1] Bolded and underlined values exceed the relevant AQO.
[2] Since air pollutants measurement at North general AQMS commenced in July 2020, there is not sufficient data for the calculation of annual averages. All concentrations in 2019 and some concentrations in 2020 are not available at North AQMS.

4.4 Potential Air Quality Impact on Proposed Development

Identification of Industrial Emission Sources

4.4.1 Site surveys were conducted on 4 June 2025 to identify any environmental nuisance and focus on area within 200m from the Application Site (see **Figure 4.1**). There is no existing and planned industrial sources and chimneys identified within 200m from the Application Site. Therefore, no adverse air quality impact from the industrial / chimney emissions is anticipated.

Identification of Vehicular Emission Sources

4.4.2 The Application Site is bounded by roads on two sides. Tai Wo Service Road West is to the immediate north, and other existing and planned carriageways (Fanling Highways and Fanling Bypass Eastern Section) are further to the north. Wo Hing Road is located on the western side of the Application Site.

4.4.3 **Figure 4.2** shows the separation distance from nearby road network provided and the buffer zone according to Table 3.1 in Chapter 9 of the HKPSG. According to the Annual Traffic Census, Fanling Highway is categorised as expressway, Tai Wo Service Road West is categorized as rural road and Wo Hing Road is categorized as local distributor. As advised by the Traffic Consultant, the proposed carriageway, Fanling Bypass Eastern Section, is considered as expressway. Although there is no definition of buffer distance requirement by HKSPG for rural road, the buffer distance requirement of rural road is assumed to be same as local distributor (i.e. 5m). For road and highways, buffer separations (measured from road kerb side to air sensitive use) of 20m and 5m are recommended respectively for expressway and local distributor.

4.4.4 To meet the recommended buffer separation and avoid adverse air quality impact, all air-sensitive uses of the proposed development including openable windows and fresh air intake would be outside the buffer zones.

4.5 Potential Odour Impact on Proposed Development

Identification of Odour Sources

4.5.1 Site survey was conducted to identify any odour impact arising from odour sources within 200m assessment area. The identified potential odour source is the Wo Hop Shek Tsuen (Tai Po Road) Refuse Collection Point (RCP) (see **Figure 4.3**).

4.5.2 The survey was conducted on 4 June 2025. No adverse odour was observed at Wo Hop Shek Tsuen (Tai Po Road) Refuse Collection Point during the onsite survey.

4.5.3 The enquires on the odour-related complaints against the odour sources close to the Application Site have been made to Environmental Protection Department. According to the reply from EPD, in the past five years, there are only 3 records of odour complaints within 200m from the Application Site, all received in 2024. As the odour complaints were only received in 2024 and the no. of odour complaints received is low, together with the observation during the onsite survey, adverse odour impact on the Application Site would not be anticipated. The relevant correspondences with EPD are shown in **Appendix 4.1**.

4.5.4 Based on the observation during the site survey, the adverse odour impact is not anticipated at the Application Site.

4.6 Potential Air Quality Impact arising from Proposed Development

Construction Phase

4.6.1 The potential air quality impacts during the construction phase and the mitigation measures where practicable for fugitive dust and gaseous emission during construction to be adopted would be further discussed in **Section 5**.

4.6.2 "Recommended Pollution Control Clauses for Construction Contracts" is available on the EPD website which set out the recommended air pollution control measures to be implemented by the contractor(s) during the construction stage of the Project.

4.6.3 With the implementation of control measures stipulated under the Air Pollution Control (Construction Dust) Regulation and the adoption of good practices, it is expected that construction fugitive dust and gaseous emission can be controlled.

Operational Phase

4.6.4 The Proposed Development at the Application Site is not considered environmentally polluting in nature. The proposed R&D and innovation & technology related uses are primarily focused on EVs, which are not expected to result in gaseous emissions or adverse impacts on air quality. There will be no chimney stack planned within the site. No adverse air quality impact on surrounding air sensitive uses is anticipated during its operation.

4.7 Conclusion

4.7.1 As confirmed in site survey, there is no existing and planned industrial source / chimney identified within 200m from the Application Site. No adverse air quality impact from the industrial / chimney emissions is anticipated.

4.7.2 The Proposed Development will be designed so that there are no air-sensitive uses of the proposed development, including openable windows and fresh air intake, falling within the buffer zones as stipulated in the HKPSG.

4.7.3 According to the findings from the site visit, adverse odour impact on the Application Site would not be anticipated.

4.7.4 Control measures stipulated under the Air Pollution Control (Construction Dust) Regulation and good practices will be adopted during construction of the project. It is expected that construction fugitive dust and gaseous emission can be controlled.

5. CONSTRUCTION PHASE ENVIRONMETAL IMPACT

5.1 Introduction

5.1.1 During the construction phase of the Proposed Development, there may be potential air quality, noise and water quality impacts upon the nearby sensitive receivers. Waste generation is another consideration. Practicable environmental mitigation measures are recommended to reduce these impacts to acceptable ranges.

5.2 Construction Air Quality Impact

Construction Fugitive Dust Impact

5.2.1 The major air quality impact of concern during the construction phase will be the potential fugitive dust emission. The major dust emission sources during the construction phase of the Proposed Development are expected to arise from construction activities such as:

- Demolition of existing building structures;
- Earthworks (minor excavation and backfilling activities);
- Wind effect on material stockpiling; and
- Vehicle movements on haul roads and over the construction site.

5.2.2 The Proposed Development is proposed to erect 2 towers atop an 7-storey high podium. There is 1 level of basement. However, as the size of the Application Site is limited, excavation work is limited for the Proposed Development. However, demolition of the existing building structures is required. It is estimated that about 14,500m^3 of demolished and excavated material will be generated. Assuming a period of 1 year for demolition, site formation and excavation, about 1 truckload per hour will be generated.

5.2.3 On the other hand, there is a proposed public housing development (Approved Planning Application: A/FSS/295) situated to the immediate east of the Application Site. It is tentatively to be completed by year 2029. Given the tentative completion year for the Proposed Development is year 2031, overlapping of construction work is expected and cumulative fugitive dust mitigation measures should be implemented for the Proposed Development as well as the concurrent project. Further, it is recommended that the contractors of the concurrent projects should have close liaison to minimize dusty activities to be taken place at the same time as far as practicable.

Construction Gaseous Emission Impact

5.2.4 There will be potential impacts from the criteria pollutants (e.g. nitrogen oxides (NOx), sulphur dioxide (SO_2), and carbon monoxide (CO)). Emission from diesel trucks for the haulage of materials and construction plants will contain high percentage of smoke particulate and unburned hydrocarbons in comparison with petrol driven vehicles. Ultra-low sulphur diesel (ULSD) with sulphur content not exceeding 0.001% by weight will be used as fuel to minimize SO_2 emission. In all circumstances, the contractor will be required to observe all relevant regulations and maintain all equipment in good condition to avoid any excessive emission. Under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, only approved or exempted non-road mobile machineries (including mobile generator, air compressor, excavator, crawler crane, bulldozer and etc.) with a proper label are allowed to be used in the construction site.

5.2.5 In addition, availability of electricity supply during construction of the project will be explored and such requirement will be specified in future contract. If available, contractor should maximise use of electricity and with least reliance of diesel fuelled

equipment (e.g. for electricity powered stationary equipment such as pump instead of using generator).

5.2.6 There are existing and planned residential uses and a park situated in the vicinity from the Application Site, which are considered as both Air and Noise Sensitive Receivers. These representative ASRs are shown in **Figure 5.1** and tabulated below.

Table 5.1 Summary of Representative Air and Noise Sensitive Receivers

ID	Description	Land Uses	Approximate Horizontal Distance to the Application Site
SR01	Tong Hang Tsuen (Village House)	Residential	~260m to the north
SR02	Tong Hang Tung Tsuen (Village House)	Residential	~230m to the northeast
SR03	Proposed Public Housing Development in Fanling Area 48 – Block 7*	Residential	~8m to the southeast
SR04	Wo Hop Shek Village (Village House)	Residential	~2m to the southwest
SR05	Regalia Villa (Village House)	Residential	~44m to the southwest
SR06	Yat Ming Road Park	G/IC	~227m to the west

**Tentative in operation by year 2029*

Mitigation Measures for Fugitive Dust and Gaseous Emission

5.2.7 Fugitive dust and gaseous emission arising from construction activities can be effectively suppressed by incorporating proper mitigation measures into work procedures through contractual clauses, good site management, and close monitoring by the resident engineers. The contractor shall be required to follow the requirements of the Air Pollution Control (Construction Dust) Regulations. With the adoption of good practices, it is expected that emission of construction dust can be kept at an acceptable level. The recommended mitigation measures are described below. In addition, EPD's recommended pollution control clause for construction contracts will be incorporated and required in future tender document to ensure that all relevant environmental protection and pollution control ordinances are observed and complied with.

General Site Management

5.2.8 Appropriate working methods should be devised and arranged to minimise dust emissions and to ensure any installed control system and/or measures are operated and/or implemented in accordance with their design merits. No free falling of construction debris should be allowed, which should be let down by hoist or enclosed tunnel to the ground.

5.2.9 Frequent mist/ water spraying should be applied on dusty areas. The frequency of spraying will depend upon local conditions such as rainfall, temperature, wind speed and humidity. The amount of water spraying should be just enough to dampen the material without over-watering which could result in surface water runoff.

5.2.10 Hoarding of not less than 2.4m high from ground level along site boundary, which is next to a road or other public area should be provided.

Vehicles and Unpaved Site Roads

5.2.11 Dust emission from unpaved roads comes predominantly from travelling of vehicles. Areas within the site where there are regular vehicle movements should have an approved hard surface. Speed controls at an upper limit of 10km/hr should be imposed

and their movements should be confined to designed roadways within the site. All dusty vehicle loads should have side and tail boards covered by tarpaulin extending at least 300mm over the edges of the side and tail boards. Wheel-wash troughs and hoses should be provided at exit points of the site.

Material Stockpiling and Handling

5.2.12 The amount of stockpiling should be minimised where possible. Construction material or debris should be covered and stored inside enclosed areas. Other control measures such as enclosed or semi-enclosed windboard should be used, where applicable, to minimise dust emission. Regular watering is needed at areas such as storage piles, where there could be potential dust emission. Placing dusty material storage piles near ASRs should be prevented.

Maximising Use of Electric Power Supply

5.2.13 Only approved Non-road Mobile Machinery (NRMM) should be used for construction work with respect to the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation. Exempted NRMMs shall be avoided. Electrified NRMMs should be deployed as far as practicable. In addition, electric power supply shall be provided for onsite machinery as far as practicable to minimize PM and gaseous emissions.

5.2.14 The dust control measures detailed below shall also be incorporated into the Contract Specification where practicable as an integral part of good construction practices:

- The area at which demolition work takes place shall be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet;
- Impervious dust screens or sheeting shall be used to enclose the whole wall to a height of at least 1m higher than the highest level of the structure being demolished;
- Any dusty materials remaining after a stockpile is removed shall be wetted with water and cleared from the surface of roads or streets.
- Plan site layout so that machineries, dust causing activities and stockpiling are away from receptors as far as possible;
- Higher site hoarding (not less than 2.4m) should be implemented where there are receptors at close proximity to the construction site and dusty activities; and
- Haul road shall be away from the project boundary as much as possible.

5.3 Construction Noise Impact

5.3.1 During the construction phase of the Proposed Development and associated works, major noise impacts would arise from demolition works, piling works, building works, etc. The use of Powered Mechanical Equipment (PME) would generate considerable noise in general. For example, use of breakers in demolition work, oiling machine during foundation work, excavator during excavation work, as well as other equipment like dump trucks, pumps/ generator sets, etc. would generate noise impact on the surrounding.

Construction Noise Criteria

5.3.2 Construction noise is controlled under the Noise Control Ordinance (NCO) which prohibits the use of PME during the restricted hours (7 p.m. to 7 a.m. on normal weekdays and any time on a public holiday, including Sunday) without a valid Construction Noise Permit (CNP) from the Authority. The criteria and procedures for issuing such a permit are specified in the "*Technical Memorandum on Noise From*

Construction Works Other than Percussive Piling" (TM1). While there is no planned construction works to be carried out during the restricted hours, TM1 should be followed in case there is any need to carry out works in such time period in future.

5.3.3 With effect from 1 November 96, the use of specified powered mechanical equipment (SPME) for carrying out construction work other than percussive piling and/ or the carrying out of prescribed construction work (PCW) within a designated area are also brought under control. The relevant technical details are provided in the "*Technical Memorandum on Noise from Construction Work in Designated Areas*" (TM2).

5.3.4 Percussive pilling is controlled similarly by a construction noise permit system and described in the NCO and the "*Technical Memorandum On Noise From Percussive Pilling*" (TM3), which restricts the number of hours during which pilling can be conducted. Percussive pilling is prohibited between 7 p.m. to 7 a.m. and on holidays (including Sundays). Percussing pilling during the daytime (i.e. between (7 a.m. to 7 p.m. on any day not being a holiday) may be carried out in accordance with the permitted hours and other conditions under a valid construction noise permit.

5.3.5 For construction works other than percussive piling, although TM1 does not provide control over daytime construction activities, noise limits as shown in below table are set out in the Professional Persons Environmental Consultative Committee Practice Notes (ProPECC PN) 1/24 "*Minimizing Noise from Construction Activities*" issued by EPD.

Table 5.2 Noise Limit for Daytime Construction Activities

NSR	0700 to 1900 Hours on Any Day Not Being a Sunday or General Holiday, Leq (30 min), dB(A)
All domestic premises Temporary housing accommodation Hostels Convalescences homes Homes for the aged	75
Places of public worship Courts of law Hospitals and medical clinics	70
Educational institutions (including kindergartens and nurseries)	70 (65 during examinations)

5.3.6 In all circumstances, future contractor will be required to exercise adequate mitigation measures to minimise potential construction noise impact on the surrounding noise sensitive uses.

Mitigation Measures

5.3.7 Sufficient noise mitigation measures should be introduced to alleviate potential noise impacts on nearby NSRs. The contractor(s) will be required under the contract to ensure regular maintenance of all plant and equipment, and that noise generation at source would be minimized and practicable noise mitigation measures would be in use. The Contractor(s) will be required to adopt onsite electricity (to avoid using genset or pneumatic equipment) and quiet type construction plants (e.g. EPD's quality powered mechanical equipment (QPME) inventory), wherever practicable. Movable noise barriers will also be erected around noisy plants in order to minimize noise generation at source. With these measures in place noise generation due to construction activities would be minimized.

5.3.8 The following general noise mitigation measures are recommended for implementation:

- Use of quieter equipment and construction method where practicable (e.g. hand-held concrete crushers, non-explosive chemical expansion agent);
- Application of properly designed silencers, mufflers, acoustically dampened panels and acoustic sheds or shields, etc.;
- Making use of onsite electricity and electric-powered equipment where applicable instead of diesel-powered or pneumatic-powered equipment;
- Erecting noise enclosures/ movable noise barriers around noisy plants;
- Only well-maintained plants should be operated on-site;
- Plants should be serviced regularly during the construction programme;
- Noisy activities can be scheduled to minimize exposure of nearby NSRs to high levels of construction noise. For example, noisy activities can be scheduled for midday or at times coinciding with periods of high background noise;
- Noisy equipment such as emergency generators shall always be sited as far away as possible from noise sensitive receivers;
- Location of noise emitting plants at maximum possible distances from sensitive receivers;
- Contractual clauses for construction works;
- Schedule of noisy operations during non-restricted hours where possible; and

5.3.9 The above-mentioned noise mitigation measures, and all other relevant measures in "*Recommended Pollution Control Clauses for Construction Contracts*" from EPD website and ProPECC PN 1/24 will be included in the contractual clauses for the contractor(s) to follow and implement during the construction stage for construction of the Proposed Development. Furthermore, the Applicant will be recommended to specify the quieter construction equipment/methods in the construction contract to adopt through the preparation of a Construction Noise Management Plan (CNMP) by the successful tenderer with reference to ProPECC PN 1/24.

5.3.10 With these measures in place, construction noise due to the Proposed Development can be minimized as far as practicable, and no significant noise impact is anticipated.

5.4 Water Quality Impact

Relevant Legislation, Standards and Guidelines

5.4.1 Relevant legislations and standards include:

- Water Pollution Control Ordinance (Cap. 358); and
- Hong Kong Planning Standards and Guidelines.

5.4.2 Other relevant guidelines include:

- Water Supplies Department (WSD) Water Quality Criteria;
- Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS);
- Professional Persons Environmental Consultative Committee Practice Note 2/24 "Construction Site Drainage" (ProPECC PN 2/24);

- Professional Persons Environmental Consultative Committee Practice Note 1/23 "Drainage Plans subject to Comment by the Environmental Protection Department" (ProPECC PN 1/23); and
- Sewerage Manual (SM) and the Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF).
- Environmental, Transport and Works Bureau (ETWB) Technical Circular (Works) No. 5/2005 Protection of natural streams/rivers from adverse impacts arising from construction works
- Drainage Services Department (DSD) Technical Circular and Practice Notes
- EPD Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (version 1.0) (Report No. EPD/TP 1/05)

Water Sensitive Receivers

5.4.3 Water sensitive receivers (WSRs) are identified in the surrounding of the Proposed Development (see **Figure 5.2**). There is no watercourse found within the Application Site. The nearest WSR is WSR 01 (Ma Wat River), which is located ~97m to the north of the Application Site.

Table 5.3 Summary of Water Sensitive Receivers in the Surrounding

WSR	Nature	Approximate Horizontal Separation from Nearest Site Boundary
WSR 01 Ma Wat River	River	~97m to the north
WSR 02 Watercourse	Natural or Channelized Watercourses	~192m to the north
WSR 03 Pond	Ponds	~407m to the east

Source of Construction Wastewater

5.4.4 Construction activities including site clearance and formation, foundation work (piling), excavation and superstructure construction, etc. would inevitably have the potential to generate wastewater and affect the nearby water quality. Works should be carried out in such a manner so as to minimise significant impacts on local water bodies. Activities that are likely to cause water pollution include:

- Demolition and construction runoff and drainage;
- Sewage effluent from the site; and
- Liquid spillage, e.g. oil, diesel, solvents etc.

5.4.5 Demolition and construction runoff contain increased loads of sediments, other suspended solids and contaminants. Potential sources of pollution include runoff and erosion from the site surfaces, drainage channels, bentonite slurries and runoff from dust suppression sprays, fuel, oil and lubricants from vehicles and other equipment.

5.4.6 Sewage effluent could be potentially generated from eating areas, temporary site facilities (e.g. toilets) and waste disposal area for onsite construction workforce. The sewage effluent is characterized by high levels of biochemical oxygen demand (BOD), ammonia, E. coli and some oil/ grease.

5.4.7 Liquid spillage could be caused by general construction works to contaminate surface soils, e.g. oil, diesel, solvents etc. The contaminated soil may be washed away through

runoff from construction site and enter nearby stormwater drains, thus leading to negative water quality impact.

5.4.8 The effects on water quality from these construction activities are likely to be minimal provided that site boundaries are well maintained a goods site practice is observed to ensure that litter and fuels are managed, stored, and handled properly. Below are some mitigation measures to avoid and minimize potential water quality impacts on the WSRs.

Mitigation Measures

5.4.9 The good practice given in the ProPECC PN 2/24 in controlling water pollution at construction site shall be implemented during the construction phase of the Proposed Development. Soil erosion from the construction site can be minimised through good onsite management practices by implementing viable erosion control measures, which should be incorporated in contract clauses. The main practices provided in ProPECC PN 2/24 are also summarized in the following paragraphs, which should be enforced to prevent adverse construction stage impacts and for compliance with the statutory criteria.

Construction Site Runoff

- Exposed soil surfaces should be protected from rainfall through, for example, by covering temporarily exposed slope surfaces or stockpiles with impervious tarpaulin and protect temporary access roads by crushed stone or gravel;
- Exposed soil areas should be minimized to reduce the potential for increased siltation and contamination of runoff;
- Minimise the time that soil surfaces are exposed;
- Slow down water run-off flowing across exposed soil surfaces;
- Channels, earth bunds or sandbag barriers should be provided on-site to properly direct surface runoff through drainage systems. The construction runoff will be controlled in such a way that there will be no spillage of site runoff into adjacent areas or into the nearby bay;
- Oil interceptors are also recommended to be provided for stormwater drains near plant maintenance/repair areas, where necessary;
- Manholes (including newly constructed ones) should be adequately covered or temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system;
- Construction works should be programmed to minimise soil excavation works where practical during rainy conditions; and

Ground Water

- Groundwater pumped out of wells, etc. for the lowing of ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction should be discharged into storm water drains after the removal of silt in silt removal facilities.

Boring and Drilling Water

- Water used in ground boring and drilling for site investigation or rock/soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.

Bentonite Slurries

- Bentonite slurries used in diaphragm wall and bore-pile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, used bentonite slurry (if mixed with only inert fill materials) should be dewatered, and disposed of at a public fill reception facility/ area or the marine spoil ground (as a last resort) subject to obtaining a marine dumping licence from EPD on a case-by-case basis; and
- The water generated from the dewatering process should be treated to the respective effluent standards applicable to foul sewers, storm water drains or the receiving waters as set out in the Technical Memorandum on Effluent Standards under the WPCO.

Wastewater from Construction Sites

- Sewerage generated from the construction workforce should be contained by chemical toilets before connection to public foul sewer can be provided. Sufficient chemical toilets should be provided in the construction site. The facility should be serviced and cleaned by a licensed contractor at regular intervals;
- Foul water from canteens on-site, if any, should also be contained by chemical toilets before connection to public foul sewer can be provided;
- A vehicle wheel washing facility should be provided at every site exit such that earth, mud, debris, etc. deposited onto the vehicle wheels or body can be washed off before leaving the sites; and
- Section of the construction road between the wheel washing bay and the public road should be paved to reduce vehicle tracking of soil and to prevent site runoff from entering public road drains.

Liquid Spillage

- Spillage of fuel oils or other polluting fluids should be prevented at source. It is recommended that all stocks should be stored inside proper containers and sited on sealed areas, preferably surrounded by berms;
- Regular site inspections to ensure the proper implementation of the above measures shall be carried out;
- A chemical waste producer must be registered by the Contractor if chemical waste would be produced from the construction site;
- Control of chemical waste shall observe and comply with the Waste Disposal Ordinance (Cap. 354) and its subsidiary regulations, particularly the Waste Disposal (Chemical Waste) (General) Regulation;
- Any maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided; and
- Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should be undertaken with the areas appropriately equipped to control these discharges.

5.4.10 Regular site inspections to ensure the proper implementation of the above measures shall be carried out.

5.5 Construction Waste Disposal

Legislations and Guidelines

5.5.1 The principal legislation controlling waste materials in Hong Kong is the Waste Disposal Ordinance (WDO) (Cap. 354) and its subsidiary regulations including Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) and Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Other relevant ordinance includes Land (Miscellaneous Provisions) Ordinance (Cap 28) and Public Health and Municipal Services Ordinance (Cap 132) - Public Cleansing and Prevention of Nuisances Regulation. Other relevant guidelines which cover how applicant and contractor should comply with the regulations are as follows:

- Hong Kong Planning Standards and Guidelines (HKPSG), Chapter 9 – Environment, Hong Kong SAR Government;
- Work Branch Technical Circular (WBTC) No. 2/93, Public Dumps, Works Branch, Hong Kong Government;
- WBTC No. 2/93B, Public Filling Facilities, Works Branch, Hong Kong Government;
- WBTC No. 12/2000, Fill Management; Works Bureau, Hong Kong SAR Government;
- WBTC No. 12/2002, Specification Facilitating the Use of Recycled Aggregates, Works Bureau, Hong Kong SAR Government;
- Environmental, Transport and Works Bureau Technical Circular (Works) ("ETWB TC(W)") No. 19/2005, Environmental Management on Construction Sites, Hong Kong SAR Government;
- Development Bureau Technical Circular (Works) ("DEVB TC(W)") No. 6/2010, Trip Ticket System for Disposal of Construction & Demolition Materials, Hong Kong SAR Government;
- DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness, Hong Kong SAR Government;
- DEVB TC(W) No. 9/2011, Enhanced Control Measures for Management of Public Fill, Hong Kong SAR Government;
- 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);
- Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (2023), Hong Kong SAR Government;
- A Guide to the Registration of Chemical Waste Producers (2023), Hong Kong SAR Government;
- A Guide to the Chemical Waste Control Scheme (2023), Hong Kong SAR Government;
- Monitoring of Solid Waste in Hong Kong (2023), Hong Kong SAR Government; and
- Guidance Notes on Tree Preservation and Removal Proposal for Building Development in Private Projects – Compliance with Tree Preservation Clause under Lease, Lands Department, Hong Kong SAR Government.

Waste Generation

5.5.2 Construction activities for the Proposed Development will generate waste materials requiring appropriate management and disposal. Likely range of waste types includes based on major works below:

- Construction & Demolition (C&D) materials due to excavation, demolition and site clearance;
- Asbestos containing materials (ACM);
- General refuse generated by the workforce; and
- Scrap, effluent, other chemicals and oily wastes from construction activities and equipment maintenance.

C&D Materials

5.5.3 C&D materials comprise mainly of unwanted materials, including surplus materials arising from excavations that are generated from the works (e.g. site clearance, demolition works of substructure, site formation works and excavation works). Inert soft C&D materials comprise of soil, sand, clay, slurry, etc., while hard C&D materials comprise of crushed concrete, asphalt, rock, etc. The amount of non-inert C&D materials generated during site clearance would be minor (as there is little vegetation at the Application Site). C&D materials may comprise different types of materials, including:

- Non-inert C&D materials (e.g. bamboo, timber, paper, metal, glass, plastic, packaging wastes, etc.) decompose or are not suitable for land reclamation and should be reused or recycled as far as possible. Those non-inert C&D materials that cannot be reused or recycled should be disposed of at landfill as a last resort.
- Inert C&D materials (e.g. soil, rock debris, rubble earth, concrete, etc.) do not decompose and are suitable for reuse as filling materials for land reclamation and site formation. Inert C&D materials could be reused on-site as filling materials. Those inert C&D materials that cannot be reused should be delivered to Public Fill Reception Facilities.

5.5.4 The general waste management strategy is to avoid waste generation in the first place. If that is unavoidable, source reduction and segregation should be exercised as far as practicable and at the same time, recycling and reuse should be adopted to salvage as much as possible all the recyclable and reusable materials.

5.5.5 Inert C&D materials should be re-used on-site for backfilling and/or delivered off-site to public filling area or other CEDD designated public fill reception facilities. Nevertheless, on-site sorting of all C&D materials should be provided prior to disposal. Non-inert C&D materials (i.e. C&D wastes) should be re-used or recycled. For those that cannot be reused or recycled should be disposed of at designated landfill sites as last resort. The details are shown in **Table 5.4**.

5.5.6 According to ETWB TC(W) 19/2005 on "*Environmental Management on Construction Sites*", waste management plan (WMP) becomes part of Environmental Management Plan (EMP) to be submitted to Architect/ Engineer for approval before construction works. The Project team will require the Contractor(s) to submit WMPs for approval. The WMPs will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. It will ensure that the day-to-day operations on site comply with the approved WMPs. It will control the disposal of inert C&D materials and non-inert C&D materials to public fill reception facilities and landfills, respectively, through a trip-ticket system. It will require the Contractor(s) to separate public fill from C&D

materials for disposal at appropriate facilities. It will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

5.5.7 The Contractor(s) should be responsible for ensuring that waste is collected by approved licensed waste collectors and that appropriate measures are taken to minimise adverse impacts, such as dust generation. The Contractor(s) must also ensure that all necessary waste disposal permits are obtained.

5.5.8 Prior to disposal of non-inert C&D materials, it is recommended that steel, glass and other metals be separated for re-use and/or recycling and inert C&D materials utilized as fill materials to minimise the quantity of waste to be disposed of to landfill. The details are shown in **Table 5.4**.

5.5.9 All the soil generated from the underground work should be refill on site to form the site to the required level. Other C&D materials should be used on-site as far as practicable.

Chemical Waste

5.5.10 Construction plant and equipment will require regular maintenance and servicing, which would generate waste such as solvents, lubrication oil and fuel, etc. The amount of chemical waste generated will be small. Overall, some hundred litres of chemical waste is expected to be generated. It will be quantified in the Environmental Management Plan (EMP) to be prepared by the Contractor. 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.

5.5.11 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.

5.5.12 Chemical wastes such as wasted solvents, lubrication oil and fuel, etc. will need special handling and storage arrangements and should be collected by licensed collectors for subsequent disposal and appropriate treatment at licensed waste disposal facilities, for example the Chemical Waste Treatment 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.

General Refuse

5.5.13 The volume of general site wastes to be generated will depend on the Contractor's operating procedure and practices. In addition, during the construction phase, the construction workforce would generate general refuse, comprising food scraps, paper, empty containers etc. Rapid and effective collection of site wastes will be required to prevent waste materials being blown around by wind, flushed or leached into the environment, and odour nuisance. The amount of general refuse which is likely to arise will be largely dependent on the size of the workforce employed by the Contractor(s).

5.5.14 As no information regarding the number of workers onsite is available at this early project state, it has been assumed that about 30 workers in average will work on the Application Site during site formation at any one time. Based on a generation rate of 0.65kg per worker per day, the daily arising of general refuse would be approximately 19.5kg/day.

Asbestos Containing Materials (ACM)

5.5.15 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.

5.5.16 ACM may be present in the buildings within the Application Site. Thus, ACM which may be disturbed during demolition activities, should be removed and disposed of in a proper manner prior to the demolition work, so as to avoid the release of harmful asbestos fibres to environment and minimise potential hazard.

5.5.17 All ACM if confirmed to be present within the existing premises must be removed and disposed of in accordance with the APCO and WDO prior to the demolition works. A Registered Asbestos Consultant and Registered Asbestos Laboratory shall be engaged to conduct investigation for the presence of ACM. An Asbestos Investigation Report, an Asbestos Abatement Plan (AAP) (if required) and a notification of commencement of asbestos abatement works commences. Also, the removal of ACMs should be carried out by a Registered Asbestos Contractor according to the approved AAP under the supervision of a Registered Asbestos Consultant. The asbestos waste generated shall be disposed of by a licensed collector in compliance with the WDO.

Yard Waste

5.5.18 It is understood that yard waste will be anticipated from construction activities, mainly from site clearance. They will be handled in accordance with the waste management hierarchy. Relevant guidelines from EPD[1] and Y Park[2] will be taken into account when handling yard waste, where applicable. To minimize the generation of yard waste, it is recommended to:

- Avoid unnecessary removal or excessive pruning of trees. Preserve trees in their original locations and implement tree transplanting when on-site preservation is not feasible;
- Segregate various types of yard waste and shred wood to facilitate reuse and recycling;
- Reuse yard waste on-site for a variety of purposes (e.g., decomposition and composting, recreational and decorative uses, and mulching in planting areas, etc.); and
- Identify recycling options (e.g. delivery to Y-park) for yard waste that cannot be directly reused on-site.

5.5.19 Where yard waste generation is unavoidable, sorting of yard waste for recycling and reuse on site will be the priority. Yard waste will be separated from C&D material to facilitate recycling, such as delivering them to Y-park so as to minimize the quantity of waste to be disposed at landfill site. Where appropriate, the Contractor should be responsible to cut and shred the yard waste in order to meet the collection requirement of the recycling outlet for processing. Disposal of yard waste directly at landfills will only be regarded as the last resort, when no alternatives are available.

[1] EPD, "Yard Waste Recycling Centre"
https://www.epd.gov.hk/epd/english/environmentinhk/waste/manage_facility/ypark.html

[2] EPD, "Y PARK"
https://www.ypark.hk/zh-hant/

Table 5.4 Estimated Quantities of Waste during Construction Phase

Type of Waste	Estimated Waste Generation	Proposed Handling Method and Destination
Inert C&D Materials	~16,200m^3	~5% (i.e. ~800m^3) would be reused onsite and the remaining (i.e. 95% or ~15,400m^3) would be delivered off-site to public fill reception facilities
Non-inert C&D Materials	~1,700m^3	Recyclables would be segregated before sending to recyclers; Non-recyclables to landfill; Yard waste that cannot be reused onsite will be delivered to Y-Park
General Refuse	~19.5kg/day	Recyclables to recyclers; Non-recyclables to landfill
Chemical Waste	Anticipated to be limited (around some hundred litres at most)	To be collected by licensed chemical waste collector and delivered to CWTC
Asbestos Containing Materials	TBC (subject to further investigation by the asbestos specialist when access to the site becomes available)	Disposal to landfill

Mitigation Measures

5.5.20 The mitigation measures for construction phase are recommended based on the waste management hierarchy principles. Recommendations of good site practices, waste reduction measures as well as the waste transportation, storage and collection are described in following sub-sections.

Good Site Practices

5.5.21 Appropriate waste handling, transportation and disposal methods for all waste arisings generated during the construction phase should be implemented to ensure that construction waste do not enter the nearby water sensitive receivers.

5.5.22 It is expected that adverse impacts from waste management would not arise, provided that good site practices are strictly followed. Recommendations for good site practices during construction include:

- 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 appropriate facilities;
- Training of site personnel in proper waste management and chemical waste handling procedures;
- Provision of sufficient waste disposal points and regular collection for disposal;
- Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;
- Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.

5.5.23 In order to monitor the disposal of C&D material at landfills and public fill reception facilities, as appropriate, and to control fly tipping, a trip-ticket system should be

included as one of the contractual requirements to be implemented by the Contractor. Reference shall be made to DEVB TCW No. 6/2010 for details.

Waste Reduction Measures

5.5.24 Avoidance of waste can be achieved through careful planning of works method and material consumption before ordering of materials. Material should be properly stored and protected to reduce damage and contamination to reduce waste generation as well. Non-timber formwork, or used timber, instead of virgin timber, should be adopted where possible.

5.5.25 If waste is unavoidable, source reduction and segregation should be exercised as far as practicable and at the same time, recycling and reuse should be adopted to salvage as much as possible all the recyclable and reusable materials.

5.5.26 Good management and control can prevent the generation of significant amounts of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:

- Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;
- Separate labelled bins shall be provided to segregate aluminium cans from other general refuse generated by the work force, and to encourage collection of by individual collectors;
- Any unused chemicals or those with remaining functional capacity shall be recycled;
- Maximising the use of reusable steel formwork to reduce the amount of C&D material;
- Prior to disposal of non-inert C&D material, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill;
- Proper storage and site practices to minimise the potential for damage or contamination of construction materials;
- Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste; and
- Minimize over ordering of concrete, mortars and cement grout by doing careful check before ordering.

5.5.27 In addition to the above good site practices and waste reduction measures, specific mitigation measures are recommended for the identified waste to minimise environmental impacts during handling, transportation and disposal of these wastes.

General Refuse

5.5.28 Recycle bins will be provided onsite to collect recyclable wastes such as paper, metal (e.g. cans), plastic and glass. Recyclable wastes will be segregated from non-recyclable waste to be stored in enclosed bins or compaction units. A reputable waste collector should be employed by the contractor to remove general refuse from the site on a daily basis. Recyclable waste will be collected in appropriate frequency to ensure no over stacking of recyclable wastes. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material.

Construction and Demolition Material

5.5.29 The C&D material generated from site formation should be sorted on-site into inert C&D material (that is, public fill) and non-inert C&D material. In order to minimise the impact resulting from collection and transportation of C&D materials for off-site disposal, the excavated material comprising fill material should be reused on-site as backfilling material as far as practicable. Non-inert C&D material, such as wood, plastic, steel and other metals should be reused or recycled and, as a last resort, disposed of to landfill.

5.5.30 Suitable areas should be designated within the site for temporary stockpiling of C&D material and to facilitate the sorting process. Within stockpile areas, the following measures should be taken to control potential environmental impacts or nuisance:

- Covering material during heavy rainfall;
- Locating stockpiles to minimise potential air quality, water quality and visual impacts; and
- Minimising land intake of stockpile areas as far as possible.

Chemical Wastes

5.5.31 For those processes which would generate chemical waste, it may be possible to find alternatives to eliminate the use of chemicals, to reduce the generation quantities or to select a chemical type of less impact on environment, health and safety as far as possible.

5.5.32 If chemical wastes are produced at the construction site, the Contractor should 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, oxidising, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed 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.

5.5.33 Any unused chemicals and those with remaining functional capacity should be recycled as far as possible.

Asbestos Containing Materials

5.5.34 Due to the potential presence of ACM during the site clearance stage, asbestos investigation is required. An asbestos specialist shall be employed during the design and construction stage to investigate this issue.

5.5.35 Sufficient and reasonable lead time shall be allowed for the preparation, vetting and implementation of asbestos investigation report and asbestos abatement plan in accordance with APCO before commencement of any demolition or site clearance work.

5.5.36 Some key precautionary measures related to the handling and disposal of asbestos based on "*Handling of Asbestos Containing Materials in Buildings*" (ProPECC PN 2/97) are listed as following:

- Adoption of protection, such as full containment, mini containment, or segregation of work area;
- Provision of decontamination facilities for cleaning of workings, equipment and bagged waste before leaving the work area;
- Adoption of engineering control techniques to prevent fibre release from work area, such as use of negative pressure equipment with high efficiency

particulate air (HEPA) filters to control air flow between the work area and the outside environment;

- Wetting of asbestos containing materials before and during disturbance, minimising the breakage and dropping of asbestos containing materials, and packing of debris and waste immediately after it is produced;
- Cleaning of work area by wet wiping and vacuuming with HEPA filtered vacuum cleaner;
- Coating on any surfaces previously in contact with or contained by asbestos with a sealant;
- Proper bagging, safe storage and disposal of asbestos and asbestos contaminated waste;
- Pre-treatment of all effluent from the work area before discharged; and
- Air monitoring strategy to check the leakage and clearance of the work area during and after the asbestos work.

Yard Waste

5.5.37 The Applicant and its contractor should consider if any yard waste is appropriate to be sent to the Yard Waste Recycling Centre in Y-Park for recycling prior to disposal at the designated landfill site.

5.5.38 Used timber in good condition will be reused in other contract and construction site of the contractor to reduce the amount of timber wastes.

5.5.39 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, general site wastes, yard waste and potential asbestos containing materials would be minimal.

5.6 Conclusion

5.6.1 Potential environment impacts arising from construction activated of the Proposed Development, including air quality, construction wastewater, noise and waste impacts have been qualitatively assessed. Potential environmental impacts are anticipated to be acceptable with the implementation of effective environmental mitigation measures.

5.6.2 In conclusion, it is envisaged that construction phase environmental impacts arising from the Proposed Development would be acceptable.

6. LAND CONTAMINATION REVIEW

6.1 Legislation and Guidelines

6.1.1 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, dated 15 August 2007; and
- Practice Guide for Investigation and Remediation of Contaminated Land (EPD's Practice Guide), revised in April 2023.

6.1.2 The criteria and the requirements stated in the above guidelines will be adopted in this Land Contamination Review.

6.2 Assessment Methodology

6.2.1 Land contamination review was carried out according to the Guidance Manual, the Guidance Note and the Practice Guide. Site appraisals, including site survey and desktop review, were conducted to identify the potentially contaminating activities that may pose adverse impact to the Application Site. Site survey was conducted within the Application Site to review the general site conditions and to identify any sources of land contamination (or 'hot spots'). For the desktop review, the following information was reviewed:

- Selected historical aerial photos and topographic maps held by the Lands Department (LD); and
- Records on dangerous goods (DGs), chemical wastes, chemical spillage/leakage incidents and Chemical Waste Producers registry from Fire Services Department (FSD) and Environmental Protection Department (EPD).

6.2.2 Subject to the assessment outcome, the Contamination Assessment Plan (CAP) and, subsequently, the Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) may be required in later stages to identify the potential land contamination issues in the Application Site. The land contamination assessment and/ or remediation works shall be completed according to EPD guidelines before the commencement of any construction works for the development.

6.3 Current and Historical Land Uses

6.3.1 The Application Site is located to the east of the J/O Tai Wo Service Road West and Wo Hing Road at Wo Hop Shek, Fanling. It is currently occupied by warehouses and open area.

6.3.2 Historical aerial photos taken in year 1945, 1964, 1984, 1994, 2004, 2014, 2019, 2022 and 2024 are shown in **Appendix 6.1** to present the land use status (**Table 6.1** also refers).

6.3.3 From year 1945 to year 1964, Application Site was a farmland, with a temporary structure located in the northwestern portion. In year 1964, the Application Site was generally paved with building structures erected. Open storage area was observed as well. From year 1977 to year 2015, the Application Site was occupied by Venton Manufacturing Company Limited and used as factory. Open storage area remained. Since year 2015, the factory was abandoned. The abandoned factory was converted to warehouse uses.

Table 6.1 Land Use Summary on the Application Site

Period / Year	Land Use / Description	Owner / Occupier	Source of Information	Off-site Property Affected?
1945	The Application Site was a farmland, with a temporary structure at the northwestern portion. Wo Hop Shek Village was formed to the southwest of the Application Site.	No information available	Aerial Photos from LD	No
1964	The Application Site was paved with building structures erected. Open storage area is also observed.	No information available	Aerial Photos from LD	No
1977 ~ 1984	A factory namely Venton Manufacturing Company Limited occupied the Application Site, while the open storage area remained. Tai Wo Service Road West and Fanling Highway were constructed to the north of the Application Site.	No information available	Aerial Photos and Topographic Map from LD	Yes K. Kee Engineering Company Limited is located to the immediate east of the Application Site, which is a covered warehouse and remains in operation since 1984. Brilliant Towing Company is located immediately to the southeast of the Application Site since 2004. Minor activities (e.g. tyre replacement) and parking of lorries were observed during site survey. Although the site is well-paved by concrete, potential land contamination would be anticipated.
1994	No change in land use of the Application Site comparing to year 1984. Wo Hing Road Car Park was formed to the west of the Application Site.	No information available	Aerial Photos from LD	
2004	No change in land use of the Application Site comparing to year 1994.	No information available	Aerial Photos from LD	
2014	No change in land use of the Application Site comparing to year 2004.	• Third parties • Government	Aerial Photos from LD	
2019	It is understood that factory owned by Venton Manufacturing Company Limited was abandoned since year 2015. Part of the abandoned factory was converted to warehouse use. The open storage area remained.	• Applicant • Government	Aerial Photos from LD	
2022	No change in land use of the Application Site comparing to year 2019.	• Applicant • Government	Aerial Photos from LD	
2024	No change in land use of the Application Site comparing to year 2022. Tai Wo Service Road West has been realigned. Fanling Bypass Eastern Section was under construction. The proposed public housing development at Fanling Area 48 is located to the	• Applicant • Government	Aerial Photos from LD	

Period / Year	Land Use / Description	Owner / Occupier	Source of Information	Off-site Property Affected?
	immediate southeast of the Application Site and its construction has been commenced.			

6.4 Information from Government Departments

6.4.1 Apart from the historic aerial photos, the following Hong Kong Special Administration Region (HKSAR) Government Departments have been enquired on the latest update on the availability of land use status and records of land contamination and/or spillage of the Application Site. The summary of correspondences is tabulated in **Table 6.2** below. Copy of letters which the Consultant sent to various Government Departments and relevant replies are shown in **Appendix 6.2.**

6.4.2 Building Records Access and Viewing On-line (BRAVO) of Building Departments (BD) was visited on 02 July 2025 to obtain records for completed private buildings. There are neither records of building, structure, drainage, alternation & additions, site formation, minor works nor any existing building available at the Application Site. The captured screen of BRAVO is provided in **Appendix 6.3**.

6.4.3 As advised by Planning Department, the Application Site falls within an area zoned as "Government, Institution or Community" ("G/IC") on the approved Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/28.

6.4.4 As advised by EPD, there is no record of chemical spillage or leakage accident at the Application Site for the past 2 years. Nevertheless, the Consultant has visited the territory-wide register of chemical waste producers (CWPs) maintained at the Territory Control Office. The register record as of 17 June 2025 has confirmed that there is no CWP at the Application Site.

6.4.5 As advised by Fire Services Department, neither records of dangerous goods license, fire incidents nor incidents of spillage/ leakage of dangerous goods were at the Application Site.

Table 6.2 Enquires and Responses on Land Contamination Related Records in the Application Site

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
SDMFLD51EI00_0_0003L.25	Planning Department	PLO/FSYLE/6-20/1	02/07/2025	The Application Site falls within an area zoned "Government, Institution or Community" ("G/IC") on the approved Fanling/ Sheung Shui Outline Zoning Plan No. S/FSS/28. According to the RNTPC Paper No. 1/16 (dated 08 Jan 2016), TPB Paper No. 10170 (dated 23 Sep 2016) and the Council on 03 Jan 2017, the Application Site was rezoned from "Industrial" to "G/IC" for a reserved primary school.

Consultant's Letter Ref.	Department	Response Letter Ref.	Response Date	Summary
SDMFLD51EI00_0_0004L.25	Environmental Protection Department	Email	26/06/2025	There is no record of chemical spillage accident and submission relating to land contamination assessment at the Application Site in the past 2 years. A visit to the Territorial Control Office for chemical waste producer registry inspection was performed. According to the register record as of 17 June 2025, no valid/ invalid CWP is found at the Application Site.
SDMFLD51EI00_0_0005L.25	Fire Services Department	(15) in FSD GR 6-5/4 R Pt. 59	07/07/2025	Neither records of dangerous goods license, fire incidents nor incidents of spillage/ leakage of dangerous goods were found at the Application Site.
SDMFLD51EI00_0_0006L.25	Lands Department	(3) in LANDSD DLOs-009-004-N-PO-149-25-106-P001	12/08/2025	There is no relevant record on land contamination. Topographic maps available from Lands Department were reviewed. The Application Site was occupied by Venton Manufacturing Company Limited as factory and open storage from year 1977 to 2015. From year 2015, the factory was abandoned and converted to be warehouses. Topographic map records generally tally with observations in aerial photos.

6.5 Discussion and Site Observation

6.5.1 Based on the above, the desktop review of historical information indicated that the Application Site was a farmland until year 1964. Major change of land use was observed in year 1964. The Application Site was paved and occupied by a factory (i.e. Venton Manufacturing Company Limited) with open storage area observed. In year 2015, the factory was abandoned and was used as warehouses. Since then, the Application Site is used as warehouses.

6.5.2 Site visit was conducted on 04 June 2025. The Application Site was occupied by warehouses and open space. It was observed that there were unlicenced vehicles stored at the Application Site. Damaged pallets were stacked at open area. Site walkover checklist and photo records were shown in **Appendix 6.4** and **Appendix 6.5** respectively.

6.5.3 Some ground areas were stained by paint but no crack was observed on the ground. There was no sign obvious/ suspected contamination such as abnormal odour, distress vegetation, dangerous goods storage and/ or chemical storage within the Application Site during the site inspection.

6.5.4 However, by considering the historic business nature of the Application Site (i.e. factory), further investigation of potential land contamination problem is considered necessary.

6.6 Conclusion

6.6.1 Further site appraisal and soil sampling is recommended after the Application Site is cleared to determine whether it is contaminated, and if so, the extent of the potential contamination should be revised. CAP will be prepared for the Application Site in later stage. Subsequently, CAR and RAP will be prepared to identify the potential land contamination issued in the Application Site.

6.6.2 Further land contamination assessment and/ or remediation works (if necessary) shall be completed before commencement of any construction works for the Application Site, in accordance with relevant guidelines issued by government departments. RR shall be prepared and submitted to EPD for approval to demonstrate that the decontamination work is adequate and is carried out in accordance with the endorsed CAP, CAR and RAP after the completion of the remediation works. No development works shall be commenced before the endorsement of RR is sought from EPD.

7. CONCLUSION

7.1.1 An environmental assessment has been conducted for the Proposed Development to address the potential environmental noise, air quality, construction phase environmental impacts and risk of land contamination.

Noise

7.1.2 According to the result of road traffic noise impact assessment, no adverse road traffic noise impact due to surrounding roads on the Proposed Development is anticipated with the recommended noise mitigation measures in place. Noise mitigation measures include acoustic window (baffle type).

7.1.3 Fixed noise impact assessment has also been conducted. The predicted noise levels of representative NSRs would comply with the criteria as stipulated in NCO. The Proposed Development would not be subject to adverse fixed noise impact. On the other hand, any potentially noisy equipment of the Proposed Development will be designed and installed with adequate noise mitigation measures to comply with the HKPSG standard and NCO.

Air Quality

7.1.4 As confirmed in site survey, there is no existing and planned industrial source / chimney identified within 200m from the Application Site. The Proposed Development will be designed so that there are no air-sensitive uses of the proposed development, including openable windows and fresh air intake, falling within the buffer zones as stipulated in the HKPSG. Therefore, no adverse air quality impact on the Proposed Development would be anticipated.

Construction Phase Environmental Impact

7.1.5 Potential environmental impacts arising from construction activities of the Proposed Development, including air quality, construction wastewater, noise and waste impacts have been qualitatively assessed. Potential environmental impacts are anticipated to be insignificant with the implementation of effective environmental mitigation measures.

Land Contamination

7.1.6 Based on the land contamination appraisal, further investigation of potential land contamination problem is considered necessary due to its historic business nature (i.e. factory). Potential land contamination issues need to be ascertained in later stage according to the findings. A Contamination Assessment Plan (CAP) and subsequently, Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) will be prepared in later stages to identify the potential land contamination issues at the Application Site. Further land contamination assessment and/or remediation works (if necessary) shall be completed before commencement of any construction works for the Proposed Development, in accordance with relevant guidelines issues by government departments. A Remediation Report (RR) shall be prepared and submitted to EPD for approval to demonstrate that the decontamination work is adequate and is carried out in accordance with the endorsed CAP, CAR and RAP after the completion of the remediation works. No development works shall be commenced before the endorsement of RR is sought from EPD.

7.1.7 Based on the environmental assessment results, it is concluded that the Proposed Development is environmentally acceptable with the recommended measures in place and remediation work (if required) implemented.

Figures

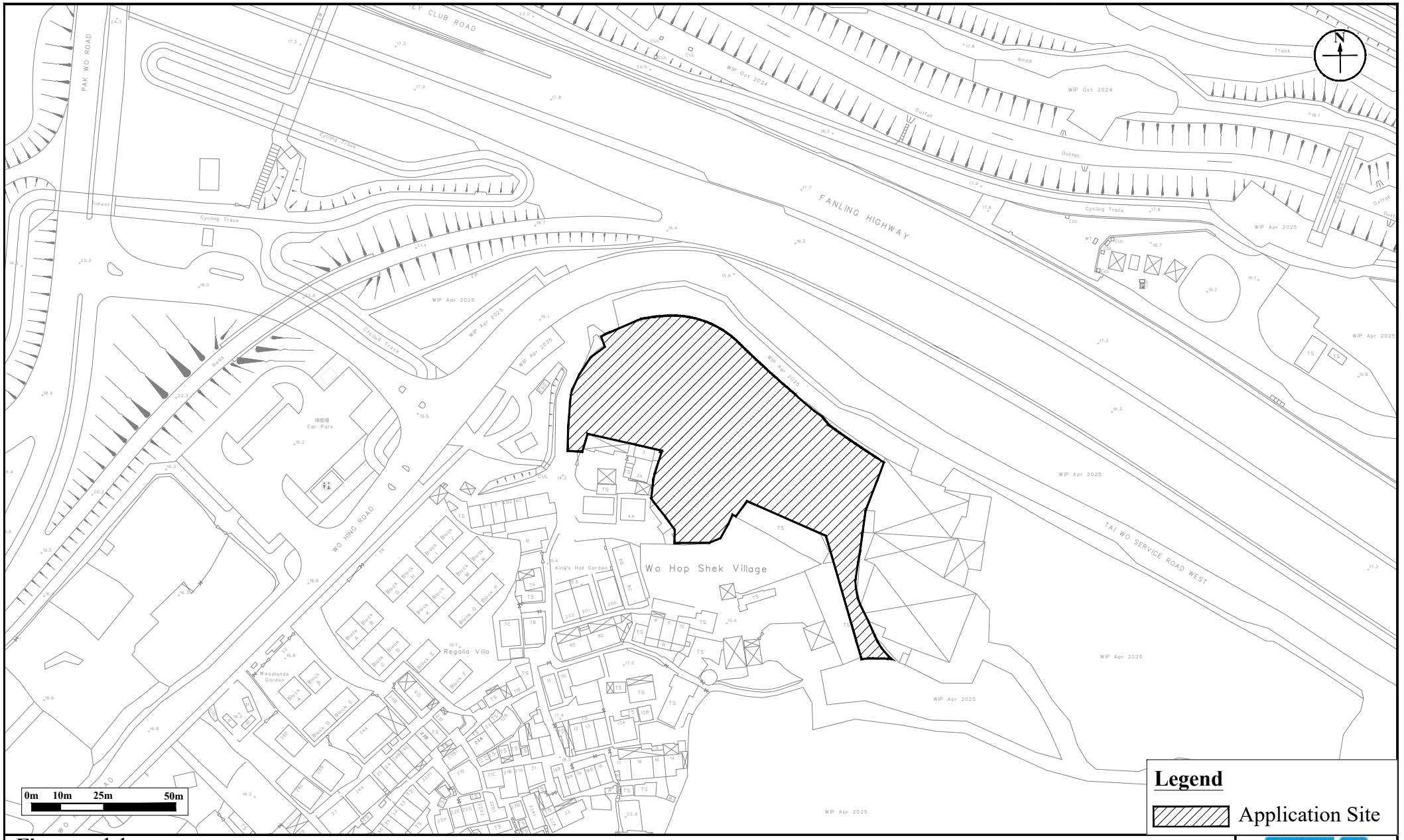

Figure: 1.1	RAMBOLL
Title: Application Site and its Environs	Drawn by: SC
	Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots In D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0
	Date: Aug 2025

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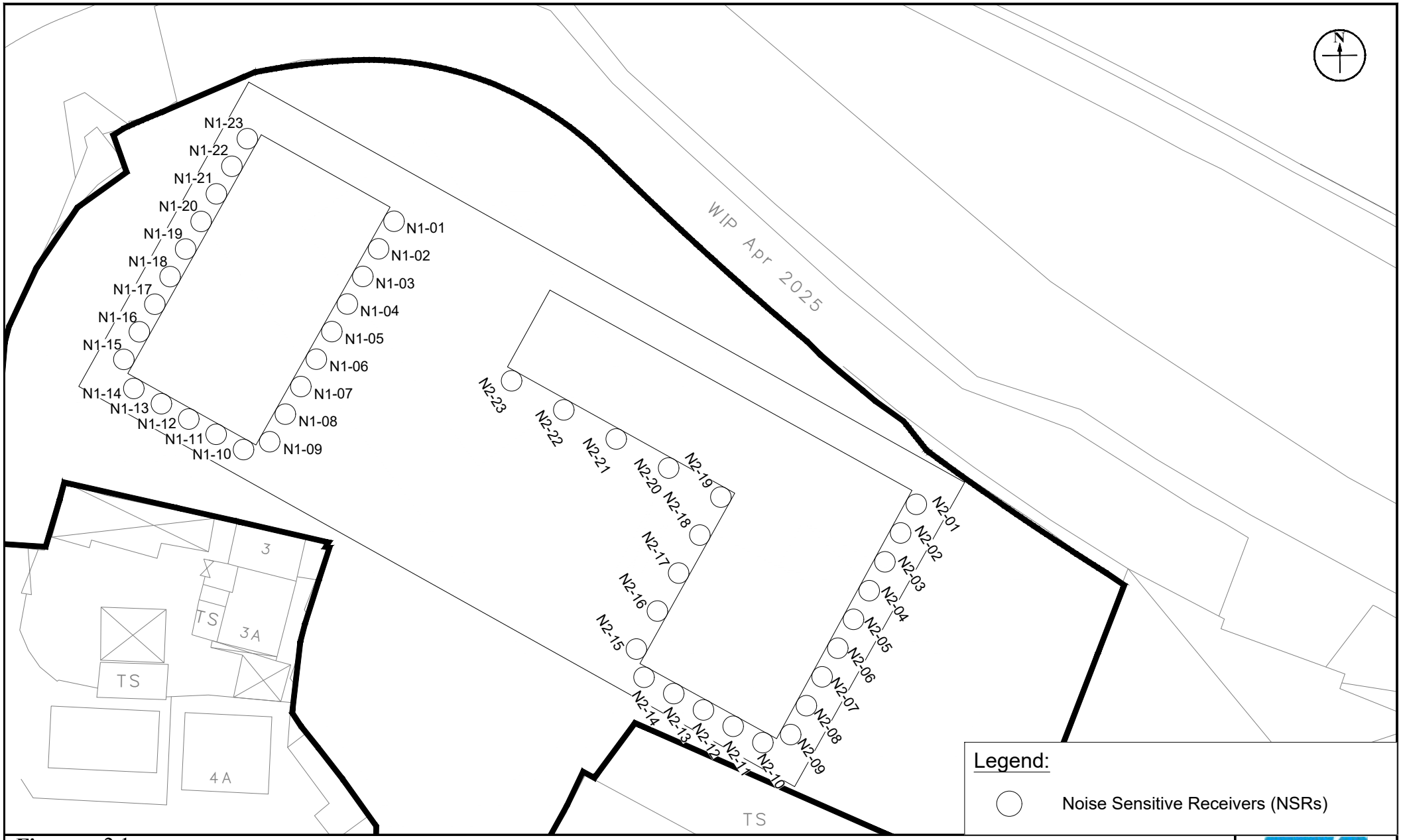

Figure: 2.1

Title: Locations of Representative Noise Sensitive Receivers for Road Traffic Noise Impact Assessment

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots In D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	CM
Checked by:	BF
Rev.:	1.0
Date:	Aug 2025

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Figure: 2.2	RAMBOLL
Title: Proposed Road Traffic Noise Mitigation Measures	Drawn by: CM
	Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots In D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0
	Date: Aug 2025

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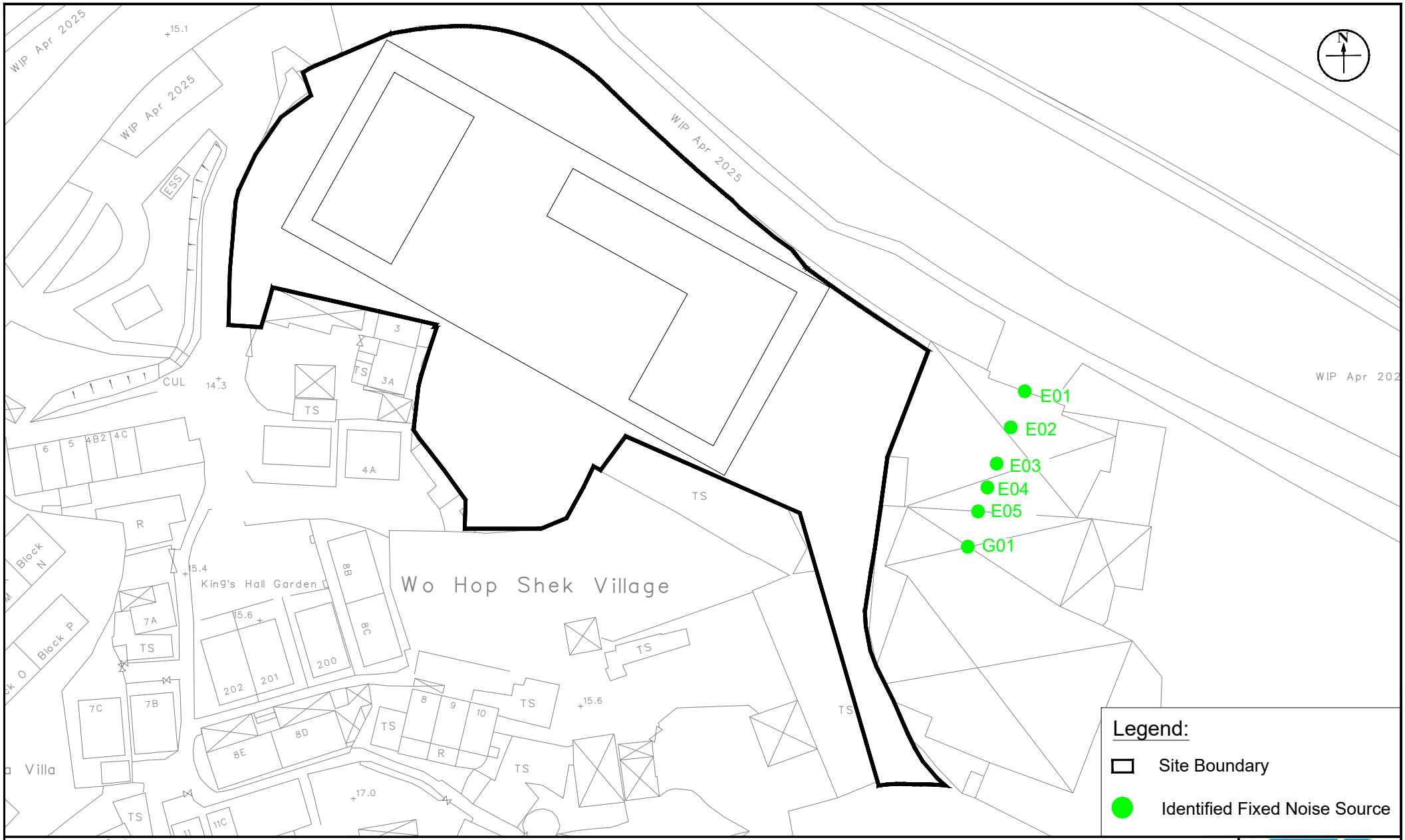

Figure: 3.1

Title: Locations of Representative Noise Sensitive Receivers for Fixed Noise Impact Assessment

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots In D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	CM
Checked by:	BF
Rev.:	1.0
Date:	Aug 2025

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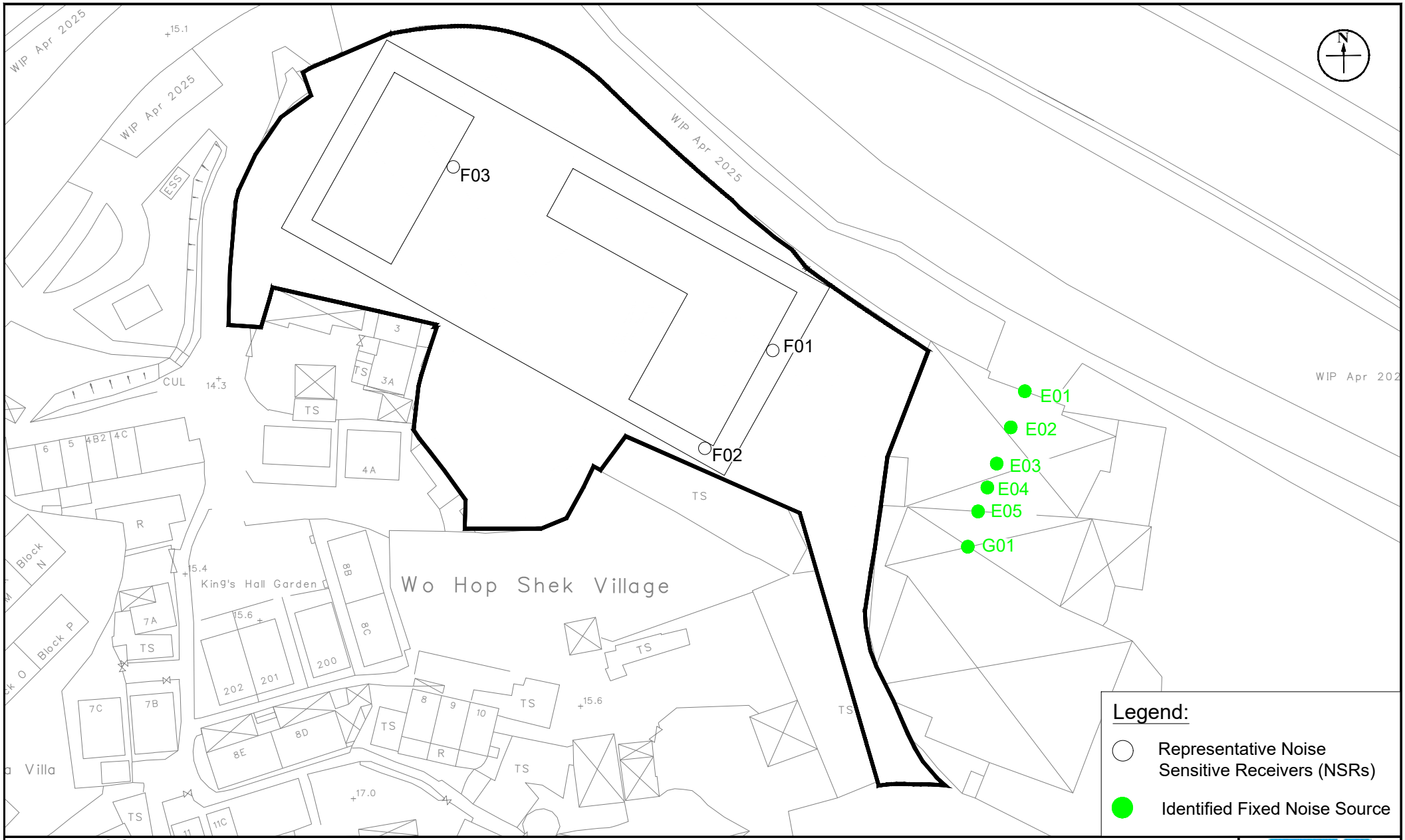

Figure: 3.2

Title: Locations of Representative Noise Sensitive Receivers for Fixed Noise Impact Assessment

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots In D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	CM
Checked by:	BF
Rev.:	1.0
Date:	Aug 2025

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Figure: 4.1

Title: Assessment Area of 200m from the Application Site

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots In D.D. 51 and Adjoining Goverment Land, Fanling

RAMBOLL

Drawn by:	SC
Checked by:	BF
Rev.:	1.0
Date:	Aug 2025

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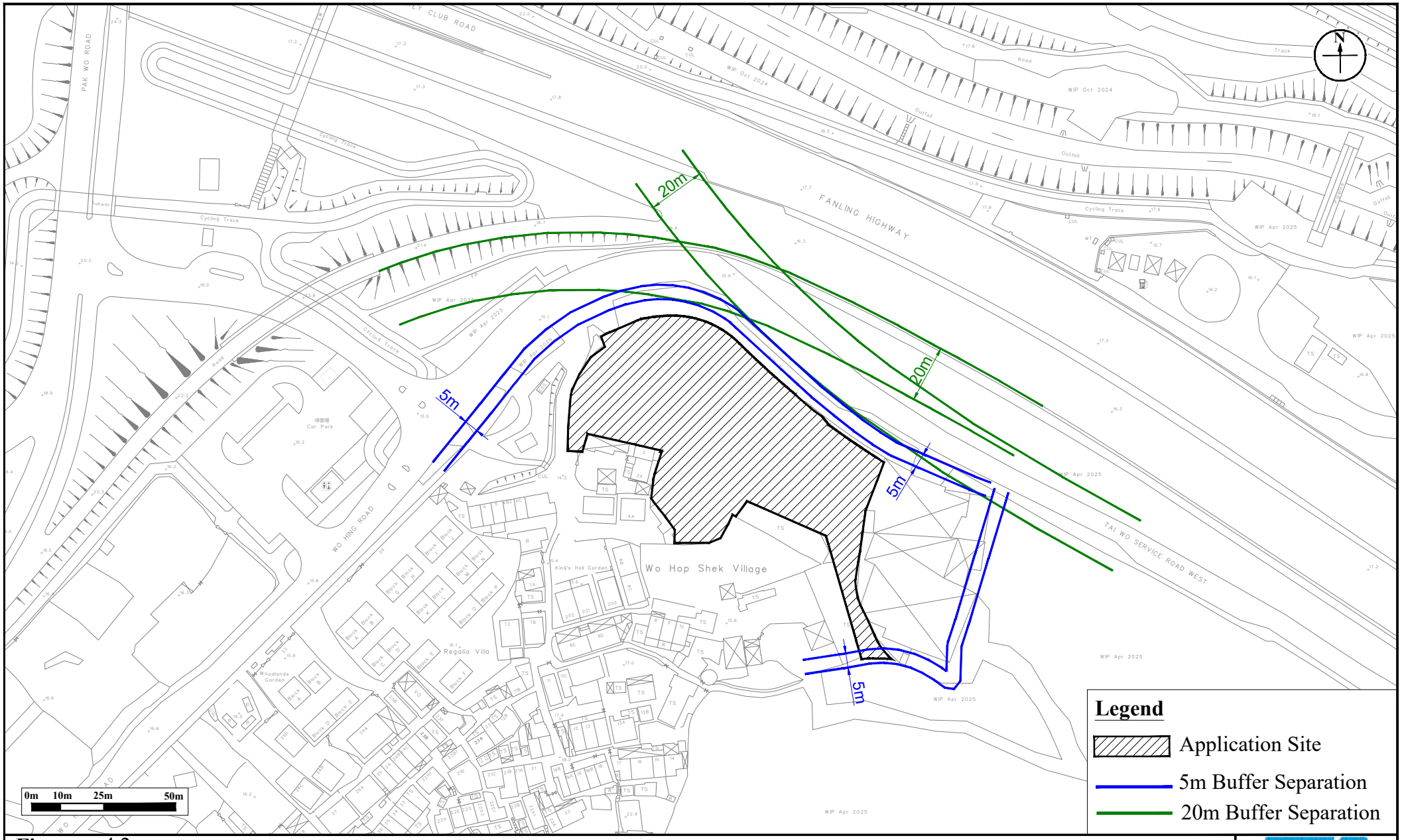

Figure: 4.2

Title: HKPSG Vehicular Emission Buffer Distance for Nearby Road Network

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots In D.D. 51 and adjoining Government Land, Fanling

RAMBOLL

Drawn by:	SC
Checked by:	BF
Rev.:	1.0
Date:	Aug 2025

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Figure: 4.3

Title: Odour Sources Identified within 200m Assessment Area

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots In D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	SC
Checked by:	BF
Rev.:	1.0
Date:	Aug 2025

Q:\Projects\SDMFLD51EI00\05 Assessments\01 Air\02 Vehicles\20250603\AQIA_Figures.dwg

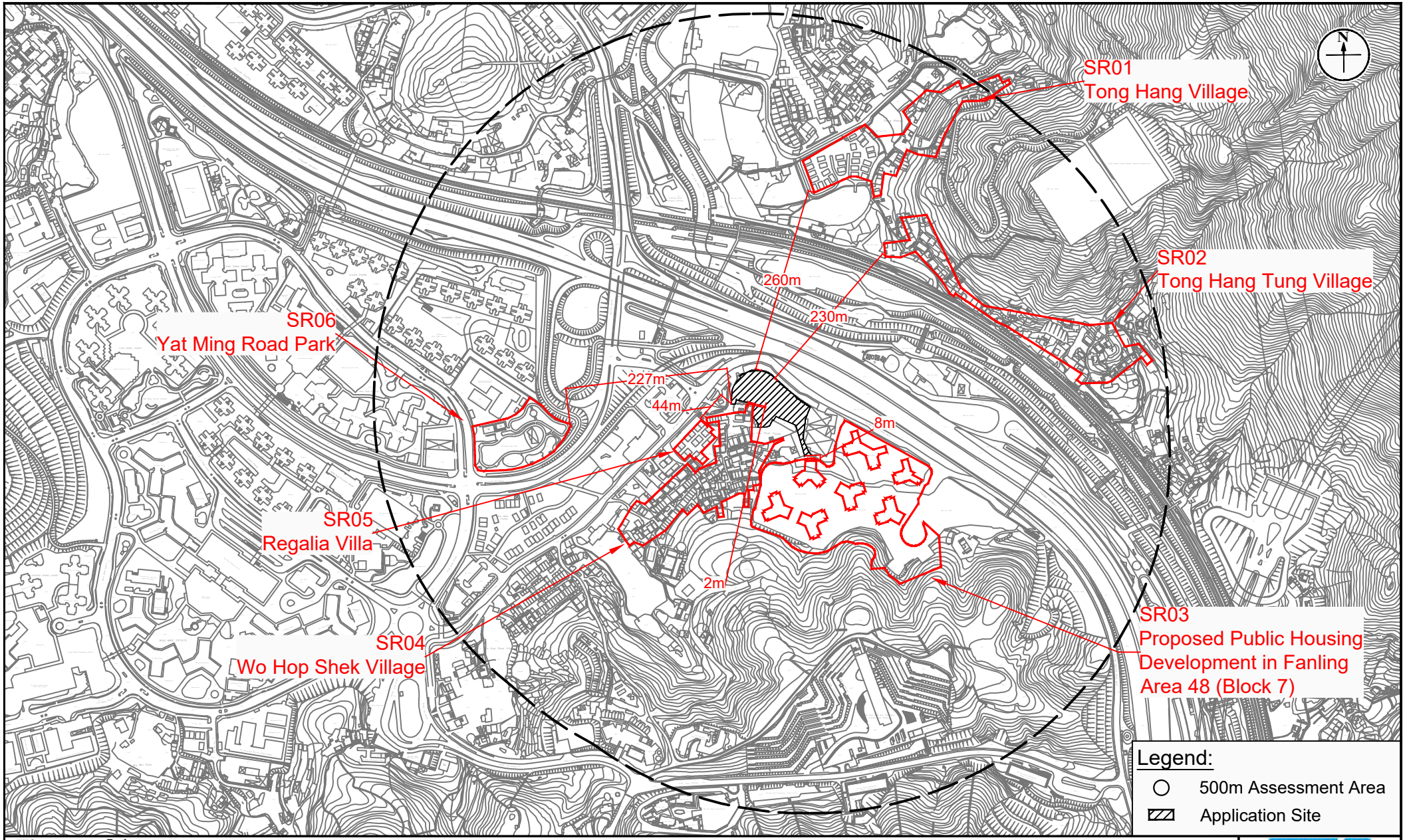


Figure: 5.1	RAMBOLL
Title: Location of Representative Air and Noise Sensitive Receivers for Construction Phase and Concurrent Construction Works	Drawn by: PL Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0 Date: Jul 2025

Q:\Projects\SDMFLD51EI00\05 Assessments\03 Water\20250624 v1.0\Construction Phase_250625.dwg

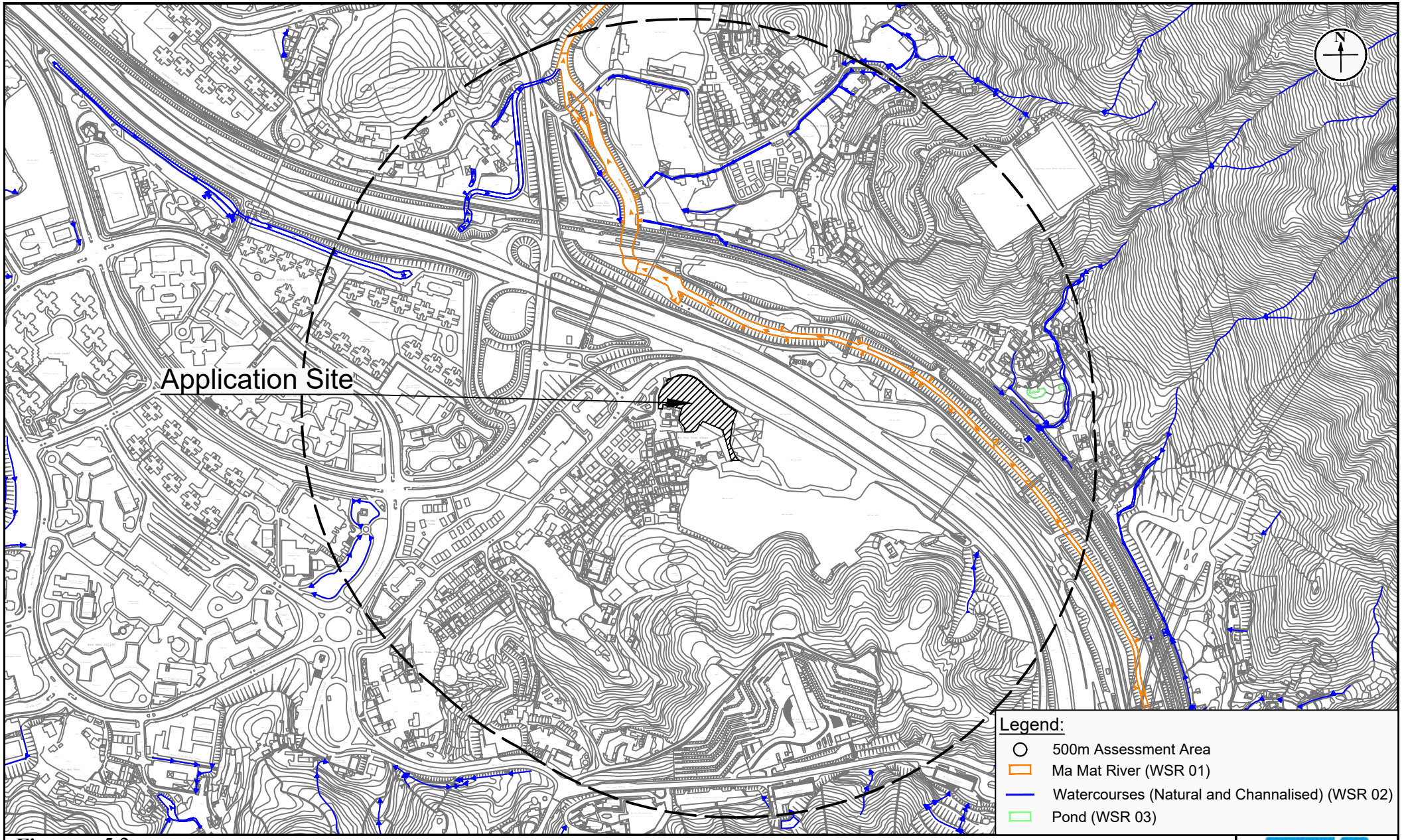


Figure: 5.2	RAMBOLL
Title: Location of Water Sensitive Receivers	Drawn by: PL
	Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0
	Date: Jul 2025

Q:\Projects\SDMFLD51EI00\05 Assessments\03 Water\20250624 v1.0\Construction Phase_250625.dwg

Appendix 1.1 Layouts and Section of the Proposed Development

MAIN ENTRANCE

N

A

A'

B

B'

Residential Institution (Talent Accommodation)

Staff Quarters

Innovation & Technology

和合石村

Wo Hop Shek Village

京士豪庭

King's Hall Garden

大嶺西支路

WIP Nov 2024

Residential Institution (Talent Accommodation)

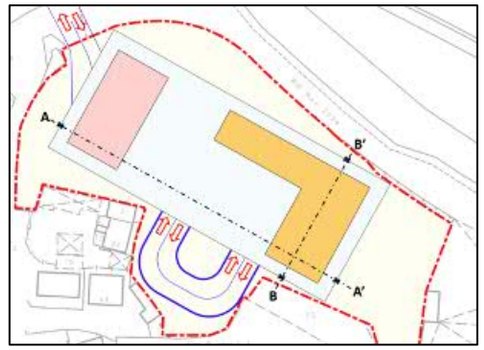
Staff Quarters

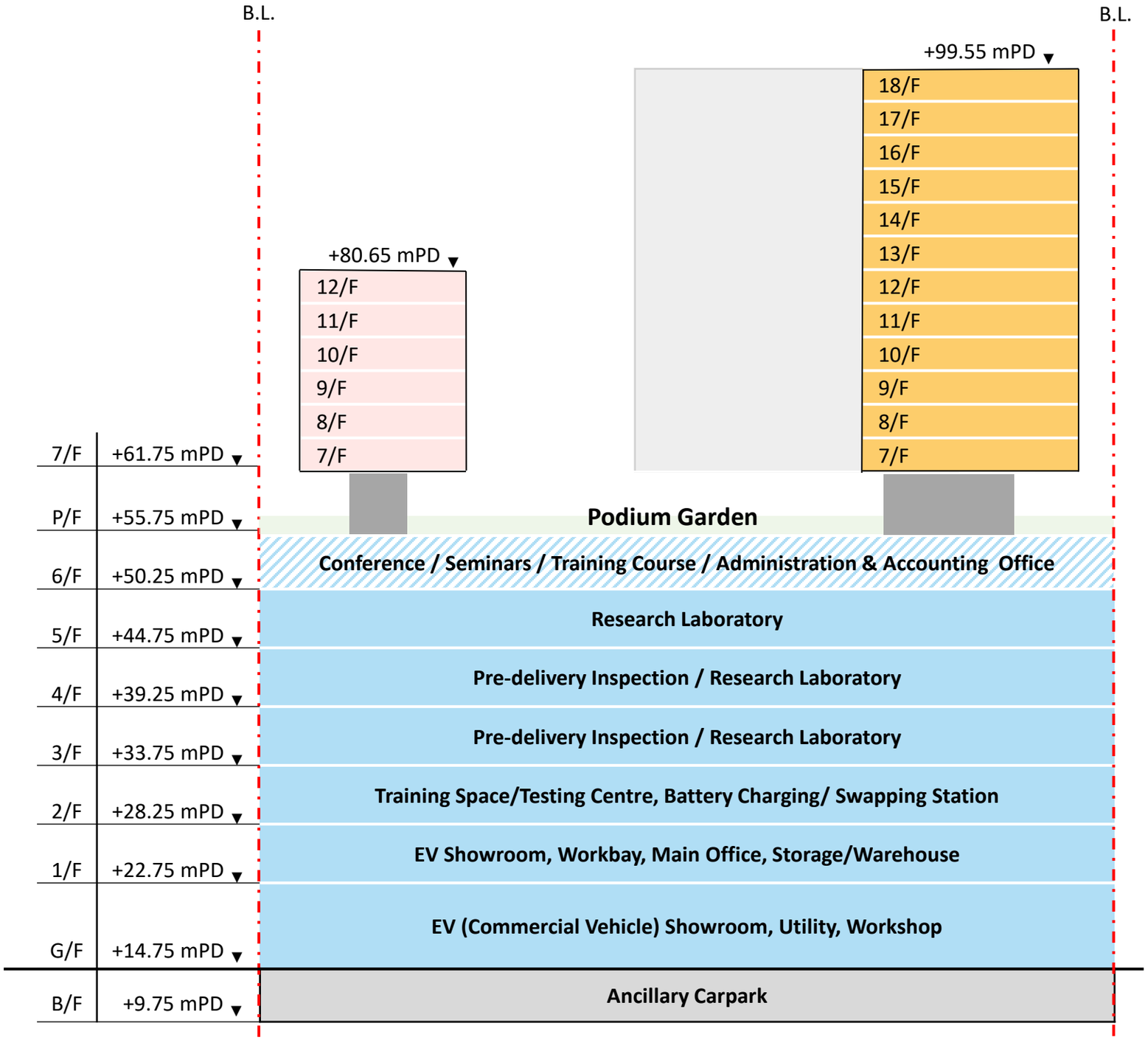
Podium Garden

EV Mobility City (Conference / Seminars / Training Course / Administration & Accounting Office)

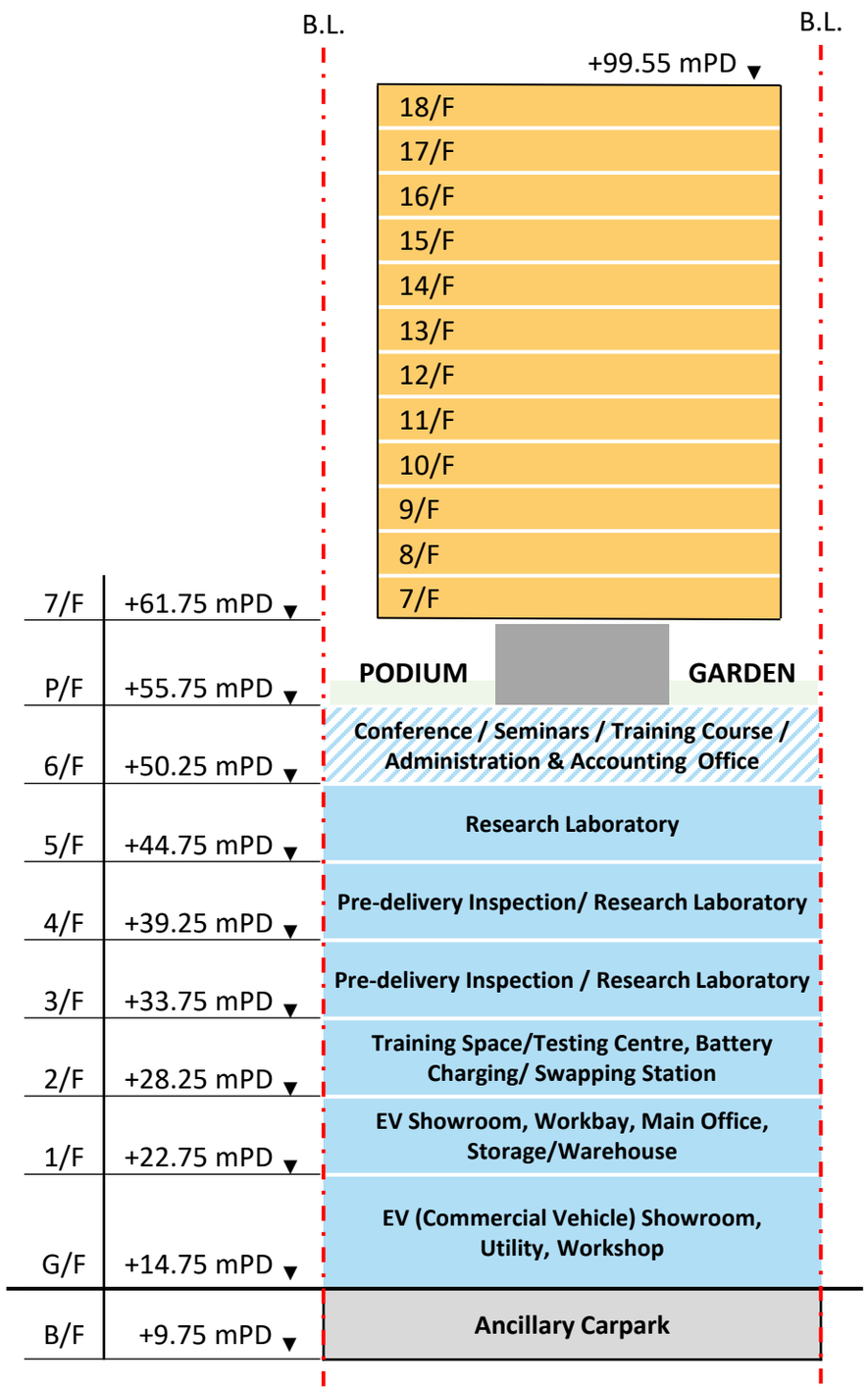
EV Mobility City (Innovation & Technology)

Ancillary Carpark





SECTION A-A'



SECTION B-B'

LIFT LOBBY / LIFT AREA
/ STAIRCASE

ANCILLARY CARPARK

B/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

EV (COMMERCIAL VEHICLE) SHOWROOM

WORKSHOP (WITH SUMP PIT)

UTILITY

G/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

STORAGE / WAREHOUSE

WORK BAY

EV SHOWROOM

MAIN OFFICE

1/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

TRAINING SPACE / TESTING CENTRE

BATTERY CHARGING/SWAPPING STATION

2/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

PRE-DELIVERY INSPECTION / RESEARCH LABORATORY

3/F & 4/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

RESEARCH
LABORATORY

5/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

CONFERENCE / SEMINARS / TRAINING COURSE /
ADMINISTRATION & ACCOUNTING OFFICE

6/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

PODIUM GARDEN

P/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

Staff Quarters
(Tower 1)

Residential Institution
(Talent Accommodation)
(Tower 2)

7-18/F PLAN

Appendix 2.1 Year 2046 Traffic Forecast (15 Years from 2031)

TABLE – PEAK HOUR TRAFFIC FLOW AND VEHICLE COMPOSITION

YEAR 2046 TRAFFIC FORECAST

Date: 25 July 2025 Job No.: J7411

Link ID	Road Section	From Road	To Road	AM Peak Hour		
				Traffic Flows (veh/hr)	Vehicle Composition	
					LV	HV
L001	Tai Wo Service Road West (NB)	Unnamed Planned Road	Kiu Tau Road	150	50.4%	49.6%
L002	Tai Wo Service Road West (SB)	Kiu Tau Road	Unnamed Planned Road	200	55.8%	44.2%
L003	Wo Hing Road (SB)	Unnamed Planned Road	Pak Wo Road Slip Road	400	73.0%	27.0%
L004	Wo Hing Road (NB)	Pak Wo Road Slip Road	Unnamed Planned Road	350	71.6%	28.4%
L005	Unnamed Planned Road (NB)	Roundabout	Tai Wo Service Road West	250	85.6%	14.4%
L006	Unnamed Planned Road (SB)	Tai Wo Service Road West	Roundabout	200	85.5%	14.5%
L007	Wo Hing Road (SB)	Pak Wo Road Slip Road	Unnamed Road	350	72.5%	27.5%
L008	Wo Hing Road (NB)	Pak Wo Road Slip Road	Pak Wo Road Slip Road	700	75.3%	24.7%
L009	Unnamed Road (WB)	Wo Hing Road	Wo Hing Road Carpark	50	58.1%	41.9%
L010	Unnamed Road (EB)	Wo Hing Road Carpark	Wo Hing Road	100	54.8%	45.2%
L011	Wo Hing Road (SB)	Unnamed Road	Wo Ka Lau Road	350	71.3%	28.7%
L012	Wo Hing Road (NB)	Wo Ka Lau Road	Unnamed Road	700	75.6%	24.4%
L013	Pak Wo Road (SB)	Fanling Highway Slip Road	Wah Ming Road	1,250	80.1%	19.9%
L014	Pak Wo Road (NB)	Yat Ming Road	Fanling Highway Slip Road	850	74.7%	25.3%
L015	Fanling Highway Slip Road (NB)	Fanling Highway	Pak Wo Road	650	71.6%	28.4%
L016	Fanling Highway Slip Road (SB)	Fanling Highway	Pak Wo Road	1,050	87.3%	12.7%
L017	Pak Wo Road (SB)	Pak Wo Road Slip Road	Fanling Highway Slip Road	250	47.2%	52.8%
L018	Pak Wo Road (NB)	Fanling Highway Slip Road	Pak Wo Road Slip Road	1,450	73.3%	26.7%
L019	Pak Wo Road (SB)	Jockey Club Road	Pak Wo Road Slip Road	550	62.8%	37.2%
L020	Pak Wo Road (NB)	Pak Wo Road Slip Road	Jockey Club Road	2,200	74.5%	25.5%
L021	Fanling highway (NB)	Fanling Highway Slip Road	Fanling Highway Slip Road	4,450	73.3%	26.7%
L022	Fanling highway (NB)	Fanling Highway Slip Road	So Kwun Po Road	3,850	73.9%	26.1%
L023	Jockey Club Road (NB)	Jockey Club Road	San Wan Road	1,450	73.2%	26.8%
L024	Jockey Club Road (SB)	Yuk Tong Path	Jockey Club Road	1,550	71.4%	28.6%
L025	Jockey Club Road (SB)	Jockey Club Road	Jockey Club Road	550	62.8%	37.2%
L026	Jockey Club Road (SB)	Jockey Club Road	Fanling Highway	1,000	75.6%	24.4%
L027	Jockey Club Road (SB)	Jockey Club Road	Fanling Highway	750	77.2%	22.8%
L028	Jockey Club Road (SB)	Jockey Club Road	Fanling Highway	1,750	76.4%	23.6%
L029	Fanling Highway (SB)	So Kwun Po Road	Jockey Club Road	3,850	72.1%	27.9%
L030	*>> Link ID Not Used <<*					
L031	Fanling highway (NB)	Fanling Bypass	Fanling Highway Slip Road	5,450	75.9%	24.1%
L032	Fanling Highway (SB)	Jockey Club Road	Fanling Highway Slip Road	5,550	73.1%	26.9%
L033	Tai Wo Service Road East (WB)	Fanling Highway Slip Road	Tai Wo Service Road	50	78.4%	21.6%
L034	Tai Wo Service Road East (EB)	Tai Wo Service Road East	Fanling Highway Slip Road	50	75.6%	24.4%
L035	Fanling Highway Slip Road (SB)	Fanling Highway Slip Road	Tai Wo Service Road East Slip Road	700	59.6%	40.4%
L036	Fanling Highway (SB)	Fanling Highway Slip Road	Fanling Highway Slip Road	4,900	74.9%	25.1%
L037	Fanling Highway Slip Road (SB)	Tai Wo Service Road East Slip Road	Fanling Highway	250	61.4%	38.6%
L038	Tai Wo Service Road East Slip Road (NB)	Fanling Highway Slip Road	Tai Wo Service Road East	200	85.4%	14.6%
L039	Tai Wo Service Road East Slip Road (SB)	Tai Wo Service Road East	Fanling Highway Slip Road	200	80.5%	19.5%
L040	Tai Wo Service Road East (WB)	Tai Wo Service Road East Slip Road	Unnamed Slip Road	200	83.5%	16.5%
L041	Tai Wo Service Road East (EB)	Unnamed Slip Road	Tai Wo Service Road East Slip Road	150	88.8%	11.2%
L042	Unnamed Slip Road (WB)	Tai Wo Service Road East	Unnamed Slip Road	50	50.0%	50.0%
L043	Unnamed Slip Road (EB)	Unnamed Slip Road	Tai Wo Service Road East	50	76.9%	23.1%
L044	Unnamed Road (NB)	Wo Ka Lau Road	Unnamed Road	50	72.7%	27.3%
L045	Unnamed Road (SB)	Unnamed Road	Wo Ka Lau Road	50	64.3%	35.7%
L046	Wo Hop Shek Road (NB)	Wo Ka Lau Road	Wo Hop Shek Road	50	75.0%	25.0%
L047	Wo Hop Shek Road (SB)	Wo Hop Shek Road	Wo Ka Lau Road	50	66.7%	33.3%
L048	Fanling Bypass (NB)	Fanling Highway	Fanling Bypass Roundabout	1,100	71.3%	28.7%
L049	Fanling Bypass (SB)	Fanling Bypass Roundabout	Fanling Highway	1,850	70.9%	29.1%
L050	Pak Wo Road Slip Road (EB)	Pak Wo Road	Wo Hing Road	300	74.6%	25.4%
L051	Pak Wo Road Slip Road (WB)	Wo Hing Road	Pak Wo Road	750	76.5%	23.5%
L052	Fanling Highway (NB)	Heung Yuen Wai Highway	Fanling Bypass	6,550	75.2%	24.8%
L053	Fanling Highway (SB)	Tai Wo Service Road East Slip Road	Fanling Bypass	450	57.3%	42.7%

Note: "LV" includes motorcycle, private car and taxi
"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bus

TABLE – PEAK HOUR TRAFFIC FLOW AND VEHICLE COMPOSITION

YEAR 2046 TRAFFIC FORECAST

Date: 25 July 2025 Job No.: J7411

Link ID	Road Section	From Road	To Road	PM Peak Hour		
				Traffic Flows (veh/hr)	Vehicle Composition	
					LV	HV
L001	Tai Wo Service Road West (NB)	Unnamed Planned Road	Kiu Tau Road	150	50.0%	50.0%
L002	Tai Wo Service Road West (SB)	Kiu Tau Road	Unnamed Planned Road	200	64.6%	35.4%
L003	Wo Hing Road (SB)	Unnamed Planned Road	Pak Wo Road Slip Road	350	75.9%	24.1%
L004	Wo Hing Road (NB)	Pak Wo Road Slip Road	Unnamed Planned Road	350	71.9%	28.1%
L005	Unnamed Planned Road (NB)	Roundabout	Tai Wo Service Road West	150	88.1%	11.9%
L006	Unnamed Planned Road (SB)	Tai Wo Service Road West	Roundabout	200	88.1%	11.9%
L007	Wo Hing Road (SB)	Pak Wo Road Slip Road	Unnamed Road	250	63.8%	36.2%
L008	Wo Hing Road (NB)	Pak Wo Road Slip Road	Pak Wo Road Slip Road	500	70.5%	29.5%
L009	Unnamed Road (WB)	Wo Hing Road	Wo Hing Road Carpark	100	73.7%	26.3%
L010	Unnamed Road (EB)	Wo Hing Road Carpark	Wo Hing Road	50	65.8%	34.2%
L011	Wo Hing Road (SB)	Unnamed Road	Wo Ka Lau Road	250	61.7%	38.3%
L012	Wo Hing Road (NB)	Wo Ka Lau Road	Unnamed Road	500	70.5%	29.5%
L013	Pak Wo Road (SB)	Fanling Highway Slip Road	Wah Ming Road	950	70.2%	29.8%
L014	Pak Wo Road (NB)	Yat Ming Road	Fanling Highway Slip Road	750	76.1%	23.9%
L015	Fanling Highway Slip Road (NB)	Fanling Highway	Pak Wo Road	950	73.5%	26.5%
L016	Fanling Highway Slip Road (SB)	Fanling Highway	Pak Wo Road	650	71.1%	28.9%
L017	Pak Wo Road (SB)	Pak Wo Road Slip Road	Fanling Highway Slip Road	300	68.6%	31.4%
L018	Pak Wo Road (NB)	Fanling Highway Slip Road	Pak Wo Road Slip Road	1,650	74.7%	25.3%
L019	Pak Wo Road (SB)	Jockey Club Road	Pak Wo Road Slip Road	600	69.1%	30.9%
L020	Pak Wo Road (NB)	Pak Wo Road Slip Road	Jockey Club Road	2,150	75.2%	24.8%
L021	Fanling highway (NB)	Fanling Highway Slip Road	Fanling Highway Slip Road	4,800	65.6%	34.4%
L022	Fanling highway (NB)	Fanling Highway Slip Road	So Kwun Po Road	3,900	63.9%	36.1%
L023	Jockey Club Road (NB)	Jockey Club Road	San Wan Road	1,450	71.9%	28.1%
L024	Jockey Club Road (SB)	Yuk Tong Path	Jockey Club Road	1,500	77.4%	22.6%
L025	Jockey Club Road (SB)	Jockey Club Road	Jockey Club Road	600	69.1%	30.9%
L026	Jockey Club Road (SB)	Jockey Club Road	Fanling Highway	950	81.8%	18.2%
L027	Jockey Club Road (SB)	Jockey Club Road	Fanling Highway	700	82.4%	17.6%
L028	Jockey Club Road (SB)	Jockey Club Road	Fanling Highway	1,650	82.1%	17.9%
L029	Fanling Highway (SB)	So Kwun Po Road	Jockey Club Road	3,900	77.7%	22.3%
L030	*> > Link ID Not Used < <*					
L031	Fanling highway (NB)	Fanling Bypass	Fanling Highway Slip Road	5,450	66.3%	33.7%
L032	Fanling Highway (SB)	Jockey Club Road	Fanling Highway Slip Road	5,500	78.9%	21.1%
L033	Tai Wo Service Road East (WB)	Fanling Highway Slip Road	Tai Wo Service Road	50	63.3%	36.7%
L034	Tai Wo Service Road East (EB)	Tai Wo Service Road East	Fanling Highway Slip Road	100	64.3%	35.7%
L035	Fanling Highway Slip Road (SB)	Fanling Highway Slip Road	Tai Wo Service Road East Slip Road	500	56.5%	43.5%
L036	Fanling Highway (SB)	Fanling Highway Slip Road	Fanling Highway Slip Road	5,000	81.1%	18.9%
L037	Fanling Highway Slip Road (SB)	Tai Wo Service Road East Slip Road	Fanling Highway	150	58.6%	41.4%
L038	Tai Wo Service Road East Slip Road (NB)	Fanling Highway Slip Road	Tai Wo Service Road East	150	71.8%	28.2%
L039	Tai Wo Service Road East Slip Road (SB)	Tai Wo Service Road East	Fanling Highway Slip Road	100	80.4%	19.6%
L040	Tai Wo Service Road East (WB)	Tai Wo Service Road East Slip Road	Unnamed Slip Road	100	92.3%	7.7%
L041	Tai Wo Service Road East (EB)	Unnamed Slip Road	Tai Wo Service Road East Slip Road	100	77.3%	22.7%
L042	Unnamed Slip Road (WB)	Tai Wo Service Road East	Unnamed Slip Road	50	81.8%	18.2%
L043	Unnamed Slip Road (EB)	Unnamed Slip Road	Tai Wo Service Road East	50	100.0%	0.0%
L044	Unnamed Road (NB)	Wo Ka Lau Road	Unnamed Road	50	71.4%	28.6%
L045	Unnamed Road (SB)	Unnamed Road	Wo Ka Lau Road	50	26.7%	73.3%
L046	Wo Hop Shek Road (NB)	Wo Ka Lau Road	Wo Hop Shek Road	50	0.0%	100.0%
L047	Wo Hop Shek Road (SB)	Wo Hop Shek Road	Wo Ka Lau Road	50	0.0%	100.0%
L048	Fanling Bypass (NB)	Fanling Highway	Fanling Bypass Roundabout	1,250	69.2%	30.8%
L049	Fanling Bypass (SB)	Fanling Bypass Roundabout	Fanling Highway	1,100	74.3%	25.7%
L050	Pak Wo Road Slip Road (EB)	Pak Wo Road	Wo Hing Road	250	68.0%	32.0%
L051	Pak Wo Road Slip Road (WB)	Wo Hing Road	Pak Wo Road	500	76.6%	23.4%
L052	Fanling Highway (NB)	Heung Yuen Wai Highway	Fanling Bypass	6,650	66.7%	33.3%
L053	Fanling Highway (SB)	Tai Wo Service Road East Slip Road	Fanling Bypass	300	57.0%	43.0%

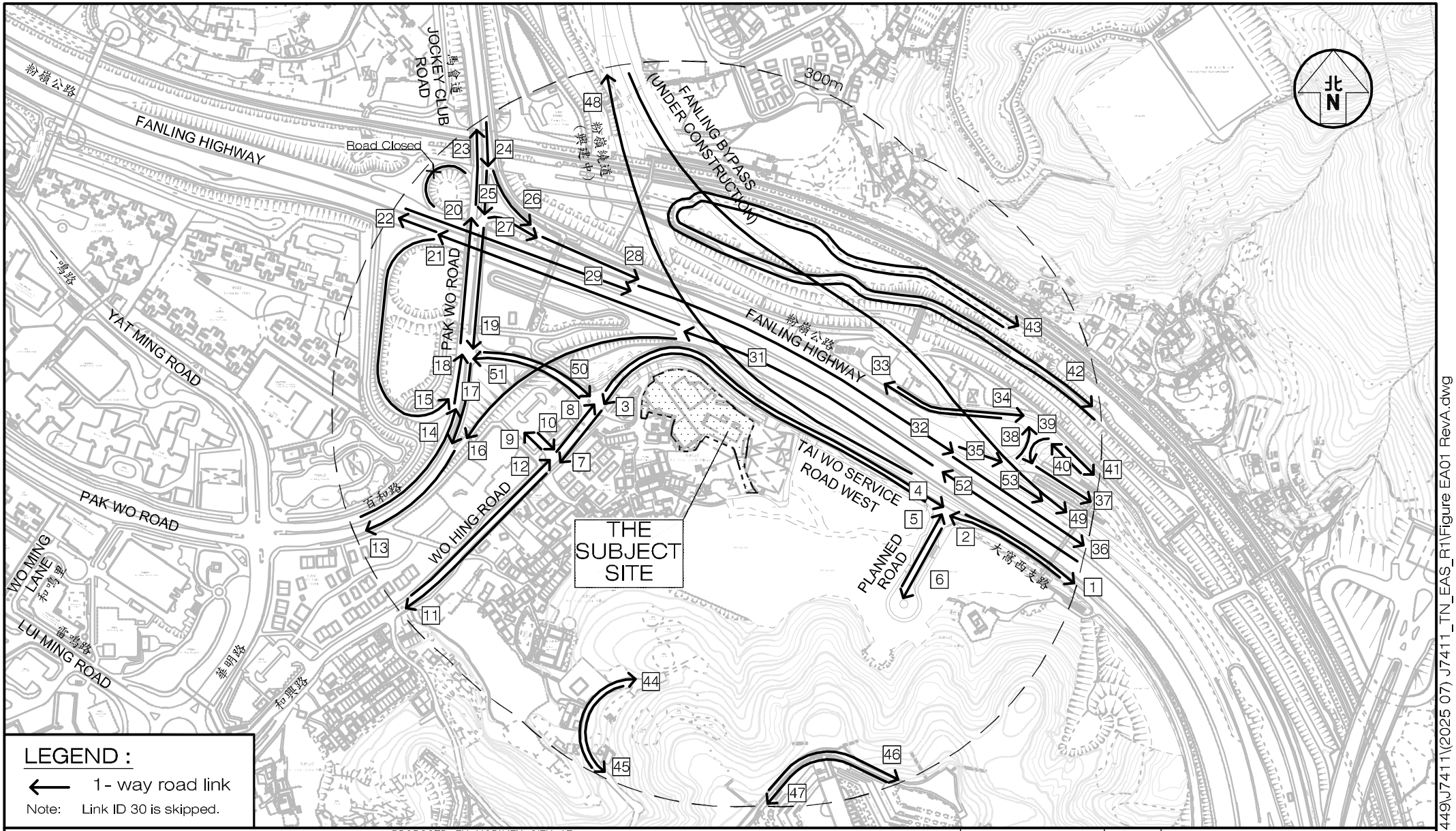
Note: "LV" includes motorcycle, private car and taxi
"HV" includes light / medium / heavy goods vehicle, public / private light bus, non-franchised bus and franchised bus

Speed Limit

Date: 25 July 2025

Link ID	Road Section	From Road	To Road	Speed Limit (km/h)
L001	Tai Wo Service Road West (NB)	Unnamed Planned Road	Kiu Tau Road	50
L002	Tai Wo Service Road West (SB)	Kiu Tau Road	Unnamed Planned Road	50
L003	Wo Hing Road (SB)	Unnamed Planned Road	Pak Wo Road Slip Road	50
L004	Wo Hing Road (NB)	Pak Wo Road Slip Road	Unnamed Planned Road	50
L005	Unnamed Planned Road (NB)	Roundabout	Tai Wo Service Road West	50
L006	Unnamed Planned Road (SB)	Tai Wo Service Road West	Roundabout	50
L007	Wo Hing Road (SB)	Pak Wo Road Slip Road	Unnamed Road	50
L008	Wo Hing Road (NB)	Pak Wo Road Slip Road	Pak Wo Road Slip Road	50
L009	Unnamed Road (WB)	Wo Hing Road	Wo Hing Road Carpark	50
L010	Unnamed Road (EB)	Wo Hing Road Carpark	Wo Hing Road	50
L011	Wo Hing Road (SB)	Unnamed Road	Wo Ka Lau Road	50
L012	Wo Hing Road (NB)	Wo Ka Lau Road	Unnamed Road	50
L013	Pak Wo Road (SB)	Fanling Highway Slip Road	Wah Ming Road	50
L014	Pak Wo Road (NB)	Yat Ming Road	Fanling Highway Slip Road	50
L015	Fanling Highway Slip Road (NB)	Fanling Highway	Pak Wo Road	50
L016	Fanling Highway Slip Road (SB)	Fanling Highway	Pak Wo Road	50
L017	Pak Wo Road (SB)	Pak Wo Road Slip Road	Fanling Highway Slip Road	50
L018	Pak Wo Road (NB)	Fanling Highway Slip Road	Pak Wo Road Slip Road	50
L019	Pak Wo Road (SB)	Jockey Club Road	Pak Wo Road Slip Road	50
L020	Pak Wo Road (NB)	Pak Wo Road Slip Road	Jockey Club Road	50
L021	Fanling Highway (NB)	Fanling Highway Slip Road	Fanling Highway Slip Road	100
L022	Fanling Highway (NB)	Fanling Highway Slip Road	So Kwun Po Road	100
L023	Jockey Club Road (NB)	Jockey Club Road	San Wan Road	50
L024	Jockey Club Road (SB)	Yuk Tong Path	Jockey Club Road	70
L025	Jockey Club Road (SB)	Jockey Club Road	Jockey Club Road	50
L026	Jockey Club Road (SB)	Jockey Club Road	Fanling Highway	70
L027	Jockey Club Road (SB)	Jockey Club Road	Fanling Highway	50
L028	Jockey Club Road (SB)	Jockey Club Road	Fanling Highway	70
L029	Fanling Highway (SB)	So Kwun Po Road	Jockey Club Road	100
L030	*>> Link ID Not Used <<*			
L031	Fanling Highway (NB)	Fanling Bypass	Fanling Highway Slip Road	100
L032	Fanling Highway (SB)	Jockey Club Road	Fanling Highway Slip Road	100
L033	Tai Wo Service Road East (WB)	Fanling Highway Slip Road	Tai Wo Service Road	50
L034	Tai Wo Service Road East (EB)	Tai Wo Service Road East	Fanling Highway Slip Road	50
L035	Fanling Highway Slip Road (SB)	Fanling Highway Slip Road	Tai Wo Service Road East Slip Road	50
L036	Fanling Highway (SB)	Fanling Highway Slip Road	Fanling Highway Slip Road	100
L037	Fanling Highway Slip Road (SB)	Tai Wo Service Road East Slip Road	Fanling Highway	50
L038	Tai Wo Service Road East Slip Road (NB)	Fanling Highway Slip Road	Tai Wo Service Road East	50
L039	Tai Wo Service Road East Slip Road (SB)	Tai Wo Service Road East	Fanling Highway Slip Road	50
L040	Tai Wo Service Road East (WB)	Tai Wo Service Road East Slip Road	Unnamed Slip Road	50
L041	Tai Wo Service Road East (EB)	Unnamed Slip Road	Tai Wo Service Road East Slip Road	50
L042	Unnamed Slip Road (WB)	Tai Wo Service Road East	Unnamed Slip Road	50
L043	Unnamed Slip Road (EB)	Unnamed Slip Road	Tai Wo Service Road East	50
L044	Unnamed Road (NB)	Wo Ka Lau Road	Unnamed Road	50
L045	Unnamed Road (SB)	Unnamed Road	Wo Ka Lau Road	50
L046	Wo Hop Shek Road (NB)	Wo Ka Lau Road	Wo Hop Shek Road	50
L047	Wo Hop Shek Road (SB)	Wo Hop Shek Road	Wo Ka Lau Road	50
L048	Fanling Bypass (NB)	Fanling Highway	Fanling Bypass Roundabout	80
L049	Fanling Bypass (SB)	Fanling Bypass Roundabout	Fanling Highway	80
L050	Pak Wo Road Slip Road (EB)	Pak Wo Road	Wo Hing Road	50
L051	Pak Wo Road Slip Road (WB)	Wo Hing Road	Pak Wo Road	50
L052	Fanling Highway (NB)	Heung Yuen Wai Highway	Fanling Bypass	100
L053	Fanling Highway (SB)	Tai Wo Service Road East Slip Road	Fanling Bypass	80

Note: Speed limit for L048, L049 and L053 are assumed to be 80kph in reference with the TPDM.



Project Title	PROPOSED EV MOBILITY CITY AT LOTS 4250 RP, 4252 S.A, 4272 RP, 4273 S.B RP AND 4897 RP IN DD51 WO HING ROAD / TAI WO SERVICE ROAD WEST, FANLING, NT	J7411	
Figure Title	PUBLIC ROAD LINKS WITHIN 300M STUDY AREA	Figure No. EA-01	Revision A
		Designed by M C Y / Drawn by S C Y / Checked by K C	
		Scale in A4 1 : 5,000 / Date 25 JUL 2025	

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

T:\JOB\J7400-J7449\J7411\(2025 07) J7411_TN_EAS_R1\Figure EA01 RevA.dwg

Appendix 2.2 Low Noise Road Surfacing within 300m Assessment Area

Coco Ma

From: Chen Ka Ho, Adrian [redacted]
Sent: 15 July 2025 17:43
To: Coco Ma
Cc: Jojo Leung; Billy Fan; Simon Lai; saihanglee@cedd.gov.hk; Pak Chau Kin, Patrick
Subject: RE: Various Lots in DD 51, Fanling - Enquiry for Latest Layout Plans for Fanling Bypass Eastern Section, Tai Wo Service Road West & Tai Wo Service Road East and Design Drawing/ As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for...
Attachments: ND_2019_05_R10_130_0772 (SK0772).pdf

Some people who received this message don't often get email from [redacted] Learn why this is important

Dear Coco,

As per your request, please find the attached pavement drawing for your reference.

Best Regards,
Adrian Chen
Resident Engineer
Contract No. ND/2019/05
Fanling North New Development Area Phase 1
AECOM
M +852 5292 9136

From: Chen Ka Ho, Adrian
Sent: Wednesday, 9 July 2025 11:33 AM
To: 'COCOMA@ramboll.com' [redacted]
Cc: J [redacted]
Subject: RE: Various Lots in DD 51, Fanling - Enquiry for Latest Layout Plans for Fanling Bypass Eastern Section, Tai Wo Service Road West & Tai Wo Service Road East and Design Drawing/ As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for...

Dear Coco,

Please find our response to your enquires of the following items for Fanling Bypass Eastern Section, Tai Wo Service Road West (re-aligned) and Tai Wo Service Road East (re-aligned) within the 300m assessment area in **red** below:

1. Tentative completion date.
The tentative completion date for the concerned roads are in Q1 2026.

2. Latest layout of alignment.
Please refer to attached “1. ND201905 – Road Alignment and Pavement Drawings” for your reference.

3. Design drawing/ As-built Drawing of the latest extent and type of material of LNRS (setting out).
Please refer to attached “1. ND201905 – Road Alignment and Pavement Drawings” for your reference.

4. Design drawing/ As-built Drawing of the latest extent and types of proposed roadside noise barriers within the 300m assessment area.
Please refer to attached “2. ND201905 – Noise Barrier General Layout Drawings” for your reference.

Best Regards,

Adrian Chen
Resident Engineer
Contract No. ND/2019/05
Fanling North New Development Area Phase 1
AECOM
M +852[redacted]

From: Coco Ma [redacted]
Sent: Tuesday, 8 July 2025 9:19 AM
To: Chen Ka Ho, Adrian <[redacted]
Subject: RE: Various Lots in DD 51, Fanling - Enquiry for Latest Layout Plans for Fanling Bypass Eastern Section, Tai Wo Service Road West & Tai Wo Service Road East and Design Drawing/ As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for...

Dear Adrian,

Please find the attached location plan of the Subject Site with 300m assessment area for your reference. Thank you.

Kind regards
Coco Ma

Environmental Consultant

[redacted]

Ramboll Hong Kong Limited

From: Chen Ka Ho, Adrian <[redacted]
Sent: 07 July 2025 10:32
To: Coco Ma [redacted]
Subject: RE: Various Lots in DD 51, Fanling - Enquiry for Latest Layout Plans for Fanling Bypass Eastern Section, Tai Wo Service Road West & Tai Wo Service Road East and Design Drawing/ As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for...

> You don't often get email from [redacted]. Learn why this is important

Dear Coco,

Can you send me the location plan of the Subject Site with 300m assessment area for my reference. Thanks.

Best Regards,
Adrian Chen
Resident Engineer
Contract No. ND/2019/05
Fanling North New Development Area Phase 1
AECOM
M +[redacted]

From: "Coco Ma" <[redacted]
Date: 03/07/2025 14:51
Subject: RE: Various Lots in DD 51, Fanling - Enquiry for Latest Layout Plans for Fanling Bypass Eastern Section, Tai Wo Service Road West & Tai Wo Service Road East and Design Drawing/ As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for...

Dear Jojo,

Could you please advise when the requested information will be ready? Thank you.

Kind regards
Coco Ma

Environmental Consultant

D +852 [redacted]

[redacted]

Ramboll Hong Kong Limited

From: saihanglee@cedd.gov.hk <saihanglee@cedd.gov.hk>
Sent: 18 June 2025 18:21
To: myleung1@cedd.gov.hk
Cc: B[redacted]
Subject: 轉寄: Various Lots in DD 51, Fanling - Enquiry for Latest Layout Plans for Fanling Bypass Eastern Section, Tai Wo Service Road West & Tai Wo Service Road East and Design Drawing/ As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for...

Dear Jojo,

Please follow. Thanks.

Regards,
Kenneth Lee
Tel 3547 1620
E/25(N), NDO
CEDD

----- Forwarded by KENNETH SAI HANG LEE/CEDD/HKSARG on 18/06/2025 18:20 -----

From: "Coco Ma" <[redacted]
To: "saihanglee@cedd.gov.hk" <saihanglee@cedd.gov.hk>
Cc: "Billy Fan" <[redacted]
Date: 16/06/2025 11:20

Subject: Various Lots in DD 51, Fanling - Enquiry for Latest Layout Plans for Fanling Bypass Eastern Section, Tai Wo Service Road West & Tai Wo Service Road East and Design Drawing/ As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for the Ro

---

Dear Kenneth,

We (Ramboll Hong Kong Limited, an environmental consultancy company) are commissioned by the owner of the captioned Subject Site to carry out the Road Traffic Noise Impact Assessment (RTNIA) for a Proposed Development. The location plan of the Subject Site with 300m assessment area is attached for your reference.

In order to prepare for the RTNIA, we would be grateful if you can provide the information for Fanling Bypass Eastern Section, Tai Wo Service Road West (re-aligned), Tai Wo Service Road East (re-aligned) and any other proposed road within the 300m assessment area listed as below:

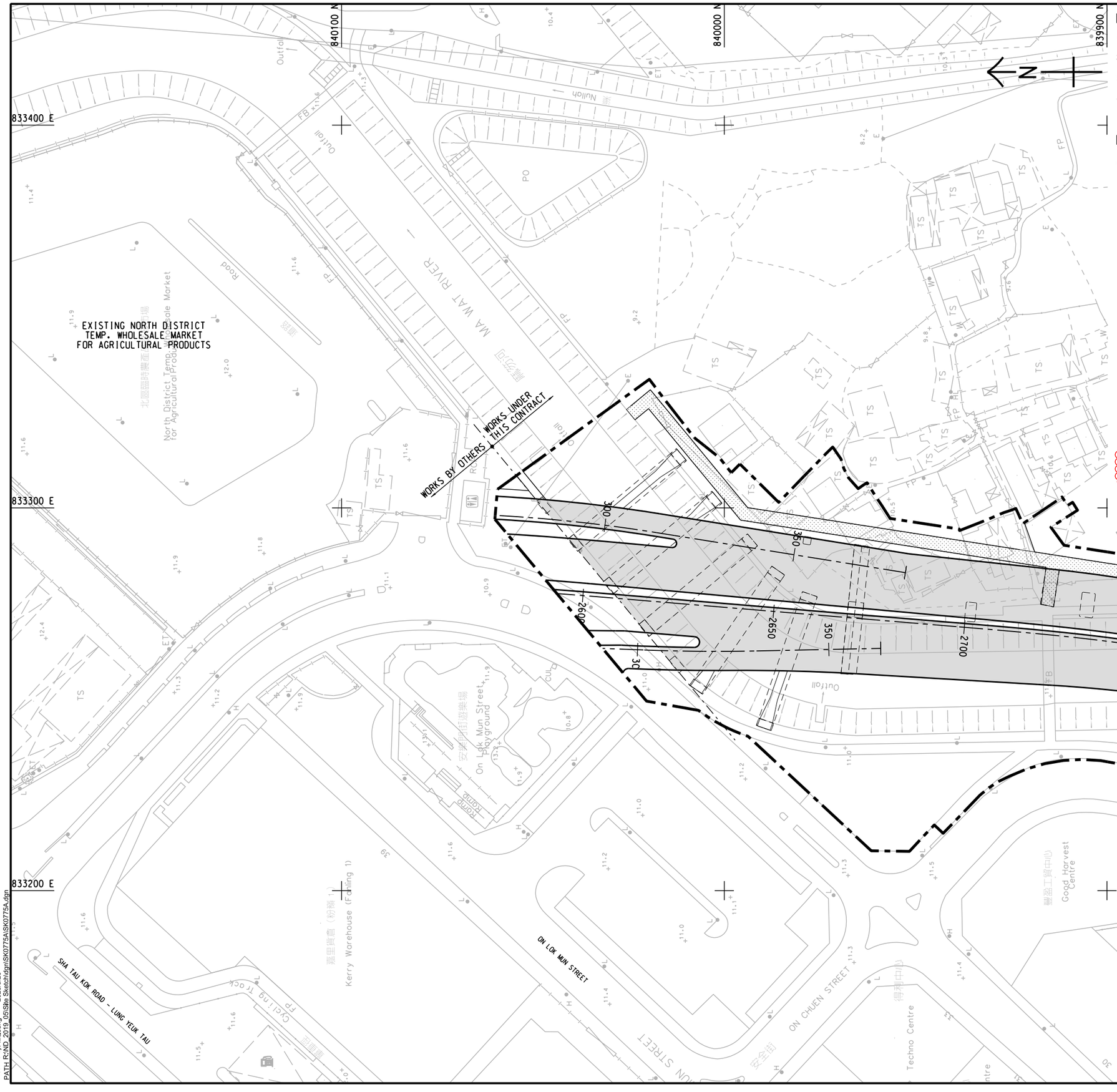
1. Tentative completion date.
2. Latest layout of alignment.
3. Design drawing/ As-built Drawing of the latest extent and type of material of LNRS (setting out).
4. Design drawing/ As-built Drawing of the latest extent and types of proposed roadside noise barriers within the 300m assessment area.

If appropriate, could we have a visit of your office for the inspection of such information, please?

Should you have any questions on this enquiry, please do not hesitate to contact me, or our Mr. Billy FAN at [redacted]

Kind regards

Coco Ma



NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5B/C00/1221 TO 1231.
2. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
3. FOR PAVEMENT DETAILS REFER TO DRAWING NO. 60335576/C5B/C00/1231 TO 1232.
4. FOOTBRIDGES ARE NOT SHOWN FOR CLARITY DETAILS REFERT TO DRAWING NOS. 60335576/C5B/C00/3002.

LEGEND:

- SITE BOUNDARY
- BITUMINOUS PAVEMENT WITH WEARING COURSE
- BITUMINOUS PAVEMENT WITH HMFC
- BITUMINOUS PAVEMENT WITH HMSMA6
- CONCRETE FOOTPATH (PAVING MATERIAL AND PATTERN SHALL MATCH WITH THE EXISTING FOOTPATH)
- PAVING BLOCK ON FOOTPATH (REFER TO DRG. NO. 60335576/C00/1781)
- RUN-IN (REFER TO HyD STANDARD DRAWING H1113)
- BITUMINOUS PAVEMENT ON CYCLE TRACK
- CONCRETE PAVEMENT ON CARRIAGEWAY
- CONCRETE CARRIAGEWAY AT LAY-BY
- BITUMINOUS PAVEMENT WITH HMSMA10
- RESURFACING OF PAVEMENT
- CONCRETE PAVEMENT AT 75mm THICK

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.
A	25/04/25	TYPE OF PAVEMENT BITUMINOUS REVISED	HKKL	KST	AC
-	30/10/24	TYPE OF PAVEMENT BITUMINOUS REVISED	HKKL	TFL	PP

CLIENT

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

CONSULTANT

AECOM

PROJECT

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE

FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: FANLING BYPASS EASTERN SECTION (SHUNG HIM TONG TO KAU LUNG HANG)

DRAWING REFERENCE TO LATEST VERSION

60335576/C5B/C00/1221B

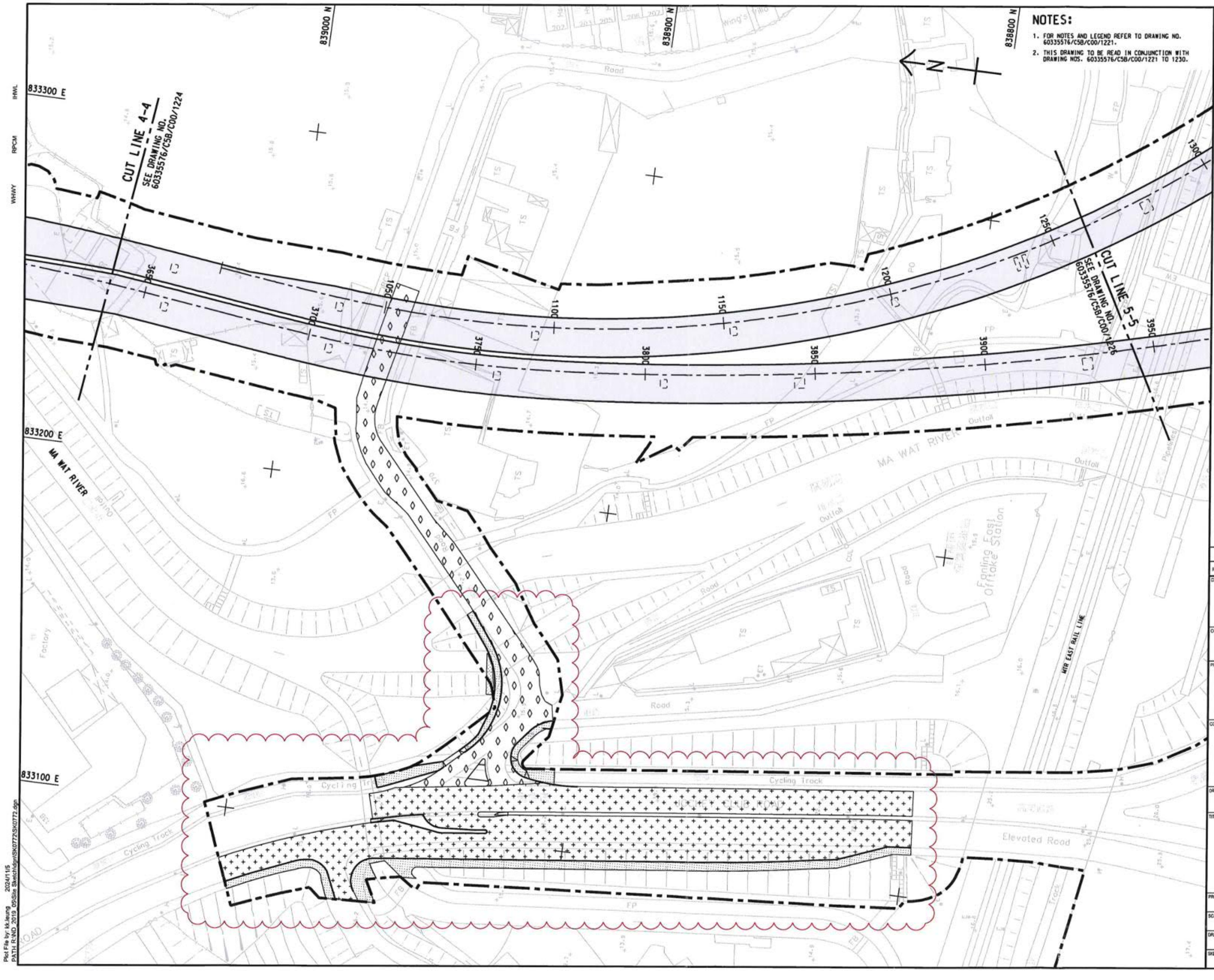
TITLE

PAVEMENT LAYOUT

SHEET 1 OF 10

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/05
SCALE 1:500 (A1) 1:1000 (A3)	DATE 25-APR-25
DRAWN HKKL	PREPARED KST / APPROVED AC
SKETCH NO. ND/2019/05/R10/130/0775	REV. A

Plot File by: kk.leung 2025/5/26
PATH: R:\ND_2019_05\Site Sketch\dgn\SK0775A\SK0775A.dgn



REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.
-	04/11/24	ISSUE FOR CONSTRUCTION	HKKL	KST	AC

CLIENT

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT

AECOM

PROJECT

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE

FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: FANLING BYPASS EASTERN SECTION (SHUNG HIM TONG TO KAU LUNG HANG)

DRAWING REFERENCE TO LATEST VERSION

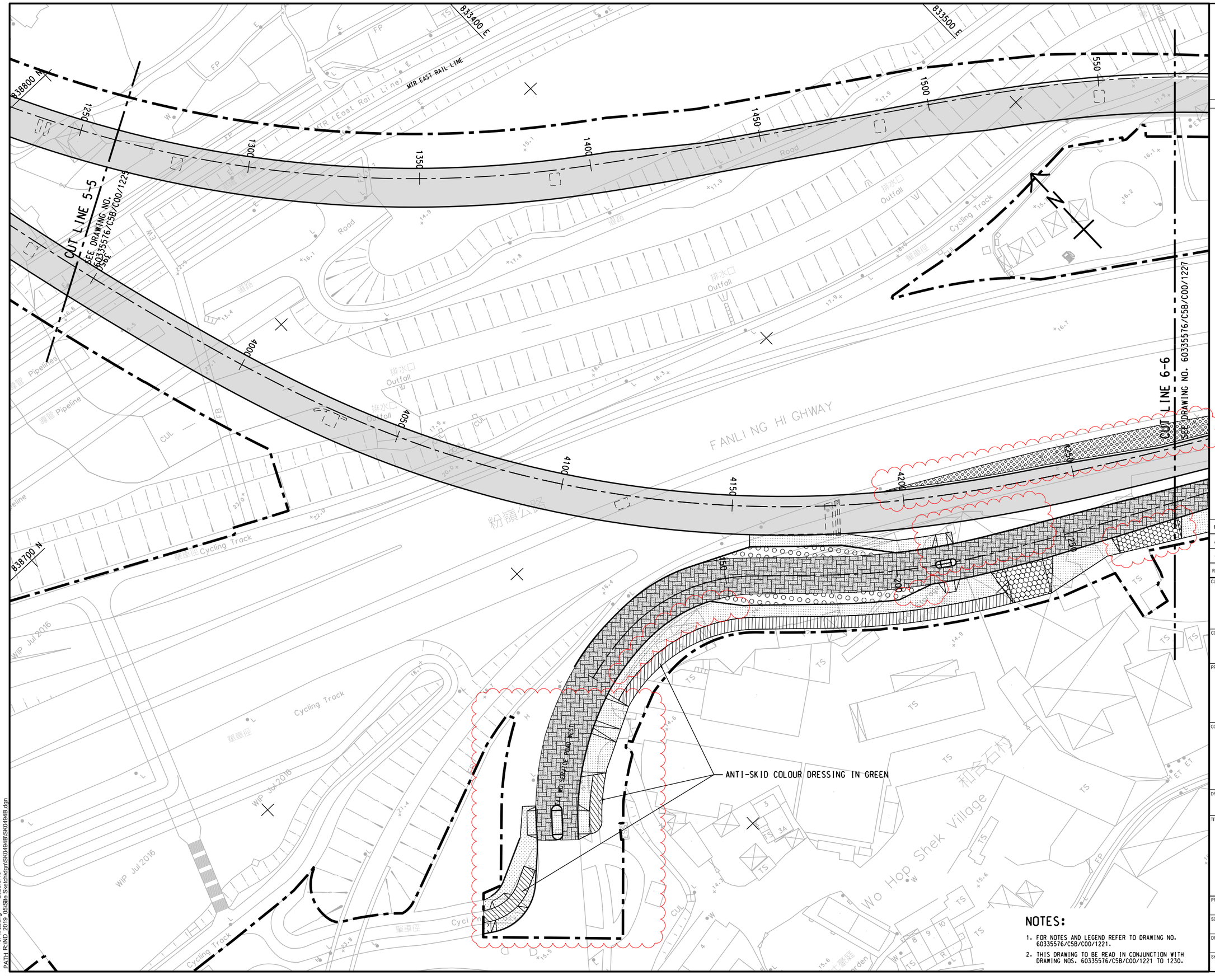
60335576/C5B/C00/1225C

TITLE

PAVEMENT LAYOUT

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/05
SCALE 1:500 (A1) 1:1000 (A3)	DATE 04-NOV-24
DRAWN HKKL	PREPARED KST
APPROVED AC	
SKETCH NO. ND/2019/05/R10/130/0772	REV. -

Plot File by: kk.leung 2024/11/5
PATH: R:\ND_2019_05\Site Sketches\ND0772SK0772.dgn



SHEUNG SHUI
FANLING
KEY PLAN

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.
B	22/04/24	PAVEMENT REVISED	HKKL	KST	AC
A	16/06/23	DESCRIPTION ADDED	HKKL	KST	AC
-	25/04/22	PAVEMENT REVISED	HKKL	JN	AC

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

CONSULTANT
AECOM

PROJECT
DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE
FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: FANLING BYPASS EASTERN SECTION (SHUNG HIM TONG TO KAU LUNG HANG)

DRAWING REFERENCE TO LATEST VERSION
60335576/C5B/C00/1226B

TITLE
PAVEMENT LAYOUT

SHEET 6 OF 10

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/05
SCALE 1:500 (A1) 1:1000 (A3)	DATE 22-APR-24
DRAWN HKKL	PREPARED KST
APPROVED AC	
SKETCH NO. ND/2019/05/R10/130/0494	REV. B

NOTES:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5B/C00/1221.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5B/C00/1221 TO 1230.

Plot File by: kk.leung 2025/3/10
PATH R:\ND_2019_05\Site Sketch\dgn\SK0494B\SK0494B.dgn

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5B/C00/1221.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5B/C00/1221 TO 1230.

KEY PLAN

COLOR AND LAYING PATTERN OF PAVING BLOCK SHALL MATCH WITH EXISTING ADJACENT FOOTPATH

HO KA YUEN FOOTBRIDGE

FANLING HIGHWAY

TAI WO SERVICE ROAD EAST

TAI WO SERVICE ROAD WEST

FANLING BYPASS

LAY-BY

CUT LINE 7-7
SEE DRAWING NO. 60335576/C5B/C00/1228

CUT LINE 6-6
SEE DRAWING NO. 60335576/C5B/C00/1226

833600 E

833700 E

838600 N

838500 N

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.
F	27/09/24	PAVEMENT LAYOUT REVISED	HKKL	KST	AC
E	06/08/24	PAVEMENT LAYOUT REVISED	HKKL	KI	AC
D	12/06/24	PAVEMENT LAYOUT REVISED	HKKL	KL	LM
C	22/04/24	PAVEMENT LAYOUT REVISED	HKKL	KST	AC
B	15/06/23	PAVEMENT LAYOUT REVISED	HKKL	KST	AC
A	28/07/22	PAVEMENT LAYOUT REVISED	HKKL	JN	AC
-	25/04/22	PAVEMENT LAYOUT REVISED	HKKL	JN	AC

CLIENT

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

CONSULTANT

AECOM

PROJECT

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE

FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: FANLING BYPASS EASTERN SECTION (SHUNG HIM TONG TO KAU LUNG HANG)

DRAWING REFERENCE TO LATEST VERSION

60335576/C5B/C00/1227B

TITLE

PAVEMENT LAYOUT

SHEET 7 OF 10

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/05
SCALE 1:500 (A1) 1:1000 (A3)	DATE 27-SEP-24
DRAWN HKKL	PREPARED KST / APPROVED AC
SKETCH NO. ND/2019/05/R10/130/0495	REV. F

Plot File by: kk.Jeung 2025/3/10
PATH: R:\ND_2019_05\Site Sketch\dgn\SK0495F\SK0495F.dgn

Coco Ma

From: to3b.nt@hyd.gov.hk
Sent: 08 July 2025 15:40
To: Coco Ma
Cc: defl.nt@hyd.gov.hk; sto3.nt@hyd.gov.hk; ptoc.nt@hyd.gov.hk; to3a.nt@hyd.gov.hk; to3c.nt@hyd.gov.hk; mens1.nt@hyd.gov.hk; msiowhsre.nt@hyd.gov.hk
Subject: Re: Fw: Enquiry for As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for Various Lots in DD 51, Fanling
Attachments: Low Noise Surfacing in DD51.pdf

You don't often get email from to3b.nt@hyd.gov.hk. Learn why this is important

Dear Ms. Ma,

The sketch of Low Noise Surfacing and Noise Barrier for concerned location is prepared and attached for your information.
(File-Checksum-00000001)

Regards,
Kam Yu Hang,
TO(3)B
27624172
www.hyd.gov.hk

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From: Cho Kwan WONG/HYD/HKSARG
To: Yu Hang KAM/HYD/HKSARG@HYD
Cc: Kwok Wai NG/HYD/HKSARG@HYD, Mok Wai YAN/HYD/HKSARG@HYD, Ho Yuen PANG/HYD/HKSARG@HYD, Sheung Kwan IP/HYD/HKSARG@HYD, Peter CK WONG/HYD/HKSARG@HYD, Chung Kee YIP/HYD/HKSARG@HYD
Date: 07/07/2025 15:58
Subject: Fw: Enquiry for As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for Various Lots in DD 51, Fanling

---

Dear Mr KAM,

Many thanks!

Please assist to contact the consultant to provide her the drawing for their reference as per usual practice.

Best Regards,
Kimmy WONG
DE/FL
NT Region, HyD
Tel: 2762 3966

----- Forwarded by Cho Kwan WONG/HYD/HKSARG on 07/07/2025 15:47 -----

From: Yu Hang KAM/HYD/HKSARG
To: Cho Kwan WONG/HYD/HKSARG@HYD
Cc: Kwok Wai NG/HYD/HKSARG@HYD, Mok Wai YAN/HYD/HKSARG@HYD, Ho Yuen PANG/HYD/HKSARG@HYD, Sheung Kwan IP/HYD/HKSARG@HYD
Date: 07/07/2025 15:45
Subject: Re: Fw: Enquiry for As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for Various Lots in DD 51, Fanling

---

Dear Ms. Wong,

The sketch is prepared and attached for your information.
[attachment "Low Noise Surfacing in DD51.pdf" deleted by Yu Hang KAM/HYD/HKSARG]

Regards,
Kam Yu Hang,
TO(3)B
27624172

www.hyd.gov.hk

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From: Kwok Wai NG/HYD/HKSARG
To: Yu Hang KAM/HYD/HKSARG@HYD
Cc: Mok Wai YAN/HYD/HKSARG@HYD
Date: 24/06/2025 17:07
Subject: Fw: Enquiry for As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for Various Lots in DD 51, Fanling

---

Dear Frankie,

Please assist in investigating the enquiry the regarding caption subject and contract Ms. CoCo Ma.

Many thanks.

Billy Ng
STO(3)/NT
Tel. 2762 3925

www.hyd.gov.hk

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*and notify the sender immediately. ****
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----- Forwarded by Kwok Wai NG/HYD/HKSARG on 24/06/2025 17:02 -----

From: Mok Wai YAN/HYD/HKSARG
To: Kwok Wai NG/HYD/HKSARG@HYD
Date: 24/06/2025 10:09
Subject: Fw: Enquiry for As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for Various Lots in DD 51, Fanling

---

Dear Billy,

Please contact Ms. CoCo Ma from Ramboll at 3465 2807 and follow up the request of the consultant stated below. Thanks.

Regards,
George Yan
PTO(C)/NT
Tel. 2762 3927

www.hyd.gov.hk

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----- Forwarded by Mok Wai YAN/HYD/HKSARG on 24/06/2025 10:07 -----

From: Cho Kwan WONG/HYD/HKSARG
To: "Coco Ma" [redacted]
Cc: "Billy Fan" [redacted]
Date: 24/06/2025 09:51
Subject: Fw: Enquiry for As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for Various Lots in DD 51, Fanling

---

Dear Coco,

Please kindly contact the following officers for inspection of the as-built drawings:

Road pavement: PTO(C), Mr. YAN Mok-wai at 2762 3927

Existing structures (noise barriers) maintained by HyD: PTO/CB, Mr. CHAN King-man at 3526 0072

Thank you.

Best Regards,
Kimmy WONG
DE/FL
NT Region, HyD
Tel: 2762 3966
----- Forwarded by Cho Kwan WONG/HYD/HKSARG on 24/06/2025 09:45 -----

From: "Coco Ma" <[redacted]
To: "defl.nt@hyd.gov.hk" <defl.nt@hyd.gov.hk>
Cc: "Billy Fan" <[redacted]
Date: 06/06/2025 17:33
Subject: Enquiry for As-built Drawing of Roadside Noise Barrier and Low Noise Road Surfacing for Various Lots in DD 51, Fanling

---

Dear Kimmy,

We (Ramboll, an environmental consultancy company) are commissioned by the owner of the captioned Subject Site to carry out the Road Traffic Noise Impact Assessment (RTNIA) for a Proposed Development. The location plan of the Subject Site with 300m assessment area is attached for your reference.

In order to carry out the RTNIA, we would be grateful if you could provide us the below information:

1. Latest Low Noise Road Surfacing extent (setting out) and material type (e.g. PMSMA6 and PMFC) applied on the existing/panned roads within 300m assessment area;
2. Maintenance records of low noise road surfacing materials; and
3. As-built drawing of noise barrier at the existing/planned roads within 300m assessment area.

If appropriate, could we have a visit of your office for the inspection of such information, please?

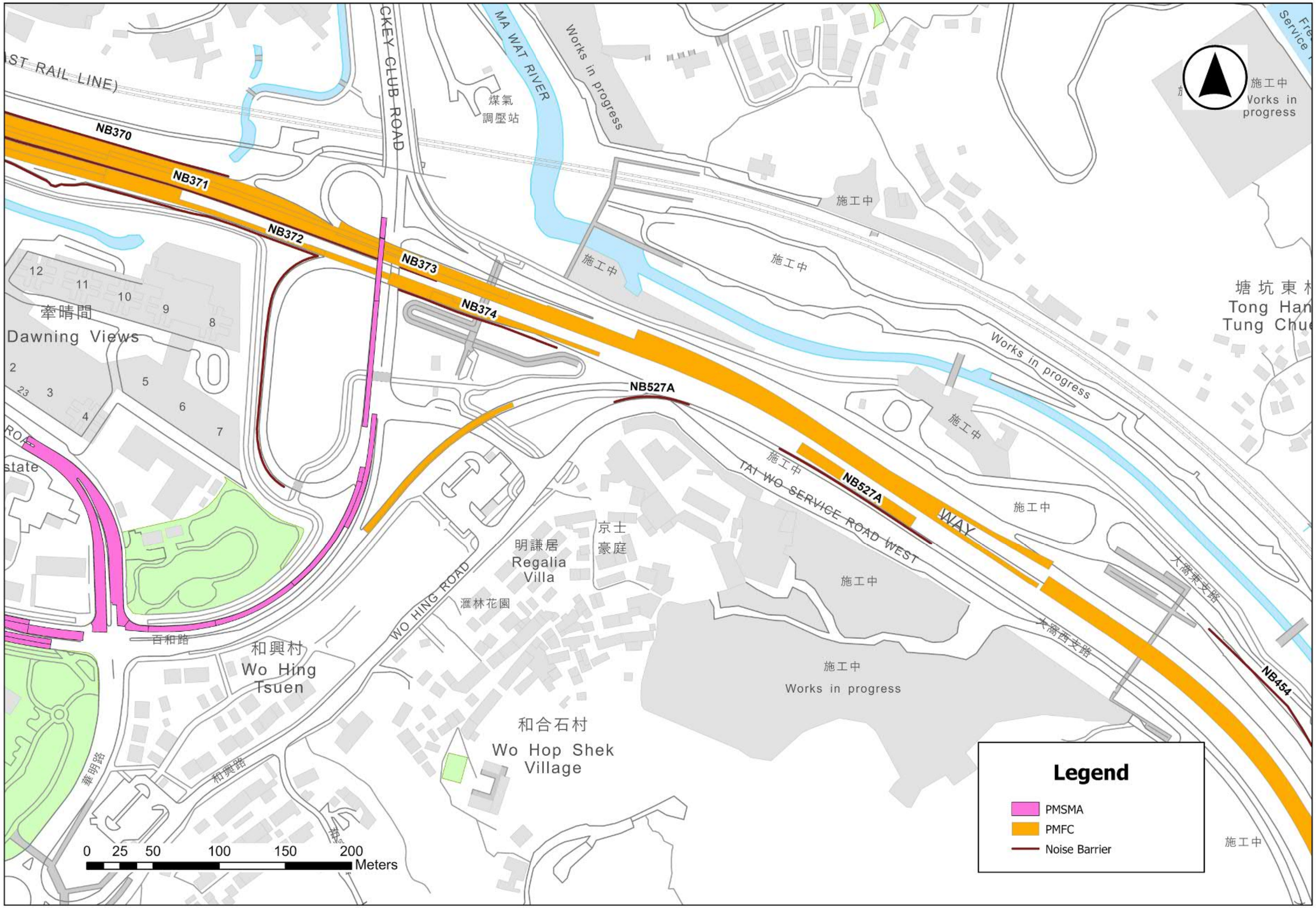
Should you have any questions on this enquiry, please do not hesitate to contact me, or our Billy Fan at 3465 2828.

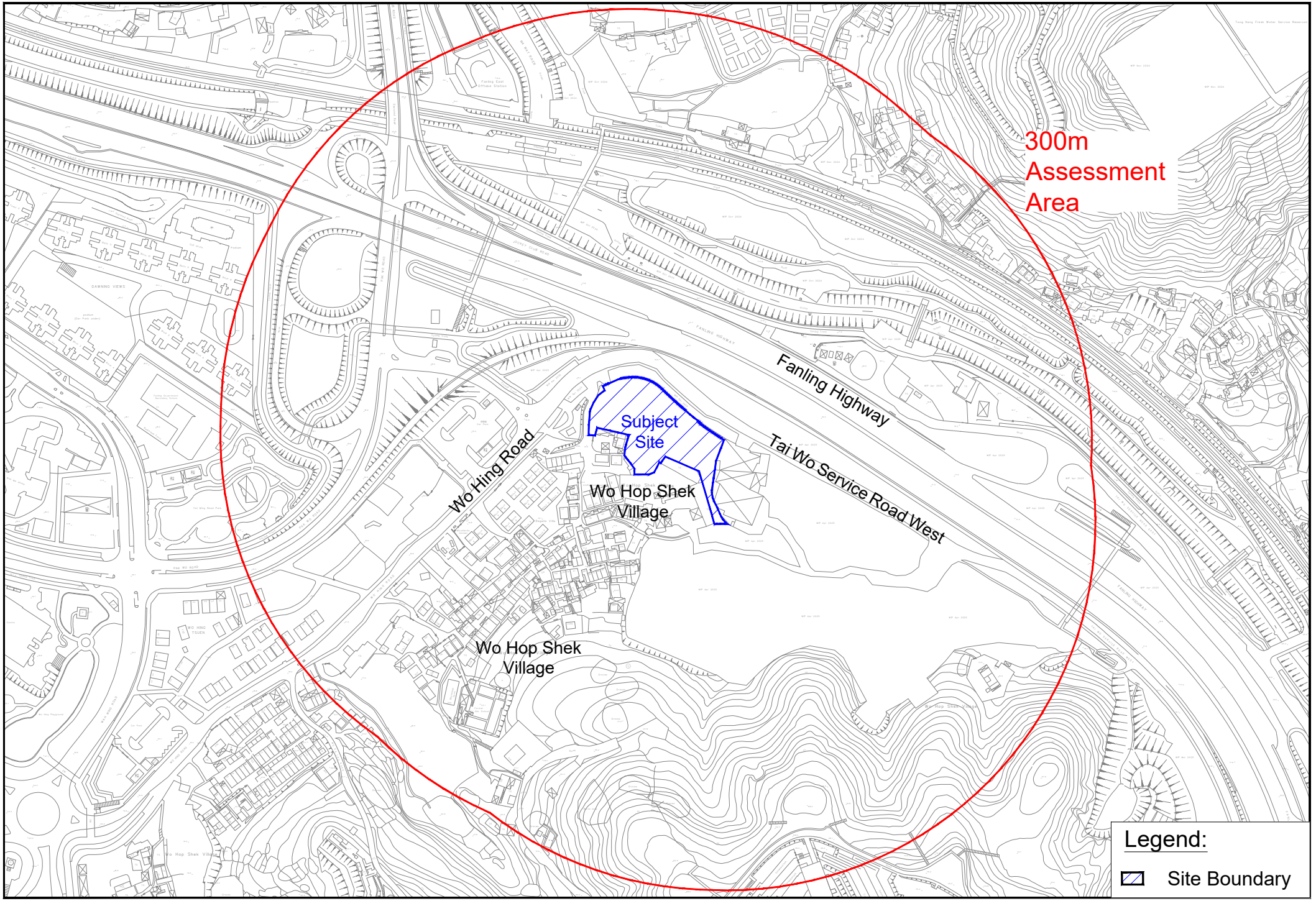
Kind regards
Coco Ma

Assistant Environmental Consultant

D +852 [redacted]

[redacted]


ST RAIL LINE)
NB370
NB371
NB372
NB373
NB374
NB527A
CKEY CLUB ROAD
MA WAT RIVER
煤氣
調壓站
Works in progress
施工中
Works in progress
施工中
施工中
施工中
Works in progress
施工中
施工中
TAI WO SERVICE ROAD WEST
NB527A
WAY
施工中
大嶼西支路
大嶼東支路
NB454
施工中
塘坑東村
Tong Han
Tung Chue
12
11
10
9
8
牽晴間
Dawning Views
2
23
3
4
5
6
7
ROAD
state
百和路
和興村
Wo Hing
Tsuen
WO HING ROAD
明謙居
Regalia
Villa
京士
豪庭
滙林花園
和合石村
Wo Hop Shek
Village
華明路
和興路
0 25 50 100 150 200
Meters
Legend
PMSMA
PMFC
Noise Barrier


300m
Assessment
Area
Subject
Site
Fanling Highway
Tai Wo Service Road West
Wo Hing Road
Wo Hop Shek
Village
Wo Hop Shek
Village
Legend:
Site Boundary

Appendix 2.3 Results of Road Traffic Noise Impact Assessment (Base Case Scenario)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Base Case (AM Peak Flow)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20	N1-21	N1-22	N1-23
7/F	61.8	**81**	**78**	**75**	**72**	70	68	66	65	66	69	69	69	**71**	**73**	**77**	**77**	**77**	**77**	**77**	**78**	**78**	**79**	**81**
8/F	64.9	**81**	**79**	**77**	**75**	**73**	**71**	69	67	67	69	69	70	**71**	**73**	**77**	**77**	**77**	**78**	**78**	**78**	**79**	**79**	**81**
9/F	68.1	**81**	**79**	**78**	**77**	**75**	**74**	**72**	70	69	69	69	70	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**79**	**80**	**81**
10/F	71.2	**81**	**79**	**78**	**78**	**76**	**75**	**73**	**72**	**71**	69	69	70	**71**	**73**	**77**	**78**	**78**	**78**	**78**	**79**	**79**	**79**	**81**
11/F	74.4	**81**	**80**	**79**	**78**	**77**	**76**	**74**	**73**	**72**	69	69	70	**71**	**73**	**77**	**78**	**78**	**78**	**78**	**79**	**79**	**79**	**81**
12/F	77.5	**81**	**80**	**79**	**78**	**77**	**76**	**75**	**74**	**73**	69	69	70	**71**	**73**	**77**	**78**	**78**	**78**	**78**	**79**	**79**	**79**	**81**
Max Noise Level		81	80	79	78	77	76	75	74	73	69	69	70	71	73	77	78	78	78	78	79	79	80	81

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23
7/F	61.8	**81**	**78**	**76**	**76**	**75**	**74**	**73**	**73**	**73**	70	66	66	66	66	66	64	63	62	61	61	61	61	65
8/F	64.9	**81**	**79**	**78**	**77**	**76**	**75**	**75**	**74**	**74**	**71**	66	66	67	67	66	65	64	63	62	62	62	62	68
9/F	68.1	**81**	**79**	**78**	**78**	**77**	**76**	**76**	**75**	**75**	**71**	66	66	67	67	67	66	65	64	63	63	63	62	69
10/F	71.2	**81**	**79**	**79**	**78**	**77**	**77**	**76**	**76**	**75**	**72**	66	67	67	67	67	66	65	64	63	63	63	63	70
11/F	74.4	**81**	**79**	**79**	**78**	**78**	**77**	**77**	**76**	**76**	**72**	66	67	67	67	67	67	65	64	63	64	63	63	70
12/F	77.5	**81**	**80**	**79**	**78**	**78**	**78**	**77**	**77**	**76**	**72**	66	67	67	67	67	67	65	64	64	64	63	63	70
13/F	80.7	**81**	**80**	**79**	**78**	**78**	**78**	**77**	**77**	**76**	**72**	66	66	67	67	67	67	66	65	64	64	64	63	70
14/F	83.8	**81**	**80**	**79**	**79**	**78**	**78**	**77**	**77**	**77**	**72**	66	66	67	67	68	67	66	65	64	64	64	63	70
15/F	87.0	**81**	**80**	**79**	**79**	**78**	**78**	**77**	**77**	**77**	**72**	66	66	67	68	68	67	66	65	64	64	64	64	**71**
16/F	90.1	**81**	**80**	**79**	**79**	**78**	**78**	**78**	**77**	**77**	**72**	66	66	67	68	68	67	66	65	64	64	64	65	**72**
17/F	93.3	**81**	**80**	**79**	**79**	**78**	**78**	**78**	**77**	**77**	**72**	66	67	67	68	68	68	67	66	65	65	66	67	**73**
18/F	96.4	**81**	**80**	**79**	**79**	**78**	**78**	**78**	**77**	**77**	**73**	67	67	68	69	69	69	68	67	66	66	67	68	**73**
Max Noise Level		81	80	79	79	78	78	78	77	77	73	67	67	68	69	69	69	68	67	66	66	67	68	73

Max. Noise Level:	81

Notes:

71	Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Base Case (PM Peak Flow)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20	N1-21	N1-22	N1-23
7/F	61.8	**81**	**77**	**75**	**72**	69	67	65	64	65	68	69	69	**71**	**73**	**77**	**77**	**77**	**77**	**77**	**78**	**78**	**79**	**81**
8/F	64.9	**81**	**79**	**77**	**75**	**73**	70	68	66	66	69	69	69	**71**	**73**	**77**	**77**	**77**	**77**	**78**	**78**	**79**	**80**	**81**
9/F	68.1	**81**	**79**	**78**	**77**	**75**	**73**	**71**	69	68	69	69	69	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**79**	**80**	**81**
10/F	71.2	**81**	**80**	**79**	**78**	**76**	**74**	**73**	**72**	**71**	69	69	69	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**79**	**79**	**80**	**81**
11/F	74.4	**81**	**80**	**79**	**78**	**77**	**75**	**74**	**73**	**72**	69	69	69	**71**	**73**	**77**	**78**	**78**	**78**	**78**	**79**	**79**	**80**	**81**
12/F	77.5	**81**	**80**	**79**	**78**	**77**	**76**	**75**	**74**	**73**	69	69	69	**71**	**73**	**77**	**78**	**78**	**78**	**78**	**79**	**79**	**79**	**81**
Max Noise Level		81	80	79	78	77	76	75	74	73	69	69	69	71	73	77	78	78	78	78	79	79	80	81

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23
7/F	61.8	**81**	**78**	**76**	**75**	**74**	**74**	**73**	**73**	**72**	70	66	66	66	66	66	64	63	62	61	61	61	61	64
8/F	64.9	**81**	**79**	**78**	**76**	**76**	**75**	**74**	**74**	**73**	70	66	66	66	66	66	65	64	63	62	62	62	62	68
9/F	68.1	**81**	**79**	**78**	**78**	**77**	**76**	**76**	**75**	**75**	**71**	66	66	66	66	66	65	64	63	63	63	62	62	69
10/F	71.2	**81**	**79**	**79**	**78**	**77**	**77**	**76**	**76**	**75**	**71**	66	66	66	67	66	66	65	64	63	63	63	62	70
11/F	74.4	**81**	**79**	**79**	**78**	**78**	**77**	**77**	**76**	**76**	**71**	66	66	66	67	67	66	65	64	63	63	63	62	70
12/F	77.5	**81**	**80**	**79**	**78**	**78**	**77**	**77**	**76**	**76**	**72**	66	66	66	67	67	66	65	64	63	63	63	62	70
13/F	80.7	**81**	**80**	**79**	**78**	**78**	**78**	**77**	**77**	**76**	**72**	66	66	66	67	67	66	65	64	63	64	63	63	70
14/F	83.8	**81**	**80**	**79**	**78**	**78**	**78**	**77**	**77**	**77**	**72**	66	66	66	67	67	66	65	64	64	64	63	63	**71**
15/F	87.0	**81**	**80**	**79**	**79**	**78**	**78**	**77**	**77**	**77**	**72**	66	66	66	67	67	67	65	65	64	64	64	64	**71**
16/F	90.1	**81**	**80**	**79**	**79**	**78**	**78**	**77**	**77**	**77**	**72**	66	66	66	67	68	67	66	65	64	64	64	65	**72**
17/F	93.3	**81**	**80**	**79**	**79**	**78**	**78**	**77**	**77**	**77**	**72**	66	66	67	68	68	68	67	66	64	65	66	67	**73**
18/F	96.4	**81**	**80**	**79**	**79**	**78**	**78**	**78**	**77**	**77**	**72**	67	67	68	69	69	69	68	67	65	66	67	68	**73**
Max Noise Level		81	80	79	79	78	78	78	77	77	72	67	67	68	69	69	69	68	67	65	66	67	68	73

Max. Noise Level:	81

Notes:

71 Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Base Case (Combined)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20	N1-21	N1-22	N1-23
7/F	61.8	**81**	**78**	**75**	**72**	70	68	66	65	66	69	69	69	**71**	**73**	**77**	**77**	**77**	**77**	**77**	**78**	**78**	**79**	**81**
8/F	64.9	**81**	**79**	**77**	**75**	**73**	**71**	69	67	67	69	69	70	**71**	**73**	**77**	**77**	**77**	**78**	**78**	**78**	**79**	**80**	**81**
9/F	68.1	**81**	**79**	**78**	**77**	**75**	**74**	**72**	70	69	69	69	70	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**79**	**80**	**81**
10/F	71.2	**81**	**80**	**79**	**78**	**76**	**75**	**73**	**72**	**71**	69	69	70	**71**	**73**	**77**	**78**	**78**	**78**	**78**	**79**	**79**	**80**	**81**
11/F	74.4	**81**	**80**	**79**	**78**	**77**	**76**	**74**	**73**	**72**	69	69	70	**71**	**73**	**77**	**78**	**78**	**78**	**78**	**79**	**79**	**80**	**81**
12/F	77.5	**81**	**80**	**79**	**78**	**77**	**76**	**75**	**74**	**73**	69	69	70	**71**	**73**	**77**	**78**	**78**	**78**	**78**	**79**	**79**	**79**	**81**
Max Noise Level		81	80	79	78	77	76	75	74	73	69	69	70	71	73	77	78	78	78	78	79	79	80	81

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23
7/F	61.8	**81**	**78**	**76**	**76**	**75**	**74**	**73**	**73**	**73**	70	66	66	66	66	66	64	63	62	61	61	61	61	65
8/F	64.9	**81**	**79**	**78**	**77**	**76**	**75**	**75**	**74**	**74**	**71**	66	66	67	67	66	65	64	63	62	62	62	62	68
9/F	68.1	**81**	**79**	**78**	**78**	**77**	**76**	**76**	**75**	**75**	**71**	66	66	67	67	67	66	65	64	63	63	63	62	69
10/F	71.2	**81**	**79**	**79**	**78**	**77**	**77**	**76**	**76**	**75**	**72**	66	67	67	67	67	66	65	64	63	63	63	63	70
11/F	74.4	**81**	**79**	**79**	**78**	**78**	**77**	**77**	**76**	**76**	**72**	66	67	67	67	67	67	65	64	63	64	63	63	70
12/F	77.5	**81**	**80**	**79**	**78**	**78**	**78**	**77**	**77**	**76**	**72**	66	67	67	67	67	67	65	64	64	64	63	63	70
13/F	80.7	**81**	**80**	**79**	**78**	**78**	**78**	**77**	**77**	**76**	**72**	66	66	67	67	67	67	66	65	64	64	64	63	70
14/F	83.8	**81**	**80**	**79**	**79**	**78**	**78**	**77**	**77**	**77**	**72**	66	66	67	67	68	67	66	65	64	64	64	63	**71**
15/F	87.0	**81**	**80**	**79**	**79**	**78**	**78**	**77**	**77**	**77**	**72**	66	66	67	68	68	67	66	65	64	64	64	64	**71**
16/F	90.1	**81**	**80**	**79**	**79**	**78**	**78**	**78**	**77**	**77**	**72**	66	66	67	68	68	67	66	65	64	64	64	65	**72**
17/F	93.3	**81**	**80**	**79**	**79**	**78**	**78**	**78**	**77**	**77**	**72**	66	67	67	68	68	68	67	66	65	65	66	67	**73**
18/F	96.4	**81**	**80**	**79**	**79**	**78**	**78**	**78**	**77**	**77**	**73**	67	67	68	69	69	69	68	67	66	66	67	68	**73**
Max Noise Level		81	80	79	79	78	78	78	77	77	73	67	67	68	69	69	69	68	67	66	66	67	68	73

Max. Noise Level:	81

Notes:

71	Noise level exceed stardand of 70 dB(A)

Appendix 2.4 Results of Road Traffic Noise Impact Assessment (Mitigated Scenario)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Mitigated Case (Acoustic Fin) (AM Peak Flow)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20	N1-21	N1-22	N1-23
7/F	61.8	78	76	74	72	69	67	66	64	66	69	69	69	71	73	77	77	77	77	77	78	78	78	78
8/F	64.9	78	78	76	75	73	71	68	66	67	69	69	70	71	73	77	77	77	77	78	78	78	78	78
9/F	68.1	78	78	77	76	74	73	72	70	69	69	69	70	71	73	77	77	78	78	78	78	78	78	78
10/F	71.2	78	78	78	77	76	74	73	72	71	69	69	70	71	73	77	77	78	78	78	78	78	78	78
11/F	74.4	78	78	78	77	76	75	74	73	72	69	69	70	71	73	77	77	78	78	78	78	78	78	78
12/F	77.5	78	79	78	77	77	76	74	73	73	69	69	70	71	73	77	77	78	78	78	78	78	78	78
Max Noise Level		78	79	78	77	77	76	74	73	73	69	69	70	71	73	77	77	78	78	78	78	78	78	78

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23
7/F	61.8	78	77	76	75	75	74	73	73	73	70	66	66	66	66	66	64	63	62	61	61	61	61	64
8/F	64.9	78	77	77	76	76	75	75	74	73	71	66	66	67	67	66	65	64	63	62	62	62	62	68
9/F	68.1	78	78	78	77	76	76	76	75	75	71	66	66	67	67	67	66	65	64	63	63	63	62	69
10/F	71.2	78	78	78	77	77	77	76	76	75	72	66	67	67	67	67	66	65	64	63	63	63	63	70
11/F	74.4	78	78	78	78	77	77	76	76	76	72	66	67	67	67	67	66	65	64	63	64	63	63	70
12/F	77.5	78	78	78	78	77	77	77	76	76	72	66	67	67	67	67	66	65	64	64	64	63	63	70
13/F	80.7	78	78	78	78	78	77	77	77	76	72	66	66	67	67	67	67	66	65	64	64	64	63	70
14/F	83.8	78	78	78	78	78	77	77	77	76	72	66	66	67	67	67	67	66	65	64	64	64	63	70
15/F	87.0	78	78	78	78	78	77	77	77	77	72	66	66	67	67	67	67	66	65	64	64	64	64	71
16/F	90.1	78	78	78	78	78	77	77	77	77	72	66	66	67	68	68	67	66	65	64	64	64	65	72
17/F	93.3	78	78	78	78	78	78	77	77	77	72	66	67	67	68	68	68	67	66	65	65	66	67	73
18/F	96.4	78	78	78	78	78	78	77	77	77	73	67	67	68	69	69	69	68	67	66	66	67	68	73
Max Noise Level		78	78	78	78	78	78	77	77	77	73	67	67	68	69	69	69	68	67	66	66	67	68	73

Max. Noise Level:	79

Notes:

71	Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Mitigated Case (Acoustic Fin) (PM Peak Flow)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20	N1-21	N1-22	N1-23
7/F	61.8	**81**	**76**	**74**	**71**	69	66	65	63	65	68	69	69	**71**	**73**	**77**	**77**	**77**	**77**	**77**	**77**	**78**	**78**	**81**
8/F	64.9	**81**	**78**	**76**	**74**	**72**	70	68	66	66	69	69	69	**71**	**73**	**77**	**77**	**77**	**77**	**78**	**78**	**78**	**78**	**81**
9/F	68.1	**81**	**78**	**77**	**76**	**74**	**73**	**71**	69	68	69	69	69	**71**	**73**	**77**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**81**
10/F	71.2	**81**	**78**	**78**	**77**	**76**	**74**	**72**	**71**	70	69	69	69	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**78**	**81**
11/F	74.4	**81**	**78**	**78**	**77**	**76**	**75**	**73**	**72**	**72**	69	69	69	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**78**	**81**
12/F	77.5	**81**	**79**	**78**	**78**	**77**	**76**	**74**	**73**	**72**	69	69	69	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**78**	**81**
Max Noise Level		81	79	78	78	77	76	74	73	72	69	69	69	71	73	77	77	78	78	78	78	78	78	81

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23
7/F	61.8	**81**	**76**	**76**	**75**	**74**	**74**	**73**	**73**	**72**	70	66	66	66	66	66	64	63	62	61	61	61	61	64
8/F	64.9	**81**	**77**	**77**	**76**	**75**	**75**	**74**	**74**	**73**	70	66	66	66	66	66	65	64	63	62	62	62	62	67
9/F	68.1	**81**	**77**	**77**	**77**	**76**	**76**	**75**	**75**	**74**	**71**	66	66	66	66	66	65	64	63	63	63	62	62	69
10/F	71.2	**81**	**78**	**78**	**77**	**77**	**76**	**76**	**75**	**75**	**71**	66	66	66	67	66	66	65	64	63	63	63	62	70
11/F	74.4	**81**	**78**	**78**	**78**	**77**	**77**	**76**	**76**	**75**	**71**	66	66	66	67	67	66	65	64	63	63	63	62	70
12/F	77.5	**81**	**78**	**78**	**78**	**77**	**77**	**77**	**76**	**76**	**72**	66	66	66	67	67	66	65	64	63	63	63	62	70
13/F	80.7	**81**	**78**	**78**	**78**	**77**	**77**	**77**	**76**	**76**	**72**	66	66	66	67	67	66	65	64	63	64	63	63	70
14/F	83.8	**81**	**78**	**78**	**78**	**77**	**77**	**77**	**77**	**76**	**72**	66	66	66	67	67	66	65	64	64	64	63	63	70
15/F	87.0	**81**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**76**	**72**	66	66	66	67	67	66	65	65	64	64	64	64	**71**
16/F	90.1	**81**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**76**	**72**	66	66	66	67	67	67	66	65	64	64	64	65	**72**
17/F	93.3	**81**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**76**	**72**	66	66	67	68	68	68	67	66	64	65	66	67	**73**
18/F	96.4	**81**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**77**	**72**	67	67	68	69	69	69	68	67	65	66	67	68	**73**
Max Noise Level		81	78	78	78	78	77	77	77	77	72	67	67	68	69	69	69	68	67	65	66	67	68	73

Max. Noise Level:	81

Notes:

71 Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Mitigated Case (Acoustic Fin) (Combined)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20	N1-21	N1-22	N1-23
7/F	61.8	**81**	**76**	**74**	**72**	69	67	66	64	66	69	69	69	**71**	**73**	**77**	**77**	**77**	**77**	**77**	**78**	**78**	**78**	**81**
8/F	64.9	**81**	**78**	**76**	**75**	**73**	**71**	68	66	67	69	69	70	**71**	**73**	**77**	**77**	**77**	**77**	**78**	**78**	**78**	**78**	**81**
9/F	68.1	**81**	**78**	**77**	**76**	**74**	**73**	**72**	70	69	69	69	70	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**78**	**81**
10/F	71.2	**81**	**78**	**78**	**77**	**76**	**74**	**73**	**72**	**71**	69	69	70	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**78**	**81**
11/F	74.4	**81**	**78**	**78**	**77**	**76**	**75**	**74**	**73**	**72**	69	69	70	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**78**	**81**
12/F	77.5	**81**	**79**	**78**	**78**	**77**	**76**	**74**	**73**	**73**	69	69	70	**71**	**73**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**78**	**81**
Max Noise Level		81	79	78	78	77	76	74	73	73	69	69	70	71	73	77	77	78	78	78	78	78	78	81

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23
7/F	61.8	**81**	**77**	**76**	**75**	**75**	**74**	**73**	**73**	**73**	70	66	66	66	66	66	64	63	62	61	61	61	61	64
8/F	64.9	**81**	**77**	**77**	**76**	**76**	**75**	**75**	**74**	**73**	**71**	66	66	67	67	66	65	64	63	62	62	62	62	68
9/F	68.1	**81**	**78**	**78**	**77**	**76**	**76**	**76**	**75**	**75**	**71**	66	66	67	67	67	66	65	64	63	63	63	62	69
10/F	71.2	**81**	**78**	**78**	**77**	**77**	**77**	**76**	**76**	**75**	**72**	66	67	67	67	67	66	65	64	63	63	63	63	70
11/F	74.4	**81**	**78**	**78**	**78**	**77**	**77**	**76**	**76**	**76**	**72**	66	67	67	67	67	66	65	64	63	64	63	63	70
12/F	77.5	**81**	**78**	**78**	**78**	**77**	**77**	**77**	**76**	**76**	**72**	66	67	67	67	67	66	65	64	64	64	63	63	70
13/F	80.7	**81**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**76**	**72**	66	66	67	67	67	67	66	65	64	64	64	63	70
14/F	83.8	**81**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**76**	**72**	66	66	67	67	67	67	66	65	64	64	64	63	70
15/F	87.0	**81**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**77**	**72**	66	66	67	67	67	67	66	65	64	64	64	64	**71**
16/F	90.1	**81**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**77**	**72**	66	66	67	68	68	67	66	65	64	64	64	65	**72**
17/F	93.3	**81**	**78**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**72**	66	67	67	68	68	68	67	66	65	65	66	67	**73**
18/F	96.4	**81**	**78**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**73**	67	67	68	69	69	69	68	67	66	66	67	68	**73**
Max Noise Level		81	78	78	78	78	78	77	77	77	73	67	67	68	69	69	69	68	67	66	66	67	68	73

Max. Noise Level:	81

Notes:

71	Noise level exceed stardand of 70 dB(A)

Predicted Road Traffic Noise (L10, dB(A)) at Selected Sensitive Receivers
Mitigated Case (Acoustic Window (Baffle Type) and Acoustic Fin)

Tower 1

Floor	mPD	N1-01	N1-02	N1-03	N1-04	N1-05	N1-06	N1-07	N1-08	N1-09	N1-10	N1-11	N1-12	N1-13	N1-14	N1-15	N1-16	N1-17	N1-18	N1-19	N1-20	N1-21	N1-22	N1-23
7/F	61.8	69	68	66	63	69	67	66	64	66	69	69	69	62	65	68	68	69	69	69	69	69	69	70
8/F	64.9	70	69	68	66	64	62	68	66	67	69	69	70	62	65	69	69	69	69	69	69	70	70	70
9/F	68.1	70	70	69	68	66	65	63	70	69	69	69	70	62	65	69	69	69	69	69	70	70	70	70
10/F	71.2	70	70	69	69	67	66	64	63	62	69	69	70	62	65	69	69	69	69	69	70	70	70	70
11/F	74.4	70	70	70	69	68	67	65	64	64	69	69	70	62	65	69	69	69	69	69	70	70	70	70
12/F	77.5	70	70	70	69	68	67	66	65	64	69	69	70	62	65	69	69	69	69	69	70	70	70	70
Max Noise Level		70	70	70	69	69	67	68	70	69	69	69	70	62	65	69	69	69	69	69	70	70	70	70

Tower 2

Floor	mPD	N2-01	N2-02	N2-03	N2-04	N2-05	N2-06	N2-07	N2-08	N2-09	N2-10	N2-11	N2-12	N2-13	N2-14	N2-15	N2-16	N2-17	N2-18	N2-19	N2-20	N2-21	N2-22	N2-23
7/F	61.8	69	68	67	67	66	65	65	64	64	70	66	66	66	66	66	64	63	62	61	61	61	61	64
8/F	64.9	69	69	68	68	67	67	66	65	65	62	66	66	67	67	66	65	64	63	62	62	62	62	68
9/F	68.1	70	69	69	69	68	68	67	67	66	63	66	66	67	67	67	66	65	64	63	63	63	62	69
10/F	71.2	70	69	69	69	69	68	68	67	67	63	66	67	67	67	67	66	65	64	63	63	63	63	70
11/F	74.4	70	69	69	69	69	68	68	68	67	63	66	67	67	67	67	66	65	64	63	64	63	63	70
12/F	77.5	70	70	69	69	69	69	68	68	67	63	66	67	67	67	67	66	65	64	64	64	63	63	70
13/F	80.7	70	70	70	69	69	69	68	68	68	64	66	66	67	67	67	67	66	65	64	64	64	63	70
14/F	83.8	70	70	70	69	69	69	69	68	68	64	66	66	67	67	67	67	66	65	64	64	64	63	70
15/F	87.0	70	70	70	69	69	69	69	68	68	64	66	66	67	67	67	67	66	65	64	64	64	64	62
16/F	90.1	70	70	70	69	69	69	69	68	68	64	66	66	67	68	68	67	66	65	64	64	64	65	63
17/F	93.3	70	70	70	69	69	69	69	68	68	64	66	67	67	68	68	68	67	66	65	65	66	67	64
18/F	96.4	70	70	70	70	69	69	69	68	68	64	67	67	68	69	69	69	68	67	66	66	67	68	65
Max Noise Level		70	70	70	70	69	69	69	68	68	70	67	67	68	69	69	69	68	67	66	66	67	68	70

Max. Noise Level:	70

Notes:

71	Noise level exceed stardand of 70 dB(A)
	AW(BT)-1
	AW(BT)-2

Appendix 3.1 Site Survey Photo Records

Appendix 3.1 - Site Survey Photo Records

4 June 2025 Site Survey

1. Brilliant Towing Company. Minor activities (e.g. tyre replacement) and parking of lorries were observed. (G01)	2. K. Kee Engineering Company Limited. Covered warehouse was identified. Operation of electic hoist was observed. (E01 to E05)

Appendix 3.2 Sound Power Levels of Identified Fixed Noise Sources

Noise Source	Noise Source ID	x	y	Quantity	Day and Evening Time SWL, dB(A)
K. Kee Engineering Company Limited	E01	833405.3	838491.2	1	95.0
K. Kee Engineering Company Limited	E02	833403.1	838485.5	1	95.0
K. Kee Engineering Company Limited	E03	833400.8	838479.8	1	95.0
K. Kee Engineering Company Limited	E04	833399.4	838476.0	1	95.0
K. Kee Engineering Company Limited	E05	833397.9	838472.3	1	95.0
Brilliant Towing Company	G01	833396.3	838466.7	1	97.0

Appendix 3.3 Results of Fixed Noise Impact Assessment

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling
Detailed Calculation of Fixed Source Noise Impact Assessment

NSR	x	y
F01	833365.5	838497.6

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Shortest Distance from Noise Source to NSR, m	Distance Attenuation, dB(A)	Barrier Correction, dB(A)	Tonality Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)
K. Kee Engineering Company Limited	E01	833405.3	838491.2	95.0	40	-40	0	3	3	60.9
K. Kee Engineering Company Limited	E02	833403.1	838485.5	95.0	39	-40	0	3	3	61.1
K. Kee Engineering Company Limited	E03	833400.8	838479.8	95.0	40	-40	0	3	3	61.1
K. Kee Engineering Company Limited	E04	833399.4	838476.0	95.0	40	-40	0	3	3	60.9
K. Kee Engineering Company Limited	E05	833397.9	838472.3	95.0	41	-40	0	3	3	60.7
Brilliant Towing Company	G01	833396.3	838466.7	97.0	44	-41	0	0	3	59.2
								Predicted SPL, dB(A)		**68**
								Acceptable Noise Level for ASR "C", dB(A)		**70**

* No night time operation for all noise sources

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling
Detailed Calculation of Fixed Source Noise Impact Assessment

NSR	x	y
F02	833354.8	838482.2

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Shortest Distance from Noise Source to NSR, m	Distance Attenuation, dB(A)	Barrier Correction, dB(A)	Tonality Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)
K. Kee Engineering Company Limited	E01	833405.3	838491.2	95.0	51	-42	0	3	3	58.8
K. Kee Engineering Company Limited	E02	833403.1	838485.5	95.0	48	-42	0	3	3	59.3
K. Kee Engineering Company Limited	E03	833400.8	838479.8	95.0	46	-41	0	3	3	59.7
K. Kee Engineering Company Limited	E04	833399.4	838476.0	95.0	45	-41	0	3	3	59.9
K. Kee Engineering Company Limited	E05	833397.9	838472.3	95.0	44	-41	0	3	3	60.1
Brilliant Towing Company	G01	833396.3	838466.7	97.0	44	-41	0	0	3	59.1
									Predicted SPL, dB(A)	**67**
									Acceptable Noise Level for ASR "C", dB(A)	**70**

* No night time operation for all noise sources

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling
Detailed Calculation of Fixed Source Noise Impact Assessment

NSR	x	y
F03	833315.2	838526.6

Source	Source ID	x	y	Day and Evening Time SWL, dB(A)	Shortest Distance from Noise Source to NSR, m	Distance Attenuation, dB(A)	Barrier Correction, dB(A)	Tonality Correction, dB(A)	Façade Correction, dB(A)	Day and Evening Time SPL, Leq (30min) dB(A)
K. Kee Engineering Company Limited	E01	833405.3	838491.2	95.0	97	-48	0	3	3	53.3
K. Kee Engineering Company Limited	E02	833403.1	838485.5	95.0	97	-48	0	3	3	53.3
K. Kee Engineering Company Limited	E03	833400.8	838479.8	95.0	98	-48	0	3	3	53.2
K. Kee Engineering Company Limited	E04	833399.4	838476.0	95.0	98	-48	0	3	3	53.2
K. Kee Engineering Company Limited	E05	833397.9	838472.3	95.0	99	-48	0	3	3	53.1
Brilliant Towing Company	G01	833396.3	838466.7	97.0	101	-48	0	0	3	51.9
									Predicted SPL, dB(A)	**61**
									Acceptable Noise Level for ASR "C", dB(A)	**70**

* No night time operation for all noise sources

Appendix 4.1 Correspondence with Environmental Protection Department

Billy Fan

From: ceciliaymchan@epd.gov.hk
Sent: 26 June 2025 11:27
To: Billy Fan
Subject: Request of Informtaion for Odour Complaints within 200m Assessment Area from Application Site - Various Lots in DD 51, Fanling

You don't often get email from ceciliaymchan@epd.gov.hk. Learn why this is important

Your ref: SDMFLD51EI00_0_0002L.25

Dear Mr. FAN,

I refer to your letter dated 17 Jun 2025 on the captioned.

Regarding your enquiries in above letter, this Regional Office has checked the record within the period of 17 Jun 2019 - 17 Jun 2025. There are 3 records of odour complaints within the 200m assessment area, all received in 2024.

Should you have any query on the matter, please contact the undersigned at 2158 5718. Thank you.

Regards,
Cecilia CHAN
Regional Office (North) /EPD

RAMBOLL

Ref.: SDMFLD51EI00_0_0002L.25

By Fax (2685 1155) & Post

17 June 2025

Environmental Protection Department
Environmental Compliance Division
Regional Office (North), North
10th floor, Shatin Government Offices
No.1 Sheung Wo Che Road, Sha Tin, New Territories

Dear Sir / Madam,

Request of Information for Odour Complaints within 200m Assessment Area from Application Site

We are the environmental consultant employed by the project proponent for conducting an Environmental Assessment for the Proposed Development at Various Lots in D.D. 51, Fanling.

Of particular interest is whether there is any information regarding historical complaints received in the past five years (2019-2024) and this year (2025) on the odour issue (if any) within 200m Assessment Area from the Application Site.

If there are odour complaints within 200m Assessment Area from the Application Site, we would be much appreciated if you would provide us the number of complaints received in each year between 2019 to 2025.

We would be grateful if there is any additional information including the date of the complaint, the affected area, as well as any identification of the odour source(s) and any mitigation measures or improvements of the odour source(s) that have been implemented after receiving the complaint(s), if necessary.

Due to the urgency of the project, we would be much appreciated if you could provide the requested information by **30 June 2025**.

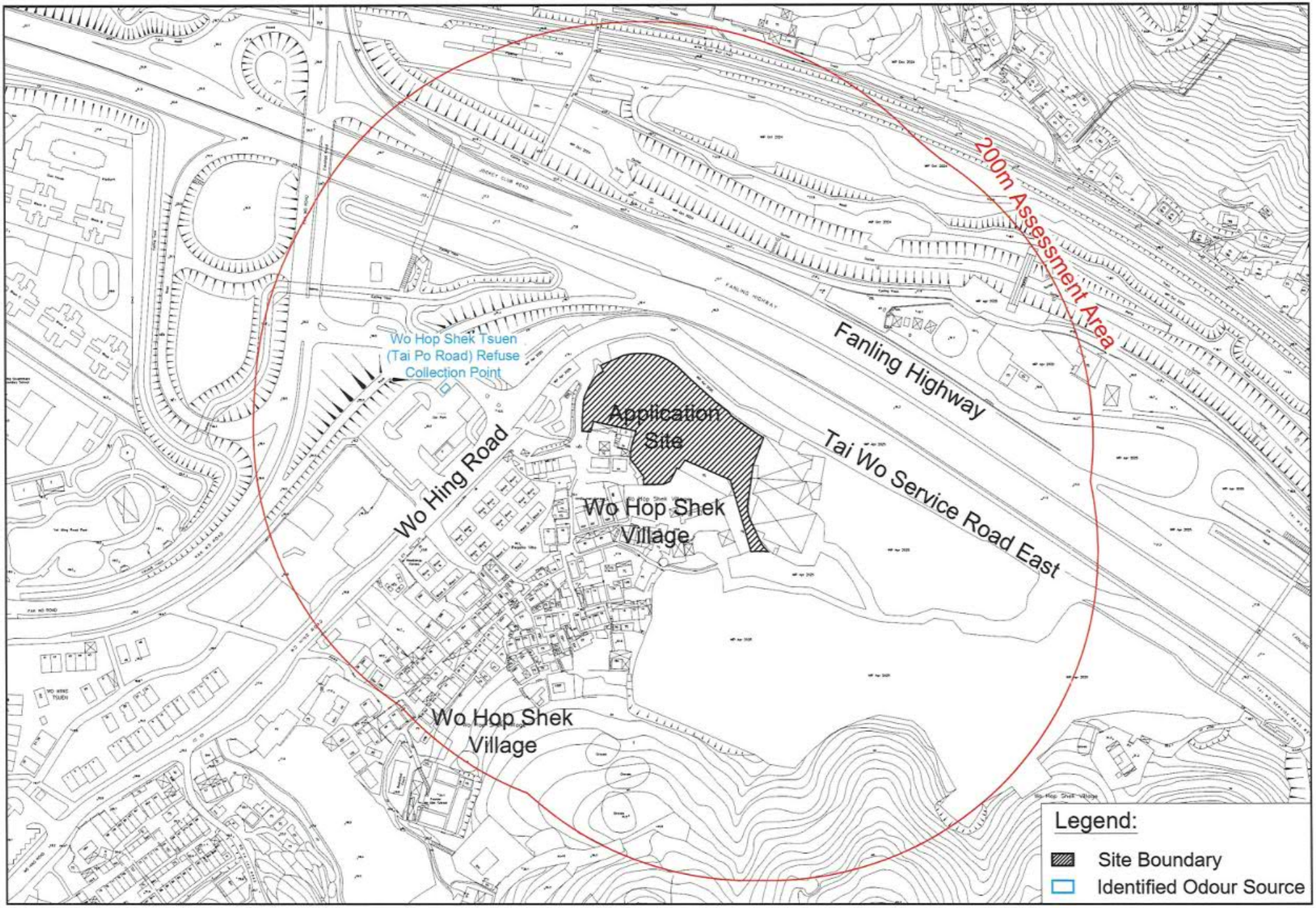
Should you have any queries, please do not hesitate to contact the undersigned at [redacted]

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited

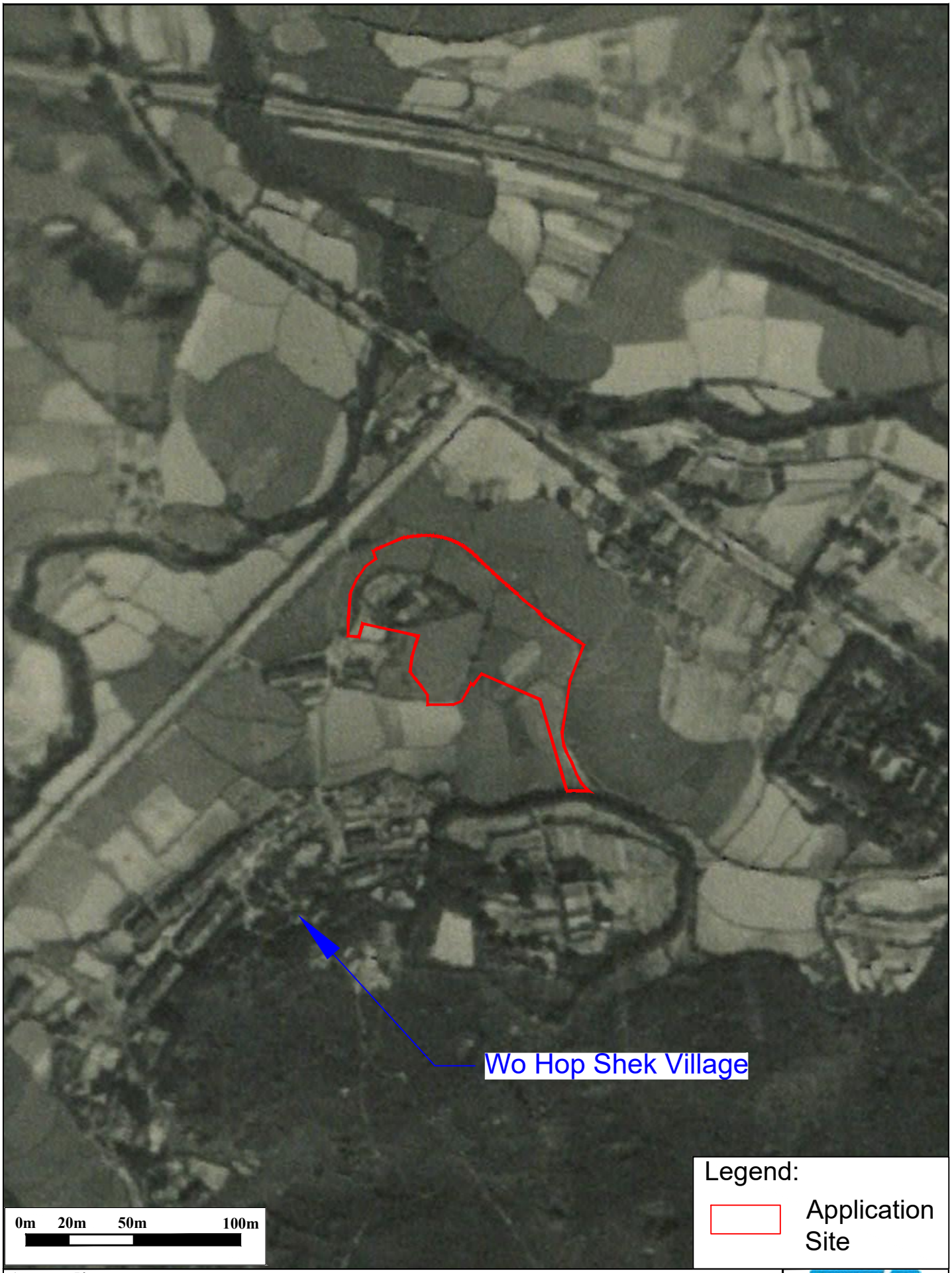
Billy Fan
Principal Consultant
Encl. Plan of 200m Assessment Area and Application Site

Q:\Projects\SDMFLD51EI00\02 Project Management\02 Corr\SDMFLD51EI00_0_0002L.25.docx

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

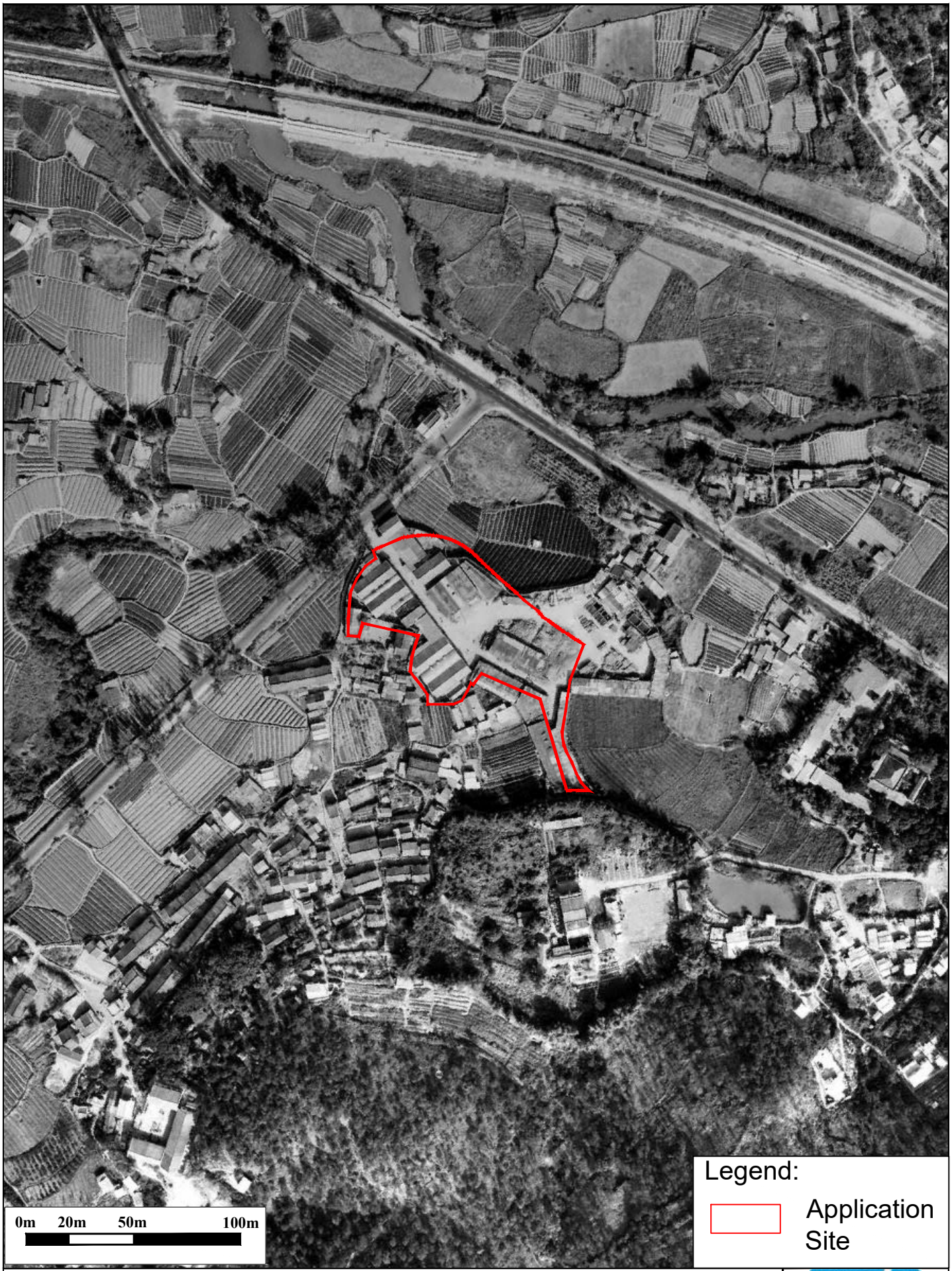

200m Assessment Area
Fanling Highway
Wo Hop Shek Tsuen (Tai Po Road) Refuse Collection Point
Application Site
Wo Hing Road
Wo Hop Shek Village
Tai Wo Service Road East
Wo Hop Shek Village
Legend:
Site Boundary
Identified Odour Source

Appendix 6.1 Historic Aerial Photo



Appendix: 6.1		RAMBOLL
Title:	Historic Aerial Photo - Year 1945	Drawn by: GW
		Checked by: BF
Project:	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0
		Date: Jul 2025

\\aphkfps3\Drive Q\Projects\SDMFLD51EI00\05 Assessments\04 LD\20250714 EA v1.0\Aerial Photo_b.dwg



Appendix: 6.1

Title: Historic Aerial Photo - Year 1964

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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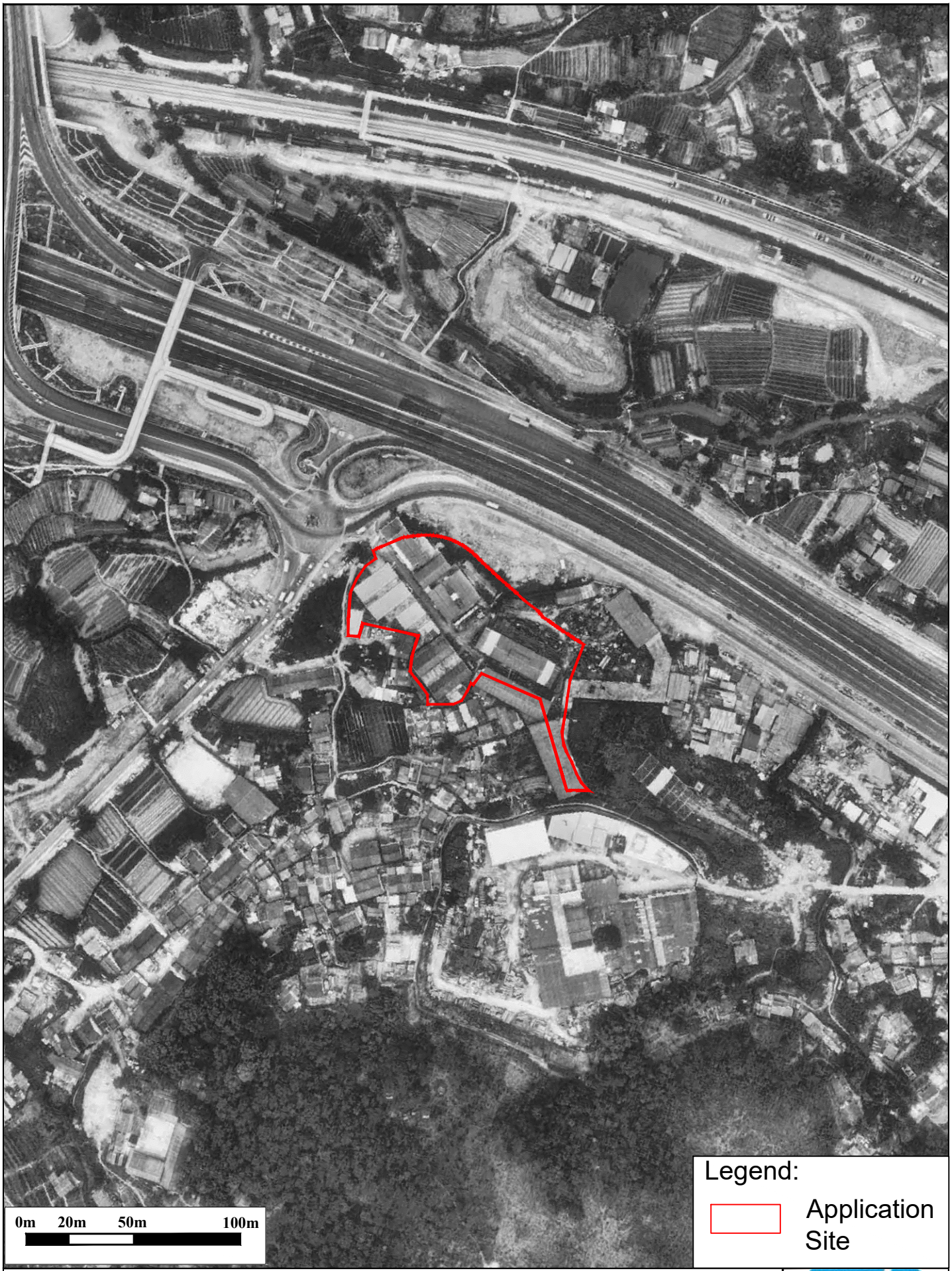

Appendix: 6.1

Title: Historic Aerial Photo - Year 1984

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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Appendix: 6.1

Title: Historic Aerial Photo - Year 1994

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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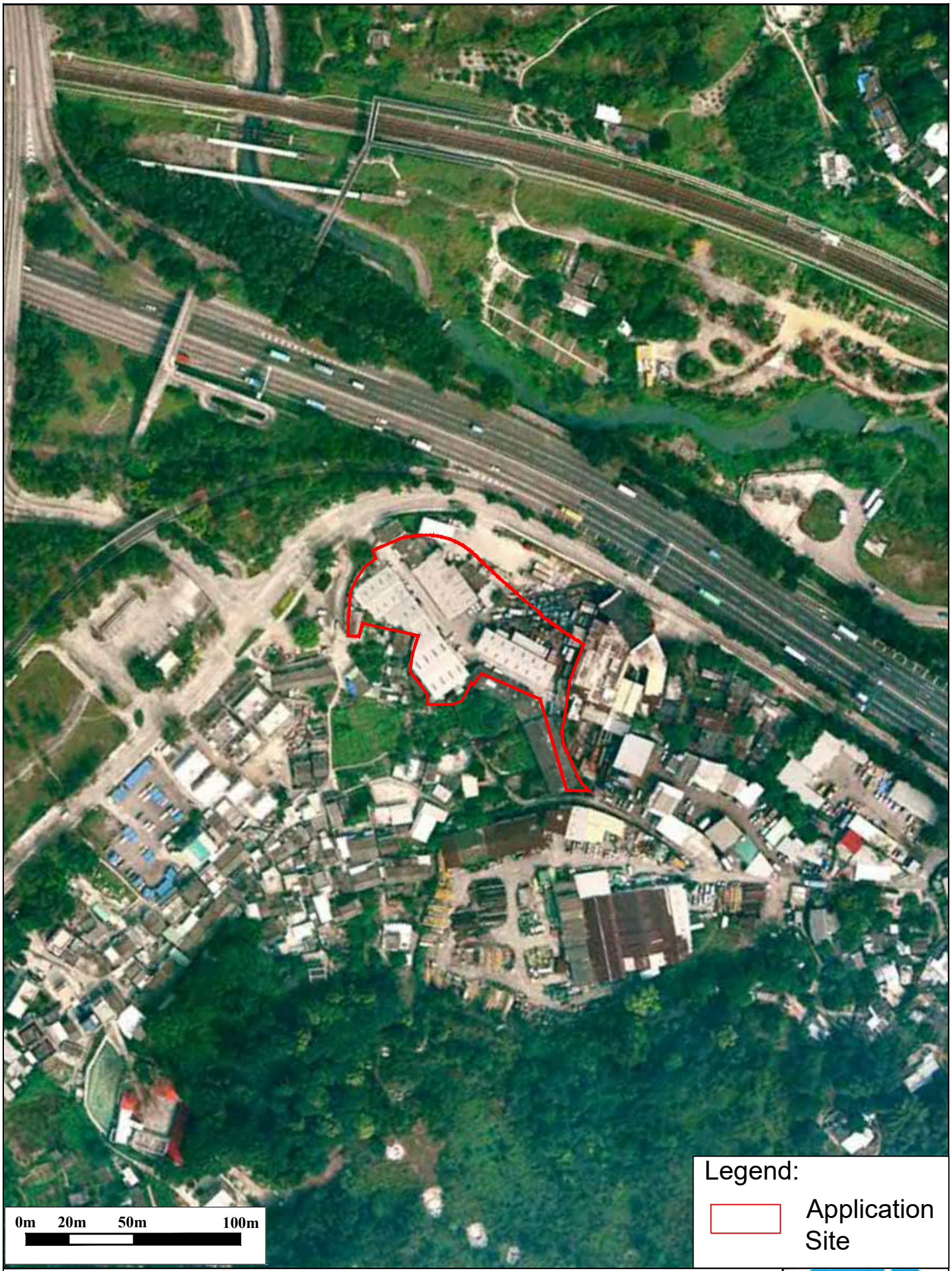

Appendix: 6.1

Title: Historic Aerial Photo - Year 2004

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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Appendix: 6.1

Title: Historic Aerial Photo - Year 2014

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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Appendix: 6.1

Title: Historic Aerial Photo - Year 2019

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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Appendix: 6.1

Title: Historic Aerial Photo - Year 2022

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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Appendix: 6.1

Title: Historic Aerial Photo - Year 2024

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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Appendix 6.2 Correspondence with Various Departments

RAMBOLL

Ref.: SDMFLD51EI00_0_0003L.25

19 June 2025

Planning Department,
District Planning Branch,
New Territories District Planning Division,
Fanling, Sheung Shui & Yuen Long East District Planning Office
Unit 2202, 22/F, CDW Building,
388 Castle Peak Road, Tsuen Wan, N.T.
Hong Kong

By Fax (3168 4074) & Post

Dear Sir / Madam,

Land Contamination Assessment Study for Planning Application for Proposed Development at Various Lots in DD 51, Fanling
Enquiry for Land Contamination Information

We are conducting a Land Contamination Assessment Study for a site at Fanling. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the Government of HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Application Site are required as part of the vetting process.

Of particular interests are current and historical site information, any change on the land use, future land use and any information relating to land contamination issues of the Application Site. A location plan for the project is enclosed for your reference.

Due to the tight timeline of the project, we would be much appreciated if you could provide the requested information by **02 July 2025**.

Should you have any query, please do not hesitate to contact the undersigned at [redacted] or our Ms. Grace Wong at [redacted]). We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited

Billy Fan
Principal Consultant

Enclosure: Location Plan of the Application Site

\\aphkfps3\Drive Q\Projects\SDMFLD51EI00\02 Project Management\02 Corr\SDMFLD51EI00_0_0003L.25.docx

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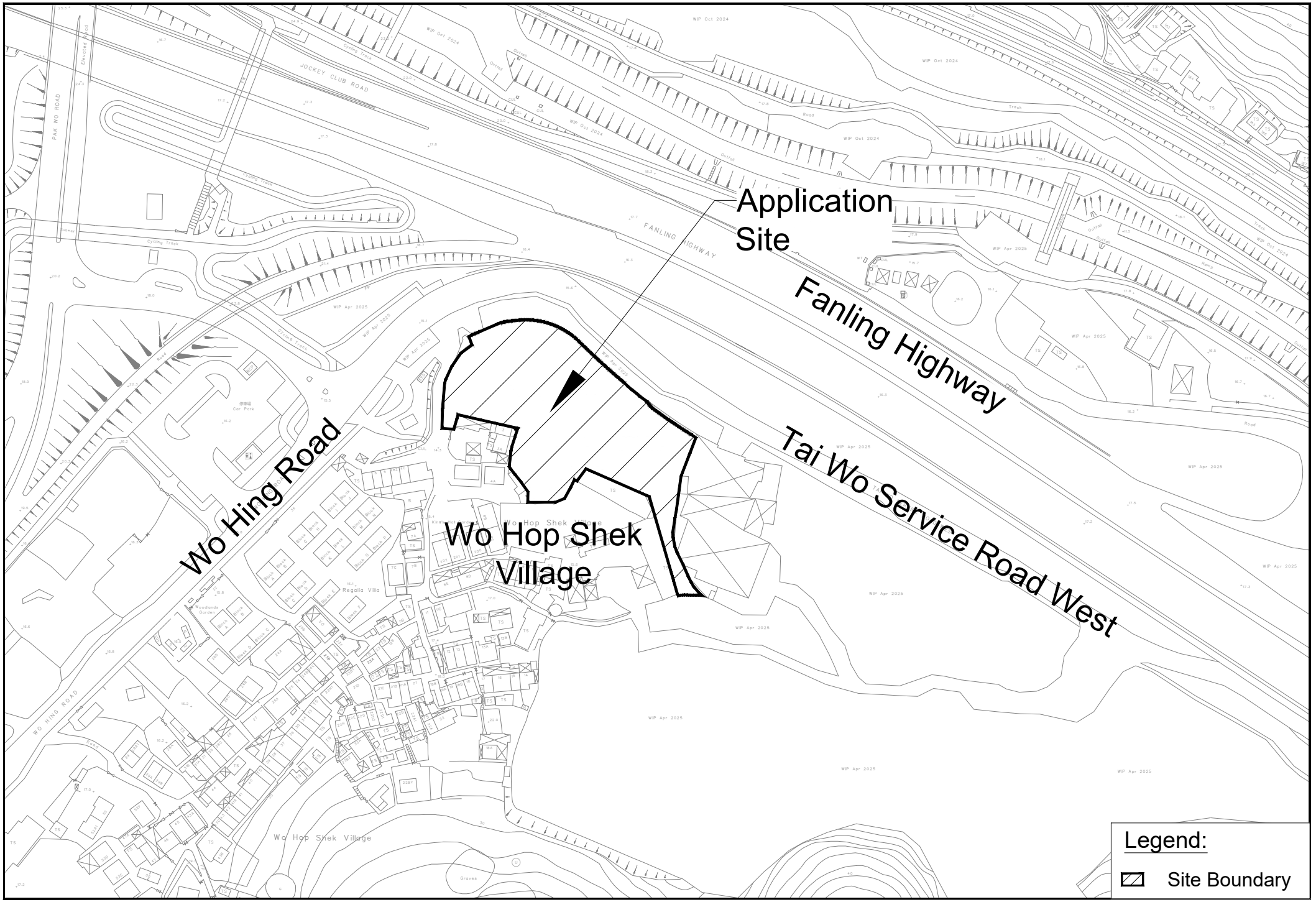
Application Site
Fanling Highway
Tai Wo Service Road West
Wo Hing Road
Wo Hop Shek Village
Legend:
Site Boundary

規劃署
粉嶺、上水及元朗東規劃處
新界荃灣青山公路388號
中染大廈22樓2202室

Planning Department
Fanling, Sheung Shui & Yuen Long East
District Planning Office
Unit 2202, 22/F, CDW Building,
388 Castle Peak Road, Tsuen Wan, N.T.

RECEIVED
04 JUL 2025
BY:.....

來函檔號 Your Reference:
本署檔號 Our Reference: PLO/FSYLE/6-20/1
電話號碼 Tel. No.: 3168 4049
傳真機號碼 Fax No.: 3168 4074

By Post and Fax (3465 2899)

2 July 2025

Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre
56 Gloucester Road, Wan Chai
Hong Kong
(Attn: Billy FAN)

Dear Sir/Madam,

Land Contamination Assessment for Planning Application for Proposed Development at Various Lots in D.D. 51, Fanling

I refer to your letter dated 19.6.2025 regarding the captioned.

The subject site falls within an area zoned "Government, Institution or Community" ("G/IC") on the approved Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/28. The proposed amendment for rezoning the subject site from "Industrial" to "G/IC" for a reserved primary school was approved by the Chief Executive in Council on 3.1.2017 under section 9(1) of the Town Planning Ordinance. For the details of the site history including the change on the land use and planned development, you may refer to the RNTPC Paper No. 1/16 and TPB Paper No. 10170 dated 8.1.2016 and 23.9.2016 respectively available on the Town Planning Board website https://www.tpb.gov.hk/en/resources/general_papers.html.

Should you have any queries on the above, please contact the undersigned at 3168 4049.

(Andrea YAN)
for District Planning Officer/
Fanling, Sheung Shui & Yuen Long East
Planning Department

...bell Hong ...

Project: SDMFL051E100.0-00157.25
Maconomy no.: 328001545

Circulation:		Read	Action
BF		☑	☐
PL		☑	☐
GW Internal		☐	☐
~~Site record (FS-0271)~~		☐	☐
		Yes	No
Document Scan		☐	☐
Keep Hard Copy		☐	☐

規劃署35周年 劃出更多可能 · 創造無限機遇
Planning a Future of Boundless Opportunities

RAMBOLL

Ref.: SDMFLD51EI00_0_0004L.25

19 June 2025

Environmental Protection Department,
Environmental Compliance Division,
Regional Office (North), North
10th Floor, Shatin Government Offices,
No.1 Sheung Wo Che Road, Sha Tin, N.T.
Hong Kong

By Fax (2685 1133) & Post

Dear Sir / Madam,

Land Contamination Assessment Study for Planning Application for Proposed Development at Various Lots in DD 51, Fanling
Enquiry for Land Contamination Information

We are conducting a Land Contamination Assessment Study for a site at Fanling. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the Government of HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Application Site are required as part of the vetting process.

Of particular interests is whether there are any registered chemical waste producers under your record in the Application Site, any waste disposal record, any accidental spillage record, any submission relating to land contamination assessment and any information you could provide which might be useful for our study. A location plan for the project is enclosed for your reference.

Due to the tight timeline of the project , we would be much appreciated if you could provide the requested information by **02 July 2025**.

Should you have any query, please do not hesitate to contact the undersigned at [redacted] or our Ms. Grace Wong at [redacted]. We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited

Billy Fan
Principal Consultant

Enclosure: Location Plan of the Application Site

\\aphkfps3\Drive Q\Projects\SDMFLD51EI00\02 Project Management\02 Corr\SDMFLD51EI00_0_0004L.25.docx

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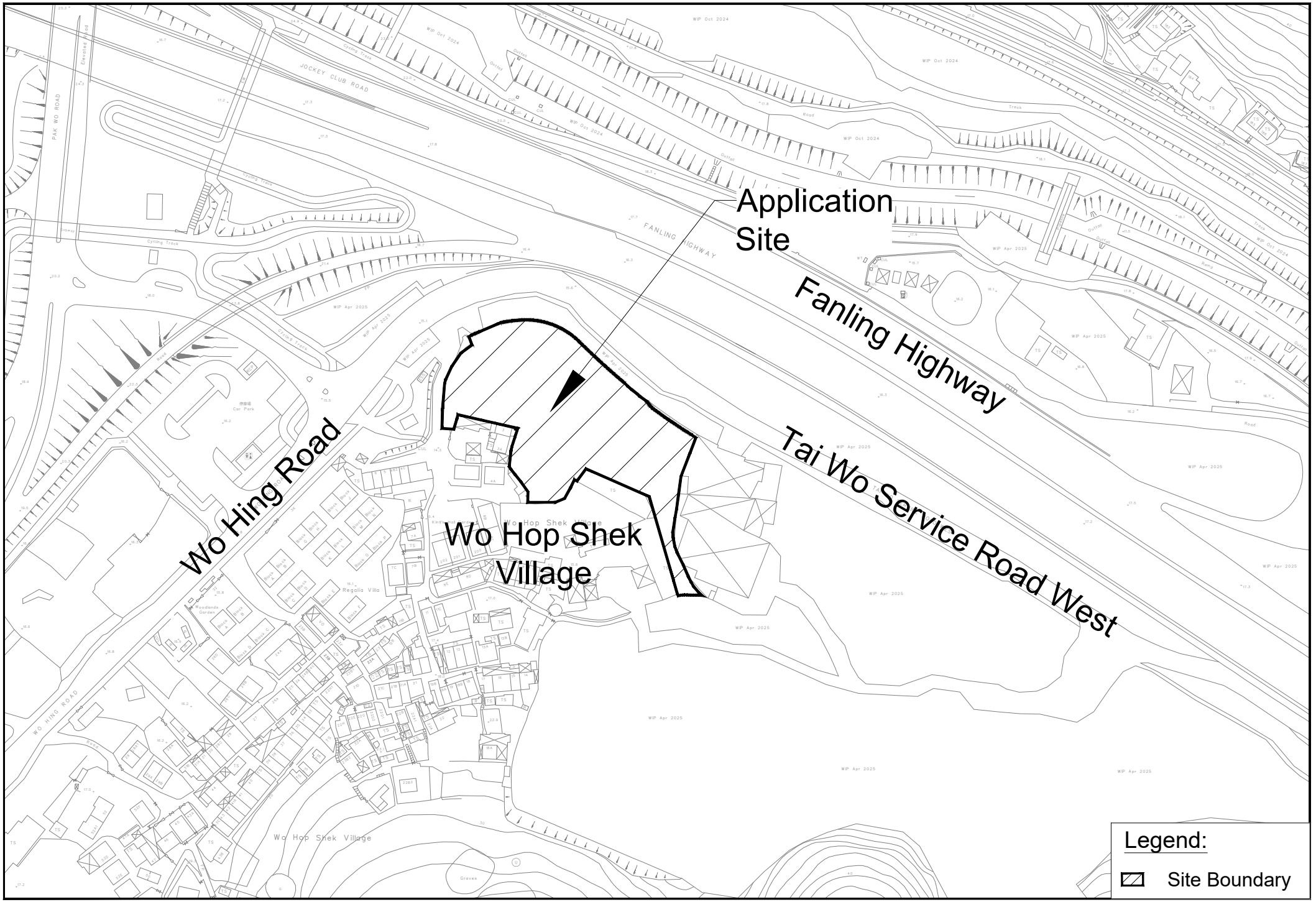
Application Site
Fanling Highway
Tai Wo Service Road West
Wo Hing Road
Wo Hop Shek Village
Legend:
Site Boundary

Grace KF Wong

From: ceciliaymchan@epd.gov.hk
Sent: Thursday, June 26, 2025 11:10 AM
To: Billy Fan
Cc: Grace KF Wong
Subject: Enquiry for Land Contamination Information - Various Lots in DD 51, Fanling

Some people who received this message don't often get email from ceciliaymchan@epd.gov.hk. Learn why this is important

Your ref: SDMFLD51EI00_0_0004L.25

Dear Mr. FAN,

I refer to your letter dated 19 Jun 2025 on the captioned.

Regarding your enquiries in above letter, this Regional Office has no record of spillage or leakage of chemical waste or chemicals within the concerned site for the past 2 years. You may like to check with other relevant parties or departments for such information as appropriate.

As registered chemical waste producers at the location are concerned, a register of chemical waste producers is available for inspection in the Territorial Control Office of this department. If you would like to inspect, please contact Mr. H. T. MAN at 2835 1017 for making appointment to view the records.

Should you have any query on the matter, please contact the undersigned at 2158 5718. Thank you.

Regards,
Cecilia CHAN
Regional Office (North) /EPD

RAMBOLL

Ref.: SDMFLD51EI00_0_0005L.25 19 June 2025

Fire Services Department
Corporate Strategy Command,
Corporate Services Division,
9th Floor, Fire Services Headquarters Building, 1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon

By Email (aio_fsd@hkfsd.gov.hk)

Dear Sir / Madam,

Land Contamination Assessment Study for Planning Application for Proposed Development at Various Lots in DD 51, Fanling
Enquiry for Land Contamination Information

We are conducting a Land Contamination Assessment Study for a site at Fanling. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the Government of HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Application Site are required as part of the vetting process.

Of particular interests are spill and incident reports (including records of fire at the Application Site) that we believe your Department might have record of. Furthermore, we would also like to know whether anywhere of the Applications Site had applied or possessed license for dangerous goods storage. Location plan & lot plan for the project are enclosed for your reference.

Due to the tight timeline of the project, we would be much appreciated if you could provide the requested information by **02 July 2025**.

Should you have any query, please do not hesitate to contact the undersigned at [redacted] or our Ms. Grace Wong at [redacted]). We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited

Billy Fan
Principal Consultant

Enclosure: Location Plan & Lot Plan of the Application Site and Appointment Letter from Client

\\aphkfps3\Drive Q\Projects\SDMFLD51EI00\02 Project Management\02 Corr\SDMFLD51EI00_0_0005L.25.docx

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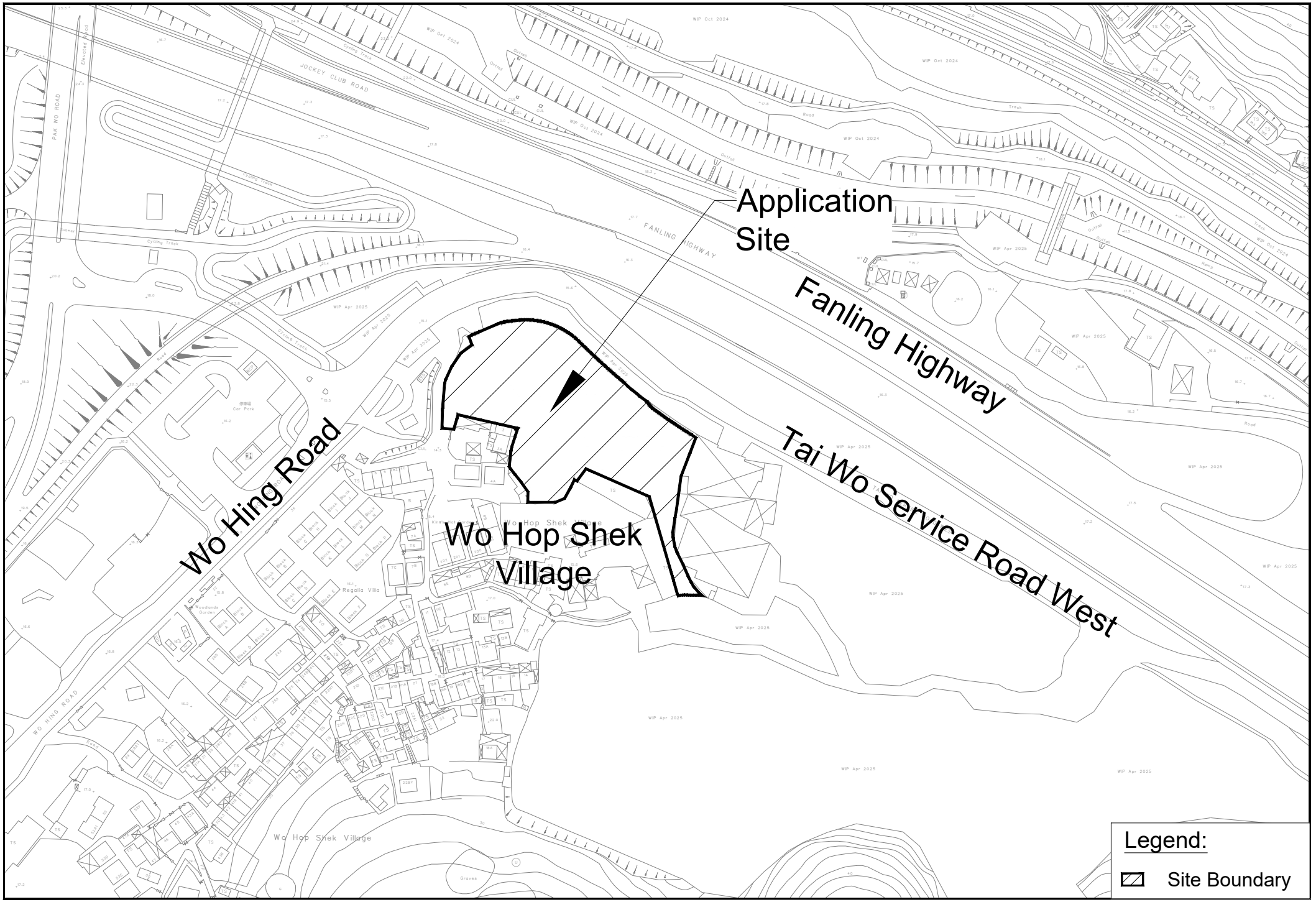
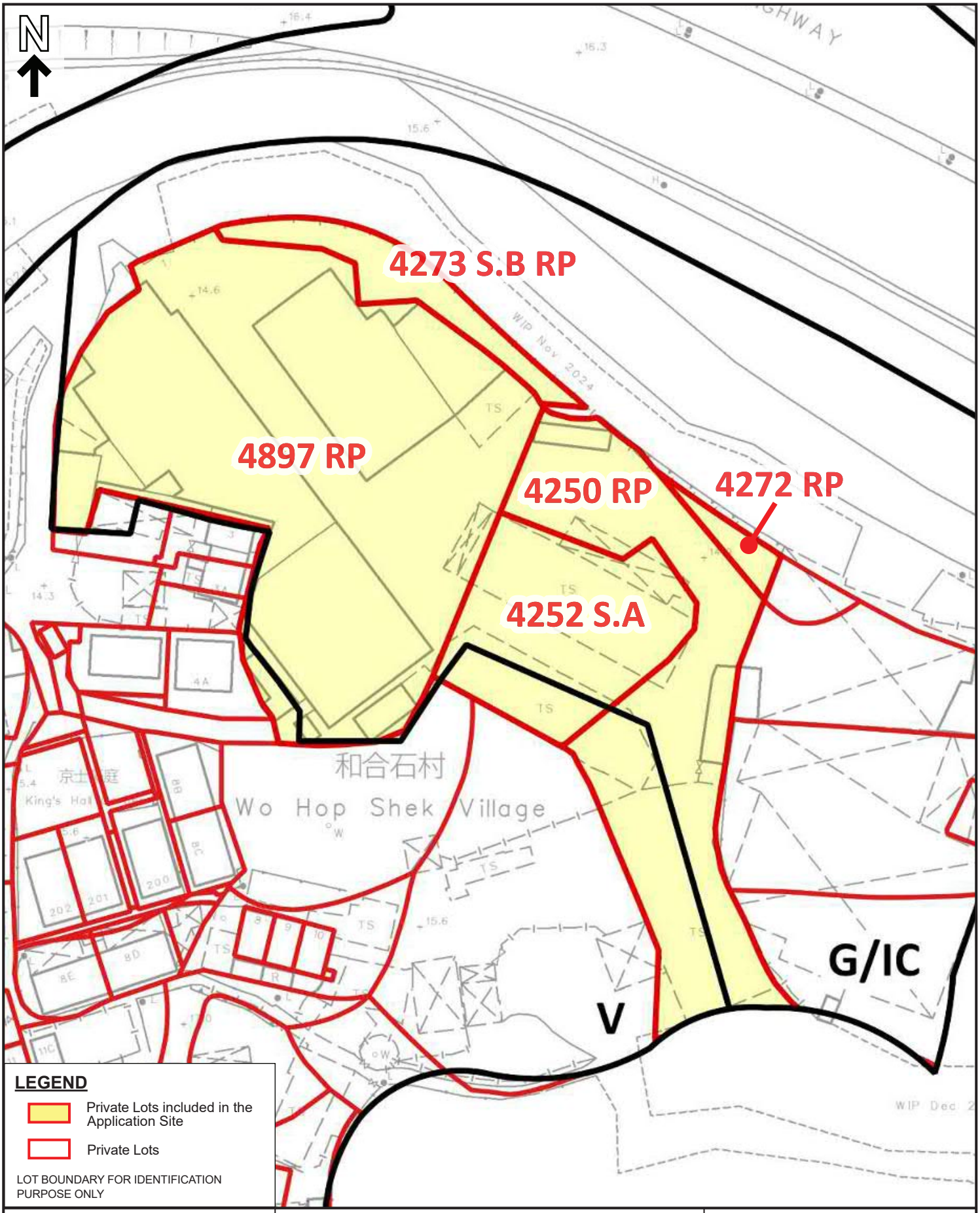

Application Site
Fanling Highway
Tai Wo Service Road West
Wo Hing Road
Wo Hop Shek Village
Legend:
Site Boundary



LOT INDEX PLAN

Proposed Rezoning at Various Lots in D.D. 51, Fanling

SCALE 1 : 750

PLAN C

Extract plan based on the Survey Sheet Nos. 3-SW-13C & 18A

DATE: 26.2.2025

Grace KF Wong

From: yin_hei_chow@hkfsd.gov.hk on behalf of ado_lea_cs@hkfsd.gov.hk
Sent: Monday, July 7, 2025 8:45 AM
To: Grace KF Wong
Cc: OE8 CS/FSD
Subject: Re: Fw: Land Contamination Assessment Study for Planning Application for Proposed Development at Various Lots in DD 51, Fanling-Enquiry for Land Contamination Information

Follow Up Flag: Follow up
Flag Status: Flagged

You don't often get email from ado_lea_cs@hkfsd.gov.hk. Learn why this is important

Our reference: (15) in FSD GR 6-5/4 R Pt. 59
Your reference: SDMFLD51EI00_0_0005L.25

Dear Ms. WONG,

Land Contamination Assessment Study for Planning Application for Proposed Development at Various Lots in DD 51, Fanling
Request for Information of Dangerous Goods & Incident Records

I refer to your email of 19.6.2025 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, fire incidents nor incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

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

Best regards,

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

Tel.: 2733 7896

Remark:
Lift incidents are excluded unless otherwise required.

Disclaimer:
*Fire Services Department uses its best endeavor to ensure the accuracy and reliability of the information provided, but cannot guarantee its accuracy and reliability and accepts no liability of any nature for any loss or damage arising from any inaccuracies or omissions that may from the information provided.

Ref.: SDMFLD51EI00_0_0006L.25

19 June 2025

Lands Department
Lands Administration Office
District Lands Office, North
6th Floor, North District Government Offices,
3 Pik Fung Road, New Territories

By Fax (2675 9224) & Post

Dear Sir / Madam,

Land Contamination Assessment Study for Planning Application for Proposed Development at Various Lots in DD 51, Fanling
Enquiry for Land Contamination Information

We are conducting a Land Contamination Assessment Study for a site at Fanling. As required by the "Practice Guide for Investigation and Remediation of Contaminated Land" published by the Environmental Protection Department of the Government of HKSAR (EPD), information pertaining to the change of land uses/past activities/incidents/accidents at the Application Site are required as part of the vetting process.

Of particular interests are information on spillage accidents, illegal/contaminating land uses or uncontrolled dumping uses, current and historical land use information, previous short term tenancy and any information relating to land contamination issues of the Application Site. Location plan and lot plan for the project are enclosed for your reference.

Due to the tight timeline of the project, we would be much appreciated if you could provide the requested information by **02 July 2025**.

Should you have any query, please do not hesitate to contact the undersigned at [redacted] or our Ms. Grace Wong at [redacted]). We sincerely seek your feedback on this matter. Thank you in advance for any assistance you can provide.

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited

Billy Fan
Principal Consultant

Enclosure: Location Plan and Lot Plan of the Application Site

\\aphkfps3\Drive Q\Projects\SDMFLD51EI00\02 Project Management\02 Corr\SDMFLD51EI00_0_0006L.25.docx

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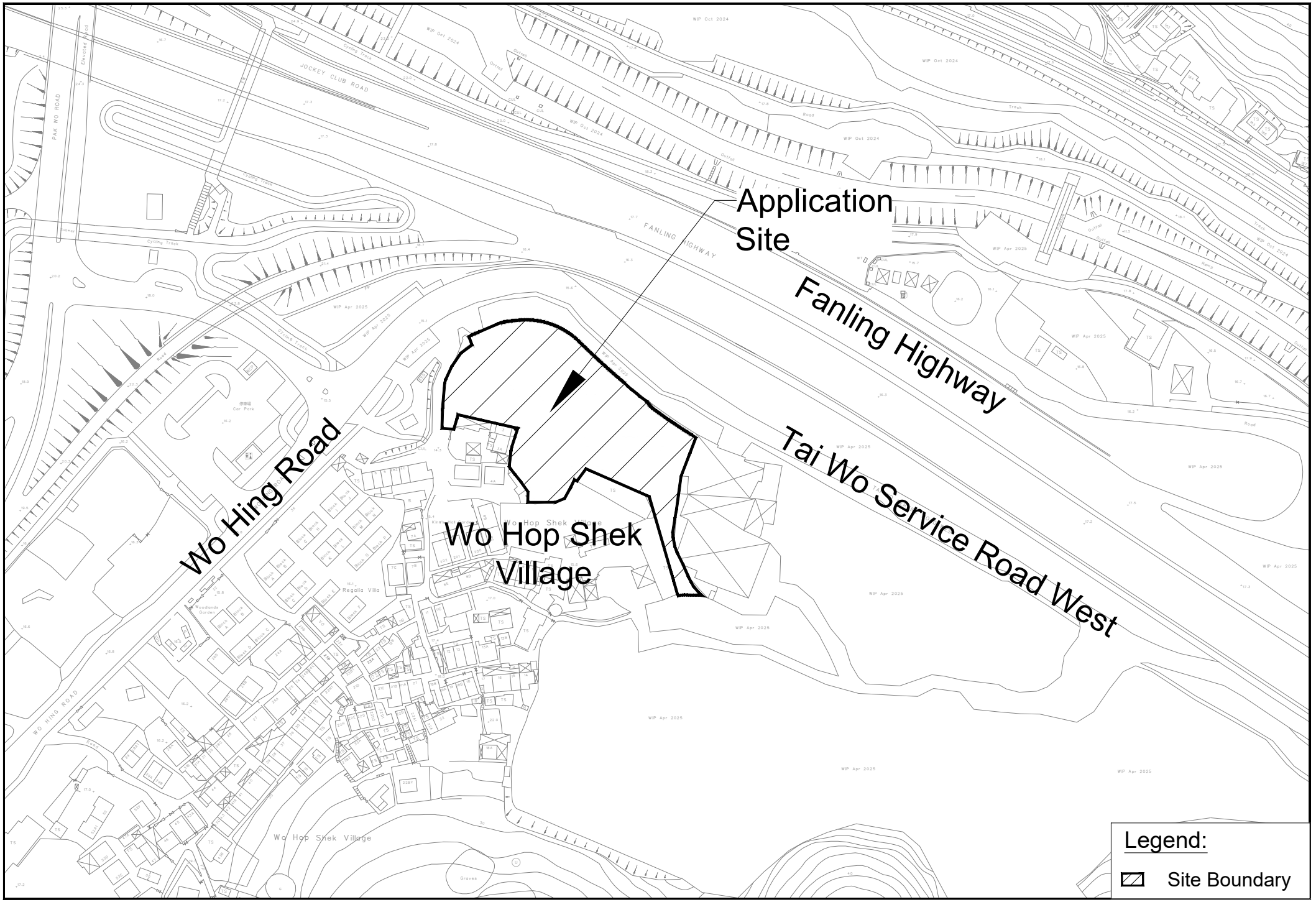
Application Site
Fanling Highway
Tai Wo Service Road West
Wo Hing Road
Wo Hop Shek Village
Legend:
Site Boundary

RECEIVED
15 AUG 2025
BY:.....

覆函請註明本署檔號
Please quote Our Reference in response to this

地政總署
北區地政處
DISTRICT LANDS OFFICE,
NORTH
LANDS DEPARTMENT

電話	Tel:	2675 1535
圖文傳真	Fax:	2675 9224
電郵地址	Email:	gendlon@landsd.gov.hk
本署檔號	Our Ref:	(3) in LANDSD DLOs-009-004-N-PO-149-25-106-P001
來函檔號	Your Ref:	SDMFLD51E100_0_0006L.25

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We strive to achieve excellence in land administration.

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6/F., NORTH DISTRICT GOVERNMENT OFFICES
3 PIK FUNG ROAD, FANLING, NEW TERRITORIES

網址 Website: www.landsd.gov.hk

12 AUG 2025

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

Dear Sir/Madam,

Land Contamination Assessment Study
for Planning Application for Proposed Development
at Various Lots in D.D. No. 51, Fanling

I refer to your letter dated 19.6.2025.

Please be advised that this office has no relevant record as required in para.2 of your letter. You may obtain relevant information from other department(s) with prescribed fee, such as Land Registry.

Should you have any questions, please contact the undersigned.

Yours faithfully,

(H.L. MO)
for District Lands Officer, North

Ramboll Hong Kong L...

Project: SDMFLD51E100_0_0009L.25
Maconomy no: 328001545

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Document Scan	☐	☐
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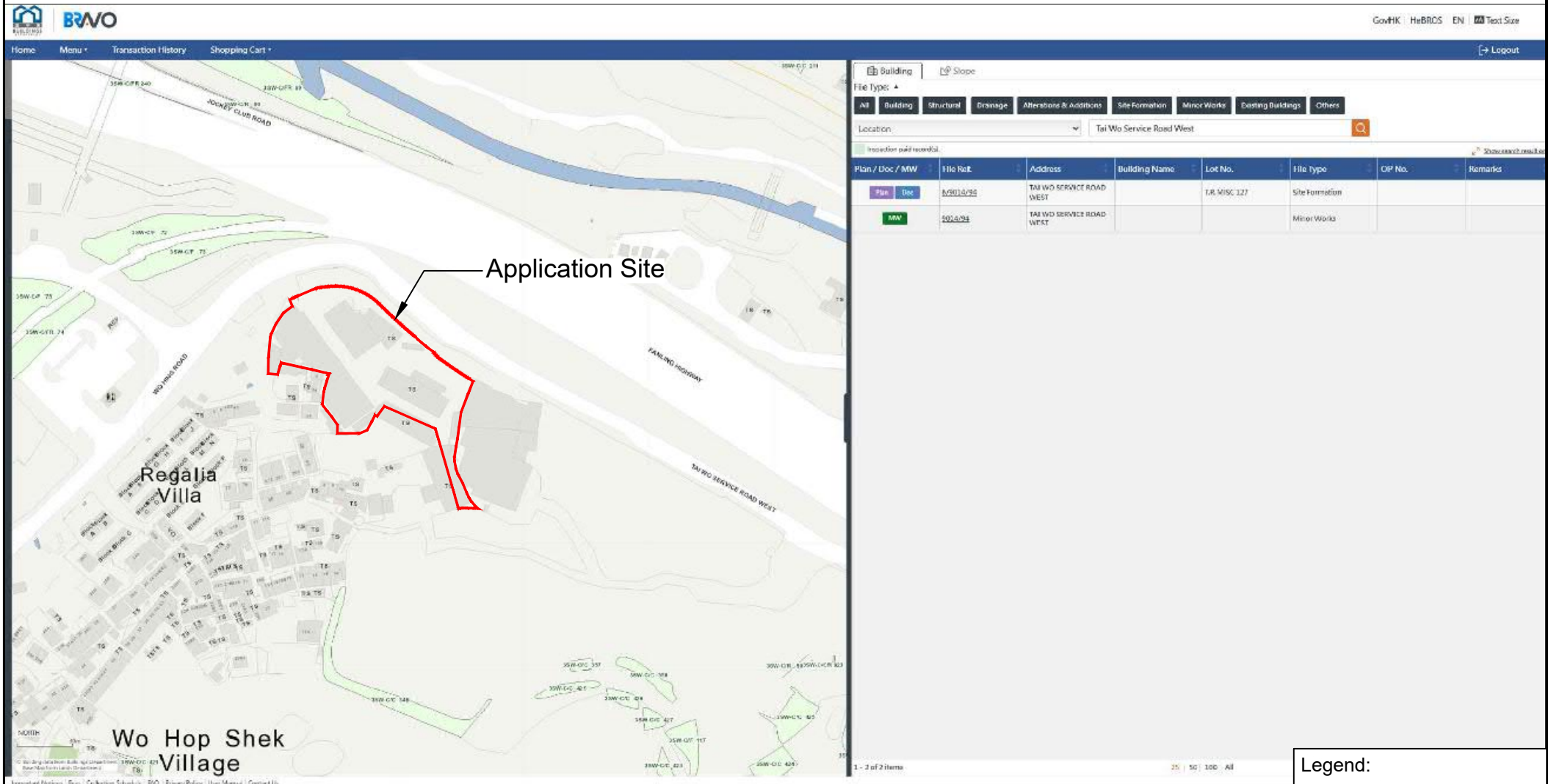
Appendix 6.3 Screen Capture of BRAVO Record



Legend:

Site Boundary

Appendix: 6.3

Title: Screen Capture of BRAVO Record

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by: GW

Checked by: BF

Rev.: 1.0

Date: Jul 2025

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Appendix 6.4 Site Walkover Checklist

Site Walkover Checklist

GENERAL SITE DETAILS

SITE OWNER/CLIENT: Sime Darby Motor Services Limited (SDMS)

PROPERTY ADDRESS: Various Lots in DD51, Wo Hing Road, Fanling

PERSON CONDUCTING THE QUESTIONNAIRE

NAME: Mike Kwan

POSITION: Environmental Consultant (Ramboll Hong Kong Limited)

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME: Carol Lo

POSITION:

TELEPHONE: 2437 1611

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:	-
	Part-time:	Guard (Contract)
	Temporary/Seasonal:	-
Maximum no. of people on site at any time:		1
Typical hours of operation:		24hours
Number of shifts:		-
Days per week:		7
Weeks per year:		52
Scheduled plant shut-down:		-

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: Approximately 5480m^2

What area of the site is covered by buildings (%): About 50%

Please list all current and previous owners/occupiers if possible.
Previous Occupiers: Various tenants
Current Occupiers: SDMS

Is a site plan available? If yes, please attach. Yes/~~No~~ (Please refer to the attached site plan)

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: Carriageway: Fanling Highway, Tai Wo Service Road West

South: Residential: Wo Hop Shek Village, Regalia Villa

East: Industrial: K. Kee Engineering Company Limited
Residential: Planned Public Housing Site at Fanling Area 48

West: Open Space: Wo Hing Road Car Park
Carriageway: Wo Hing Road

Site Walkover Checklist

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

Generally flat terrain with vegetation located at south and northwest. Low rise residential and/ or village type developments located from south to southwest of the Application Site.

State the size and location of the nearest residential communities.

Wo Hop Shek Village (village development) and Regalia Villa (16 buildings, 3 storeys each)

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.		Yes/No	Notes
1.	What are the main activities/operations at the above address?	-	The site is currently vacant and used for storage of vehicle.
2.	How long have you been occupying the site?	-	10 years
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy?)	No	-
4.	Prior to your occupancy, who occupied the site?	-	Various tenants
5.	What were the main activities/operations during their occupancy?	-	The site previously occupied by various tenant used as repairing warehouse, goods storage, and logistics company.
6.	Have there been any major changes in operations carried out at the site in the last 10 years?	No	the site was mainly used for vehicle parking in the last 10 years.
7.	Have any polluting activities been carried out in the vicinity of the site in the past?	-	-
8.	To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	No	-
9.	Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	No	-
10	Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	-
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	No	-
	• Where do you store these chemicals?	-	-
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	-
13.	Has the facility produced a separate hazardous substance inventory?	No	-

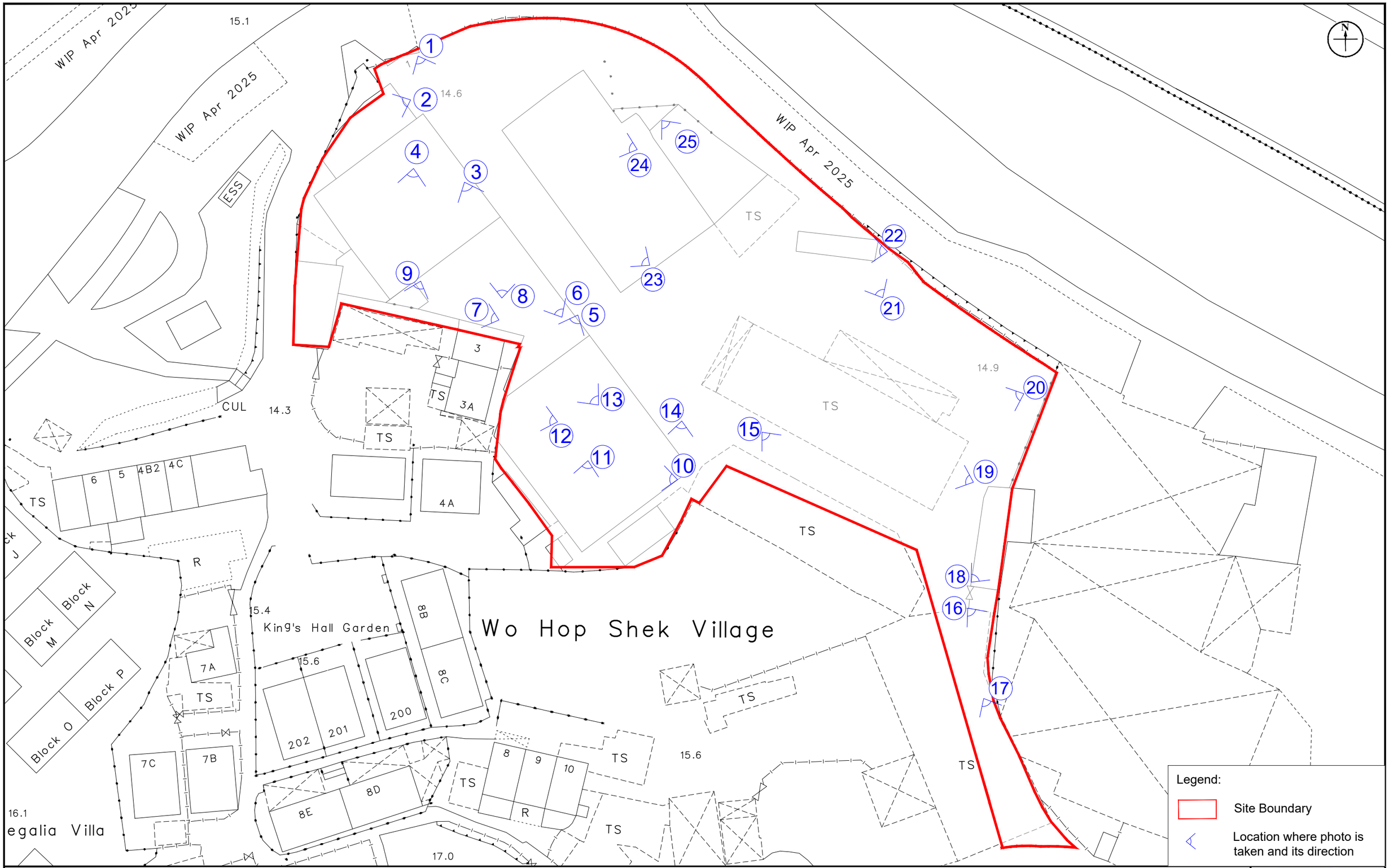
Ref.		Yes/No	Notes
14.	Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	No	-
15.	How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	-	Truck
16.	Do you have any underground storage tanks? (If yes, please provide details.)	No	-
	▪ How many underground storage tanks do you have on site?	-	-
	▪ What are the tanks constructed of?	-	-
	▪ What are the contents of these tanks?	-	-
	▪ Are the pipelines above or below ground?	-	-
	▪ If the pipelines are below ground, has any leak and integrity testing been performed?	-	-
	▪ Have there been any spills associated with these tanks?	-	-
17.	Are there any disused underground storage tanks?	No	No underground storage tank.
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	No	No chemical handling on site
19.	How are the wastes disposed of?	-	Only general refuge from site guard is disposed.
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?	-	-
	• What were the substances spilled?	-	-
	• What was the quantity of material spilled?	-	-
	• Did you notify the relevant departments of the spill?	-	-
	• What were the actions taken to clean up the spill?	-	-
	• What were the areas affected?	-	-
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.)	Yes	The guard room had been renovated. No rearrangement of utilities.
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	No	No underground storage tank.
24.	Are there any known contaminations on site? (If yes, please provide details.)	No	-

Ref.		Yes/No	Notes
25.	Has the site ever been remediated? (If yes, please provide details.)	-	-

Observations

1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	-	There is no chemical storage on site. Chemical storage areas are not provided.
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?	-	-
4.	Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	Yes	General refuse from site guard
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.)	Yes	Paint saint is observed on the paved road within the Site.
9.	Are there any potential off-site sources of contamination?	Yes	K. Kee Engineering Company Limited located immediate east of the Site. Repairing of large construction machinery and storage of metal sheets were observed.
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 6.5 Site Survey Photo Records



Appendix: 6.4	RAMBOLL
Title: Site Survey Record Plan	Drawn by: GW
	Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0
	Date: Jul 2025

\\aphkfps3\Drive Q\Projects\SDMFLD51EI00\05 Assessments\04 LD\20250714 EA v1.0\Site Visit Photo Record.dwg

Land Contamination Site Visit Photo Record

1. Site entrance with concrete paved in good condition.	2. Guard room near site entrance.
3. Individual room inside the warehouse. Construction waste is observed.	4. Material storage.
5. Vacant land inside the abandoned factory.	6. Vacant land inside the abandoned factory.

7. Vacant land inside the abandoned factory. Water observed on the ground.	8. Vacant land inside the abandoned factory. Water observed on the ground.
9. Individual room inside the abandoned factory (vacant).	10. Material storage.
11. Vacant land inside the warehouse.	12. Abandoned metal racks and wooden cabinets are observed in the warehouse.

13. Abandoned metal racks are observed in the warehouse.

14. Damaged pallets are observed.

15. Concrete paved access road within the Application Site. Paint stains are observed with no crack.

16. Vacant land inside the abandoned factory.

17. Vacant land inside the abandoned factory.

18. Vacant land inside the abandoned factory.

19. Temporary structure used for vehicle parking.	20. Temporary structure used for vehicle parking.
21. Abandoned restroom.	22. Abandoned restroom.
23. Temporary structure used for vehicle parking.	24. Temporary structure with abandoned metal racks.

25. Temporary structure with abandoned metal racks.	

Appendix 6

Air Ventilation Assessment (Expert Evaluation)

Prepared for

Sime Darby Motor Services Limited

Prepared by

Ramboll Hong Kong Limited

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING

AIR VENTILATION ASSESSMENT (EXPERT EVALUATION)

Date	**August 2025**
Prepared by	**Mike KWAN** **Environmental Consultant**
Signed	
Approved by	**Billy FAN** **Principal Consultant**
Signed	
Project Reference	**SDMFLD51EI00**
Document No.	**R9821_V1.0.docx**

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APPENDIX

Appendix 1 The Master Layout Plan of the Proposed Scheme

1. INTRODUCTION

1.1 Project Background

1.1.1 The Application Site at various lots in D.D. 51, Fanling currently falls within the "Government, institution of Community" ("G/IC") zone, according to the Approved Fanling / Sheung Shui Outline Zoning Plan ("Approved OZP") No. S/FSS/28. The Applicant proposed to rezone from "G/IC" to "Other Specified Uses (Innovation and Technology)" ("OU(I&T)") zone, given the unique nature of the EV and low-altitude aerial vehicles industries with R&D and business needs.

1.1.2 Ramboll Hong Kong Limited has been commissioned to prepare the Air Ventilation Assessment – Expert Evaluation (AVA-EE report) in support of the planning application. The AVA-EE report will assess the air ventilation issues of the Application Site and the surrounding area.

1.2 Objective

1.2.1 This AVA-EE report has been prepared to identify opportunity and good design features that can be practicably adopted in the Proposed Scheme from air ventilation standpoint and evaluate if there would be any impact on the overall air ventilation performance of the assessment area by comparing the Proposed Scheme with the Baseline Scheme.

1.3 Application Site and its Environs

1.3.1 The Application Site is of about 5,480m^2 in area and elevated at around +15mPD currently. It is located in Wo Hop Shek Tsuen and currently bounded to the northwest by Wo Hing Road and to the northeast by Tai Wo Service Road West and Fanling Highway.

1.3.2 The Application Site is currently paved and occupied by warehouses and open area. The area immediately to the southwest consists mainly low-rising village houses, open carpark and brownfield development at Wo Hop Shek Village (about +31mPD). To the further southwest side, low-rise development at Wo Hing Tsuen is located (about +37.5mPD). To the immediate northwest are open spaces and green belt areas which comprised of woodland, cycling track and Pak Wo Road. Fanling Government Secondary School (+45.6mPD) and Dawning Views (+114mPD) are distributed further northwest and west of the Application Site. On the northern and north-east side of the Application Site, there are mainly existing and planned roads including Tai Wo Service Road West, Fanling Highway, Fanling Bypass Eastern Section, and a proposed freshwater pumping station (+26mPD).

1.3.3 It is noted that Public Housing Development at Fanling Area 48, located immediately to the east and southeast of the Application Site, is planned to be completed tentatively in 2027/28. A technical feasibility study of the proposed Public Housing Development was submitted as one of the supporting documents for the OZP amendment (RNTPC Paper No. 1/16). The Section 16 Planning Application (Application No.: A/FSS/295) has been submitted and approved by Town Planning Broad (TPB) in 2024. The findings have been referenced where appropriate. The proposed building heights of Public Housing Development are ranging from +118mPD to +175mPD.

1.3.4 **Figure 1** shows the location of the Application Site and its environs.

1.4 Baseline Scheme

1.4.1 The Baseline Scheme refers to the existing site condition. The Application Site is mainly occupied by temporary structures and open area. The maximum building height of the temporary structures and factories are approximately +22mPD.

1.5 Proposed Scheme

1.5.1 The Proposed Scheme comprises one 12 storeys Residential Institution (Talent Accommodation) and one 6 storeys Staff Quarters elevated at 99.55mPD and 80.65mPD respectively. The two towers are atop of an 7-storey podium building, comprising 6 storeys for R&D and innovations & technology related uses (research laboratory, pre-delivery inspection, training space/testing centre, battery charging/swapping station, EV showrooms, workbay, main office, storage/warehouse, utility and workshop) and 1 storeys of ancillary and supporting business and training facilities (i.e. conference, seminars, training course, and administration & accounting office). A podium garden (not less than 3m height) is proposed and lies between the podium and the two residential towers.

1.5.2 There will be a semi-open car ramp at the southwestern façade of the proposed podium, providing car access to each floor level (from basement to 5/F). Tentatively, the ramp is assumed to be the same as the elevation of 5/F, which is 44.75mPD, and permeable design will be adopted to enhance building block's permeability.

1.5.3 Design measures have been adopted to enhance air ventilation performance of the Proposed Scheme. At least 15m building separation is proposed between the Residential Institution and the Staff Quarters atop of 8-storey podium (+55.75mPD). This will serve as an air path that promotes high-level wind penetration across the Application Site and then gradually descends to the pedestrian level over distance. The podium garden (not less than 3m height), which contains few building structures, also provides a gap between the 7-storey podium and residential blocks to enhance building's permeability. That helps reduce the impediment of impermeable building blocks and provide more open spaces at high level for wind penetration and improve wind availability at downwind areas. Additionally, there is a building setback from northwest site boundary and provision of a large open area in the north and east to south-east side of the Application Site to facilitate wind flow at pedestrian level. Permeable ramp design in the south will also enhance wind penetration across the Application Site. The indicative layout plan of the Proposed Scheme is shown in **Appendix 1**.

2. SITE WIND AVAILABILITY DATA

2.1 Site Wind Availability Data From RAMS

2.1.1 According to the Planning Department's website, a meso-scale Regional Atmospheric Modelling System (RAMS) was used to produce a simulated 10-year wind climate at the horizontal resolution of 0.5 km x 0.5 km covering the whole territory of Hong Kong. The simulated wind data represents the annual, winter and summer wind condition at various levels, e.g. 300 m, and 500 m above terrain.

2.1.2 The RAMS data of the grid (X: 075, Y:079) has been extracted from the Site Wind Availability Data of Planning Department's website as the Application Site falls into the grid.

2.1.3 Among the wind roses with respect to different heights (200, 300 or 500m) available, the 200 m site wind availability data represents wind data that takes into account the topographical effect around the Application Site. Therefore, a lower level of wind roses at 200 m height is selected to study the prevailing wind condition as it represents the incoming wind to the Application Site and considers the influence on the prevailing winds by the surrounding topography.

2.1.4 According to the wind roses at 200 m altitude, annual prevailing wind directions for the Application Site are E, ESE and SE whereas summer prevailing wind directions are ESE, SE, SSE, S, and SSW. **Figure 2** shows the relevant wind roses diagrams representing the frequency and wind speed distribution at 200m height in annual and summer conditions. The wind frequency data is provided in **Table 2.1** below.

Table 2.1 Summary of RAMS Data and Wind Direction at 200m

	(X: 075, Y: 079)	
Wind Direction	**Probability for Annual Condition (%)**	**Probability for Summer Condition (%)**
N	5.5%	1.3%
NNE	6.1%	1.1%
NE	6.1%	1.1%
ENE	5.4%	1.9%
E	**12.7%**	6.8%
ESE	**18.3%**	**10.5%**
SE	**14.0%**	**13.4%**
SSE	8.4%	**16.3%**
S	4.3%	**10.2%**
SSW	4.2%	**10.7%**
SW	2.8%	7.5%
WSW	1.9%	4.8%
W	2.7%	5.9%
WNW	1.9%	3.8%
NW	2.5%	3.0%
NNW	3.2%	1.6%

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

2.2 Simulated Site Wind Availability Data from AVA-EE report (Agreement No. CE 47/2020) for Proposed Housing Development at Area 48, Fanling

2.2.1 According to the wind availability data from the Agreement No. CE 47/2020 (CE) – Term Consultancy for Site Formation and Infrastructure Works for Proposed Housing Development in Zone 2 (2021-2024), Final AVA-EE report for Public Housing Development at Fanling Area 48, completed in November 2023 (referred as FPHD-EE), it is summarized that the annual prevailing wind direction for the study area is primarily from the E, ESE, and SE directions, while the summer prevailing wind directions are ESE, SE, SSE, S, and SSW.

2.2.2 Various sets of site wind availability data, including those from the Hong Kong Observatory's measurements in Ta Kwu Ling, the approved AVA-EE report for On Lok Tsuen (2016), Fanling Area 48 (2015), and the Hong Kong Planning Department, have been evaluated. Considering validity and topographical factors, outdated datasets and wind data recorded far from the study area have been excluded. FPHD-EE adopted the wind data from RAMS model at Grid (X: 075, Y:079) for wind environment evaluation, which is consistent with the finding of prevailing wind directions analysed in **Section 2.1**.

2.3 Topography

2.3.1 The Application Site is situated at the northern fringe of Wo Hop Shek Tsuen, a relatively flat area for residential development. According to the FPHD-EE, the slopes rise gradually from Wo Hop Shek Tsuen towards the northeast and south directions while the land at the west to north is generally flat reclamation land. To the further northeast side, Lung Shan, elevated up to 350mPD, is located approximately 1.3km from the Application Site. Although the Application Site is in proximity to the foothill of Lung Shan, there will be no signification impact on both annual summer prevailing wind ventilates through the site. To the further south and southwest are Kei Lak Tsai (about 1.8 km apart) and Pak Tai To Yan (about 3km apart) with hilly topography (up to about 250mPD at Lei Laak Tsai and 480mPD at Pak Tai To Yan). Pak Tai To Yan is expected to block a portion of the incoming prevailing S and SSW wind to the Application Site due to the shielding effect of the hills. However, the influence on the wind flow patterns from S and SSW directions are considered minimal due to long distance. Therefore, under the existing wind condition, it is expected that annual and summer prevailing winds can penetrate the Application Site and reach its downwind areas thus existing site wind availability and immediate surrounding is anticipated to be satisfactory.

2.4 Building Morphology

2.4.1 The Application Site is mainly surrounded by low-rise developments concentrated on the southwest side, e.g. Wo Hop Shek Village (~+18.3 to 31mPD) and Wo Hing Tsuen (~+25.9 to 29.1mPD). Under the existing wind condition, the building density of the surrounding is considered low. Although there are few gaps between the existing blocks in the surroundings, wind flow over the building blocks and subsequently reaching the pedestrian level is possible. High-rise residential/Commercial developments are situated further northwest of the Application Site, e.g. Dawning Views (~+112.6 to 114mPD) and Wah Sum Estate (~+60.9 to 126.2mPD). As these high-rise buildings are located in downwind areas with respect to identified prevailing wind directions from the Application Site, the potential building blockage effect due to the surrounding existing development is considered low.

2.4.2 According to published information in Statutory Planning Portal under the Town Planning Board regarding planned / committed developments in the surrounding area,

to the immediate southeast and south of the Application Site is proposed Public Housing Development. The proposed Public Housing Development includes one large irregular housing block (B1) at +118mPD atop a podium of 43.4mPD, and six "Y-shaped" housing blocks (B2-B7), i.e. B2 (+121mPD) atop a podium of 43.4mPD; B3 (+175mPD) atop a podium of 38.1mPD and B4 to B7 (range from +145mPD to 175mPD) atop the same podium of 34.7mPD. Additionally, a primary school of around 40mPD in height is proposed adjacent to the eastern side of the Public Housing Development. The building separations between B1/B2 and B3/B4 provide open space along NNE/SSW axis of the Public Housing Development site. The building disposition of B1, B2, B3, B4 and B7 creates building separation clearance along ESE/WSW axis of the Public Housing Development site that allow ESE and SE (prevailing under both annual and summer condition) wind penetration at pedestrian level. Other effective building separations on top of the low-rise podium of B4 to B7, along with the aforementioned building separations, would enhance wind penetration towards the Application Site. The building setbacks near the Application Site within Public Housing Development will also divert more portion of prevailing winds (e.g. E, SSE and SSW) towards the Application Site. Since the planned Public Housing Development is generally situated on upwind side of the Application Site with respect to identified prevailing wind directions, potential building blockage effect due to the Public Housing Development is considered medium to high. Therefore, the ventilation performance for the Public Housing Development evaluated from the FPHD-EE report will be taken into consideration when assessing the air ventilation performance of the Application Site. The air paths passing through the Public Housing Development have been identified as primary incoming wind corridors for the Application Site under different prevailing wind directions.

2.4.3 All noise barriers, elevated structures, planned and committed development, if any, are considered in this report. Fanling Highway is the major road within the surrounding area that facilitate air flow along NW/SE axis. Other major roads, including Tai Wo Service Road West and Wo Hing Road, located immediate northeast and southwest side of the Application Site. The planned Fanling Bypass Eastern Section is elevated at the immediate northeast side of the site. In addition, discrete sections of noise barriers are installed along Fanling Highway in the north and northwest directions of the site. There are also several elevated footbridges across Fanling Highway and the East Rail Line railway. It is anticipated that the wind availability at pedestrian level will be slightly lowered due to the blockage of noise barriers and elevated structures.

2.4.4 The building height information of these identified developments was extracted from Geo-Reference Database (BG1000) provided by Survey and Mapping Office/ Lands Department.

2.5 Summary of Existing Site Wind Availability

2.5.1 According to the wind availability data from RAMS, the summarised annual wind directions of the Application Site include E, ESE, and SE directions. While in summer wind condition, the prevailing winds mainly come from ESE, SE, SSE, S, and SSW directions.

2.5.2 The surrounding topography and existing low-rise residential development in proximity to the Application Site will not have significant impact on the wind availability to the Application Site at pedestrian level. It is anticipated that the surrounding traffic network and open areas would be the main air corridor under both annual and summer condition, including Fanling Highway, Tai Wo Service Road West and Wo Hing Road. The existing noise barriers, elevated structures and planned development should not impose any significant obstruction to wind flow.

2.5.3 The low-rise village type development is concentrated at the upwind areas under summer prevailing SSE, S and SSW wind directions so that summer prevailing wind is expected to flow above these building blocks before reaching the Application Site. Due to the low-rise nature, it should impose only some minor and insignificant obstruction to wind flow.

2.5.4 The Planned Public Housing Development, situated immediately to the east and southeast of the Application Site, is on upwind side of the Application Site under most identified prevailing wind directions (e.g. ESE, SE, SSE, and SSW). It is expected that the high-rise planned development would block the incoming wind and reduce wind availability to the Application Site. The air paths passing through the Public Housing Development would be identified as primary incoming wind corridors for the Application Site under prevailing ESE, SE, SSE, and SSW wind directions.

2.5.5 **Figure 3** to **Figure 5** show the annual and summer prevailing wind directions under the Baseline Scheme.

3. EXPERT EVALUATION OF AIR VENTILATION PERFORMANCE OF THE PROPOSED DEVELOPMENT

3.1 Important Pedestrian Areas

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

- Roads surrounding the Application Site (Tai Wo Service Road West, Wo Hing Road, and roads further away)
- Open space; and
- Nearby residential and village-type developments.

3.2 Evaluation of Merit/Demerit of Design Features of the Proposed Development

3.2.1 Under the Proposed Scheme, various good design features are beneficial to air ventilation such as separation of building from site boundary, optimal building disposition and alignment, and building separation advantageous to prevailing wind penetration are incorporated.

- Open space is provided at northern side of the Application Site to facilitate wind flow along Tai Wo Service Road West. The northern open space allows annual and summer prevailing E and ESE winds to penetrate through.
- Open space is provided at eastern side of the Application Site to facilitate wind penetration across. The eastern open space allows annual and summer prevailing E, SE, SSE, and SSW winds to penetrate through.
- Building setback from the northwest site boundary of the Application Site with open spaces created will facilitate summer prevailing S and SSW winds penetration to benefit its surrounding areas.
- At least 15m building separation is proposed between the Residential Institution and the Staff Quarters atop of 8-storey Innovation & Technology building (+55.75mPD). This separation primarily facilitates high-level wind penetration and gradually descend to the pedestrian level over distance. Consequently, a wake area is anticipated immediately north of the Application Site under the summer prevailing S and SSW wind conditions.
- A podium garden (not less than 3m height) with permeable design is proposed between the 7-storey podium and the two residential towers (Residential Institution and Staff Quarters). The provision of open spaces at high level (+55.75mPD) will complement the building separation to further enhance high-level wind penetration under the summer prevailing S and SSW wind conditions. While improved high-level wind flows will gradually descend to the pedestrian level over distance, the effectiveness of podium garden on wind availability at immediate pedestrian areas are limited.

3.2.2 Further discussion of the scheme based on the good design features above is included below.

Air corridors/ Air paths

3.2.3 **Figure 3** to **Figure 5** illustrate the prevailing winds from annual and summer wind directions for the Baseline Scheme. **Figure 6** to **Figure 8** illustrate the prevailing winds from annual and summer wind directions for the Proposed Scheme.

3.2.4 Nearest wind corridors from the Application Site are along Tai Wo Service Road West and Wo Hing Road which may allow ESE and SSW wind penetration respectively. With respect to these wind corridors, the Proposed Scheme is designed so that the building allow setback from boundary immediate to them. For instance, there is at least 5m building setback from the northwestern site boundary, which enable ventilation from Wo Hing Road under the summer prevailing S and SSW wind conditions. Moreover, there is northern open space which enable wind penetration from Tai Wo Service Road West under the annual and summer prevailing E and ESE wind conditions. Therefore, the impact due to the Proposed Scheme on air flow along wind corridors have been avoided/minimised.

3.2.5 The Planned Public Housing Development is located immediately to the east and southeast of the Application Site. The development comprises eight high-rise towers (+175mPD), with building separations and open spaces integrated into its design. It is positioned on the upwind side of the Application Site under both annual and summer prevailing wind conditions (e.g. ESE, SE, SSE, and SSW). It is considered the Public Housing Development may reduce wind availability for the Application Site due to the proximity and height of its towers. According to the FPHD-EE, the air paths passing through the Public Housing Development have been identified as primary incoming wind corridors for the Application Site under different prevailing wind directions. **Figure 3** to **Figure 5** illustrate these air paths across the Public Housing Development site for both annual and summer prevailing wind directions.

Building Disposition and Development Permeability

3.2.6 The Proposed Development are positioned in the centre of the Application Site, leaving large open spaces on north and southeast sides. The northern open space would allow wind flow from annual and summer prevailing ESE wind and the southeastern open space would allow wind from annual and summer prevailing E, SE, SSE, and SSW winds to flow across the Application Site to provide wind availability for the surroundings. Furthermore, at least 15m building separation is proposed between the Residential Institution and the Staff Quarters atop of 8-storey podium (+55.75mPD). It will primarily facilitate high-level wind penetration for summer prevailing S and SSW wind conditions. The high-level wind would gradually descend to the pedestrian level. Thus, wake area is expected on immediately north of the Application Site. Moreover, a 5-storey semi-open car ramp (+44.75mPD) is proposed at the southwestern façade of the podium under the Proposed Scheme. The permeable design of the car ramp would enable some portion of wind flow from annual and summer prevailing winds to penetration across to the downwind side.

3.2.7 Comparing to the existing condition of the Application Site, the building footprint of Proposed Development in the Proposed Scheme would impose some wind blockage impacts. However, various mitigated measures/ wind enhancement features are incorporated in the design of the Proposed Scheme, which would allow wind penetration across the Application Site and minimise the impact.

Building Height

3.2.8 The Proposed Scheme with taller building height (+99.55mPD), may increase wind blockage impact and it could be more challenging for wind to flow over the high-rise building and descend to the pedestrian level when compared to the existing condition. However, the planned Public Housing Development immediately to the east and southeast of the Application Site has even greater maximum building height (+175mPD) than the Proposed Scheme. Since this development lies on the upwind side, it will dictate the incoming wind corridors towards the Proposed Scheme under most prevailing wind conditions (e.g. ESE, SE, SSE, and SSW). Moreover, the northern

and southeastern open spaces are proposed to facilitate airflow paths from the nearby development towards the downwind area. As the result, the potential ventilation impact to the downwind area caused by the taller building height in the Proposed Scheme is expected to be mitigated.

3.3 Directional Analysis of the development

3.3.1 As discussed in **Sections 2.1** to **2.2**, winds from E, ESE and SE directions are annual prevailing winds whereas winds from ESE, SE, SSE, S and SSW are dominant in the summer. The following appraises the situation with respect to the Proposed Scheme.

E Wind

3.3.2 Under the annual prevailing E wind direction, a portion of wind flow would pass above Fanling Highway and Tai Wo Service Road West before reaching the Application Site. Since the E wind is not obstructed by upwind building structure, higher wind availability at the Application Site is anticipated under annual prevailing E wind condition. Some portion of the E wind would penetrate through the setback area between B1 and site boundary of the planned Public Housing Development to reach the Application Site. Under the Proposed Scheme, the E wind would further flow towards the downwind area by flowing atop of the proposed southeastern open space. In addition, some portion of the E wind would be directed towards the semi-open car ramp (+44.75mPD) on the southern façade of the proposed podium. The permeable design of the car ramp is expected to facilitate wind penetration through the Application Site. As the result, no adverse air ventilation impact on the downwind area is anticipated under the annual prevailing E wind.

ESE and SE Wind

3.3.3 The annual and summer prevailing ESE and SE winds would primarily flow through the building separations and open spaces of the planned Public Housing Development located on the upwind side before reaching the Application Site. The building separations B1/B4 and B2/B3 would channel ESE and SE winds though the Public Housing Development site. Then, the SE wind would flow over the southeastern open space until encountering the Proposed Development, which may cause a slight reduction in wind availability immediately to the north of the Application Site. However, as the northern area primarily consists of carriageway road rather than pedestrian walkways, the Proposed Scheme is not expected to create significant air ventilation impact in downwind area under SE wind condition.

3.3.4 The design features of the Proposed Scheme ensure continuous wind penetration through the Application Site. ESE wind would flow through the building separations B1/B4 and B2/B3 of the Public Housing Development site and reach the southeastern open space of the Proposed Scheme, maintaining air ventilation to west of the surrounding area. In addition, ESE winds along Tai Wo Service Road West would penetrate through the proposed northern open space to reach downwind areas. As a result, the Proposed Scheme would not adversely affect air ventilation performance or create significant impacts to the western and southern surrounding areas, including Wo Hop Shek Village and pedestrian area along Wo Hing Road, under annual and summer prevailing ESE and SE wind conditions.

SSE Wind

3.3.5 Under summer prevailing SSE wind condition, the primarily airflow would occur through the building separation B4/B7 of the planned Public Housing Development on the upwind side before entering the Application Site. This building separation would channel SSE wind towards the southeastern open space of the Proposed Scheme, which

would allow further penetrate through the Application Site for reaching the northern surrounding areas.

3.3.6 On the other hand, secondary airflow would approach the direction of the downwind area near the Application Site through the southwestern building setback of the Public Housing Development site boundary after flowing above low-rise structures in Wo Hop Shek Village (about +31mPD).

3.3.7 In general, the southeastern open space in the Proposed Scheme would enable continuous SSE wind penetration to downwind areas. Furthermore, the Proposed Scheme would be able to maintain the existing airflow patterns from the upwind Public Housing Development without creating significant obstructions under summer prevailing SSE wind condition.

S and SSW wind

3.3.8 Under summer prevailing S and SSW wind conditions, the wind would mainly approach to the Application Site after passing over the low-rise structures of Wo Hop Shek Village (about +31mPD). These winds further penetrate through the northwestern setback (at least 5m) in the Proposed Scheme reaching downwind areas.

3.3.9 S and SSW winds would flow towards the Application Site through the building separations and building setback areas of upwind Public Housing Development. The SSW wind would flow along the western building setback of the Public Housing Development site before crossing the proposed southeastern open space in the Proposed Scheme. Meanwhile, prevailing S wind would primarily penetrate through the building separation B4/B7 of the Public Housing Development, channelling directly toward northern surrounding areas while bypassing the Application Site.

3.3.10 Furthermore, the building separation (at least 15m) between the Residential Institution and the Staff Quarters, aligned along NE/SW axis, serves as a channel for high-level wind penetration. This opening predominantly facilitates SSW wind while allowing partial S wind penetration. Besides, the podium garden (not less than 3m height and elevated at 55.75mPD) allows more portion of S and SSW winds ventilate through the proposed development high up from the ground. Wind penetration at high level can be further enhanced due to increased building's permeability. These high-level winds gradually descend to pedestrian level over distance. On the other hand, at ground level, airflow from prevailing S and SSW winds would encounter the 8-storey podium building (+55.75mPD), they generate a wake zone immediately north of the Application Site due to lower-level blockage effects.

3.3.11 The Proposed Scheme maintains existing airflow patterns from the upwind Public Housing Development with design measures to mitigate potential ventilation impacts. The southeastern open space and at least 5m northwestern setback collectively ensure continuous wind penetration to downwind areas. High-level building separation (at least 15m) is also provided to mitigate the localized wake effect north of the Application Site under summer prevailing S and SSW wind conditions.

3.4 Summary of Relative Air Ventilation Performance

3.4.1 The air ventilation performance of the Baseline Scheme and the Proposed Scheme has been appraised. Under the Proposed Scheme, higher maximum building height (+99.5mPD) is proposed with air ventilation design measures of building setbacks between towers, open spaces, and high-level building separation between towers.

3.4.2 The building setback between the Proposed Development and northwestern site boundary facilitates summer prevailing S and SSW wind flow. The disposition of the Proposed Development would create open spaces at the northern and eastern site

boundary. These open spaces facilitate annual and summer prevailing E, ESE, SSE, and SSW wind penetration through the Application Site. In addition, at least 15m building separation between the Residential Institution and the Staff Quarters is aligned in NE/SW axis to facilitate high-level wind penetration. High-level wind flow from summer prevailing S and SSW wind would channel through the gap and gradually descend to the ground level further northern surrounding areas. The permeable podium garden atop the podium building will further promote the high-level wind flow and enhance ventilation to surrounding areas. Although its effectiveness in increasing wind availability at the immediate pedestrian level is limited, the wake area can be mitigated by other good designs such as building setback and the provision of open space at ground level.

3.4.3 Overall, various good design measures have been incorporated so that the Proposed Scheme is considered unlikely to impose significant and worsened impacts on the surrounding areas in air ventilation perspective when compared with the Baseline Scheme.

4. CONCLUSION

4.1.1 A qualitative assessment on the air ventilation performance of the Proposed Development has been carried out.

4.1.2 According to the findings of this AVA-EE, the annual prevailing wind comes from E, ESE, and SE directions while the summer prevailing wind comes from ESE, SE, SSE, S, and SSW directions. Good design features of the Proposed Development include building setbacks between towers, open spaces, and high-level building separation between towers are provided to maintain good air ventilation performance.

4.1.3 After considering the potential air ventilation impacts on the Application Site under all prevailing wind directions, it is considered that the Proposed Scheme with the design measures incorporated would unlikely impose significant and worsened air ventilation impacts on the surrounding as compared with the Baseline Scheme.

Figures

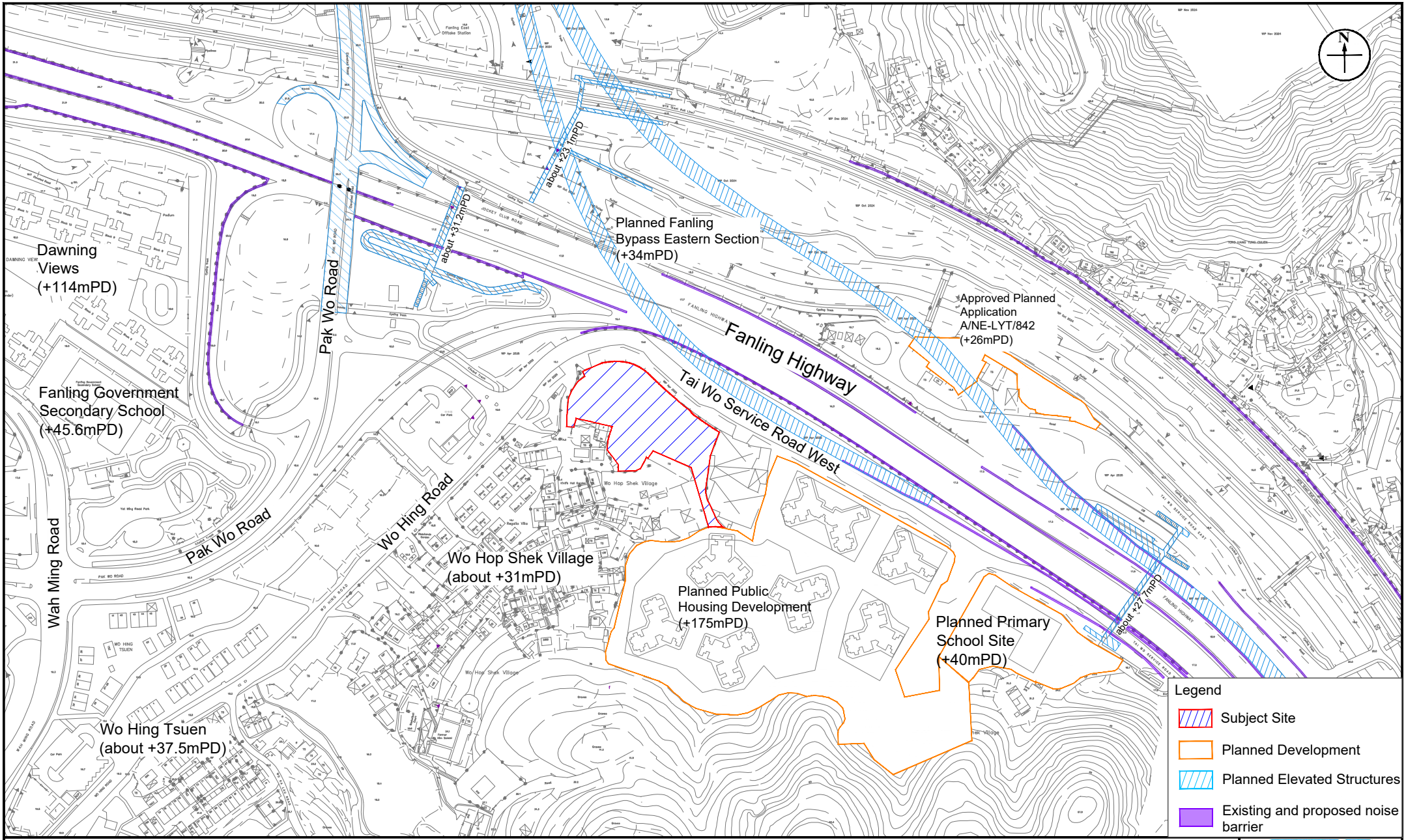

Figure: 1

Title: Location of the Application Site and Its Environs

Project: Proposed Rezoning of "Government Institution or Community" Zone at Various Lots in D.D. 51, Fanling

RAMBOLL

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Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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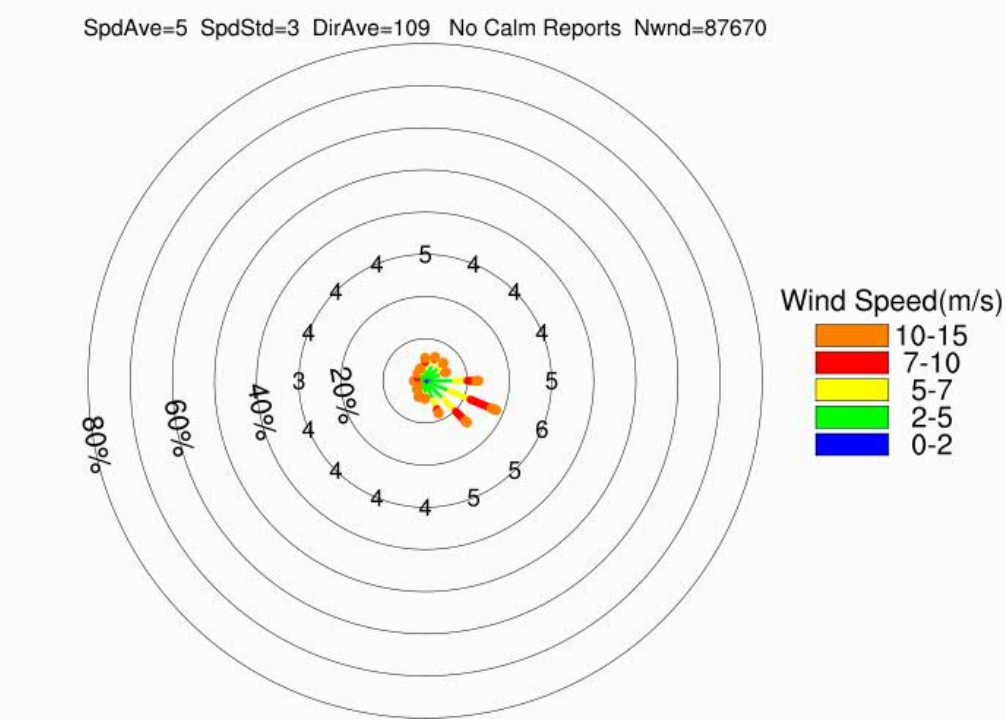
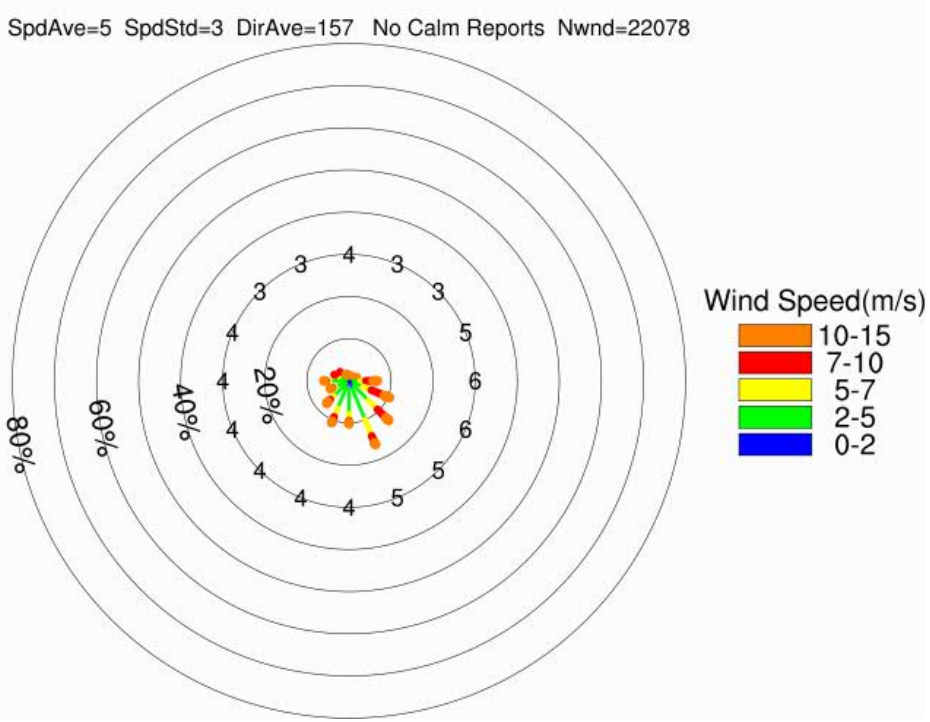


Annual



Summer

Figure: 2	RAMBOLL
Title: Windrose Diagram representing V∞ of the Area under Concern at 200m above ground (X:075, Y:079)	Drawn by: AW Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0 Date: Jul 2025

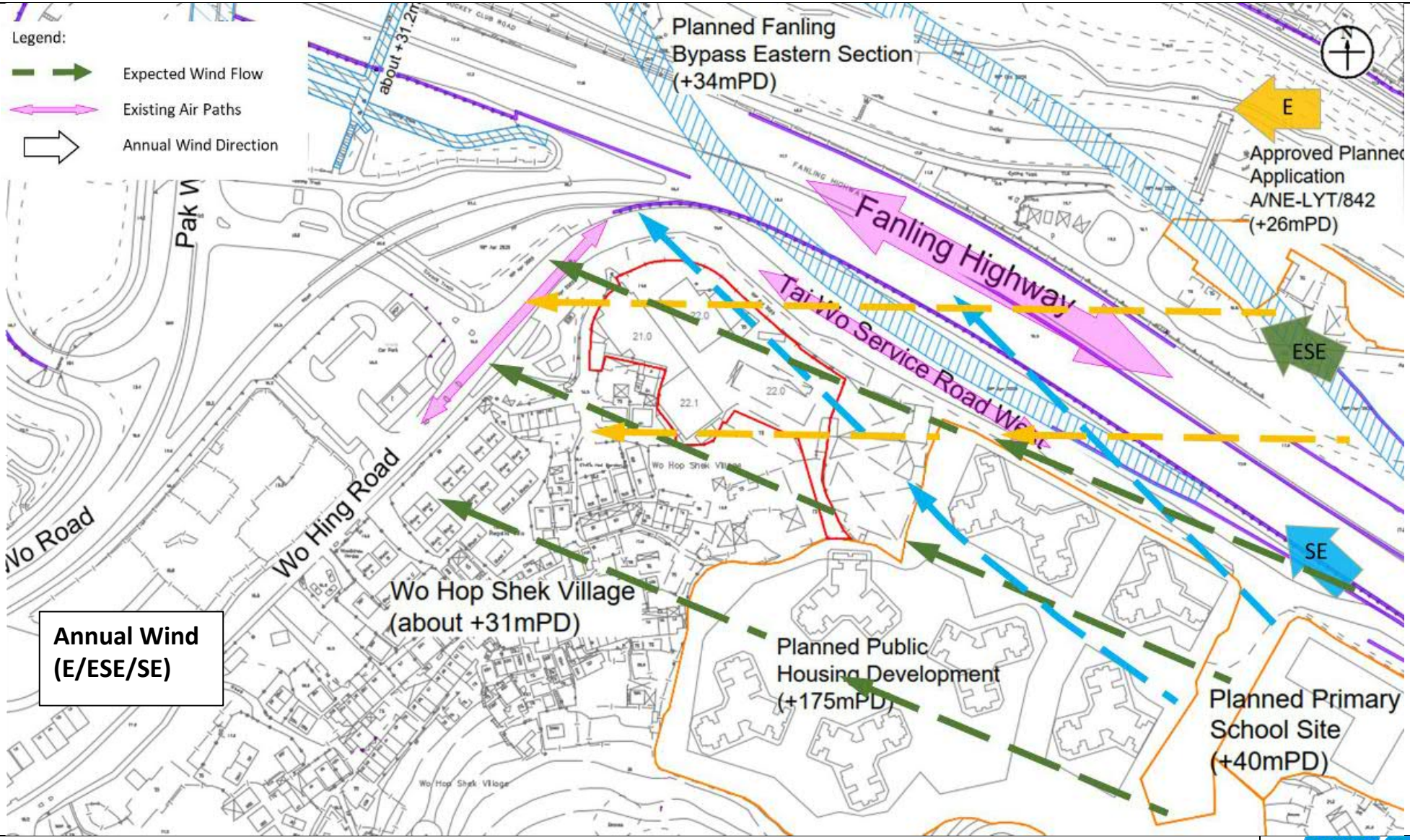


Figure: 3	RAMBOLL
Title: Illustration of Wind Flow from Annual Wind Directions for Baseline Scheme	Drawn by: AW Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0 Date: Jul 2025

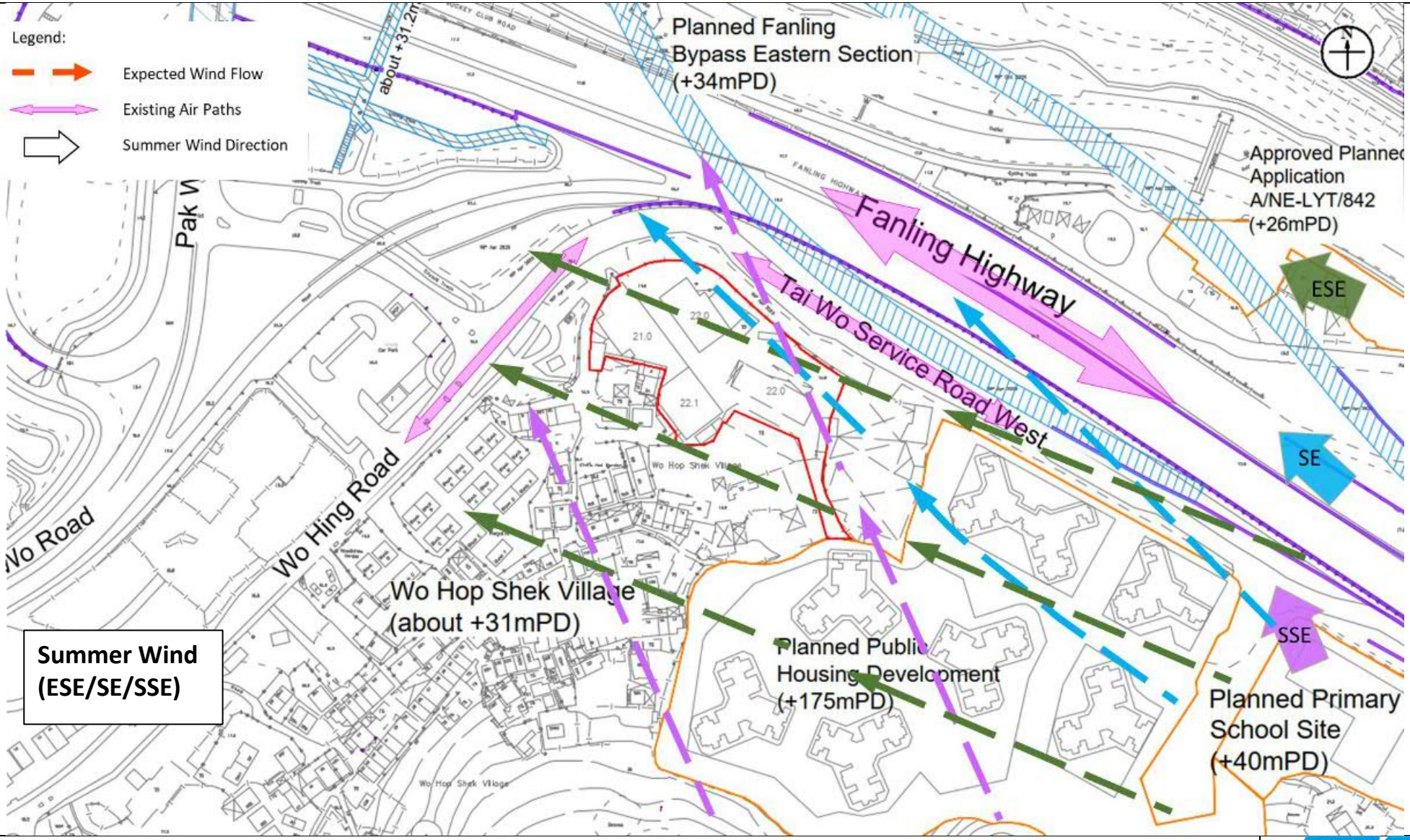


Figure: 4	RAMBOLL
Title: Illustration of Wind Flow from Summer ESE, SE and SSE Wind Directions for Baseline Scheme	Drawn by: AW Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0 Date: Jul 2025

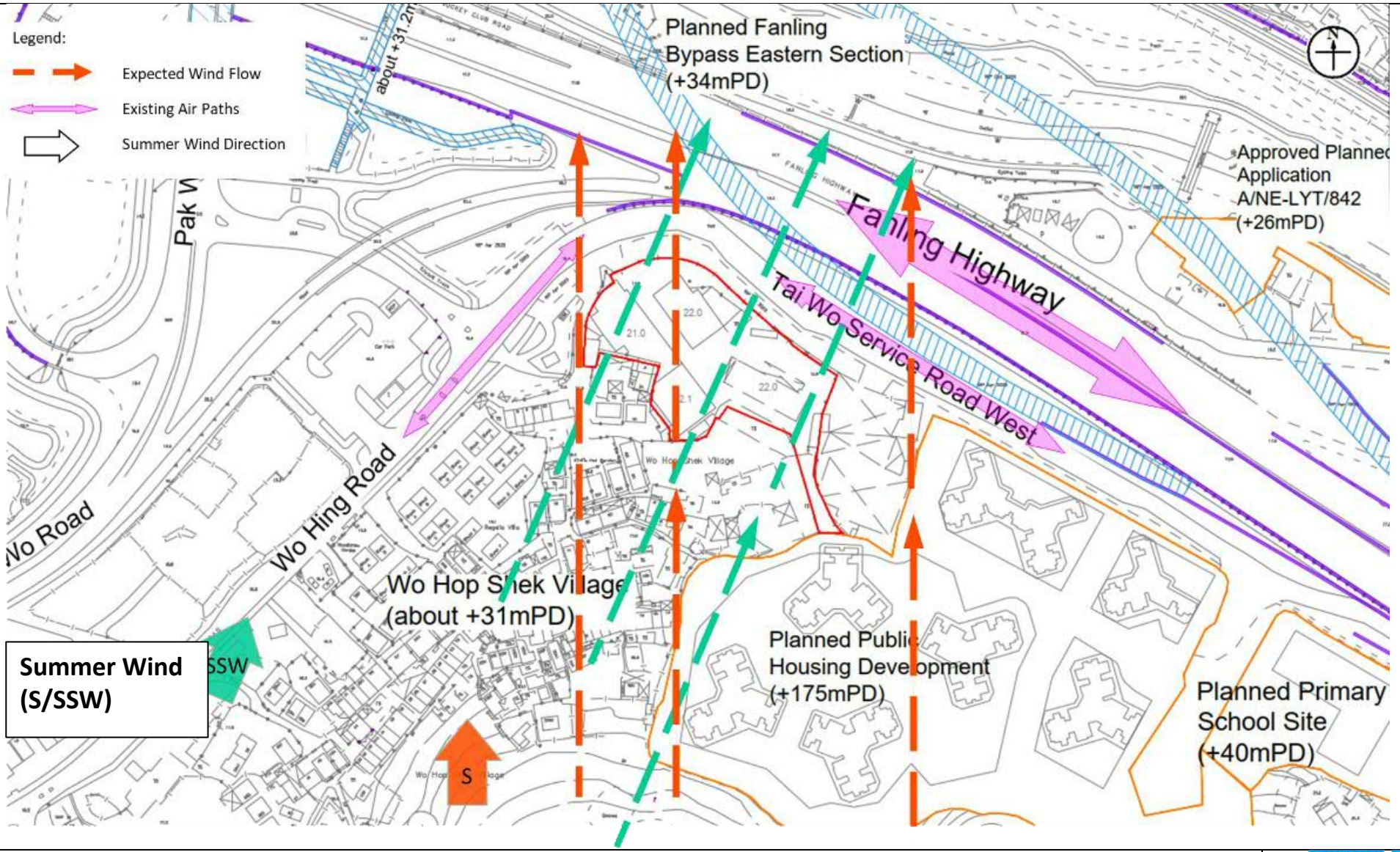


Figure:	5	RAMBOLL
Title:	Illustration of Wind Flow from Summer S and SSW Wind Directions for Baseline Scheme	Drawn by: AW Checked by: BF
Project:	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0 Date: Jul 2025

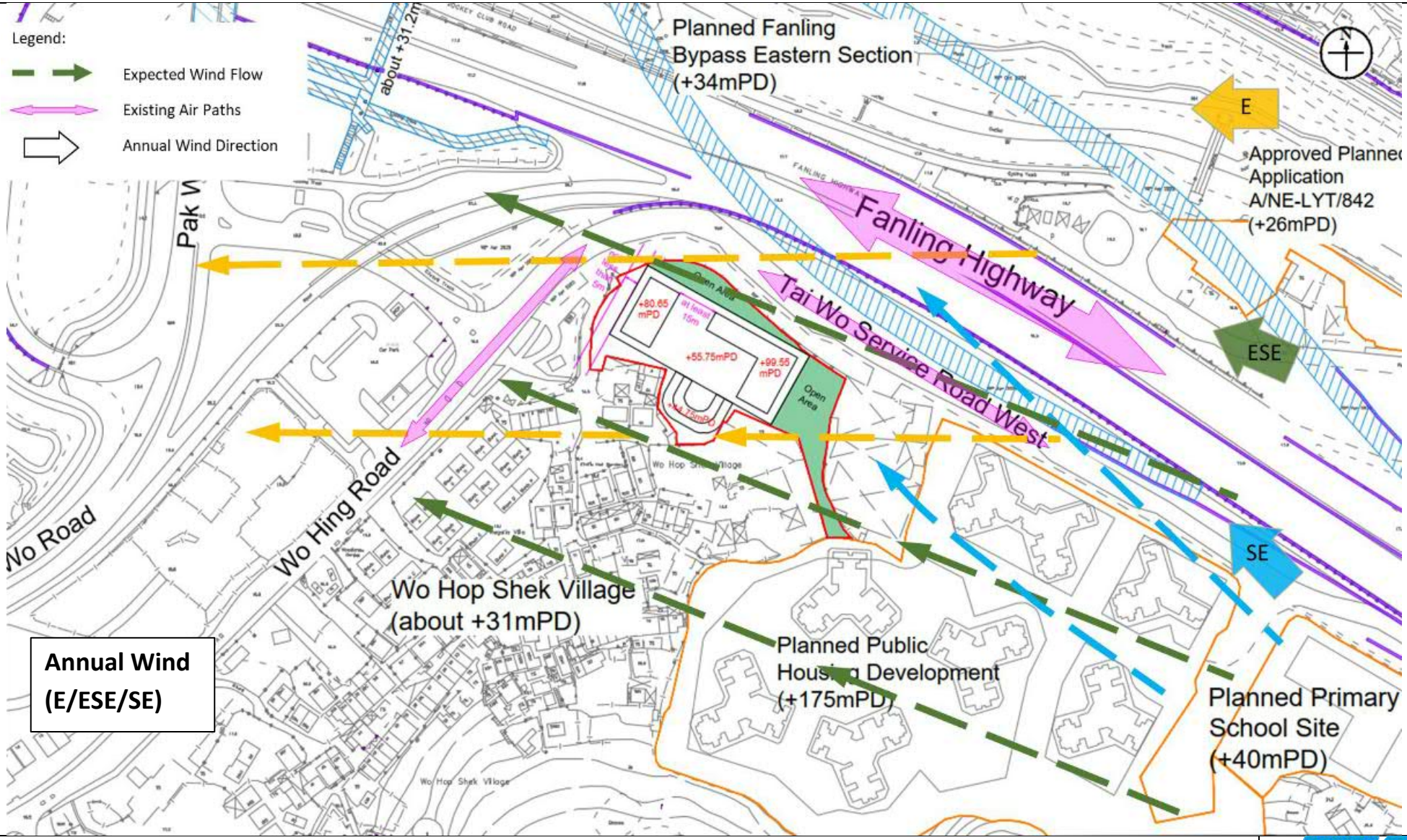


Figure: 6	RAMBOLL
Title: Illustration of Wind Flow from Annual Wind Directions for Proposed Scheme	Drawn by: AW Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0 Date: Jul 2025

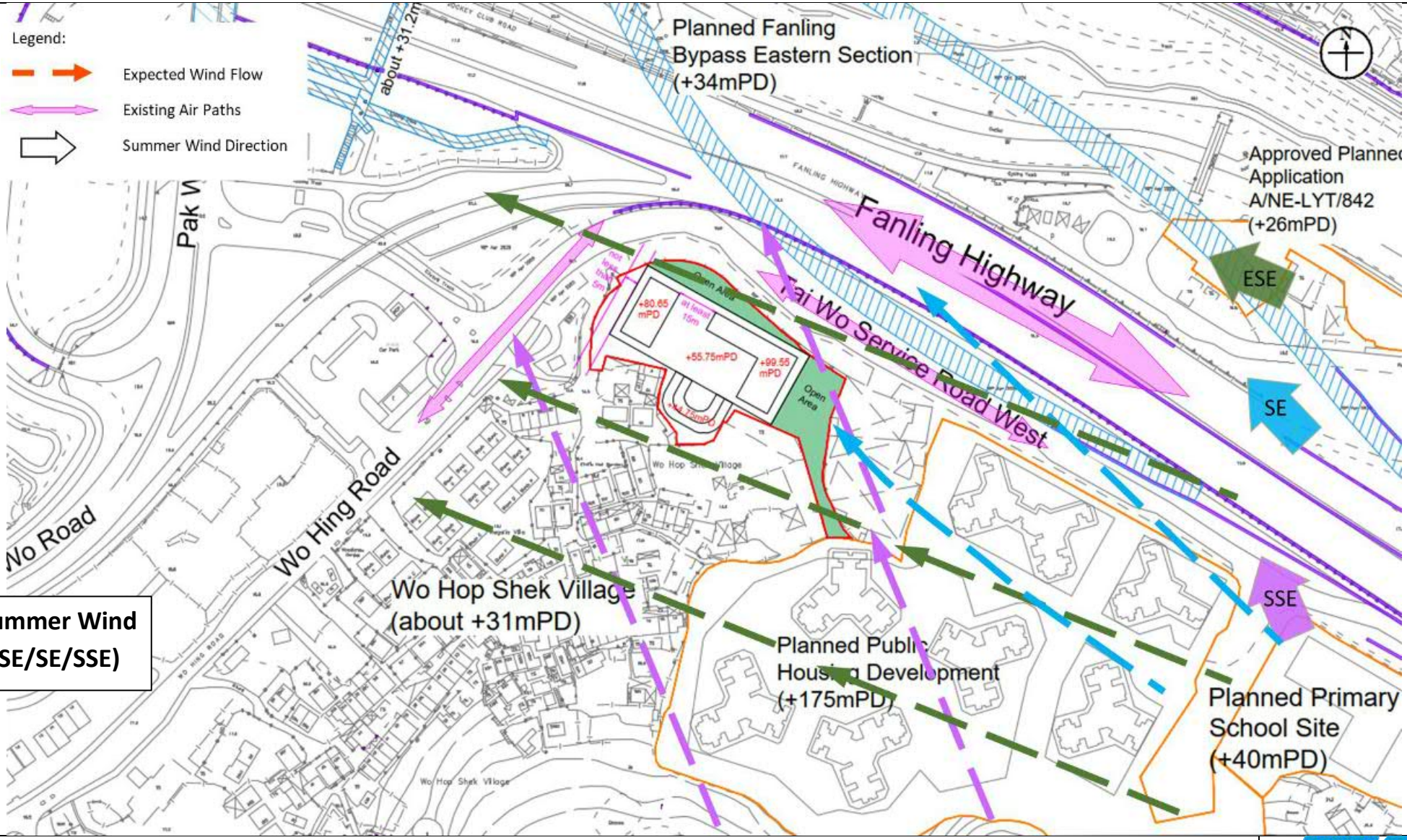


Figure: 7	RAMBOLL
Title: Illustration of Wind Flow from Summer ESE, SE and SSE Wind Directions for Proposed Scheme	Drawn by: AW Checked by: BF
Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0 Date: Jul 2025

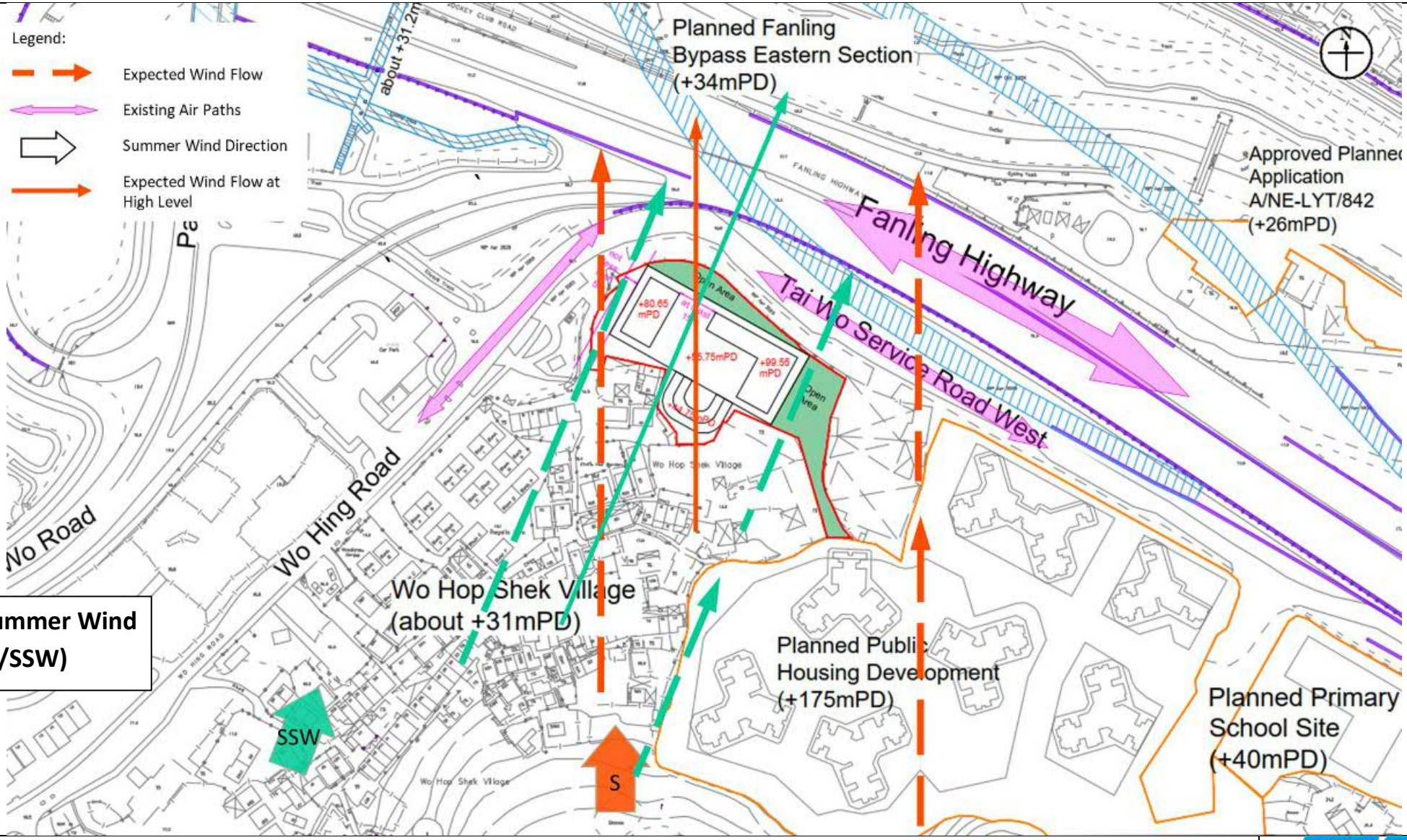


Figure:	8	RAMBOLL
Title:	Illustration of Wind Flow from Summer Wind S and SSW Directions for Proposed Scheme	Drawn by: AW Checked by: BF
Project:	Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling	Rev.: 1.0 Date: Jul 2025

Appendix 1

The Master Layout Plan of the Proposed Scheme

MAIN ENTRANCE

Not less than 5m

At least 15m

A

A’

B

B’

Residential Institution (Talent Accommodation)

Staff Quarters

Innovation & Technology

和合石村

Wo Hop Shek Village

京士豪庭

King's Hall Garden

大嶺西支路

WIP Nov 2024

Residential Institution (Talent Accommodation)

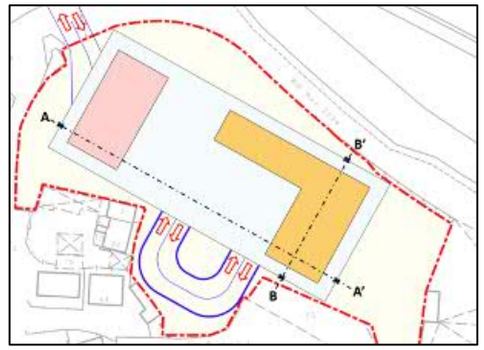
Staff Quarters

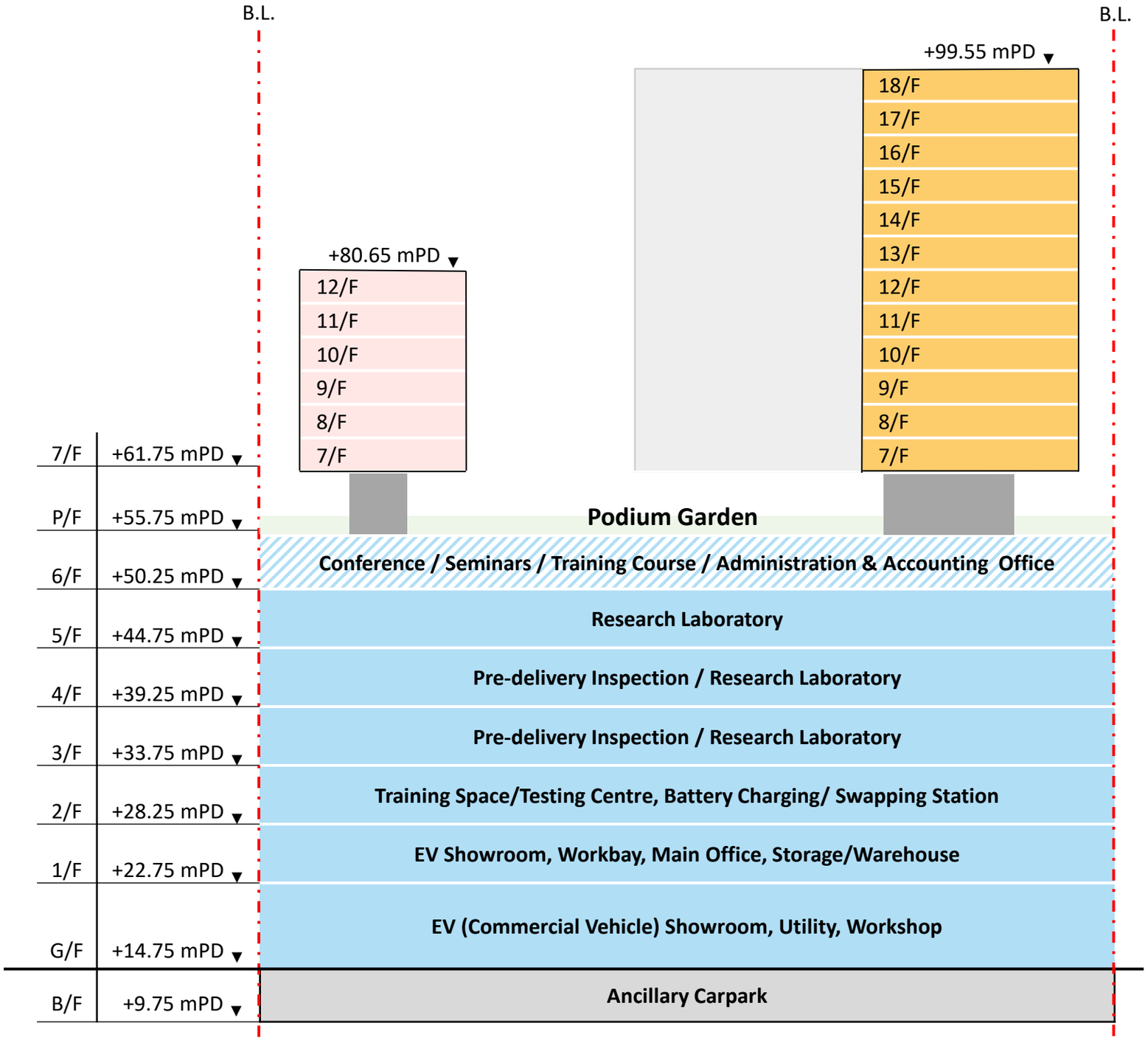
Podium Garden

EV Mobility City (Conference / Seminars / Training Course / Administration & Accounting Office)

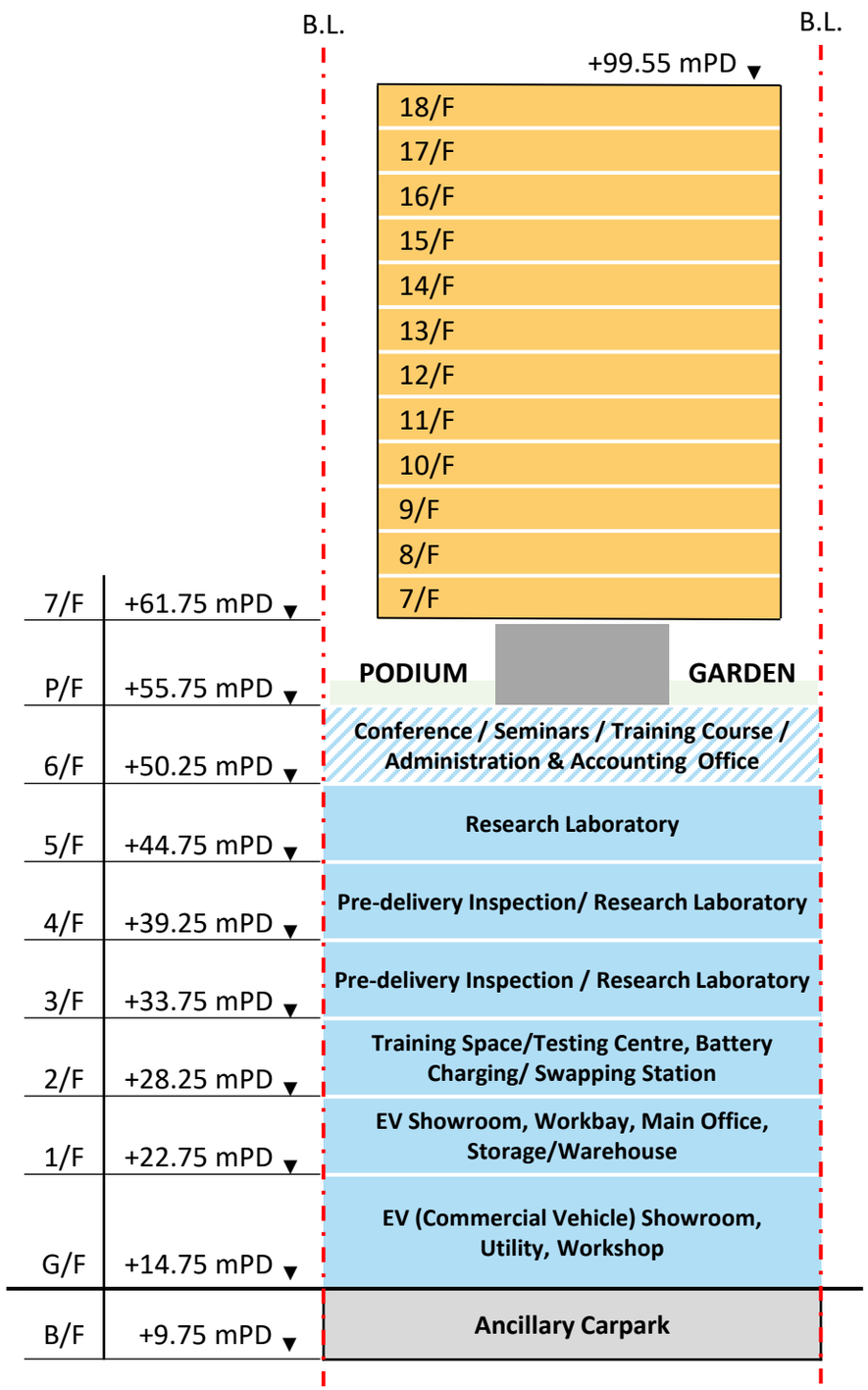
EV Mobility City (Innovation & Technology)

Ancillary Carpark





SECTION A-A'



SECTION B-B'

LIFT LOBBY / LIFT AREA
/ STAIRCASE

ANCILLARY CARPARK

B/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

EV (COMMERCIAL VEHICLE) SHOWROOM

WORKSHOP (WITH SUMP PIT)

UTILITY

G/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

STORAGE / WAREHOUSE

WORK BAY

EV SHOWROOM

MAIN OFFICE

1/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

TRAINING SPACE / TESTING CENTRE

BATTERY CHARGING/SWAPPING STATION

2/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

PRE-DELIVERY INSPECTION / RESEARCH LABORATORY

3/F & 4/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

RESEARCH
LABORATORY

5/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

CONFERENCE / SEMINARS / TRAINING COURSE /
ADMINISTRATION & ACCOUNTING OFFICE

6/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

PODIUM GARDEN

P/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

Staff Quarters
(Tower 1)

Residential Institution
(Talent Accommodation)
(Tower 2)

7-18/F PLAN

Appendix 7

Drainage and Sewerage Impact Assessment

Prepared for

Sime Darby Motor Services Limited

Prepared by

Ramboll Hong Kong Limited

PROPOSED EV MOBILITY CITY WITH ANCILLARY STAFF QUARTERS AND TALENT ACCOMMODATION AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND, FANLING

DRAINAGE AND SEWERAGE IMPACT ASSESSMENT

Date	**August 2025**
Prepared by	**Miko Wan** **Environmental Consultant**
Signed	
Approved by	**Billy FAN** **Principal Consultant**
Signed	
Project Reference	**SDMFLD51EI00**
Document No.	**R9824_v1.0.docx**

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Appendix 2.1 Detailed Drainage Impact Assessment Calculations
Appendix 3.1 Detailed Sewerage Impact Assessment Calculation
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Appendix 3.3 Proposed Sewerage Layout Plan from Site Formation and Infrastructure Works at Area 48, Fanling under CEDD Contract No. CV/2022/08
Appendix 3.4 Extracted from Engineering Feasibility Study Report for Proposed Public Housing Development at Area 48, Fanling (PHD48)

1. INTRODUCTION

1.1 Project Background

1.1.1 The Application Site currently falls within the " Government, Institution or Community" ("G/IC") zone, according to the Approved Fanling / Sheung Shui Outline Zoning Plan ("Approved OZP") No. S/FSS/28. The Applicant proposed to rezone from "G/IC" to "Other Specified Uses (Innovation and Technology)" ("OU(I&T)") zone, given the unique nature of the EV and low-altitude aerial vehicles industries with R&D and business needs.

1.1.2 Ramboll Hong Kong Limited is commissioned by the Applicant to conduct this Drainage and Sewerage Impact Assessment (DSIA) based on the Proposed Development.

1.2 Application Site and its Environs

1.2.1 The Application Site is approximately 5,480m^2. The Application Site comprising various lots in D.D.51 is located in the south of Fanling, which is bounded by Tai Wo Service Road West from northeast to northwest of the Application Site. To the immediate east is a Planned Public Housing Development at Fanling Area 48. Wo Hop Shek Village is located from south to southwest of the Application Site.

1.2.2 A feasibility study has been conducted for the above-mentioned Planned Public Housing Development (PHD48) for the OZP amendment (RNTPC Paper No. 1/16). And the Section 16 Planning Application (Application No.: A/FSS/295) for PHD48 has been submitted and approved by Town Planning Broad (TPB) in 2024. The findings from the relevant technical assessments have been referenced to where appropriate.

1.2.3 The location of the Application Site and its surrounding environs are shown in **Figure 1.1**.

1.3 Proposed Development

1.3.1 R&D and I&T facilities on EV, green energy and low-altitude aerial vehicle, related business uses, and ancillary/supporting business and training facilities are proposed at the Application Site.

1.3.2 There is an 7-storey podium building, comprising 6 storeys for R&D and innovations & technology related uses (including research laboratory, pre-delivery inspection, training space/testing centre, battery charging/swapping station, EV showrooms, workbay, main office, storage/warehouse, utility and workshop) and 1 storey of ancillary and supporting business and training facilities (i.e. conference, seminars, training course, and administration & accounting office). There will be one 12 storeys residential institution (talent accommodation) and one 6 storeys staff quarters.

1.3.3 There are altogether 138 units provided. It is estimated that there would be maximum of 414 residents. R&D and innovations & technology related uses are planned.

1.3.4 The tentative completion year is 2031.

1.3.5 The MLP of the Proposed Development is included in **Appendix 1.1.**

2. DRAINAGE IMPACT ASSESSMENT

2.1 Appraisal of Drainage Impact

2.1.1 The Application Site currently is paved with a partially green area and occupied by warehouses and open area. The Application Site is served by existing public drainage system. There is a Ø900mm drainage pipe (SWD1010692) at immediate northwest across Wo Hing Road to receive the runoff discharged from the Application Site and then connected to the existing 3 x 3.8m x 2.55m of box culvert (SBP1001912).

2.1.2 The estimated surface runoff under the existing and future conditions of the Application Site is shown in **Appendix 2.1**. 20% greenery coverage would be provided for the Proposed Development. It is expected that the peak 1 in 50-year runoff from the Application Site would be decreased from 0.31m^3/s to approximately 0.29m^3/s. In other words, there will be a reduction of surface runoff when compared with the existing condition due to increased greenery. The surface runoff generated from the Application Site will be collected and discharged to the aforementioned drainage pipe so that there is no change of flow regime.

2.1.3 According to the preliminary drainage impact assessment of the Approved Section 16 Planning Application for PHD48, a slope drains will be proposed to receive the surface runoff from uphill catchment. Therefore, it is anticipated that there is no surface runoff from uphill catchment will be flow into the Application Site.

2.1.4 As the total paved area and in turn the surface runoff is expected to decrease after development, it is anticipated that there is no adverse impact on the existing drainage pipe receiving runoff from the site.

2.1.5 It is expected that the Proposed Development (with reduced surface runoff and same flow regime) would not result in worsened drainage impact.

3. SEWERAGE IMPACT ASSESSMENT

3.1 Scope of Work

3.1.1 The aim of this Sewerage Impact Assessment (SIA) is to assess whether the capacity of the existing sewerage network serving the Application Site is sufficient to cope with the sewage flow from the proposed development. Geoinfo Map was obtained for the purposes of this SIA.

3.2 Assessment Criteria and Methodology

3.2.1 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 peaking factors in this document have been adopted for this SIA.

3.2.2 Based on the building types in the area, the following unit flow factors are used in the SIA calculation:

- Residents: 0.27 m^3/person/day (R2)
- Residents: 0.37 m^3/person/day (R4)
- Office employee: 0.08 m^3/day (J12 Public Administration)
- Workshop employee: 0.63 m^3/day (J1 North District)
- EV Showroom employee: 0.28 m^3/day (J4 Wholesale & Retail)
- Warehouse employee: 0.18 m^3/day (J3 Transport, Storage & Communication)

3.2.3 Catchment Inflow Factor (P_{CIF}) of North District (1.00) has been applied in the assessment.

3.3 Existing and Future Sewerage System

Existing Sewerage System

3.3.1 According to the Geoinfo Map, there is an existing Ø250mm sewer and then connected to the existing Ø600mm sewer along Wo Hing Road as shown in **Figure 3.1**.

Proposed Sewerage System

3.3.2 Under Advance Site Formation and Engineering Infrastructure Works at Kwu Tung North and Fanling North New Development Area, *Contract No. ND/2019/05* and Site Formation and Infrastructure Works for Public Housing Development at Area 48, Fanling, *Contract No. CV/2022/08*, there will be proposed sewerage works in the vicinity of the Application Site.

3.3.3 Based on the information of *Contract No. ND/2019/05*, a new Ø450mm sewer and Ø600mm sewer will be constructed along Tai Wo Service Road West, and the existing Ø600mm sewer will be demolished. Moreover, a new Ø450mm sewer will be constructed running forward northwest under *Contract No. CV/2022/08*. The proposed sewerage layout plans for *Contract No. ND/2019/05* and *Contract No. CV/2022/08* are shown in **Appendix 3.2** and **Appendix 3.3** respectively. The completer year for the proposed sewerage system is 2026.

3.3.4 According to the preliminary sewerage impact assessment of the Approved Section 16 Planning Application for PHD48, the proposed sewerage works for PHD48 will not be connected to the existing Ø600mm sewer along Tai Wo Service Road West and Wo Hing Road. The wastewater generated from PHD48 will be discharged into the new Ø450mm sewer proposed under *Contract No. ND/2019/05*. The proposed sewerage system plan is extracted in **Appendix 3.4**.

3.4 Wastewater Generated by the Proposed Development

3.4.1 Wastewater arising from the Proposed Development will primarily be contributed by residents and staffs.

3.4.2 Detailed calculation for the Proposed Development is given in **Table 3.1** below and **Appendix 3.1**.

Table 3.1 Estimated Peak Flow

Development Parameters	Proposed Development				
	Residential	Office	Workshop	EV Showroom	Warehouse/ Storage/Utility
Assumed Area (m^2)	-	3417	7535	4191	277
Number of Population	414	68	371	92	69
Design Flow (m^3/person/day)	0.27(1)	0.08(2)	0.63(3)	0.28(4)	0.18(5)
Flow Rate (m^3/day)	**111.8**	**5.4**	**233.9**	**25.8**	**12.5**
Total Flow Rate with P_{CIF} (m^3/day)	**389.3**				
Peak Flow (L/s)	**27.0**				

(1) Refer to Table T-1 of GESF – R2
(2) Refer to Table T-2 of GESF – J12 Public Administration
(3) Refer to Table T-3 of GESF – J1 Manufacturing + North District
(4) Refer to Table T-2 of GESF – J4 Wholesale & Retail
(5) Refer to Table T-2 of GESF – J3 Transport, Storage & Communication

3.5 Discussion

3.5.1 The potential sewerage impact due to the Proposed Development has been quantitatively addressed. Sewage generation rate from the Proposed Development is estimated to be 389.3 m^3/day (i.e. peak flow 27.0 litre/sec).

3.5.2 The wastewater from Proposed Development will be discharged to the existing manhole S1 (FMH1004311) via a proposed Ø200mm sewer.

3.5.3 According to Table 4a of **Appendix 3.1**, regarding the sewage generation rate from the Proposed Development and surrounding areas (**Figure 3.2**), the existing sewerage system has adequate capacity to cater the cumulative flow in future.

3.5.4 However, as the invert levels of the existing sewer S1-S2 (FMH1004311 to FSH1002349) are too high, modification work of the existing sewer S1-S2 would be proposed. The proposed modification work is summarized in **Table 3.2** below.

Table 3.2 Proposed Modification Work

Segment	Length (m)	Original			After Modification Work		
		Size(Ø) (mm)	Upstream Invert Level (mPD)	Downstream Invert Level (mPD)	Size (Ø) (mm)	Upstream Invert Level (mPD)	Downstream Invert Level (mPD)
S1-S2	11.4	250	14.549	13.535	200	13.600	13.375

3.5.5 With the proposed modification work, the sewerage system would have adequate capacity to cater the sewerage generated from the proposed development. Therefore, the sewerage generated from the Proposed Development would not have adverse impact on the existing sewerage system.

4. OVERALL CONCLUSION

4.1.1 The EV Mobility City with Ancillary Staff Quarters and Talent Accommodation is proposed at the Various Lots in D.D. 51, Fanling. The potential drainage and sewerage impact have been qualitatively or quantitatively addressed.

4.1.2 The Application Site is currently served by public drainage system. The Proposed Development would result in reduced surface runoff and follow the same flow regime as per existing condition. It would not result in worsened drainage impact.

4.1.3 Based on the sewerage impact assessment results, it is found that the existing sewerage system has adequate capacity to cater the cumulative flow in future.

4.1.4 However, as the invert levels of the existing sewer S1-S2 (FMH1004311 to FSH1002349) are too high, modification work of the existing sewer S1-S2 would be proposed.

4.1.5 With the proposed modification work in place, it is anticipated that the Proposed Development will not result any adverse impact on the existing sewerage system.

Figures

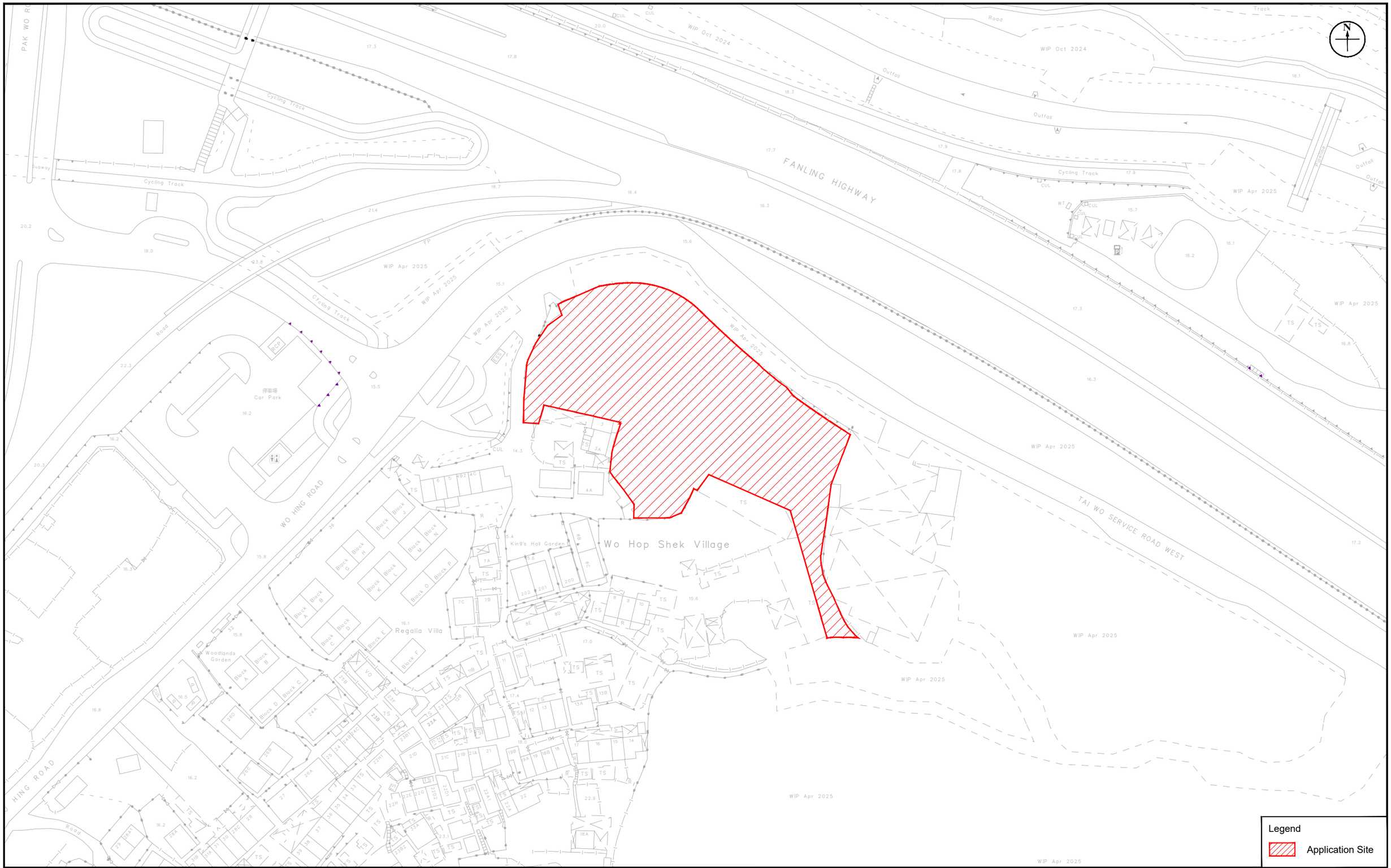

Figure: 1.1

Title: Location of the Application Site and its Environs

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	MW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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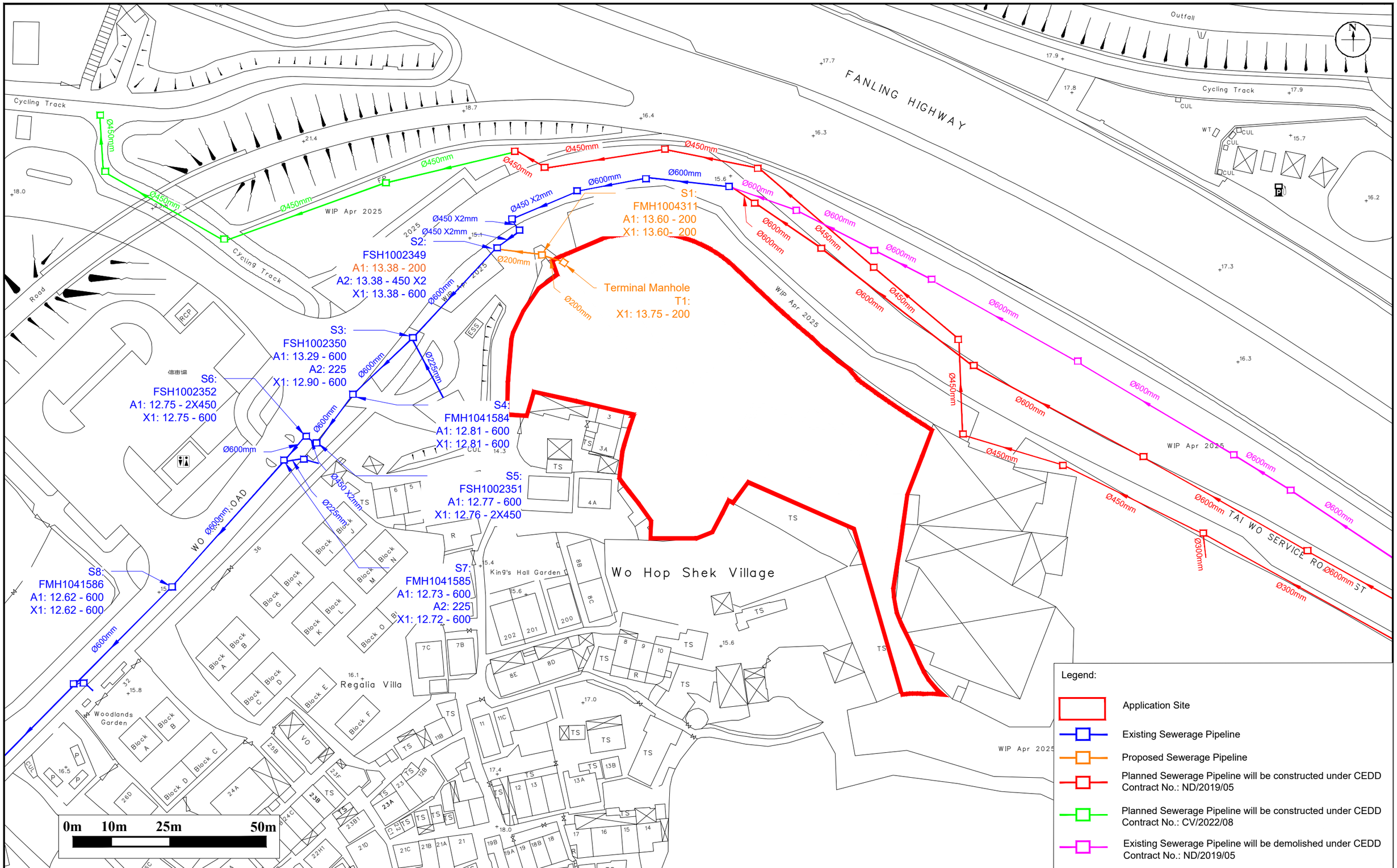

Figure: 3.1

Title: Existing and Proposed Sewerage System in the Vicinity of the Application Site

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

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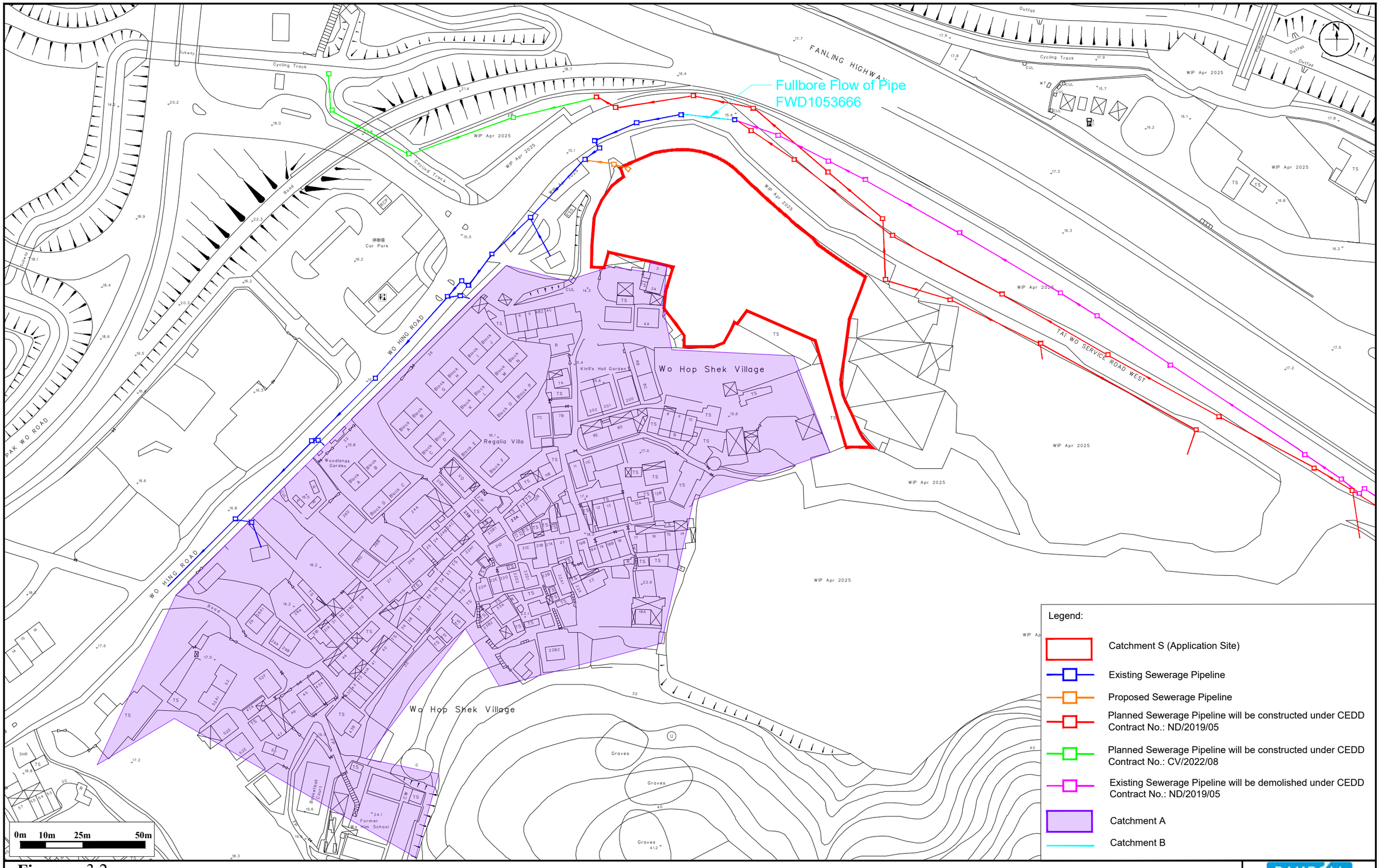


Figure: 3.2

Title: Catchment Areas in the Vicinity of the Application Site

Project: Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling

RAMBOLL

Drawn by:	GW
Checked by:	BF
Rev.:	1.0
Date:	Jul 2025

\\aphkfps3\Drive Q\Projects\SDMFLD51EI00\05 Assessments\07 Sewerage\20250626_v1.0\SIA_20250710.dwg

Appendix 1.1 Master Layout Plan (MLP)

MAIN ENTRANCE

N

A

A'

B

B'

Residential Institution (Talent Accommodation)

Staff Quarters

Innovation & Technology

和合石村

Wo Hop Shek Village

京士豪庭

King's Hall Garden

大嶺西支路

WIP Nov 2024

Residential Institution (Talent Accommodation)

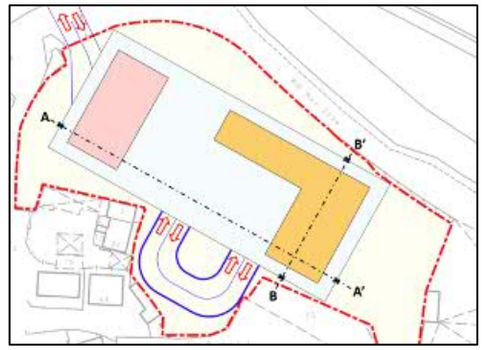
Staff Quarters

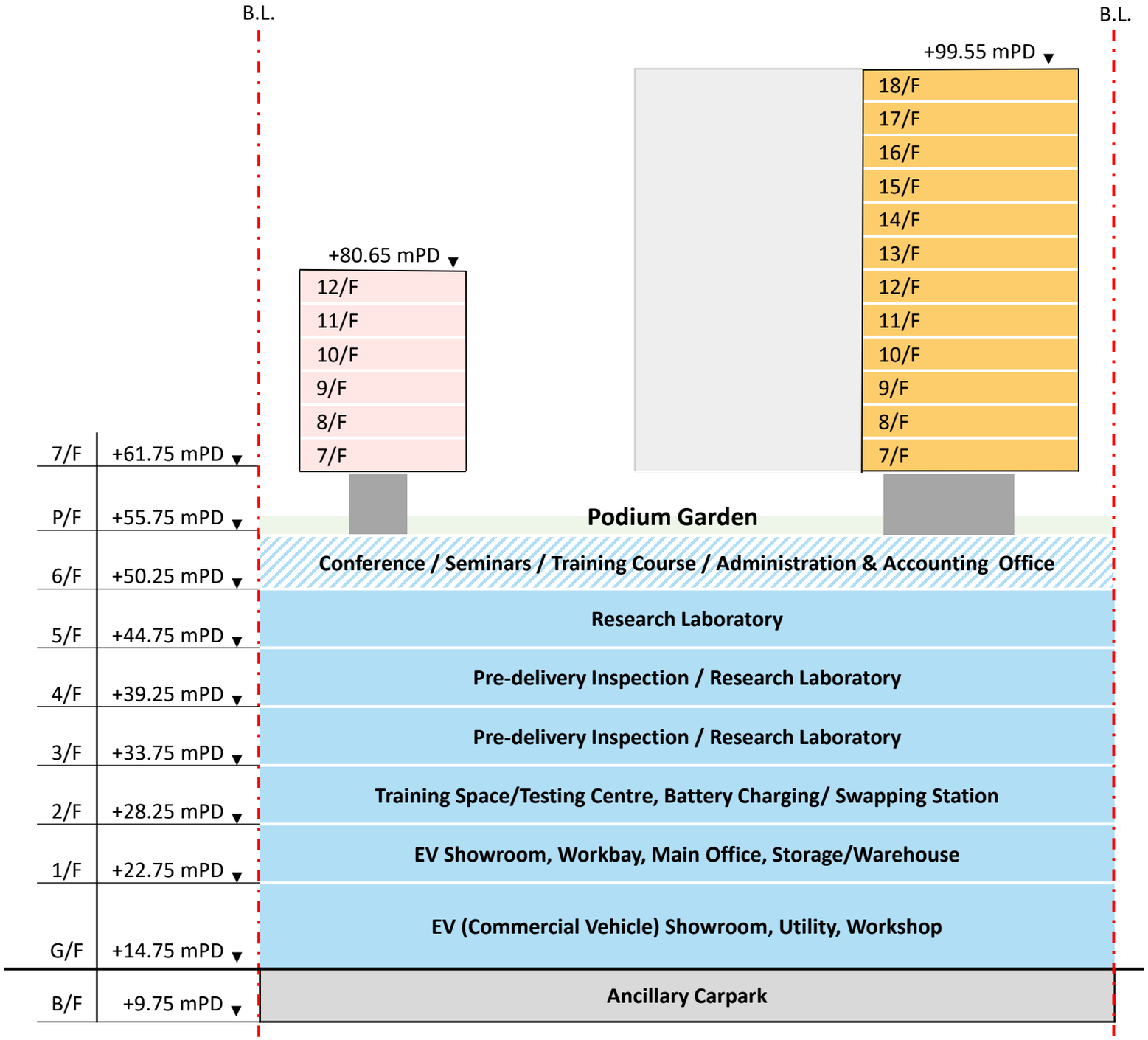
Podium Garden

EV Mobility City (Conference / Seminars / Training Course / Administration & Accounting Office)

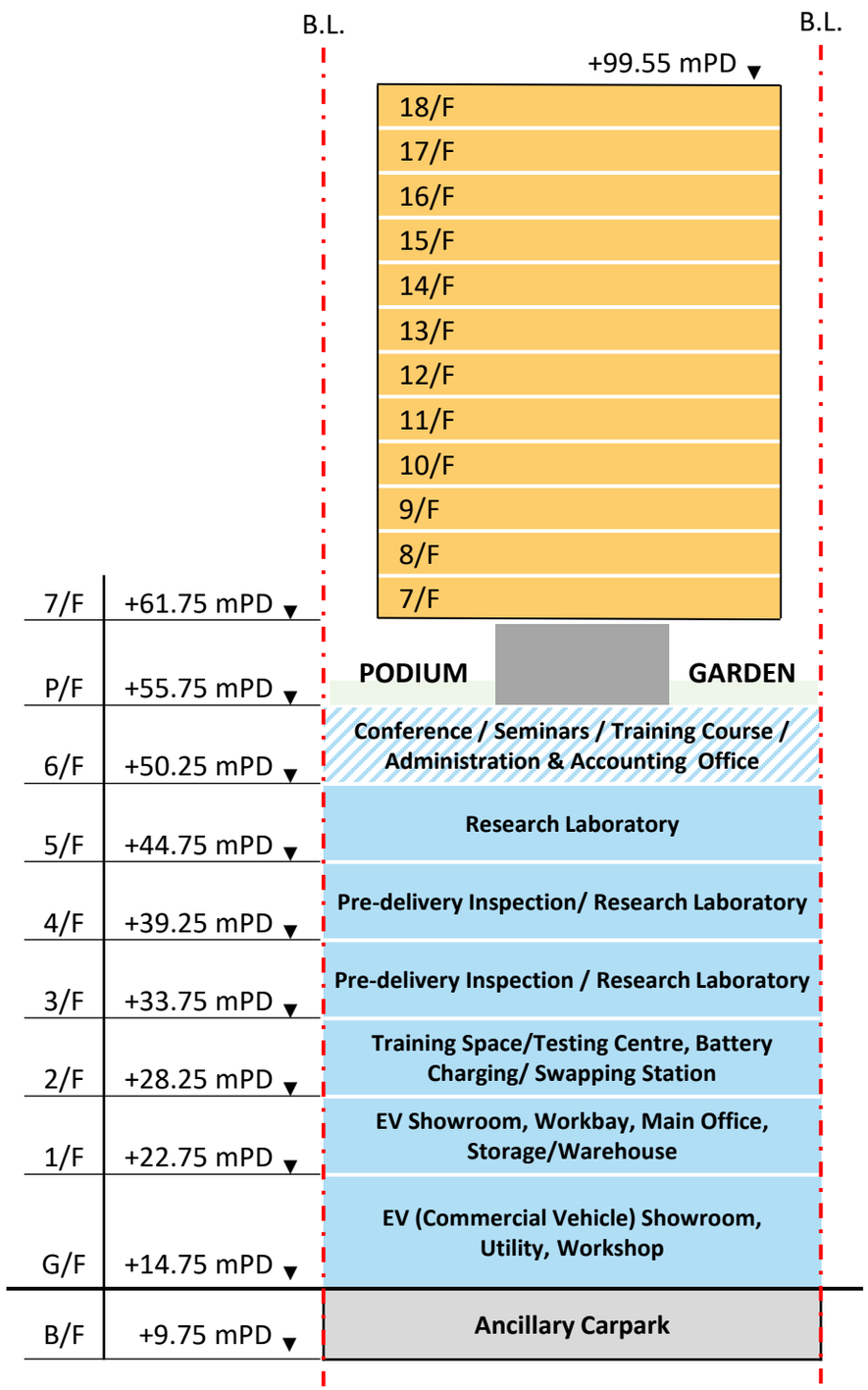
EV Mobility City (Innovation & Technology)

Ancillary Carpark





SECTION A-A'



SECTION B-B'

LIFT LOBBY / LIFT AREA
/ STAIRCASE

ANCILLARY CARPARK

B/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

EV (COMMERCIAL VEHICLE) SHOWROOM

WORKSHOP (WITH SUMP PIT)

UTILITY

G/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

STORAGE / WAREHOUSE

WORK BAY

EV SHOWROOM

MAIN OFFICE

1/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

TRAINING SPACE / TESTING CENTRE

BATTERY CHARGING/SWAPPING STATION

2/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

PRE-DELIVERY INSPECTION / RESEARCH LABORATORY

3/F & 4/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

RESEARCH
LABORATORY

5/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

CONFERENCE / SEMINARS / TRAINING COURSE /
ADMINISTRATION & ACCOUNTING OFFICE

6/F PLAN

LIFT LOBBY / LIFT AREA / STAIRCASE

PODIUM GARDEN

P/F PLAN

LIFT LOBBY / LIFT AREA
/ STAIRCASE

Staff Quarters
(Tower 1)

Residential Institution
(Talent Accommodation)
(Tower 2)

7-18/F PLAN

Appendix 2.1 Detailed Drainage Impact Assessment Calculations

Proposed EV Mobility City with Ancillary Staff Quarters and Talent Accommodation at Various Lots in D.D. 51 and Adjoining Government Land, Fanling
Table 1 - Proposed Catchment Areas and Run-off (1 in 50 year)

$$Q_p = 0.278\ C\ i\ A$$

where Q_p = peak runoff in m^3/s
C = runoff coefficient (dimensionless)
i = rainfall intensity in mm/hr
A = catchment area in km^2

Surface Characteristics	*Runoff coefficient, C**
Asphalt	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Grassland (heavy soil**)	
Flat	0.13 - 0.25
Steep	0.25 - 0.35
Grassland (sandy soil)	
Flat	0.05 - 0.15
Steep	0.15 - 0.20

Notes:
Site Area 5,480 m^2

Catchments are small, so Rational Method is appropriate

1 in 50 year (according to Table 3 of DSD Manual)
a= 505.5
b= 3.29
c= 0.355

	Catchment	Discharge Manhole	Paved	Unpaved	Run-off at	Area	Levels (mPD)		Fall	Overland, L	Fall, H	Overland t_c	t_0	Total t_f	Total t_c	Intensity	Weighted Runoff Coefficient[1]	Run-off	Run-off [2]	Run-off [3]
						(m^2)	Upstream	Downstream	(m)	(m)	(m/100m)	(min)	(min)	(min)	(min)	(mm/h)		(m^3/s)	(m^3/s)	(m^3/s)
Existing	**Application Site**																			
	S1	T1	87%	13%	T1	5,480								5.00	5.00	239	0.85	0.31	0.34	0.36
Future	**Application Site**																			
	S1	T1	80%	20%	T1	5,480								5.00	5.00	239	0.80	0.29	0.32	0.34

Remarks:
1. Runoff coefficient of 0.95 for Paved area and 0.20 for Unpaved area
2. Runoff includes rainfall increase due to Climate Change 11.1% in the mid 21st Century
3. Runoff includes rainfall increase due to Climate Change 16% in the end of 21st Century

Appendix 3.1 Detailed Sewerage Impact Assessment Calculation

Table 1 Calculation for Sewage Generation Rate of the Proposed Development at the Application Site

Catchment S (Proposed Development)

1. Residential

Total number of residents	=	414	people
Design flow	=	0.27	m^3/person/day -- (refer to Table T-1 of GESF - R2)
Sewage Generation rate	=	**111.8**	m^3/day

2. Office

Assumed Area	=	3417	m^2
Assumed floor area per employee	=	50.5	m^2 per worker -- (refer to Table 8 of CIFSUS - Financial, Insurance, Real Estate & Bussiness Services)
Total number of employees	=	68	employees
Design flow for commercial activities	=	0.08	m^3/employee/day -- (refer to Table T-2 of GESF - J12)
Sewage Generation rate	=	**5.4**	m^3/day

3. Workshop

Assumed Area	=	7535	m^2
Assumed floor area per employee	=	20.3	m^2 per worker -- (refer to Table 8 of CIFSUS -Manufacturing)
Total number of employees	=	371	employees
Design flow for commercial activities	=	0.63	m^3/employee/day -- (refer to Table T-3 of GESF - J1 + North District)
Sewage Generation rate	=	**233.9**	m^3/day

4. EV Showroom

Assumed Area	=	4191	m²
Assumer flooe area per employee	=	45.45	m² per employee -- (refer to Table 8 of CIFSUS -Wholesale Trade)
Total number of employee	=	92	employees
Design flow for transport employee	=	0.28	m³/employee/day -- (refer to Table T-2 of GESF - J4)
Sewage Generation rate	=	**25.8**	m³/day

5. Warehouses / Storage / Utility	=	277	m²
Assumed Area	=	4.00	m² per employee -- (refer to Table 8 of CIFSUS -Storage)
Assumer flooe area per employee	=	69	employees
Total number of employee	=	0.18	m³/employee/day -- (refer to Table T-2 of GESF - J3)
Design flow for transport employee	=	**12.5**	m³/day
Sewage Generation rate			

Total flow from proposed development

Flow Rate (without Catchment Inflow Factor)	=	389.3	m³/day
Catchment Inflow Factor	=	1.00	Catchment Inflow Factor for North District in Table T-4 of GESF
Flow Rate (with Catchment Inflow Factor)	=	**389.3**	m³/day
Contributing Population	=	1442	People
Peaking Factor	=	6	Refer to Table T-5 of GESF for population 1,000-5,000 incl. stormwater allowance
Peak Flow	=	27.0	litre/sec

Table 2a Hydraulic Capacity of Existing Sewers

Segment	Manhole Reference	Manhole Reference		Pipe Length	Invert Level 1	Invert Level 2	g	k_s	s	v	V	Area	Q	Estimated Capacity
			mm	m	mPD	mPD	m/s^2	m		m^2/s	m/s	m^2	m^3/s	L/s
S1-S2	FMH1004311	FSH1002349	250	11.4	14.55	13.54	9.81	0.00060	0.089	0.000001	4.20	0.05	0.21	206
S2-S3	FSH1002349	FSH1002350	600	31.5	13.38	13.29	9.81	0.00300	0.003	0.000001	1.05	0.28	0.30	297
S3-S4	FSH1002350	FMH1041584	600	21.3	12.90	12.81	9.81	0.00300	0.004	0.000001	1.28	0.28	0.36	361
S4-S5	FMH1041584	FSH1002351	600	16.1	12.81	12.77	9.81	0.00300	0.002	0.000001	0.97	0.28	0.27	273
S5-S6	FSH1002351	FSH1002352	450	3.6	12.76	12.75	9.81	0.00060	0.002	0.000001	0.89	0.16	0.14	142
			450	3.6	12.76	12.75	9.81	0.00060	0.002	0.000001	0.89	0.16	0.14	142
S6-S7	FSH1002352	FMH1041585	600	9.2	12.75	12.73	9.81	0.00300	0.002	0.000001	0.89	0.28	0.25	252
S7-S8	FMH1041585	FMH1041586	600	43.2	12.72	12.62	9.81	0.00300	0.002	0.000001	0.95	0.28	0.27	270

Table 2b Hydraulic Capacity of Existing Sewers (After Modification Work of Segment S1-S2)

Segment	Manhole Reference	Manhole Reference	Pipe Dia.	Pipe Length	Invert Level 1	Invert Level 2	g	k_s	s	v	V	Area	Q	Estimated Capacity
			mm	m	mPD	mPD	m/s^2	m		m^2/s	m/s	m^2	m^3/s	L/s
S1-S2	FMH1004311	FSH1002349	200	11.4	13.60	13.38	9.81	0.00030	0.020	0.000001	1.86	0.03	0.06	58
S2-S3	FSH1002349	FSH1002350	600	31.5	13.38	13.29	9.81	0.00300	0.003	0.000001	1.05	0.28	0.30	297
S3-S4	FSH1002350	FMH1041584	600	21.3	12.90	12.81	9.81	0.00300	0.004	0.000001	1.28	0.28	0.36	361
S4-S5	FMH1041584	FSH1002351	600	16.1	12.81	12.77	9.81	0.00300	0.002	0.000001	0.97	0.28	0.27	273
S5-S6	FSH1002351	FSH1002352	450	3.6	12.76	12.75	9.81	0.00060	0.002	0.000001	0.89	0.16	0.14	142
			450	3.6	12.76	12.75	9.81	0.00060	0.002	0.000001	0.89	0.16	0.14	142
S6-S7	FSH1002352	FMH1041585	600	9.2	12.75	12.73	9.81	0.00300	0.002	0.000001	0.89	0.28	0.25	252
S7-S8	FMH1041585	FMH1041586	600	43.2	12.72	12.62	9.81	0.00300	0.002	0.000001	0.95	0.28	0.27	270

Table 2c Hydraulic Capacity of Proposed Sewers

Segment	Manhole Reference	Manhole Reference	Pipe Dia.	Pipe Length	Invert Level 1	Invert Level 2	g	k_s	s	v	V	Area	Q	Estimated Capacity
			mm	m	mPD	mPD	m/s^2	m		m^2/s	m/s	m^2	m^3/s	L/s
T1-S1	T1	FMH1004311	200	5.3	13.75	13.60	9.81	0.00030	0.028	0.000001	2.24	0.03	0.07	70

Remarks:

(1) g=gravitational acceleration; k_s=equivalent sand roughness; s=gradient; v=kinematic viscosity of water; V=mean velocity

(2) Table 2a & 2b: The value of k_s = 0.6mm is used for the calculation of slimed clayware sewer, poor condition (based on Table 5: Recommended roughness values in Sewerage Manual)

(3) Table 2a &2b: The value of k_s = 3mm is used for the calculation of concrete sewer, poor condiction (based on Table 5: Recommended roughness values in Sewerage Manual)

(4) Table 2b & 2c The value of k_s = 0.3mm is used for the calculation of slimed polyethelyene for the proposed sewers, poor condition (based on Table 5: Recommended roughness values in Sewerage Manual)

(5) The value of velocity (V) is referred to the Tables for the hydraulic design of pipes, sewers and channels (8th edition)

(6) Equation used: $V = -\sqrt{(8gDs)}\log\left(\frac{k_s}{3.7D} + \frac{2.51v}{D\sqrt{(2gDs)}}\right)$

Table 3a Calculation for Sewage Generation Rate of the Existing Surrounding Building

Ctachment A
Subunits 628/17-20

Total number of Residents	=	1295	people ((2021 Population Census: Subunit 628/17-20)
Design flow for Residents	=	0.37	m^3/residential/day -- (refer to Table T-1 of GESF - R4)
Sewage Generation rate	=	**479.2**	m^3/day

Table 3b Calculation for Sewage Generation Rate of the Existing Surrounding Building

Catchment B (FWD1053666) (upstream)

a. Assumed Pipe Capacity	=	100	%
b. Pipe Diameter	=	600	mm
c. Pipe Length	=	21.43	m
d. Invert Level 1	=	13.595	mPD
e. Invert Level 2	=	13.58	mPD
f. Invert Level Difference	=	0.02	m
g. Gravitational Acceleration	=	9.81	ms^{-2}
h. Equivalent Sand Roughness	=	0.003	m
i. Gradient	=	0.0009	
j. Kinematic Viscosity of Water	=	0.000001	m^2/s
k. Mean Velocity	=	0.58	m/s
l. Cross Sectional Area of the Pipe	=	0.28	m^2
m. Velocity of the Concerned Pipe	=	0.17	m^3/s
n. Estimated Capacity	=	**165.0**	litre/sec

Sub-total

Peak Flow	=	165.0	litre/sec
Peaking factor	=	4.00	Refer to Table T-5 of GESF for population 13,201 incl. stormwater allowa
Contributing Population	=	13201	people
Equivalent Flow Rate	=	**3564.2**	m^3/day

Table 4a Comparision of the Hydraulic Capacity of Existing Sewers for Sewerage generated from the Proposed Development and Surrounding Catchment Areas

Segment	Pipe Dia. (mm)	Pipe Length (m)		Estimated Capacity (L/s)	Catchment Involved	ADWF (m^3/day)	Contributing Population	Peaking Factor	Swimming Pool/Public Toilet (L/s)	Peak Flow from the Proposed Development and Catchment Areas (L/s)	Contribution from the Proposed Development and the Surrounding Catchment Areas (%)	Status
S1-S2	250	11.4	0.089	206	S	389.3	1442	6	0.0	27.0	13.1%	OK
S2-S3	600	31.5	0.003	297	S + B	3953.5	14643	4	0.0	183.0	61.7%	OK
S3-S4	600	21.3	0.004	361	S + B	3953.5	14643	4	0.0	183.0	50.7%	OK
S4-S5	600	16.1	0.002	273	S + B	3953.5	14643	4	0.0	183.0	66.9%	OK
S5-S6	450	3.6	0.002	142	S + B	3953.5	14643	4	0.0	183.0	64.3%	OK
	450	3.6	0.002	142								
S6-S7	600	9.2	0.002	252	S + B + A	4432.7	16417	4	0.0	205.2	81.3%	OK
S7-S8	600	43.2	0.002	270	S + B + A	4446.2	16468	4	0.0	205.8	76.3%	OK

Table 4b Comparision of the Hydraulic Capacity of Existing Sewers for Sewerage generated from the Proposed Development and Surrounding Catchment Areas (After Modification Work of Segment S1-S2)

Segment	Pipe Dia.	Pipe Length (m)	Gradient	Estimated Capacity (L/s)	Catchment Involved	ADWF (m^3/day)	Contributing Population	Peaking Factor	Swimming Pool/Public Toilet (L/s)	Peak Flow from the Proposed Development and Catchment Areas (L/s)	Contribution from the Proposed Development and the Surrounding Catchment Areas (%)	Status
S1-S2	200	11.4	0.020	58	S	389.3	1442	6	0.0	27.0	46.2%	OK
S2-S3	600	31.5	0.003	297	S + B	3953.5	14643	4	0.0	183.0	61.7%	OK
S3-S4	600	21.3	0.004	361	S + B	3953.5	14643	4	0.0	183.0	50.7%	OK
S4-S5	600	16.1	0.002	273	S + B	3953.5	14643	4	0.0	183.0	66.9%	OK
S5-S6	450	3.6	0.002	142	S + B	3953.5	14643	4	0.0	183.0	64.3%	OK
	450	3.6	0.002	142								
S6-S7	600	9.2	0.002	252	S + B + A	4432.7	16417	4	0.0	205.2	81.3%	OK
S7-S8	600	43.2	0.002	270	S + B + A	4432.7	16417	4	0.0	205.2	76.1%	OK

Table 4c Comparision of the Hydraulic Capacity of Proposed Sewers from the Terminal Manhole of the Proposed Development for Sewage generated from the Proposed Development

Segment	Pipe Dia. (mm)	Pipe Length (m)	Gradient	Estimated Capacity (L/s)	Catchment Involved	ADWF (m^3/day)	Contributing Population	Peaking Factor	Swimming Pool/Public Toilet (L/s)	Peak Flow from the Proposed Development and Catchment Areas (L/s)	Contribution from the Proposed Development and the Surrounding Catchment Areas (%)	Status
T1-S1	200	5.3	0.028	70	S	389.3	1442	6	0.0	27.0	38.4%	OK

Remarks: (a) The value of peaking factor = 4 is used for population 10.000 - 50.000 incl. stormwater allowance (refers to Table T-5 of GESF)
(b) The value of peaking factor = 6 is used for population 1,000-5,000 incl. stormwater allowance (refers to Table T-5 of GESF)

Appendix 3.2 Proposed Sewerage Layout Plan from Development of Kwu Tung North and Fanling North New Development Areas (KTNFNWDA), Phase 1 under CEDD Contract No. ND/2019/05

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
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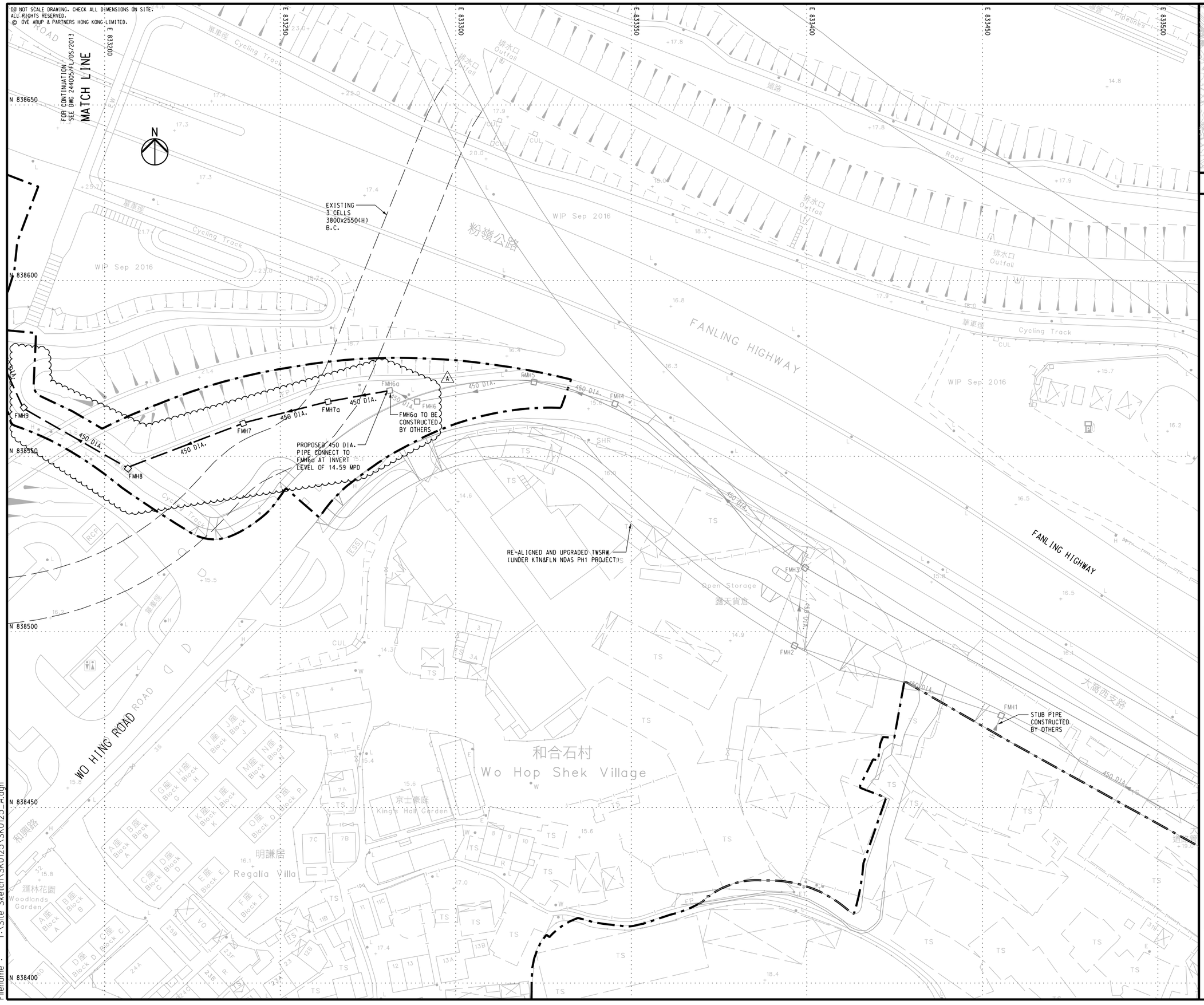

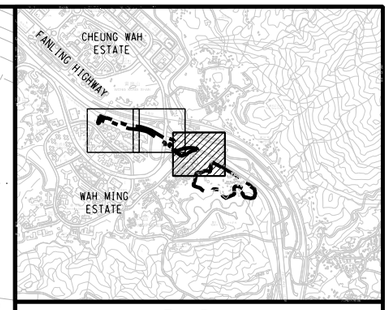

KEY PLAN

NOTES

1. FOR NOTES AND LEGEND, REFER TO DRAWING NOS. 244005/FL/DS/1001 & 1002.
2. FOR MANHOLE AND TAPPING POINT SCHEDULE, REFER TO DRAWING NO. 244005/FL/DS/2021.

Rev	Description	By	Date
A	FOR CONSTRUCTION	WYY	05/25
-	FOR CONSTRUCTION	WYY	08/24

Consultant

ARUP

Contract No. and Title:

Contract No. CV/2022/08

Site Formation and Infrastructure Works at Area 48, Fanling

Drawing title

SEWERAGE LAYOUT PLAN

(SHEET 1 OF 3)

Drawing no.		Rev.
244005/FL/SK0125		A
Drawn: EC	Date: 05/25	Checked: JC	Approved: JY
Scale: 1:500 @A1		EXTRACTED FROM DRG. NO. 244005/FL/DS/2012	

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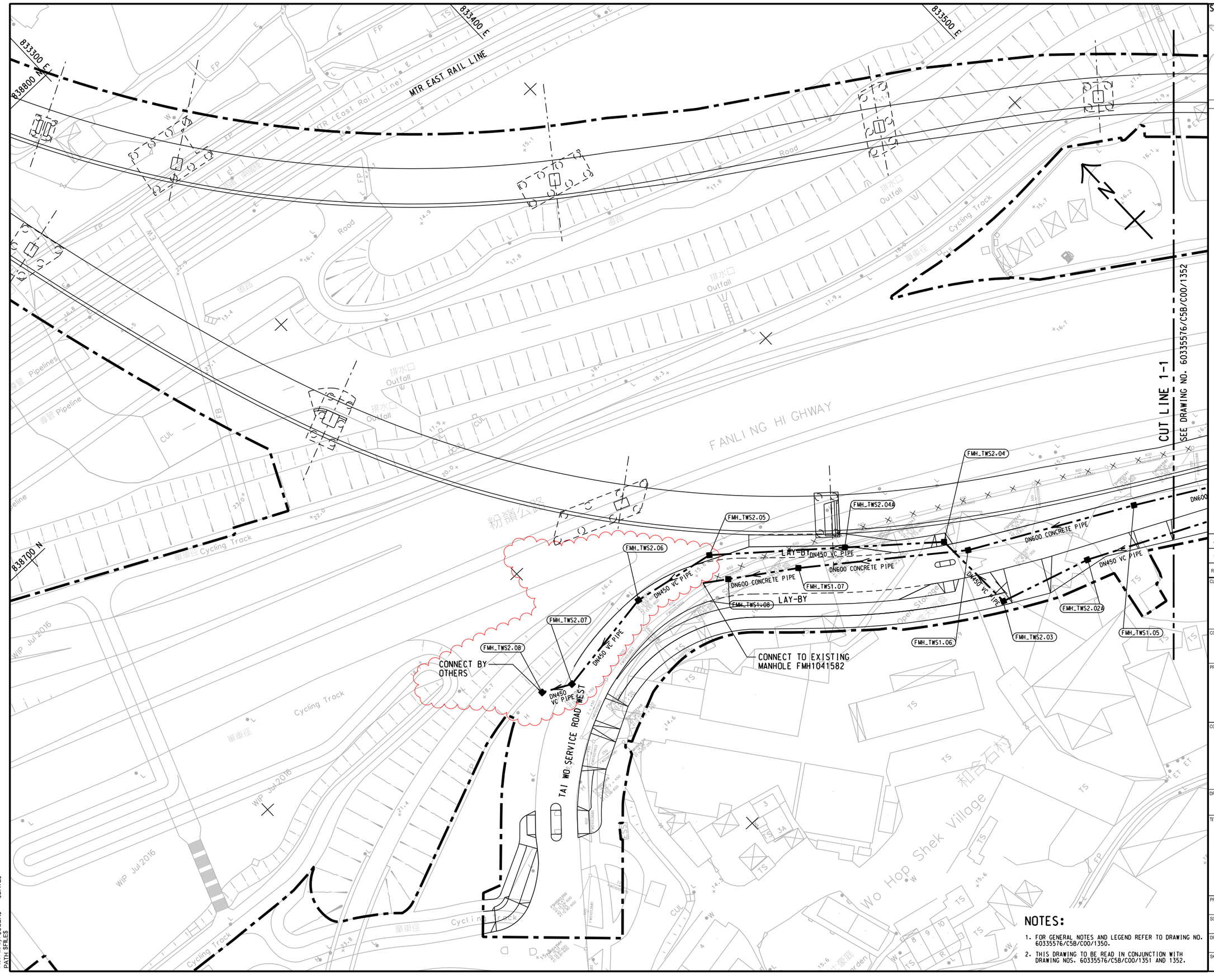
Printed by : 6/5/2025
Filename : T:\Site Sketch\SK0125\SK0125_A.dgn

Appendix 3.3 Proposed Sewerage Layout Plan from Site Formation and Infrastructure Works at Area 48, Fanling under CEDD Contract No. CV/2022/08



NOTES:

1. FOR GENERAL NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5B/C00/1350.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5B/C00/1351 AND 1352.

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.
A	24/05/24	SEWERAGE LAYOUT REVISED	HKKL	AC	PP
-	13/12/22	SEWERAGE LAYOUT REVISED	HKKL	JC	AC

CLIENT

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT

AECOM

PROJECT

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE

FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: FANLING BYPASS EASTERN SECTION (SHUNG HIM TONG TO KAU LUNG HANG)

DRAWING REFERENCE TO LATEST VERSION

60335576/C5B/C00/1351

TITLE

SEWERAGE LAYOUT PLAN

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/05
SCALE 1:500 (A1) 1:1000 (A3)	DATE 24-JAN-24
DRAWN HKKL	PREPARED AC
APPROVED PP	
SKETCH NO. ND/2019/05/R10/130/0558	REV. A

Plot File by: $USER$ $DATE$
PATH $FILE$

Appendix 3.4 Extracted from Engineering Feasibility Study Report for Proposed Public Housing Development at Area 48, Fanling (PHD48)

PART PLAN SEE DRAWING : WSP/CE47/TO4/DR/1213

PART PLAN SEE DRAWING : WSP/CE47/TO4/DR/1212

JOCKEY CLUB ROAD

YAT MING ROAD

PAK WO ROAD

WO HANG ROAD

WAH MING ROAD

KIU TAU ROAD

FANLING HIGHWAY

PROPOSED VEHICULAR ACCESS

PROPOSED VEHICULAR ACCESS

838500 N

838000 N

833500 E

833500 E

LEGEND :

PROPOSED WORKS BOUNDARY

FUTURE PUBLIC HOUSING SITE BOUNDARY

800 PIPE SIZE — EXISTING SEWERAGE MANHOLES — EXISTING SEWERAGE PIPE

800 PIPE SIZE — PLANNED SEWERAGE MANHOLES (CONSTRUCTED BY OTHERS) — PLANNED SEWERAGE PIPE (CONSTRUCTED BY OTHERS)

800 PIPE SIZE — PROPOSED SEWERAGE MANHOLES — PROPOSED SEWERAGE PIPE

ROAD WORKS (TO BE CONSTRUCTED UNDER KTN&FLN NDAS PH1 PROJECT)

0 20 40 60 80 100
METRES
1 : 2000

Rev	Description	By	Date
–	FIRST ISSUE	HL	JUL 21

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 4
AREA 48, FANLING
PROPOSED SEWERAGE SYSTEM
LAYOUT PLAN

Drawing no.	Rev.
CE47/TO4/DR/1211	–

Drawn	Date	Checked	Approved
CAD	JUL 2021	VS	YWY

Scale 1:2000 (A1) — Status –

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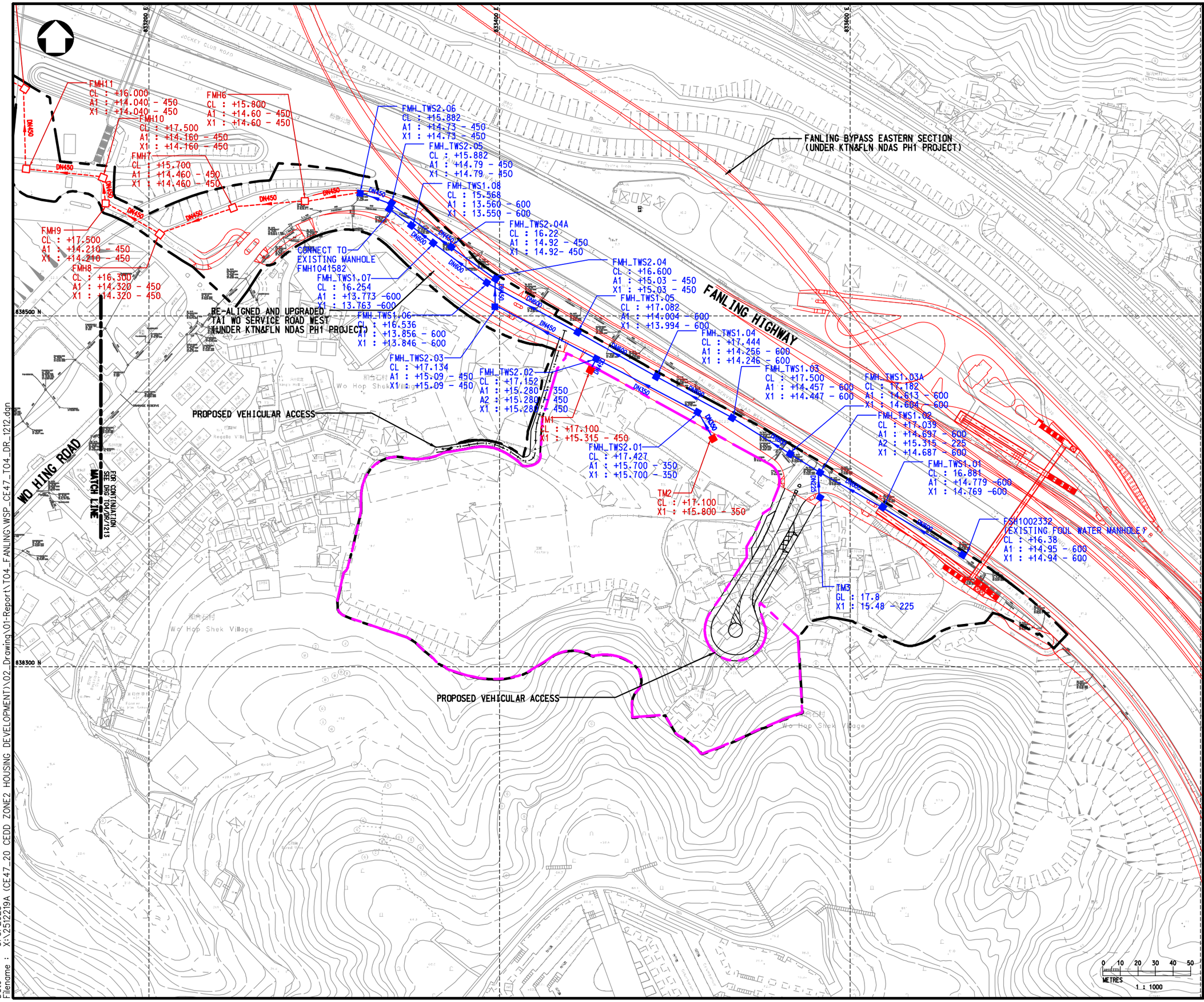
Date : 28/2/2023
Filename : x:\2512219a (ce47_20 cedd zone2 housing development)\02_drawing\01-report\to4_fanling\WSP_CE47_TO4_DR_1211.dgn



KEY PLAN

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- PROPOSED WORKS BOUNDARY
- FUTURE PUBLIC HOUSING SITE BOUNDARY
- 800 PIPE SIZE — EXISTING SEWERAGE MANHOLES / EXISTING SEWERAGE PIPE
- 800 PIPE SIZE — PLANNED SEWERAGE MANHOLES (CONSTRUCTED BY OTHERS) / PLANNED SEWERAGE PIPE (CONSTRUCTED BY OTHERS)
- 800 PIPE SIZE — PROPOSED SEWERAGE MANHOLES / PROPOSED SEWERAGE PIPE
- ROAD WORKS (TO BE CONSTRUCTED UNDER KTN&FLN NDAS PH1 PROJECT)
- PROPOSED SEWERAGE TERMINAL MANHOLES

Rev	Description	By	Date
-	FIRST ISSUE	HL	NOV 21

Consultant: wsp

Project title:
AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title:
TASK ORDER NO. 4
AREA 48, FANLING
PROPOSED SEWERAGE SYSTEM LAYOUT PLAN (SHEET 1)

Drawing no.	Rev.
CE47/TO4/DR/1212	-

Drawn	Date	Checked	Approved
CAD	JUL 2021	VS	YWY

Scale: 1:1000 (A1)
Status: -

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土木工程處
CIVIL ENGINEERING OFFICE

0 10 20 30 40 50 METRES
1 : 1000

Date : 5/5/2023
Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\01-Report\TO4_FANLING WSP_CE47_TO4_DR_1212.dgn