

Appendix 1:

Replacement pages of the Environmental Assessment Report

pollution problem. O₃ is therefore not considered as a key parameter in this assessment.

5.4. Assessment Area and Representative Air Quality Sensitive Receivers (ASRs) during operation phase

5.4.1. In general, the assessment area for an air quality impact assessment (AQIA) is defined by a distance of 500m from the site boundary are shown in **Figure 5.1**.

5.4.2. Representative air quality sensitive receivers (ASRs) of the Current S16 Proposal were identified for the assessment of the air quality impacts arising from the surrounding air pollution sources during the operational phase. After reviewing the layout, the identified ASRs during operational phase are shown in **Figure 5.2a** and **Figure 5.2b**, and summarised in **Table 5-5**.

Table 5-5 Representative Air Sensitive Receivers (ASRs)

ID	Ground level (mPD)	Flagplot Height (mAG)	Floor	Nature of ASR (Short-term/ Long-term) [1]	Usage of ASRs
A01-26	6.1	33.20-130.7	Residential 1/F-31/F	Long term	Residential
		7.5-24.55	Podium 1-5/F [2]	Short term	2/F: GIC [4] 5/F: Clubhouse
		1.50	G/F	Short term	Retail Sunken Plaza [3]
P01-65		-4.85	B1/F	Short term	Sunken Plaza [3]
		-9.95	B2/F	Short term	Sunken Plaza [3]

Remark:

[1]: Short term refers to the averaging time of 10min, 1-hour, 8-hour and 24-hour while long term refers to the averaging time of annual

[2] The ASRs at Podium 1–5/F will be short-term only in terms of duration of stay.

[3] Refer to the commercial use under the “purpose-designed non-domestic portion of a building connecting to the sunken plaza” as per the Approved Development Scheme Plan (DSP)

[4] Child Care Centre (CCC) will be provided as the designated Government, Institution and Community (GIC) use, in accordance with the Land Grant executed in March 2026.

5.4.3. The ASRs have been identified within the Current S16 Proposal and are summarised in **Table 5-5**. The ASRs comprise Sunken Plaza from B2/F to G/F and retail units at G/F are considered short-term usage ASRs, for which only short-term averaging time criteria are applicable. The ASRs located at 2/F consist of the designated Government,

- The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore.
 - Vehicles within the site are restricted to a maximum speed of 10 kph.
 - Vehicles are inspected regularly and well maintained to ensure that they are operating efficiently and that exhaust emissions are not causing nuisance.
 - Vehicle engines are turned off when they are not in use.
 - Haul road of the Application Site is located as far as possible from nearby ASRs.
- 5.5.8. Requirements set out in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation to control potential emissions from non-road mobile machinery (NRMM) will need to be fully complied with. Therefore, gaseous emissions from diesel-fuelled construction equipment would be minor and would not cause any significant adverse air quality impacts.
- 5.5.9. To reduce SO₂ emissions from diesel-fuelled machinery operating on-site, Air Pollution Control (Fuel Restriction) Regulations was enacted in 1990 to impose legal control on the types of fuel allowed for use and their sulphur contents in commercial and industrial processes. To improve air quality and protect public health, EPD has introduced the Air Pollution control (Non-road Mobile Machinery) (Emission) Regulation since 1 December 2015, under which only approved or exempted NRMMs are allowed to be used in construction sites. In addition, all construction plants are required to use ULSD (defined as diesel fuel containing not more than 0.001% sulphur by weight) as stipulated in Environment, Transport and Works Bureau Technical Circular (ETWB-TC(W)) No.19/2005 on Environmental Management on Construction Sites. Furthermore, given the localised and small-scaled nature of the Project, as well as the small number of PMEs involved, adverse air quality impacts due to emissions from the use of PMEs would be unlikely.

5.6. Potential Air Quality Impact – Operational Phase

5.6.1. In accordance with the HKPSG recommendation to minimise adverse air quality impacts associated with vehicular emissions from open roads, horizontal buffer zones of at least 5m, 10m and 20m shall be provided between the ASRs within the Application Site and Local Distributors, District Distributors and Primary Distributors respectively as illustrated in Figure 5.4. However, the separation distances between the ASRS within the Application Site and the nearby roads are insufficient under the Notional Design for the subject S16 Planning Application. Therefore, a quantitative AQIA has been conducted to evaluate the environmental acceptability of the Current S16 Proposal from an air quality perspective.

restaurants/ commercial kitchens and refuse collection points, adverse air quality impact to ASRs within site and in the vicinity is not expected.

Tier 2 – Emissions within 500m study area

Vehicular Emissions from Open Road Traffic

- 5.6.8. Vehicular emissions from all open roads within the 500m Assessment Area would be taken into account in the assessment. Traffic forecast data, including 24-hour traffic flows and vehicle compositions, as provided by the Project Traffic Consultant would be adopted. Submission of Traffic forecast data to Transport Department (TD) was made on 2 June 2026 as shown in **Appendix 5.1**. Endorsement of the adopted traffic forecast data is being sought from TD and will be provided when it is available. The assessment years for air quality impacts would be determined based on the year with the highest emission within the next 15 years following commencement of operation of the Current S16 Proposal. Traffic forecasts for the identified roads would be assessed for four selected years, namely 2030 (the commencement year), 2035 (5 years after commencement), 2040 (10 years after commencement), and 2045 (15 years after commencement). The traffic forecasts for Air Quality Assessment in 2030, 2035, 2040 and 2045 are provided in **Appendix 5.2**.

Vehicular Emissions from Minibus Terminus/Metered carpark/Public Transport Interchange

- 5.6.9. There are one Minibus Terminus (MT) and two metered carpark, and one Public Transport Interchanges (PTIs) found within 500m Assessment Area from the Application Site boundary, including Tung Tau Estate (Tung Lung Road) Minibus Terminus (TTEMT), Ning Yuen Street Carpark (NYSCP), Tung Lei Road Carpark (TLRCP) and Kai Tak Public Transport Interchange (KTPTI) as shown in **Figure 5.5a**. Those vehicular emissions would have the potential to cause air quality impacts to the Current S16 Proposal during the operational phase. NO₂, RSP and FSP impacts due to vehicular emissions from the above-mentioned MT, metered carparks and PTI (including starting, idling and running emissions) were quantitatively assessed.
- 5.6.10. For vehicle activity data at TTEMT and KTPTI, the minibuss and bus route timetables, including travelling time, arrival and departure times, and headways (in minutes), were referenced from information provided by the respective bus companies. For TLRCP, traffic activity data were referenced to the traffic flow of Tung Lei Road (Road ID: RD_013) as adopted in the traffic forecast as a conservative approach. For NYSCP, vehicle arrival and departure patterns were estimated with reference to the

operating hours and number of parking spaces of the car park, and the emission factors for Light Goods Vehicles with a gross vehicle weight of 2.5–3.5 tonnes (i.e. LGV4) were adopted as a conservative approach.

- 5.6.11. Vehicle activity data adopted for the calculation of starting, idling, and running emissions associated with car parks (including NO, NO₂, RSP, and FSP) were referenced from the Calculation of Start Emissions in Air Quality Impact Assessment published by the Environmental Protection Department (EPD). This reference was used as the basis for calculating starting, idling, and running emissions. Starting and running emission factors were predicted using the EMFAC-HK model (v4.3). Cold idling emissions were derived from emission factors provided in Annex A of the Calculation of Start Emissions in Air Quality Impact Assessment, while warm idling emissions were estimated using emission factors presented in Road Tunnels: Vehicle Emissions and Air Demand for Ventilation published by the World Road Association.

Vehicular Emissions from Portal

- 5.6.12. The deck of the Current S16 Proposal above Sa Po Road creates a tunnel-like structure. The vehicular emissions generated inside the tunnel is regarded as volume source and the calculation is referred with Road Tunnels: Vehicle Emissions and Air Demand for Ventilation published by the World Road Association. The location of the portal emission is shown in **Figure 5.5b**.

Industrial Chimney Emissions

- 5.6.13. Based on desktop study conducted on 11 Nov 2025, no existing chimneys were found within 500m of the Application Site. Given the Current S16 Proposal is for residential use, which is not environmentally polluting in nature and does not have provision of chimneys, hence, no chimney emissions will arise from the Current S16 Proposal and no adverse air quality impact due to chimney emissions is anticipated.

Odour Emission

- 5.6.14. Based on desktop study conducted on 11 Nov 2025, there are two existing sewage pumping stations within a 500m radius of the Application Site. Kowloon City No. 2 Sewage Pumping Station is located south-west of the site with a separation distance of 280m and Kowloon City No. 1 Sewage Pumping Station is located 400m east of the site. It is anticipated that with appropriate mitigation measures already implemented by the sewage pumping station, potential odour impacts from the sewage pumping stations to the Current S16 Proposal can be properly controlled.

Portal Emissions

- 5.7.6. The portal emission is modelled as “VOLUME” sources as shown in **Figure 5.5b**. In accordance with the recommendations in the Permanent International Association of Road Congress Report (PIARC, 1991), the pollutants were assumed to eject from the portal as a portal jet such that 2/3 of the total emissions is dispersed within the first 50m of the portal and the other 1/3 of the total emissions within the second 50m.
- 5.7.7. The annual minimum temperature and RH values (11°C and 18%) at PATH grids (42,34) were used in the calculation as a conservative approach. The SAMP v2.1 with ZEV scenario was used for the calculation of composite vehicular emission factor and emission rates. **Appendix 5.5** is provided for the volume sources produced by SAMP.

Minibus Terminus/Metered carpark/ Public Transport Interchange Emissions

- 5.7.8. The start emissions, running exhaust emissions, and idling emissions (i.e., NO, NO₂, RSP, and FSP) associated with the MT/Metered carpark and PTI are calculated based on the start emission and running exhaust emission factors predicted by EMFAC-HK model, cold idling emission factors from Calculation of Start Emissions in Air Quality Impact Assessment published by EPD, warm idling emission factors from Road Tunnels: Vehicle Emissions and Air Demand for Ventilation published by World Road Association. Starting emissions from diesel vehicles equipped with selective catalytic reduction (SCR) systems were assumed to be dispersed over a total distance from the point where the vehicle start occurred. Running and idling emissions were assumed to be released at their respective locations. The detailed calculation of emission is provided in **Appendix 5.6**.
- 5.7.9. Precise approach has been adopted to estimate the MT, meter carpark and PTI emission. Starting emissions from terminating vehicles, together with idling and running emissions from both terminating and non-terminating vehicles (where applicable), were included and modelled in the assessment. For emissions occurring beyond the car park boundaries, the remaining spread distance of starting emissions from terminating vehicles was also considered and modelled. Calculated starting emissions from terminating vehicles were adjusted to account for their corresponding idling emissions within the car parks, with reference to the Calculation of Start Emissions in Air Quality Impact Assessment.
- 5.7.10. One MT, two metered carpark and one PTIs were identified within 500m Assessment Area from the Application Site Boundary of the Current S16 Proposal, as shown in **Figure 5.4**. The nature of Tung Tau Estate (Tung Lung Road) Minibus Terminus

6. Noise Impact Assessment

6.1.1. A Noise Impact Assessment (NIA) to assess the potential noise impact and identify any necessary noise mitigation measures will be submitted to the EPD for approval in accordance with the Special Condition (S.C.) stipulated in the Land Grant executed in March 2026. No adverse noise impacts are anticipated from the subject S16 Planning Application.

10. Conclusion

Air Quality Impact

10.1.1. Potential air quality impact, noise impact, water quality impact, land contamination and waste management during construction and operation phase of the project are evaluated in this Environmental Assessment Report for the Application Site.

10.1.2. Fugitive dust due to construction works and gaseous emission from construction equipment would make insignificant air quality impacts to the nearby air sensitive receivers, with the implementation of air quality control measures and good site practice as stipulated under Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulations. With the implementation of dust suppression measures and good site practices, no adverse air quality impact is anticipated during construction phase.

10.1.3. During the operation phase, the air quality impacts of emissions from the surrounding to our Current S16 Proposal were assessed by AERMOD modelling. The predicted results indicated that it complies with AQO where no ASR is located in the exceedance zone at G/F. It is anticipated that there will be no adverse air quality impact towards the Current S16 Proposal.

Noise Impact

10.1.4. A Noise Impact Assessment (NIA) to assess the potential noise impact and identify any necessary noise mitigation measures will be submitted to the EPD for approval in accordance with the Special Condition (S.C.) stipulated in the Land Grant executed in March 2026. No adverse noise impacts are anticipated from the subject S16 Planning Application.

Water Quality Impact

10.1.5. For water quality impact during construction phase, it is expected to be minimal when appropriate guidelines and mitigation measures stated in ETWB TC (Works) No. 5/2005 and good site practice outlined in ProPECC PN 2/24 are implemented to properly discharge site run-offs. Hence, no adverse water quality impact is anticipated.

10.1.6. For the operational phase, the effluent discharge should be in compliance with the WPCO-TM and WPCO discharge license conditions. Following the ProPECC PN1/23,

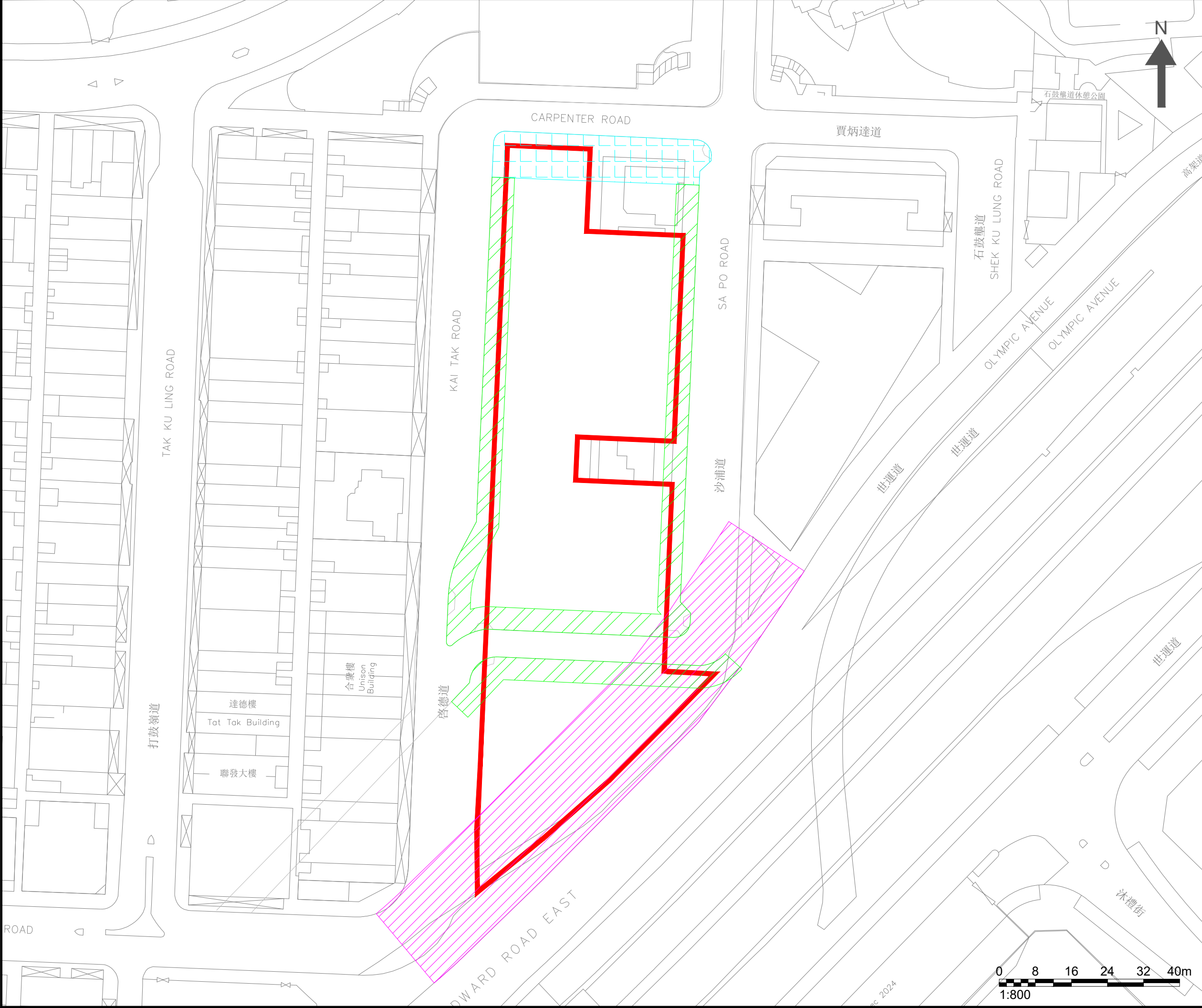
no adverse water quality impact related to surface runoff is anticipated. Moreover, all sewage generated from the Current S16 Proposal will be discharged to the public foul sewer. Thus, no adverse water quality impact on the nearby WSRs during the operational phase is anticipated.

Land Contamination

- 10.1.7. For land contamination, land contamination assessment and remediation works have been conducted in 2025. Given there is no change in land use since 2025. Further land contamination is considered not necessary.

Waste Management

- 10.1.8. For waste management, top priority should be given to waste avoidance, followed by minimization, reuse/recycling, treatment and disposal of waste as a last resort during construction and operation phases. C&D material, general refuse and chemical waste are expected to be generated from the construction phase, while general refuse and chemical waste will be the major waste generated from operation phase. Provided that all these wastes are reused and recycled if appropriate, handled, stored and disposed of in strict accordance with the relevant legislative requirements and the recommended mitigation measures are properly implemented, no adverse waste impact is anticipated.
- 10.1.9. For waste management during construction phase, C&D waste will be properly sorted on-site into inert and non-inert waste for recycling and disposed of at designated facilities. Top priority should be given to waste avoidance, followed by minimization, reuse/recycling, treatment and disposal of waste as a last resort. During the operational phase, general refuse will be the major waste type. Recycling bins will be provided to promote separation of recyclables and will be collected regularly by recycling agents. The Project Team will explore feasibility of providing separate bins for food waste with disposal to the ORRC. Provided that all these wastes are reused and recycled if appropriate, handled, stored and disposed of in strict accordance with the relevant legislative requirements and the recommended mitigation measures are properly implemented, no adverse waste impact is anticipated during construction and operational phases.



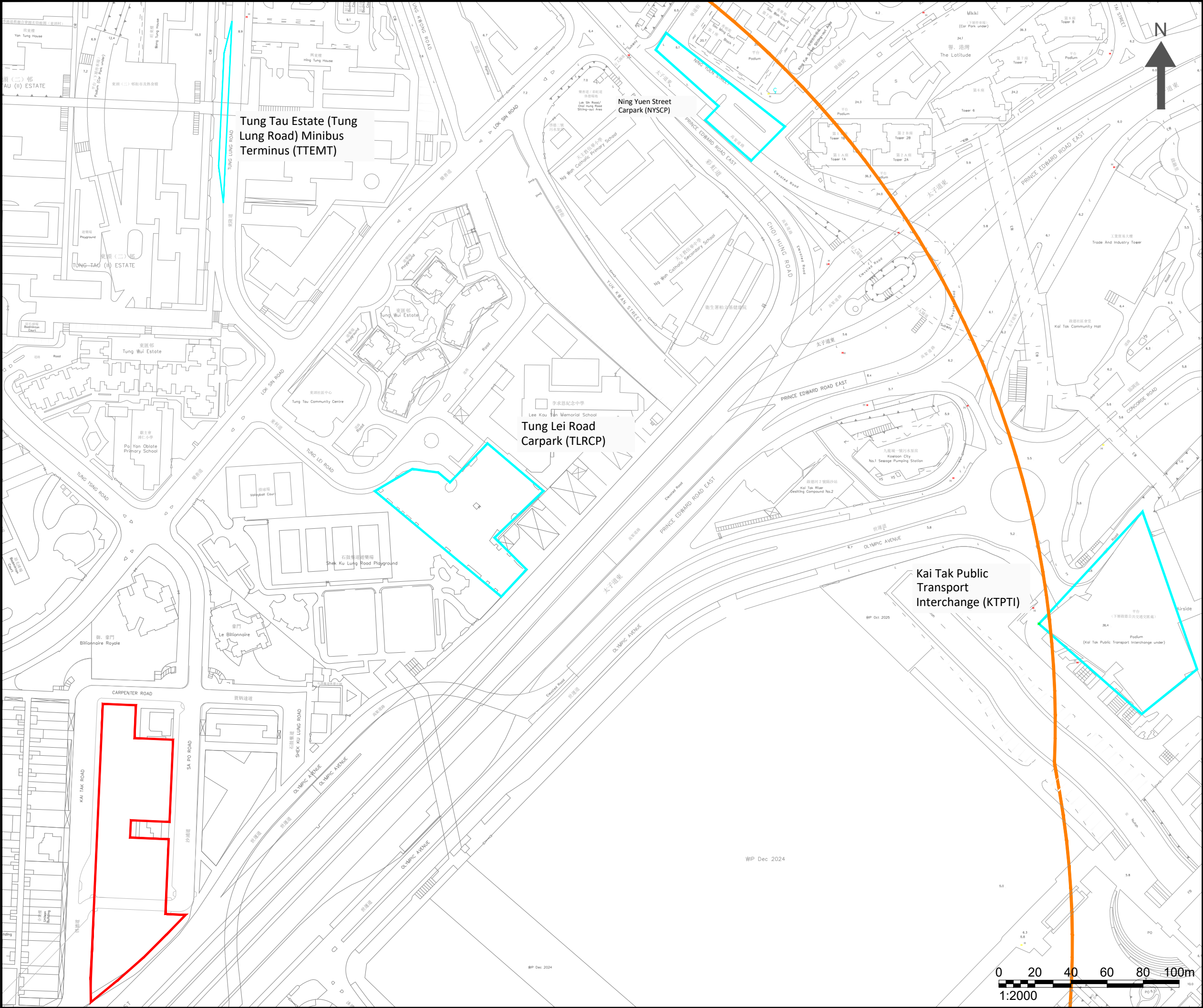
- NOTES :
- APPLICATION SITE
 - BUFFER ZONE FROM PRIMARY DISTRIBUTOR
 - BUFFER ZONE FROM DISTRICT DISTRIBUTOR
 - BUFFER ZONE FROM LOCAL DISTRIBUTOR

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Project No. : 2288	
Drawing By : TL	
Project : PROJECT KC-015 AT KAI TAK ROAD/ SA PO ROAD, KOWLOON CITY	
Drawing Title : BUFFER DISTANCE BETWEEN THE APPLICATION SITE AND ADJACENT ROADS	
Drawing No : FIG 5.4	Revision : 0
Scale : AS SHOWN	Date : JUL 2026
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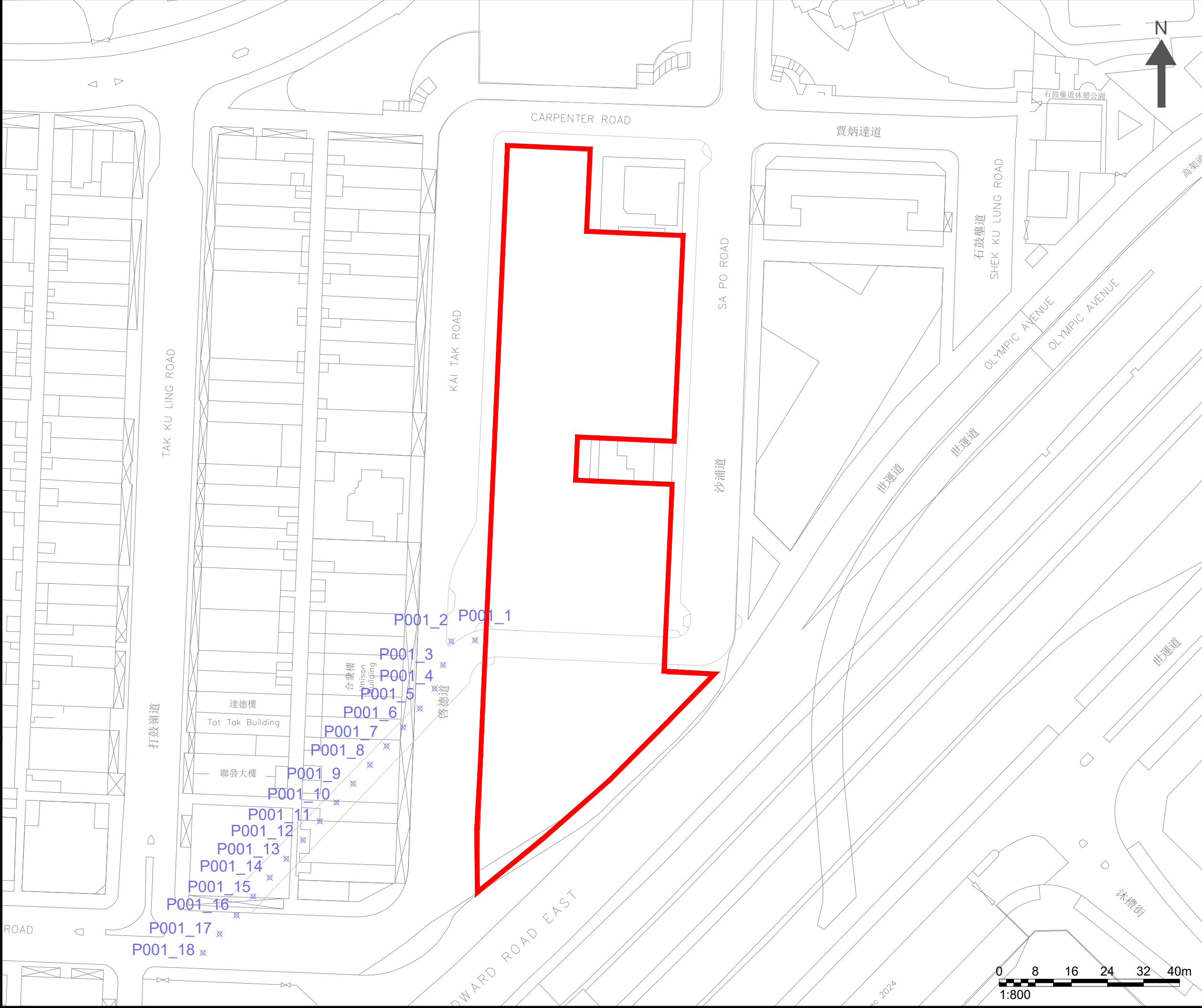
- NOTES :
- APPLICATION SITE
 - 500M ASSESSMENT AREA
 - MT/METERED CARPARK/PTI

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AEC

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Project No. : 2288	
Drawing By : TL	
Project : PROJECT KC-015 AT KAI TAK ROAD/ SA PO ROAD, KOWLOON CITY	
Drawing Title : LOCATION OF IDENTIFIED MINIBUS TERMINUS/METERED CARPARK/PUBLIC TRANSPORT INTERCHANGES/PORTAL EMISSION	
Drawing No : FIG 5.5a	Revision : 0
Scale : AS SHOWN	Date : JUL 2026
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NOTES :

APPLICATION SITE

PORTAL EMISSIONWITH ID

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Project No. : 2288	
Drawing By : TL	
Project : PROJECT KC-015 AT KAI TAK ROAD/ SA PO ROAD, KOWLOON CITY	
Drawing Title : LOCATION OF IDENTIFIED MINIBUS TERMINUS/METERED CARPARK/PUBLIC TRANSPORT INTERCHANGES/PORTAL EMISSION	
Drawing No : FIG 5.5b	Revision : 0
Scale : AS SHOWN	Date : JUL 2026
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