

**Section 16 Planning Application for Proposed Minor Relaxation
of the Maximum Domestic GFA of Site B for the Urban Renewal
Authority Sai Yee Street/ Flower Market Road Development
Scheme (YTM-013), Mong Kok, Kowloon**

PLANNING STATEMENT

June 2026

Urban Renewal Authority



EXECUTIVE SUMMARY

This planning application is submitted by the Urban Renewal Authority (URA) to the Town Planning Board (TPB) pursuant to Section 16 of the Town Planning Ordinance (Cap. 131), for minor relaxation of the maximum domestic gross floor area (GFA) for Site B (the Application Site) of the URA Sai Yee Street/ Flower Market Road Development Scheme (YTM-013) (the Scheme).

The Scheme, with a total gross site area of approximately 29,315sq.m., is divided into Site A and Site B. Under the approved Development Scheme Plan (DSP) No. S/K3/URA5/2, Site B of the Scheme, i.e. the Application Site, is zoned as “Other Specified Uses” annotated “Mixed Use 2” (“OU(MU)2”), and further divided into Sub-area (1) and Sub-area (2). Sub-area (1) of Site B is subject to a maximum domestic gross floor area (GFA) of 46,605sq.m. (equivalent to a domestic plot ratio (DPR) of 6.5), and a total GFA of 64,530sq.m. (equivalent to a total PR of 9), with a building height restriction (BHR) of 150mPD. Sub-area (2) of Site B is subject to a total GFA of 8,955sq.m. (equivalent to a PR of 0.5), and it has a BHR of 30mPD. YTM-013 was commenced as a development scheme pursuant to Section 25 of the Urban Renewal Authority Ordinance (URAO) on 15 March 2024 and was approved by the Chief Executive in Council (CE in C) on 8 April 2025, with the decision first gazetted on 17 April 2025. The approved DSP was exhibited for public inspection on the same day.

In view of the current market needs and oversupply of offices, URA has reviewed the approved DSP and proposed to increase the permissible maximum domestic GFA within Sub-area (1) of Site B to optimise development flexibility. As such, this S16 Planning Application seeks TPB’s permission for **minor relaxation of maximum permissible domestic GFA of Sub-area (1) of Site B from 46,605sq.m. to 53,775sq.m. (equivalent to a DPR from 6.5 to 7.5), with total permissible GFA and BHR remaining the same as 64,530sq.m. (equivalent to a total PR of 9.0) and 150mPD respectively**. There will be no change in Sub-area (2) of Site B. If the proposed increase in domestic GFA is implemented, the resulting non-domestic GFA of 19,710sq.m. in Site B (equivalent to a non-domestic PR (NDPR) of 1.5) will still provide adequate retail GFA for ground floor retail activities, creating an active street frontage and injecting vibrancy to the existing Flower Market precinct for sustained development of local businesses.

This S16 Planning Application is a “non-scheme-based” submission. The notional design and indicative development parameters of the subject S16 Planning Application are solely for illustration purposes and for conducting necessary technical assessments. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S16 Planning Application.

The main justifications in support of the S16 Planning Application are listed as follows:

- In response to the current market needs and compatible with Government’s latest directives on suspension of sales of commercial sites;
- Enhance development flexibility and project’s implementability;
- Retain planning intention to enhance Flower Market in the approved DSP;
- Retain the planning intention of “OU(MU)” zone under the approved DSP and in line with the recommendations of the District Study for Yau Ma Tei and Mong Kok (YMDS);
- Retain the previously committed planning gains; and

- No Insurmountable technical impacts anticipated.

In light of the justifications presented in this planning statement, the TPB is respectfully requested to give favourable consideration to the application.

行政摘要

(聲明：此中文譯本僅供參考，如中文譯本和英文原文有歧異時，應以英文原文為準。)

是項規劃申請由市區重建局（市建局）向城市規劃委員會（城規會）提交，旨在根據《城市規劃條例》（第131章）第16條就市建局洗衣街／花墟道發展計劃（YTM-013／發展計劃）的地盤B（申請地點）申請略為放寬最大住用總樓面面積（本規劃申請）。

發展計劃的總地盤面積約為29,315平方米，分為地盤A和地盤B。根據洗衣街／花墟道發展計劃核准圖編號S/K3/URA5/2，發展計劃中的地盤B（即申請地點）劃為「其他指定用途」註明「混合用途（2）」，並再細分為支區（1）和支區（2）。地盤B的支區（1）受限於最大住用總樓面面積46,605平方米（相當於住用地積比率6.5倍）、整體總樓面面積64,530平方米（相當於總地積比率9倍），以及主水平基準上150米的建築物高度限制。地盤B的支區（2）的整體總樓面面積為8,955平方米（相當於地積比率0.5倍），並受限於主水平基準上30米的建築物高度限制。YTM-013於2024年3月15日根據《市區重建局條例》第25條以發展計劃形式開展，並於2025年4月8日獲行政長官會同行政會議核准，該決定已於2025年4月17日首次刊憲。該計劃核准圖於同日展示，供公眾查閱。

鑑於當前的市場需要和辦公室供應過剩，市建局已檢討發展計劃，建議增加地盤B支區（1）的最大住用總樓面面積，以優化發展靈活性。因此，本規劃申請旨在向城規會申請，將地盤B支區（1）的最大住用總樓面面積由46,605平方米略為放寬至53,775平方米（相當於住用地積比率由6.5倍增至7.5倍），而整體總樓面面積及建築物高度限制則維持不變，為64,530平方米（相當於總地積比率9倍）及主水平基準上150米。地盤B的支區（2）將沒有任何變動。隨著住用總樓面面積的擬議變更，地盤B的非住用總樓面面積將為19,710平方米（相當於非住用地積比率1.5倍），有關非住用樓面面積仍可為地面零售活動提供足夠的零售樓面面積，從而營造具活力的街道面貌，為現有的花墟注入活力及供持續的發展。

本規劃申請屬「非方案主導」（“non-scheme-based”）性質。本規劃申請所提供的初步概念設計及發展參數僅供參考及用於進行必要的技術評估。除任何施加於規劃許可的相關附帶條件外，未來項目的發展設計將不受本規劃申請所提交的初步概念設計所限制。

以下為支持本規劃申請的主要理據：

- 回應當前市場需要，並配合政府暫停推售商業用地的政策；
- 提升項目的發展靈活性和可實施性；
- 保留發展計劃核准圖中推動花墟發展的規劃意向；
- 保留發展計劃核准圖的「其他指定用途」註明「混合用途」的規劃意向，及《油麻地及旺角地區研究（油旺研究）》的建議；
- 保留已承諾的規劃增益；及
- 不會產生無法克服的技術影響。

基於以上的發展理據，現懇請城規會能對本規劃申請予以贊同。

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1. INTRODUCTION

- 1.1 This planning application is submitted by the Urban Renewal Authority (URA) to the Town Planning Board (TPB) pursuant to Section 16 of the Town Planning Ordinance (Cap. 131) (the S16 Planning Application) for minor relaxation of maximum domestic gross floor area (GFA) of Site B for the Approved URA Sai Yee Street/ Flower Market Road Development Scheme (YTM-013/ the Scheme).
- 1.2 The Scheme, with a total gross site area of approximately 29,315sq.m., is divided into Site A and Site B under the approved DSP. The Scheme was formulated under the Master Urban Renewal Concept Plan (MRCP) of the District Study for Yau Ma Tei and Mong Kok (YMDS) as an early project and formed part of the “Mong Kok East – Nullah Road Urban Waterway” Development Node (DN). The Scheme was commenced on 15 March 2024 by way of a development scheme in accordance with Section 25 of the Urban Renewal Authority Ordinance (URAO). On 8 April 2025, the draft Development Scheme Plan (DSP) was approved by the Chief Executive in Council (CE in C) and its decision was gazetted on 17 April 2025. The approved DSP No. S/K3/URA5/2 was gazetted on the same day.
- 1.3 Site B (the Application Site) is sub-divided into Sub-area (1) and Sub-area (2) in the approved DSP. It has a total site area of approximately 24,870sq.m., with Sub-area (1) being 7,170sq.m. and Sub-area (2) being 17,700sq.m.. The Application Site is zoned as “Other Specified Uses” annotated “Mixed Use” 2 (OU(MU)2). Sub-area (1) of Site B has a maximum domestic gross floor area (GFA) of 46,605sq.m. (equivalent to a domestic plot ratio (DPR) of 6.5) and a total GFA of 64,530sq.m. (equivalent to a total PR of 9.0), with a building height restriction (BHR) of 150mPD. Sub-area (2) of Site B has a non-domestic GFA of 8,955sq.m. (equivalent to a non-domestic PR (NDR) of 0.5) and is subject to a BHR of 30mPD.
- 1.4 Since 2025, the office market has been facing unoptimistic sentiment, which was also reflected in the Government’s decision in suspending the sales of commercial sites as announced in both 2025/26 and 2026/27’s Budget Speeches. In response to the changing market condition and to allow for greater development flexibility, **this S16 Application seeks TPB’s approval on minor relaxation of maximum permissible domestic GFA in Sub-area (1) of Site B from 46,605sq.m. to 53,775sq.m. (equivalent to a DPR from 6.5 to 7.5), while keeping the total GFA of 64,530sq.m..** There will be no change in Sub-area (2) of Site B and the BHR of the two sub-areas.
- 1.5 The subject S16 Planning Application is a “non-scheme-based” submission. The notional design and indicative development parameters provided are solely for illustration purposes and for conducting necessary technical assessments.

2. SITE AND PLANNING CONTEXT

2.1 Site Context

2.1.1 The Application Site, i.e. Site B of the Scheme, is broadly bounded by Mong Kok Stadium to the east, Sai Yee Street to the west, Flower Market Road to the south, and Boundary Street to the north. Site A of the Scheme (not forming the Application Site) covers five land parcels with low-rise tenement buildings along Sai Yee Street, Yuen Ngai Street and Flower Market Road (i.e. Sites A1 to A5) (see **Figure 2.1**).

2.1.2 Site B, the Application Site, covers various leisure, recreation and GIC facilities including Boundary Street Sports Centre No.1 and No.2, Boundary Street Recreation Ground, Sai Yee Street Children's Playground, Boundary Street Amenity Plot, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department (LCSD) Boundary Street Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation, as well as the Flower Market Path with the existing covered nullah and the surrounding public pavement within the site. There is no private lot within Site B (see **Figure 2.2**).

2.1.3 The Application Site is well served by a range of public transport options. The Application Site is located within approximately 10-minute walking distance from both Prince Edward MTR Station Exit B1 to its southwest and Mong Kok East MTR Station Exits C and D to its southeast (see **Figure 2.1**). It is also served by numerous bus routes operation along Prince Edward Road West and Boundary Street, providing convenient access throughout the city.

2.2 Planning Context

2.2.1 Under the approved DSP of the Scheme, Site B, the Application Site, as indicated in **Figure 2.3**, falls within an area zoned as "Other Specified Uses" annotated "Mixed Use" 2 ("OU(MU)2"). It is divided into Sub-area (1) and Sub-area (2). A public vehicle park (PVP) is required to be provided within "OU(MU)2".

2.2.2 Sub-area (1) of "OU(MU)2" in the Application Site is intended for comprehensive mixed-use development with a combination of residential/ commercial/ hotel/ office/ retail uses and the provision of GIC facilities, with a BHR of 150mPD. It is subject to a maximum domestic GFA of 46,605sq.m. and a total GFA of 64,530sq.m.. Sub-area (2) of "OU(MU)2" in the Application Site is intended to provide an at-grade Waterway Park, GIC facilities and retail facilities, with a BHR of 30mPD. It has a total GFA of 8,955sq.m.. To provide development flexibility, minor relaxation of GFA may be considered by TPB on application under Section 16 of the TPO based on the individual merits of the development proposals.

- 2.2.3 Site A of the Scheme (not form part of the Application Site) is zoned as “Other Specified Uses” annotated “Mixed Use” 1 (“OU(MU)1”) and it consists of 5 Sub-areas including Sub-areas (1) to (5) respectively (i.e. Sites A1 – A5). Site A1 will be developed for residential development cum commercial podium, with a BHR of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5.

2.3 Surrounding Context

- 2.3.1 The Application Site is located at a transitional zone between the high-density residential and commercial developments in Mong Kok East. **Figure 2.4** shows the site and surrounding context.
- 2.3.2 Buildings to the west and south of the Application Site are mainly residential buildings of 10 to 15 storeys high which are completed in the 1960s and 1970s, except for some new private developments, such as High Park Grand at Boundary Street, which was completed in 2014 respectively. The southern and western sides of the Application Site concentrate with floral and horticultural businesses mainly at ground floors, creating an active street frontage and forming the popular Flower Market precinct.
- 2.3.3 To the immediate east of the Application Site is Mong Kok Stadium managed by LCSD and to the further east of the Application Site is another LCSD open space named Yuen Po Street Bird Garden with bird stalls.
- 2.3.4 To the north of the Application Site are mainly open spaces and GIC facilities including Tai Hang Tung Recreation Ground, Fa Hui Park and two primary schools across the Boundary Street. To the further north is the low-density neighbourhood of Yau Yat Tsuen.
- 2.3.5 In addition, there are several historic buildings in the vicinity. To the southern side of the Application Site is the URA’s Prince Edward Road West/ Yuen Ngai Street Project (MK/02) which preserved and revitalised a cluster of Grade 2 pre-war buildings built in the 1930s, as well as the Grade 3 historic buildings at 177-179 Prince Edward Road West to the southwest of the Application Site. The building was converted into a hotel under the S16 application no. A/K3/523 as approved on 19 March 2010.

3. THE INDICATIVE DEVELOPMENT PROPOSAL

3.1 Proposed Minor Relaxation of Maximum Domestic GFA

- 3.1.1 To allow for greater flexibility for future development, this S16 Planning Application proposes to relax the maximum permissible domestic GFA from of Sub-area (1) in Site B from 46,605sq.m. to 53,775sq.m (equivalent to a DPR from 6.5 to 7.5), while keeping the total GFA of 64,530sq.m. (equivalent to a total PR of 9) as well as the BHR of 150mPD. There will be no change in the development parameters of Sub-area (2) of Site B.
- 3.1.2 While the S16 Planning Application seeks to allow a more flexible GFA mix for the future development, it will not propose any restriction on the non-domestic GFA of Sub-area (1) in Site B. It allows flexibility in adjusting the final GFA mix and the provision of non-domestic GFA at the detailed design stage, subject to the maximum domestic GFA of 53,775sq.m and a total GFA of 64,530sq.m. of the Application Site.
- 3.1.3 A comparison between the DSP approved in April 2025 (the Approved DSP) and the Current Indicative Proposal of the S16 Planning Application (Current Indicative Proposal) is provided in **Table 3.1a** below. The notional design parameters of the Current Indicative Proposal under the S16 Planning Application are provided in **Table 3.1b** below.
- 3.1.4 While the subject S16 Planning Application is a non-scheme-based submission, the notional block plan and section plan are provided in **Figure 3.1 and Figure 3.2** for illustration purposes and for conducting necessary technical assessments only.

Table 3.1a: Comparison of Key Development Parameters of the Approved DSP and Current Indicative Proposal of the S16 Planning Application

Development Parameters of Site B (the Application Site)							
	Approved DSP [A]			Current Indicative Proposal of the S16 Application [B]			Difference [B] – [A] %
Application Site Area (m²)	About 24,870m²						N/A
Zoning	“OU(MU)2”						N/A
	Sub-area (1)	Sub-area (2)	Total [A]	Sub-area (1)	Sub-area (2)	Total [B]	
Net Site Area (For PR calculation) (m²) ⁽¹⁾	About 7,170	About 17,700	About 24,870	About 7,170	About 17,700	About 24,870	N/A
Total GFA (m²) (Equivalent PR) ⁽²⁾	64,530 (9)	8,955 (0.5)	73,485	64,530 (9)	8,955 (0.5)	73,485	N/A
Maximum Domestic GFA (m²) (Equivalent PR) ⁽²⁾	46,605 (6.5)	N/A	46,605	53,775 (7.5)	N/A	53,775	+15.4%
Non-domestic GFA for GIC Provision (m²) ⁽³⁾	About 20,000			About 20,000			NA
Maximum Building Height (mPD)	150 ⁽⁴⁾	30	N/A	150 ⁽⁴⁾	30	N/A	N/A
Public Vehicle Park (PVP)	220 private car spaces, 10 loading/ unloading bays			220 private car spaces, 10 loading/ unloading bays			N/A
Total Public Open Space (m²)	Not less than 16,200			Not less than 16,200			N/A
-At-grade Open Space (m²)	Not less than 8,800			Not less than 8,800			N/A

Remarks:

- (1) Subject to site survey during detailed design stage.
- (2) The approved DSP adopts maximum total and domestic GFAs. The equivalent PRs are for reference only.
- (3) Indicative only, subject to confirmation of funding, usage and operational needs from relevant Government bureaux/ departments, and detailed design at the project implementation stage. The GIC GFA will be exempted from GFA calculation under the approved DSP.
- (4) With a staggered height profile stepping from 150mPD at the western part to not more than 130mPD towards the east of Sub-area (1) in Site B.

Table 3.1b: Notional Design of the Current Indicative Proposal of the S16 Planning Application

Key Notional Design Parameters of Site B (the Application Site)⁽⁵⁾			
	Sub-area (1)	Sub-area (2)	Total
Total GFA (m ²) ⁽⁶⁾ (Equivalent to PR) ⁽²⁾	64,530 (9.0)	8,955 (0.5)	73,485
-Domestic GFA (m ²) ⁽⁶⁾ (Equivalent PR) ⁽²⁾	53,775 (7.5)	N/A	53,775
-Non-domestic GFA (m ²) ⁽⁶⁾ (Equivalent to PR) ⁽²⁾	10,755 (1.5)	8,955 (0.5)	19,710
- Retail GFA (m ²) ⁽⁶⁾	5,755	Not less than 8,955	14,710
- Hotel (m ²) ⁽⁶⁾	5,000	N/A	5,000
Non-domestic GFA for GIC Provision (m ²) ⁽³⁾	About 20,000		
No. of Building Blocks ⁽⁷⁾	3 (2 residential and 1 composite towers atop the GIC/ retail podia ⁽⁸⁾)	1 (1 low-rise retail block ⁽⁸⁾)	4
No. of Storeys ⁽⁷⁾	Residential towers (Tower 1 & Tower 2): About 36s Composite tower (Tower 3): About 26s Retail/ GIC podia: About 5s Low-rise retail block: About 1s Basement: About 2s		
No. of Flats ⁽⁹⁾	About 1,080	N/A	About 1,080
Average Flat Size (m ²) ⁽⁹⁾	About 50	N/A	About 50
Anticipated Population ⁽¹⁰⁾	About 2,700	N/A	About 2,700

Remarks:

- (5) Notional design will provide the required PVP and POS as stated in the approved DSP Notes and ES.
- (6) The domestic and non-domestic PRs/ GFAs of the notional design for both the approved DSP and the S16 Planning Application are for illustrative purposes only. The actual domestic and non-domestic PRs and GFAs would be worked out at the detailed design stage.
- (7) Numbers of building blocks and storeys are for reference only, subject to change during the detailed design stage.
- (8) Under the notional design, the proposed 3 towers in Sub-area (1) are atop the GIC/ retail podia which straddle both Sub-areas (1) and (2).
- (9) Estimated based on the assumed average flat size. The actual number of flats would be worked out at the detailed design stage.
- (10) Assumption of PPF of 2.5 is adopted from the average household size of Yau Tsim Mong District in the 2021 Population Census.

3.2 Notional Design for the Current Indicative Proposal

- 3.2.1 The notional design of the Current Indicative Proposal as illustrated in **Table 3.1b** comprises two residential towers and one composite building with residential and hotel uses atop the GIC/ retail podia, as well as one low-rise retail block. The high-rise towers are concentrated in Sub-area (1) of Site B; while the low-rise retail block is proposed at the southern side of Sub-area (2).
- 3.2.2 As shown in **Figure 3.2**, retail facilities will be provided at the GIC/retail podia and the low-rise retail block in Site B. Ground floor retail shop frontage will be created at the podia along Sai Yee Street, the area facing the Waterway Park to enable extension of retail activities. Low-rise retail shops/ kiosks along Flower Market Road will be provided to reinforce the bazaar-like street vibe, enhancing the vibrancy of local business. Flexibility will be given to the affected flower shops for relocating to the retail area within Site B in future for continuing their businesses.
- 3.2.3 The proposed at-grade Waterway Park of not less than 8,800sq.m. will be provided within Sub-area (2) of Site B and strategically designed and integrated with the surrounding retail/ commercial activities of the proposed development to create a cohesive and enjoyable leisure space. Opportunities will be explored at detailed design stage of the Sub-area (2) of Site B to create better connectivity between the Waterway Park and the adjoining Mong Kok Stadium by creating place-making space for event activities and community gatherings for visitors.
- 3.2.4 Together with the proposed hotel use, the mixed-use development in Site B is expected to attract patronage from diverse visitors to enhance vibrancy of the Flower Market precinct. Ancillary parking facilities and a PVP will be provided at the basement levels of Site B.
- 3.2.5 The major change between the notional design of the approved DSP and that of the subject S16 Planning Application is proposed at Sub-area (1) of Site B, where the original hotel/ office tower in the approved notional scheme is replaced by a composite tower for residential/ hotel use. The other two residential towers proposed at Sub-area (1) remains unchanged. Compared with the approved DSP, the proposed increase in the maximum domestic GFA can be accommodated within a similar building envelope and layout. As demonstrated in the notional block plan in **Figure 3.1**, the building disposition is largely similar to that under the approved DSP.
- 3.2.6 Under the Current Indicative Proposal, the number of ancillary carparking spaces will be fewer than that in the Approved DSP, which can reduce the extent of underground carpark (see **Table 3.2**) and enhance construction efficiency.
- 3.2.7 It should be noted that the S16 Planning Application is a “non-scheme-based” submission, thus the notional design of the Current Indicative

Proposal shown in **Figure 3.1** is for illustrative purposes only and will be subject to change at the detailed design stage.

Provision of Open Space and GIC Facilities in Site B

- 3.2.8 Under the “Single Site, Multiple Uses” initiative (SSMU), the multi-purpose GIC complex with a GFA of about 20,000sq.m. proposed in the approved DSP will be maintained, subject to timely confirmation of usage, funding and operation needs from the relevant Government departments and technical feasibility. The GIC complex is intended for the reprovisioning/ upgrading of the existing affected GIC and sports/ recreational facilities, the provision of a district health centre and new GIC facilities¹, subject to on-going liaison and agreement with relevant Government bureaux and departments.
- 3.2.9 Waterway Park of not less than 8,800sq.m. will be created in Site B to build a new iconic green hub complementing the adjoining Flower Market precinct. Detailed landscape design of Waterway Park will follow the Explanatory Statement (ES) of the approved DSP, subject to agreement with LCSD and other relevant departments. The overall provision of public open space with an area of not less than 16,200sq.m. within Site B will remain unchanged in the subject S16 Planning Application.

Public Vehicle Park and “Park n Walk” Concept

- 3.2.10 The proposed PVP at Site B (see **Table 3.2**) under the approved DSP will be provided. The number of car parking spaces and loading/unloading bays is subject to liaison with relevant Government departments at the detailed design stage. Subject to technical feasibility, the “Park n Walk” concept as advocated under the DSP by means of appropriate pedestrian connections between Site B and its surrounding areas (**Figure 3.1** refers) will be kept in the subject S16 Planning Application.

Urban Design of the Current Indicative Proposal

- 3.2.11 On urban design, the maximum building heights in Sub-area (1) and Sub-area (2) are maintained at 150mPD and 30mPD respectively. The wind enhancement features and design merits as stated in the ES of the approved DSP will be maintained as far as practicable, which include:
- The Waterway Park with a minimum width of 20m following the nullah alignment within the “OU(MU)2” zone;
 - Permeable elements at podium of Sub-area (1) of Site B to be provided as far as practicable;

¹ Such as Integrated Family Service Centre and Special Child Care Centre, subject to liaison with relevant Government departments.

- A building/ podium separation within Sub-area (1) of not less than 15m in width in a north-south direction;
- A staggered building height profile within Sub-area (1) of Site B, stepping down from 150mPD at the western part to not more than 130mPD at the eastern part as far as practicable; and
- Podium setback at ground level facing Sai Yee Street and Flower Market Road.

3.3 Retain Planning Gains of the Approved DSP

3.3.1 The Current Indicative Proposal will retain the planning gains under the approved DSP, including:

- Shaping the Scheme as an anchor development at the Nullah Road DN, with the proposed mixed-use developments to create synergy and serve as a catalyst for urban regeneration in the area;
- Forming a Waterway Park of about 8,800sq.m. in Site B to become a new public realm and district landmark in Mong Kok for public enjoyment. The whole Scheme (i.e. Site A and Site B) aims to provide public open space of not less than 17,000sq.m. in total to facilitate various activities and good accessibility as a public realm for public enjoyment;
- Adopting “linked-site” approach and echoing the SSMU initiatives to optimize land potential by developing multi-purpose GIC complex to create a “socio-economic activity hub” in the area;
- Enhancing road and pedestrian networks by providing a PVP to alleviate the district parking and loading/ unloading needs in relation to the operation of Flower Market, and podium setback at appropriate locations to enhance pedestrian circulation; and
- Adopting “integrated approach” of urban renewal actions by proposing potential pedestrian connections with adjoining areas (See **Figure 3.1**) to improve walkability, place-making works to shape back lanes abutting the Scheme to enrich local character².

² These urban renewal initiatives are outside the Scheme and may be implemented in form of public works of URA initiatives as appropriate. The details and implementation of these initiatives are subject to feasibility and further liaison and agreement with relevant Government bureaux/ departments and/ or stakeholders.

3.4 Access, Parking and Servicing Facilities

- 3.4.1 The Application Site is fronting Boundary Street, which is a primary distributor with busy vehicular traffic. Two run-in/ outs along Boundary Street are proposed to help relieve the “bottleneck” caused by the converging trips reaching the Flower Market precinct.
- 3.4.2 The proposed car parking and internal transport provision for the Current Indicative Proposal is summarised in **Table 3.2**. For details, please refer to the Traffic Impact Assessment (TIA) report provided in **Appendix A**.

Table 3.2 Proposed Car Parking and Internal Transport Provision

Facilities	Proposed Total Provision in Site B ⁽¹⁾
Private Car Parking Spaces ⁽²⁾	402 (Including accessible parking spaces)
Motorcycle Parking Spaces ⁽³⁾	25
L/UL Bays ⁽³⁾	25
Public Vehicle Parking ⁽⁴⁾	
-Private Car Parking	About 220
-Loading/ Unloading	About 10

Remarks:

- (1) For the detailed breakdown of the provisions for the residential, hotel, retail and GIC uses, please refer to the Traffic Impact Assessment report provided in **Appendix A**.
- (2) A GPS of 1 : 4 (high-end) is adopted in the assessment
- (3) Benchmarking 2021 HKPSG high-end requirement
- (4) Subject to liaison and agreement with Transport Department (TD)

3.5 Tentative Completion Year

- 3.5.1 Upon approval of this S16 Planning Application by TPB, the URA will continue with the land acquisition process, detailed design and go through the required submission/ procedures for implementation of YTM-013. The tentative completion year is anticipated by 2036.

4. PLANNING MERITS AND JUSTIFICATIONS

4.1 In Response to the Current Market Needs and Compatible with Government's Latest Directives on Suspension of Sales on Commercial Sites

4.1.1 Office vacancy rates have been high in recent years. The Financial Secretary (FS) in his 2025-2026 Budget Speech set out the Government's strategies to consider to rezone some of the commercial sites for residential use, allowing greater flexibility of land use. The further postponement of commercial land sales is also reflected in the recent 2026-27 Budget Speech. In view of the unoptimistic office market sentiment, the subject S16 Planning Application proposes to ensure optimal utilization of land resources and hence timely realization of the Scheme by enhancing the project's implementability with the flexibility to provide more domestic areas in response to the changing market conditions.

4.1.2 Moreover, the proposed change is also in line with TPB's comment recommended to URA in the 1329th TPB Meeting on 17 January 2025 for considering the representations of the draft DSP: *"given the fluctuations in the property market, URA should consider carefully the proportion of the commercial component at Site B"*. The proposed minor relaxation of domestic GFA will allow greater development flexibility in adjusting the GFA mix of domestic and non-domestic uses to meet the market conditions.

4.2 Enhance Development Flexibility and Project's Implementability

4.2.1 The Application Site is zoned "OU(MU)" in the approved DSP. There is no change to the zoning of the Application Site in the subject S16 Planning Application. Under the "OU(MU)" zoning in the approved DSP, the planning intention is for mixed non-industrial land uses. Flexibility for various types of compatible uses is allowed to meet the changing market and community needs. The "OU(MU)" zone also controls the maximum domestic GFA, maximum total GFA, and maximum BHR; while minor relaxation of such may be considered by the TPB. As stated in the planning intention, the "OU(MU)" zone aims to provide design flexibility without control on the specific form and layout of the future development, which is considered necessary to facilitate project implementability to meet the changing market and community needs. The subject S16 Planning Application is a "non-scheme-based" submission, which tallies with the "OU(MU)" zone controlling mainly on the planning intention of the mixed non-industrial land uses and development parameters but not specifically on the building design.

4.2.2 The URA may implement the Project with joint venture partners or by itself. The URA will ensure a responsive urban design form and layout of the Project which is compatible with the surrounding cityscape. Upon the subject S.16 planning approval, the Project will proceed with detailed design and subsequent GBP submissions for relevant government

departments' approval, a concrete scheme layout can only be developed at the detailed design stage/ GBP submission stage for implementation.

- 4.2.3 To address the prevailing housing demand in Hong Kong, the S16 Planning Application proposes to increase the maximum domestic GFA to allow for more flat supply and facilitate the project's implementability under the current market trends. It can thereby facilitate the implementation of the first phase of the "Mong Kok East – Nullah Road Urban Waterway" DN, which is the first DN of YMDS.

4.3 Retain Planning Intention to Enhance Flower Market in the Approved DSP

- 4.3.1 Under the S16 Planning Application, if the maximum domestic GFA is implemented, the non-domestic GFA of Site B will be about 19,710sq.m., i.e. about 10,755sq.m. in Sub-Area (1) (equivalent to a NDPR of 1.5) and 8,955sq.m. in Sub-Area (2). The proposed non-domestic GFA will still allow sufficient provision of retail uses in Site B for ground-floor retail activities. This will create a retail frontage which injects street vibrancy and enables expansion of the Flower Market precinct, and thereby reinforcing local characters.

- 4.3.2 The change in non-domestic GFA in Site B will not adversely affect the relocation of the affected flower shop operators. Adequate and suitable spaces will be provided within the development as far as practicable to accommodate their needs to ensure a smooth transition and operational continuity in the Flower Market. As such, the subject S16 Planning Application will not affect the planning intention to enhance the Flower Market precinct as stated in the approved DSP.

4.4 Retain Planning Intention of the Approved DSP and In Line with the Recommendations of YMDS

- 4.4.1 Despite the proposed minor relaxation of domestic GFA in Site B, the Current Indicative Proposal under the S16 Planning Application in Site B seeks to establish a mixed-use development, comprising residential, commercial, retail uses and GIC facilities, which are in line with the planning intention to create a mixed-use development with diverse leisure and commercial activities under the approved DSP. Such mixed uses will shape the area as a vibrant "socio-economic activity hub" in Mong Kok East as envisaged in YMDS. The S16 Planning Application is in line with the recommendations of YMDS.

- 4.4.2 The proposed development is compatible with the surrounding land uses which are largely residential buildings with ground-floor active retail activities in the Flower Market. Physical segregation will be provided to separate the residential uses from the non-residential portion of the building. The proposed development in Site B will not create any interface problems among various uses within the development. It complies with the TPG Guidelines No.42.

4.5 Retain Previously Committed Planning Gains and Design Merits

- 4.5.1 The planning merits proposed in the approved DSP mentioned in **Section 3.3.1** will be retained, including creation of Waterway Park for public enjoyment, provision of GIC facilities for public use and provision of a PVP for relieving traffic congestion to improve walkability. The wind enhancement features and design merits stated in **Section 3.2.9** will also be maintained as far as practicable to enhance the urban environment.

4.6 No Insurmountable Technical Impacts anticipated

- 4.6.1 Technical assessments have been conducted based on the notional design for the Application Site. To ascertain the technical feasibility, a conservative approach similar to that under the approved DSP is adopted for GFA-sensitive assessments for aspects including traffic, noise, environmental, drainage, sewerage and water supply by adding an extra 10,000sq.m. non-domestic GFA for GIC uses up to a total of 30,000sq.m. GFA, and a +5% sensitivity test.
- 4.6.2 To demonstrate the complete picture and its accumulated impacts of the future development in the urban context, the whole DSP (i.e. both Site A and Site B) will be taken into account in the technical assessments of the S16 Planning Application.
- 4.6.3 The following paragraphs provide an overview of the potential technical impacts associated with the Current Indicative Proposal, indicating that no adverse impacts arising from the proposed minor relaxation of domestic GFA are anticipated. Relevant mitigation measures have been recommended where necessary.

No Adverse Traffic Impact

- 4.6.4 A Traffic Impact Assessment (TIA) (**Appendix A** refers) has been conducted to assess the traffic impact and proposed provision of internal transport facilities of the Scheme with the proposed minor relaxation of domestic GFA. Two run-in/ outs along Boundary Street are proposed to relieve the “bottleneck” caused by the converging trips reaching the Flower Market precinct. The proposed parking provision aligns with the requirements in the Hong Kong Planning Standards and Guidelines.
- 4.6.5 The findings show that the Current Indicative Proposal with the proposed increase in domestic GFA will not induce any adverse impact on traffic and pedestrian walking environment. All identified junctions and pedestrian walkways (with proposed improvement measures) will continue to operate with ample capacity in design year 2039 (i.e. 3 years after the tentative completion year of 2036). The traffic impact is acceptable from traffic engineering point of view.

No Adverse Noise Impact

- 4.6.6 Assessment on the potential noise impact has been included in the EA report (**Appendix B** refers). The assessment results indicated that with the proposed mitigation measures, such as provision of enhanced acoustic window, acoustic balcony, fixed glazing etc., a 97.8% compliance of HKPSG's road traffic noise standard of 70 dB(A) would be achieved and no adverse road traffic noise is anticipated. Furthermore, the assessment results confirm that subject to mock test of the proposed mitigation measures such as acoustic balcony and window at the detailed design stage, there will be no adverse noise impact arising from the Mong Kok Stadium on the proposed development.

No Adverse Waste Management Impact

- 4.6.7 Assessment on the potential waste management impact has been included in the EA report (**Appendix B** refers) and the findings show that with appropriate site management and mitigation measures, no adverse waste management impact is anticipated.

No Adverse Land Contamination Impact

- 4.6.8 According to the Land Contamination Assessment of the approved DSP, potential land contamination is unlikely to arise from the activities within the Scheme.

No Adverse Drainage Impact

- 4.6.9 A Drainage Impact Assessment (DIA) has been conducted to evaluate the potential drainage impact of the Scheme (**Appendix C** refers). To facilitate the proposed development and the separate public works/urban renewal initiatives to provide underground pedestrian connection, diversion of existing pipes and new pipes are proposed as appropriate. The findings concluded that with the proposed new pipes and upgrades, the downstream pipes will be able to cater for the expected peak stormwater flow, and thus no adverse impact to the public drainage system arising from the proposed development with the proposed increase in domestic GFA in the Application Site is anticipated.

No Adverse Sewerage Impact

- 4.6.10 A Sewerage Impact Assessment (SIA) has been conducted to estimate the sewerage flow in both the existing and future scenarios with and without the proposed development respectively (**Appendix D** refers). The SIA report concluded that with the proposed diversion of existing pipes and new pipes to be connected with the existing sewerage systems, manholes and sewers, the existing public sewerage system would have sufficient capacity to cater for the sewerage generated by the proposed development. No adverse impact to the sewerage system

arising from the proposed increase in domestic GFA in the Application Site is anticipated.

No Adverse Water Supply Impact

- 4.6.11 A Water Supply Impact Assessment (WSIA) has been conducted (**Appendix E** refers) and the findings concluded that with proposed pipe modification and new pipes, the existing fresh and salt water supply systems in the vicinity are adequate to meet the demand arising from the Scheme with the proposed increase in domestic GFA in the Application Site.

No Adverse Air Quality Impact

- 4.6.12 The Air Quality Impact Assessment (AQIA) of the Approved DSP demonstrated that no adverse air quality impact on the proposed development in the whole DSP area is anticipated. Besides, with the implementation of appropriate dust suppression measures and good site practices, no adverse air quality impact is anticipated during the construction stage.

No Adverse Visual Impact

- 4.6.13 The number of building towers and the maximum building heights of 150mPD and 30mPD under the approved DSP will be maintained in the S16 Planning Application. The staggered building height profile as stated in the ES of the approved DSP will also be adopted and maintained as far as practicable at Sub-area (1) of Site B, stepping down from 150mPD at the western part to not more than 130mPD in the eastern part. Given that there is no change in BHR and number of towers under the S16 Application, and as demonstrated in the Visual Impact Assessment (VIA) of the approved DSP, no significant visual impact arising from the proposed development on the surrounding built environment is anticipated.

No Adverse Air Ventilation Impact

- 4.6.14 As mentioned, there will be no change to the BHR and number of building towers. The proposed change in maximum domestic GFA can be accommodated within similar building envelope. As demonstrated in the notional block plan in **Figure 3.1**, the disposition of buildings and intended urban design features are largely similar with those in the notional scheme under the approved DSP. The Waterway Park at Site B will be also kept and act as the major ventilation corridor running in a northeast and southwest direction. Given that the design merits stated in **Section 3.2.9** will be retained and as demonstrated in the Air Ventilation Assessment (AVA) of the approved DSP, no adverse air ventilation impact is anticipated.

Landscape and Greenery

- 4.6.15 All Old and Valuable Trees (OVT), Stone Wall Trees (SWT) and mature trees within the Scheme area identified in the tree survey report of the approved DSP will be retained. The overall landscaping and greening proposal of the Scheme including the Waterway Park in the Application Site will follow the ES of the approved DSP and is subject to further liaison with relevant Government departments where appropriate.

5. CONCLUSION

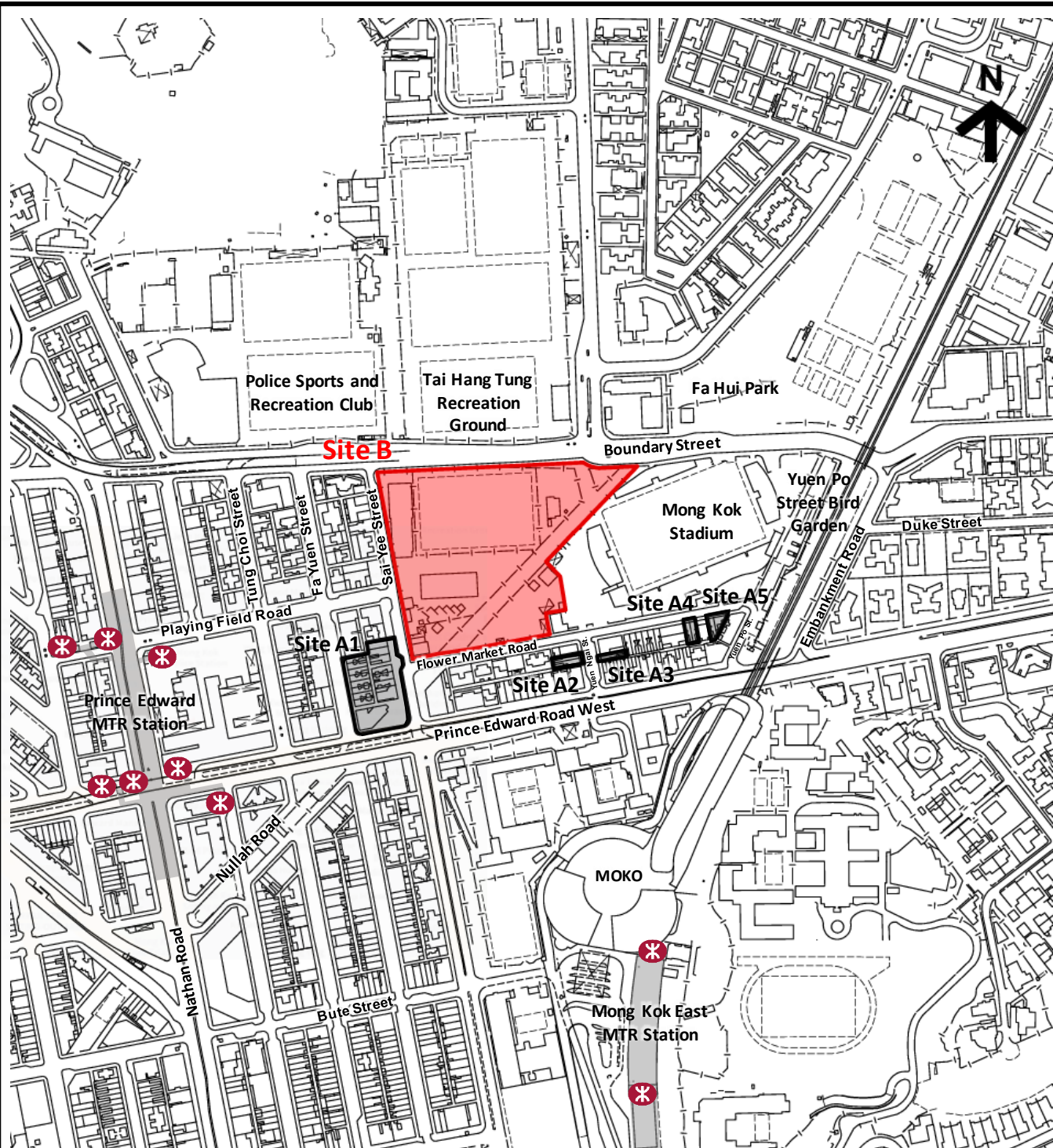
- 5.1 The Application Site of this subject S16 Planning Application is Site B of the Approved URA Sai Yee Street/ Flower Market Road Development Scheme (YTM-013). This planning application seeks the TPB's permission to allow more flexibility on the GFA mix for the future development. There will be no change in the total GFA and BHR of the Application Site, and all planning merits and gains outlined in the approved DSP will be retained. The proposed change will not jeopardise the planning intention of the approved DSP.
- 5.2 The Current Indicative Proposal is consistent with the planning intention of the "OU(MU)2" zoning under the Approved DSP by establishing a mixed-use development with residential and commercial uses, as well as provision of an at-grade Waterway Park and GIC facilities. It is also in line with recommendations under YMDS and forms part of the key district landmark and a "socio-economic activity hub" in Mong Kong East. The non-domestic portion of Site B can still inject economic activities and vibrancy to the Flower Market precinct.
- 5.3 To facilitate development flexibility, this S16 Planning Application seeks TPB's approval for minor relaxation of the maximum permissible domestic GFA in Sub-area (1) of Site B from 46,605sq.m. to 53,775sq.m, (equivalent to DPR from 6.5 to 7.5) while keeping the total GFA of 64,530sq.m (equivalent to a total PR of 9) and the maximum BHR of 150mPD. There will be no change in Sub-area (2) of Site B.
- 5.4 The subject S16 Planning Application is a "non-scheme-based" submission. The notional design and indicative development parameters provided are solely for illustration purposes and for conducting necessary technical assessments.
- 5.5 Relevant technical assessments on traffic, noise, waste management, drainage, sewerage, and water supply aspects have been conducted and the findings concluded that the Current Indicative Proposal of the subject S16 Planning Application is technically feasible and no insurmountable problem is anticipated.
- 5.6 The subject S16 Planning Application is supported by the following development planning merits and justifications:
- In response to the current market needs and compatible with Government's latest directives on suspension of sales on commercial sites;
 - Enhance development flexibility and project's implementability;
 - Retain planning intention to enhance Flower Market in the approved DSP;
 - Retain the planning intention under the approved DSP and in line with the recommendations of YMDS;

- Retain previously committed planning gains and design merits; and
- No Insurmountable technical impacts anticipated.

5.7 In light of the merits and justifications of S16 Planning Application of the Application Site presented in this planning statement, the TPB is respectfully requested to give favourable consideration to the application.

URBAN RENEWAL AUTHORITY

June 2026



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Application Site



Scheme Area

EXTRACTED PLAN PREPARED ON
22.04.2026 BASED ON SURVEY SHEET
NO. T11-NW-14B,
T11-NW-14D & T11-NW-19B

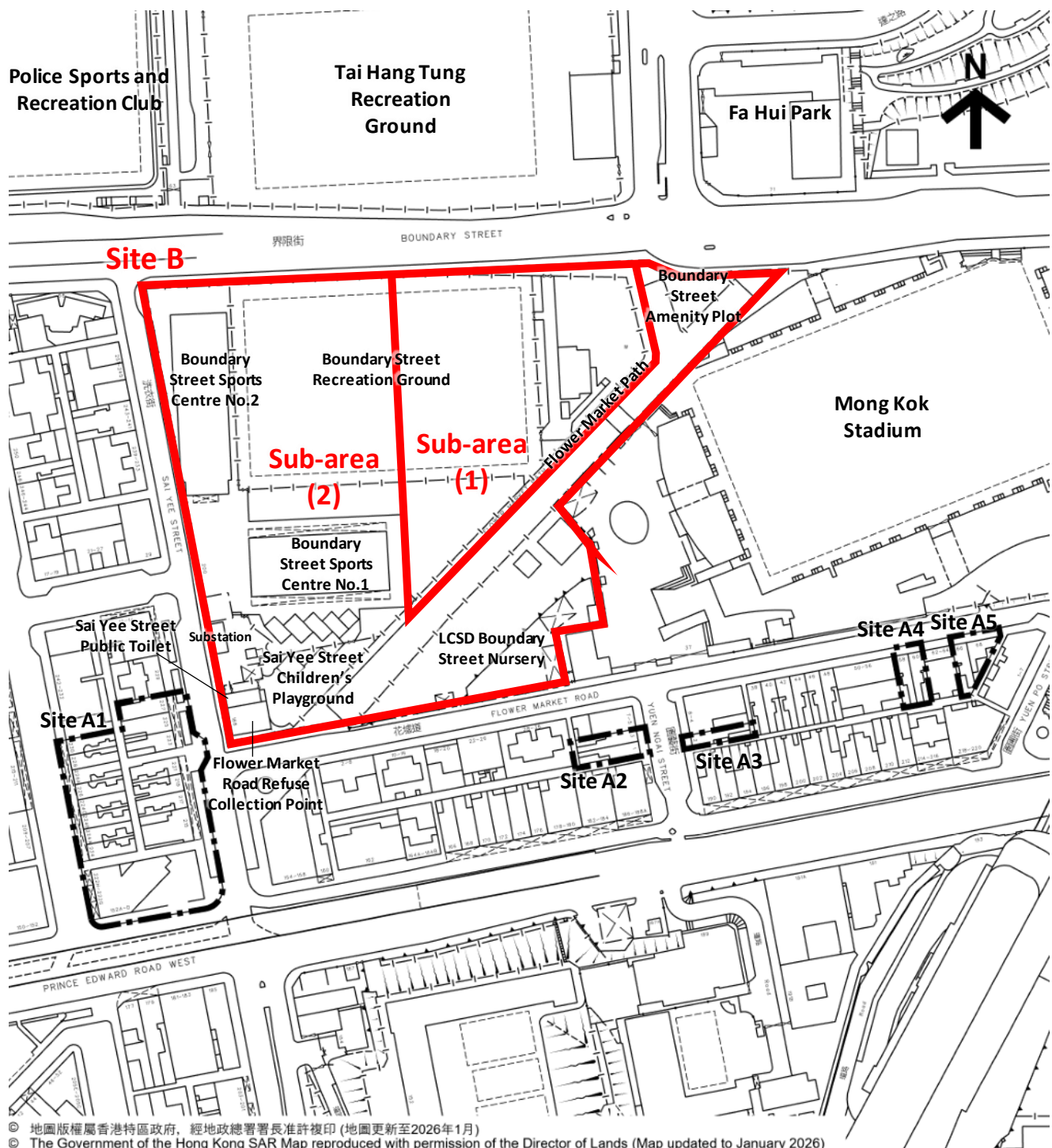
Location Plan

Sai Yee Street /
Flower Market Road
Development Scheme (YTM-013)

Scale: 1:5000



Figure 2.1



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Application Site



Scheme Area

Site Plan

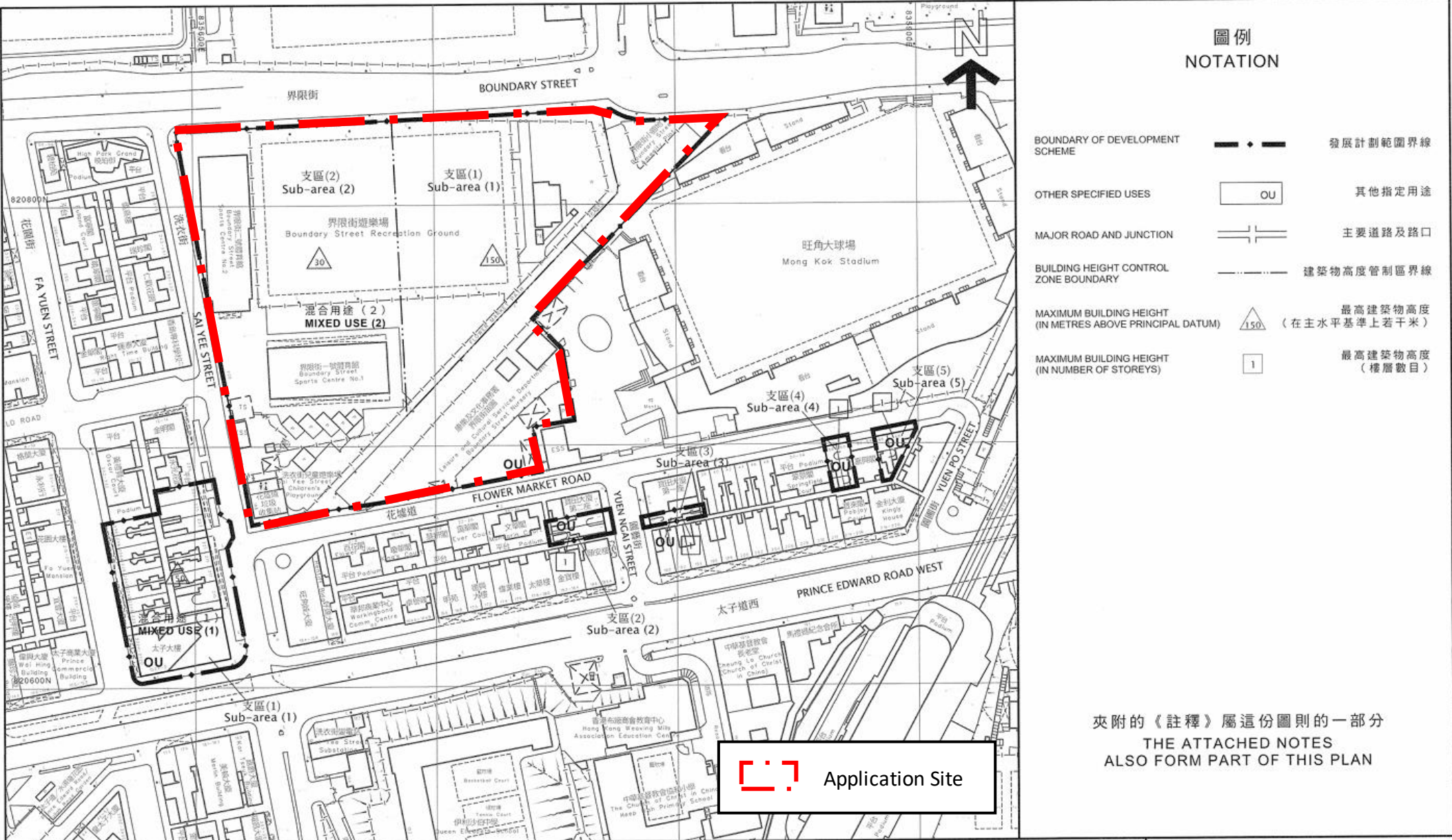
Sai Yee Street /
 Flower Market Road
 Development Scheme (YTM-013)

Scale: 1:2000



Figure 2.2

EXTRACTED PLAN PREPARED ON
 22.04.2026 BASED ON SURVEY SHEET
 NO. T11-NW-14D



行政長官會同行政會議於2025年4月8日根據城市規劃條例第9(1)(a)條核准的圖則
APPROVED BY THE CHIEF EXECUTIVE IN COUNCIL UNDER SECTION 9(1)(a) OF THE TOWN PLANNING ORDINANCE ON 8 APRIL 2025

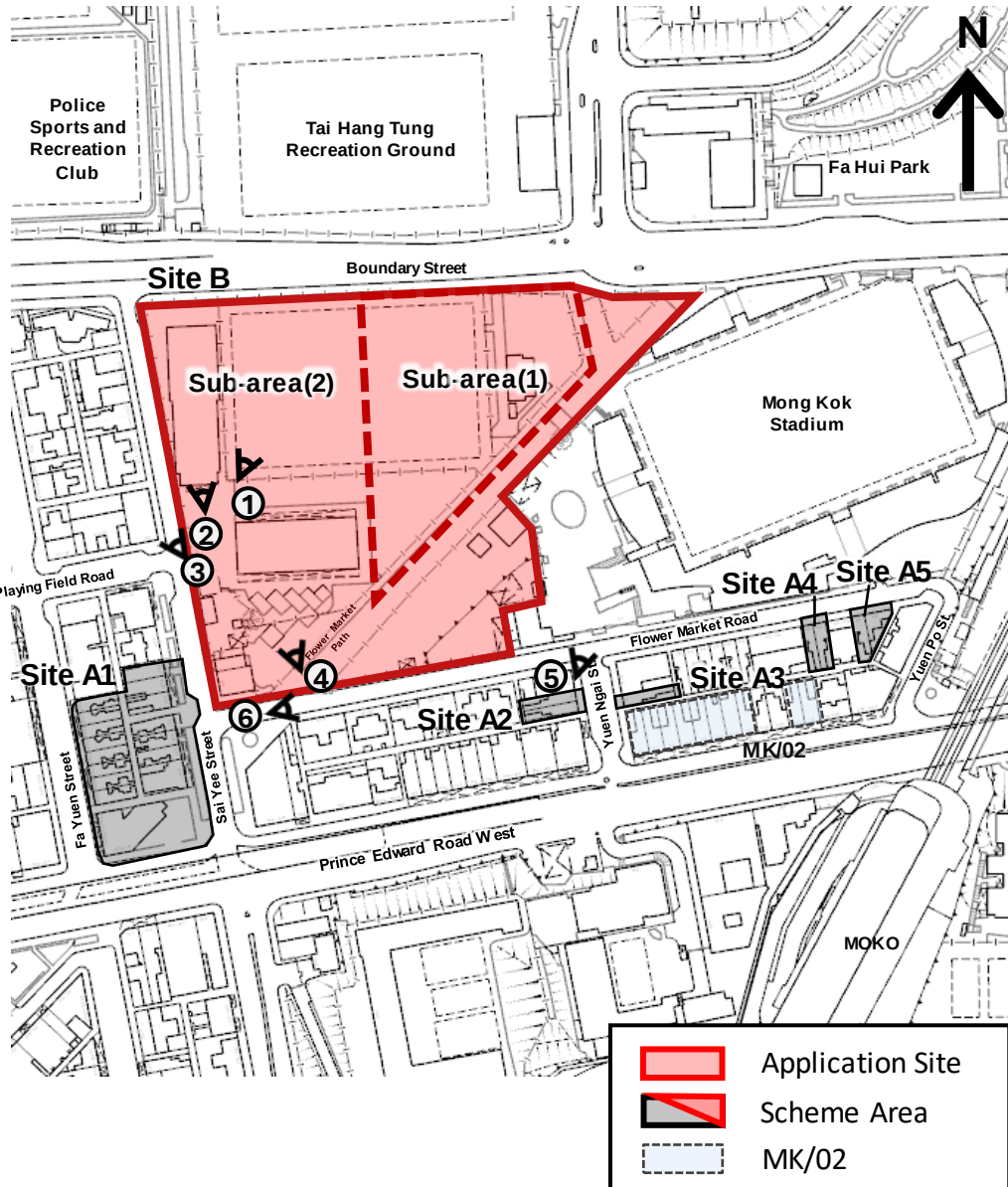
Ms Carmen KONG 江嘉敏女士
CLERK TO THE EXECUTIVE COUNCIL 行政會議秘書

香港城市規劃委員會依據城市規劃條例擬備的市區重建局洗衣街／花墟道發展計劃圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
URBAN RENEWAL AUTHORITY SAI YEE STREET / FLOWER MARKET ROAD
DEVELOPMENT SCHEME PLAN

SCALE 1 : 1 500 比例尺
米 METRES 30 0 30 60 90 120 METRES 米

依據市區重建局條例第25(3)(a)條擬備
PREPARED UNDER SECTION 25(3)(a) OF THE URBAN RENEWAL AUTHORITY ORDINANCE

圖則編號 PLAN No. S/K3/URA5/2



Boundary Street Recreation Ground



Boundary Street Sports Centre No.2



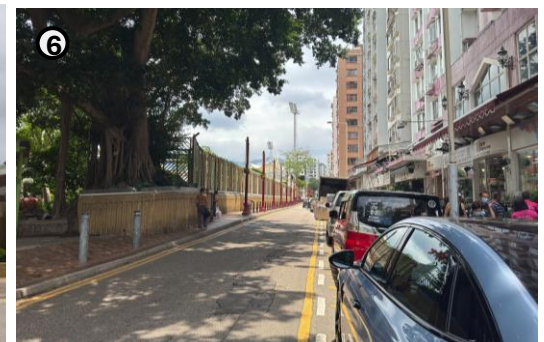
Buildings along Sai Yee Street



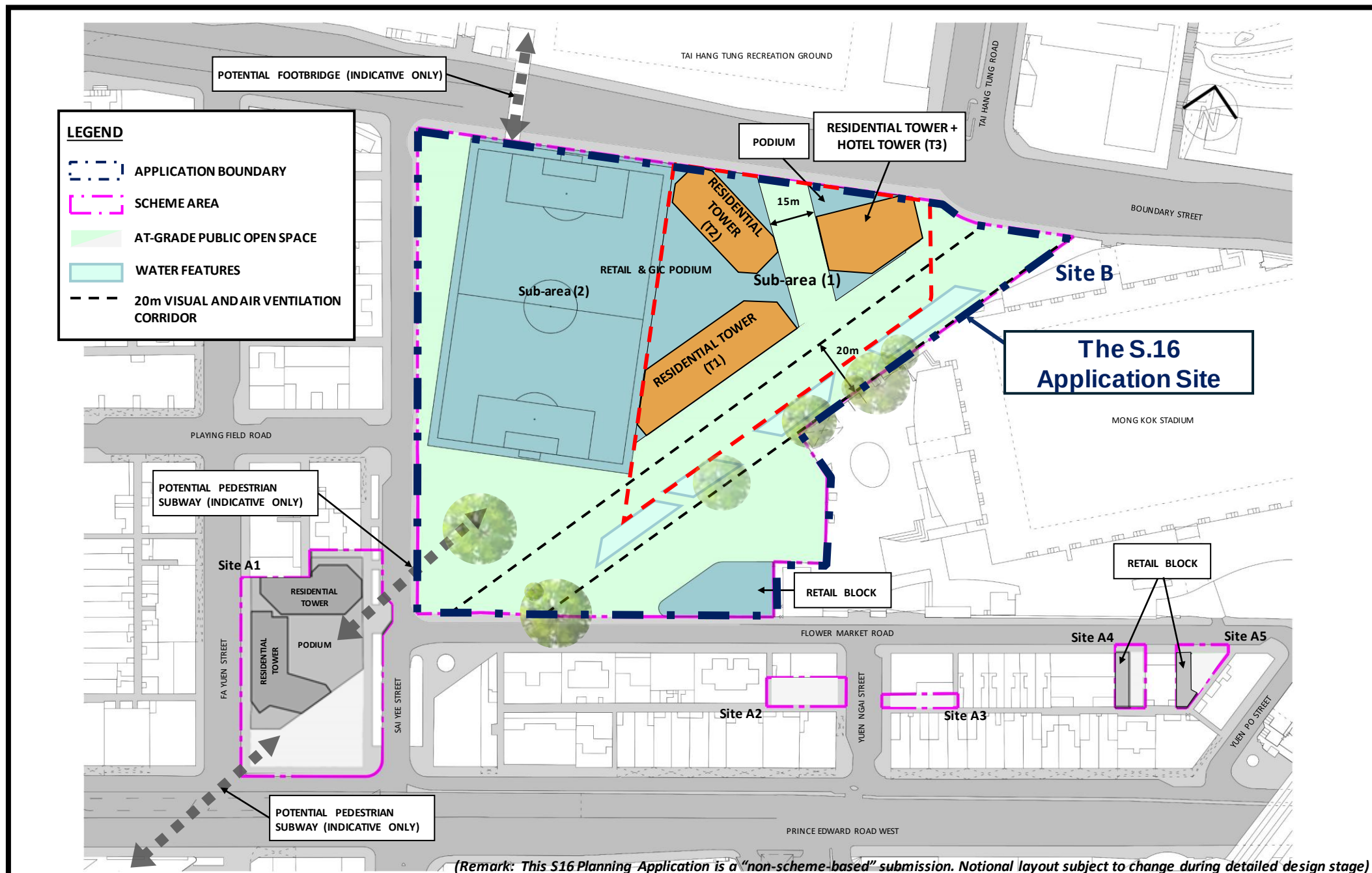
Sai Yee Street Children's Playground

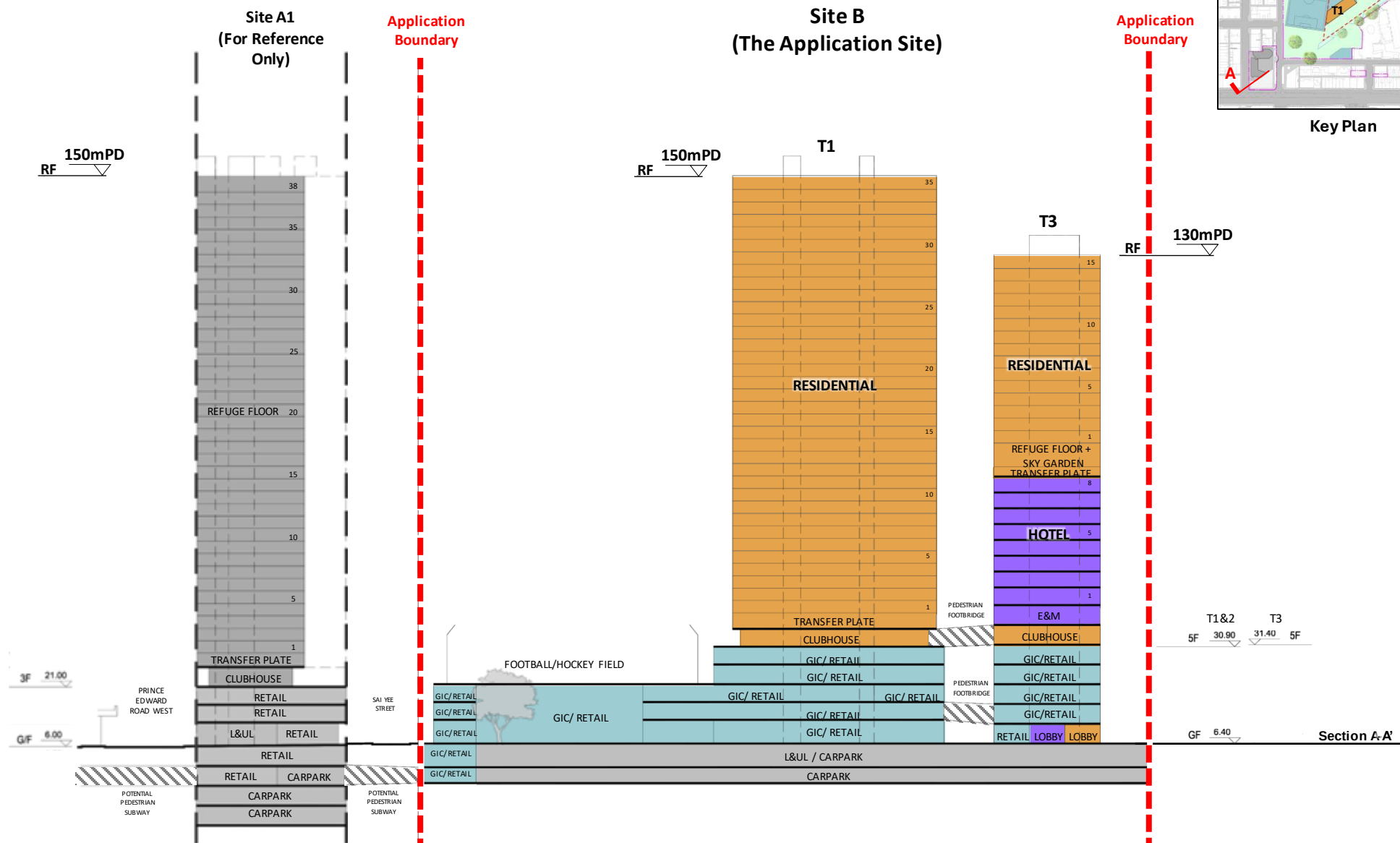


Mong Kok Stadium

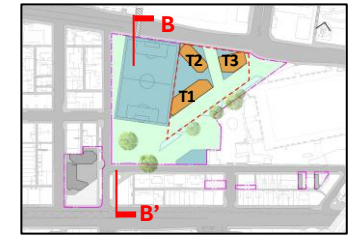


Flower Market Road

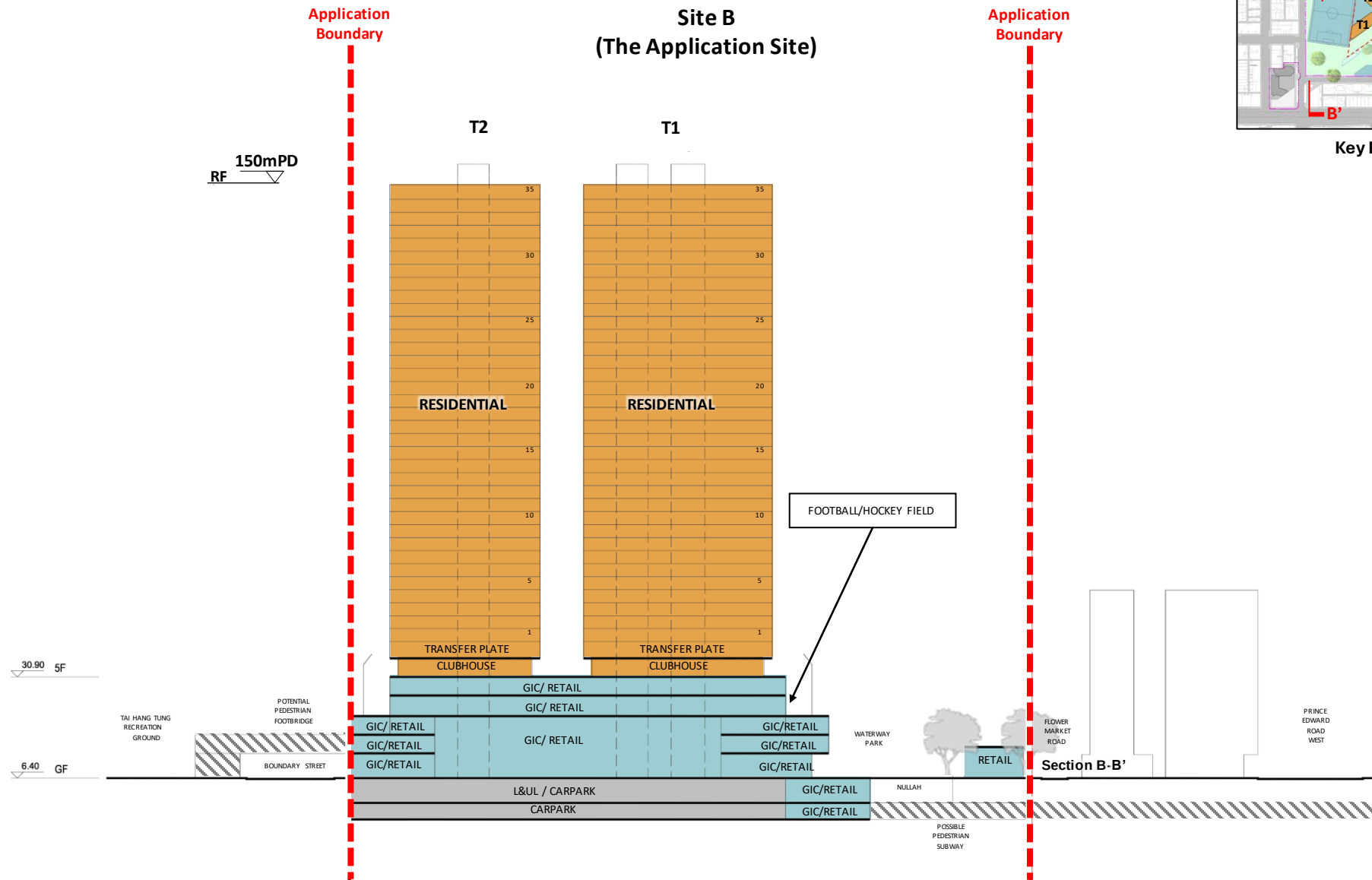




(Remark: This S16 Planning Application is a “non-scheme-based” submission. Notional layout will be subject to change during detailed design stage)



Key Plan



(Remark: This S16 Planning Application is a “non-scheme-based” submission. Notional layout will be subject to change during detailed design stage)

**Section 16 Planning Application for Proposed Minor Relaxation of
the Maximum Domestic GFA of Site B for the Urban Renewal
Authority Sai Yee Street/ Flower Market Road Development
Scheme (“YTM-013”), Mong Kok, Kowloon**

JUN 2026

Reference Number CHK50908510

TRAFFIC IMPACT ASSESSMENT REPORT



SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF THE MAXIMUM DOMESTIC GFA OF SITE B FOR THE URBAN RENEWAL AUTHORITY SAI YEE STREET/ FLOWER MARKET ROAD DEVELOPMENT SCHEME (“YTM-013”), MONG KOK, KOWLOON

TRAFFIC IMPACT ASSESSMENT REPORT

IDENTIFICATION TABLE	
Client/Project owner	Urban Renewal Authority
Project	Section 16 Planning Application for Proposed Minor Relaxation of the Maximum Domestic GFA of Site B for the Urban Renewal Authority Sai Yee Street/ Flower Market Road Development Scheme (“YTM-013”), Mong Kok, Kowloon
Study	Traffic Impact Assessment Report
Date	Jun 2026
File name	L2600875 URA_YTM-013_TIA_20260604.docx
Reference number	CHK50908510
Version	1

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1. INTRODUCTION

1.1 Background

- 1.1.1 The Urban Renewal Authority (“URA”) has commenced the proposed Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under Section 25 of the Urban Renewal Authority Ordinance (“URAO”) on 15 March 2024. On 8 April 2025, the draft Development Scheme Plan (“DSP”) was approved by the Chief Executive in Council, and its decision was gazetted on 17 April 2025. The approved DSP No. S/K3/URA5/2 was exhibited for public inspection on the same day.
- 1.1.2 To optimize the utilization of the Scheme area and in view to the current unoptimistic office market sentiment with a high office vacancy rate and the Government’s directive of suspending the sales of commercial sites, the URA proposes to increase the maximum domestic Gross Floor Area (GFA) to allow flexibility for future development to meet the market needs and enhance market attractiveness of the Scheme. A Section 16 planning application (S.16 Application) is proposed to seek for minor relaxation of domestic GFA in Sub-area (1) of Site B (the Whole Site B as the Application Site), zoned as “OU(MU)2” from 46,605 m² (equivalent to a Domestic Plot Ratio (“DPR”) of 6.5) to 53,775 m² (equivalent to a DPR of 7.5), while keeping the total maximum GFA of Site B unchanged. The Application Site of the current S.16 Application will only cover Site B of the approved DSP.
- 1.1.3 This S.16 Application is a non-scheme-based submission. The notional design is prepared based on the proposed minor relaxation of the Approved DSP parameters. Under the non-scheme-based approach, the notional design and indicative development parameters provided are only for illustrative purposes and for conducting necessary technical assessments to demonstrate the impacts of the proposed minor relaxation. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S.16 Application.
- 1.1.4 MVA Hong Kong Limited is commissioned by the URA to conduct a Traffic Impact Assessment (TIA) to support the submission of the S.16 Planning Application to Town Planning Board (TPB) to seek for minor relaxation of maximum domestic GFA of Site B.

1.2 Study Objective

- 1.2.1 The main objective of this study is to examine the potential traffic impact generated by the proposed development on the adjacent local road and pedestrian network. The key tasks are summarized as follows:
- to assess the existing traffic conditions in the vicinity of the proposed development;
 - to forecast traffic demands on the adjacent road and pedestrian network for the design years;
 - to estimate the likely traffic generated by the proposed development during operation stage; and
 - to assess the impact of the generated traffic on the adjacent road network during operation stage.

1.3 Report Structure

1.3.1 This TIA report is structured into the following chapters:

Chapter 2 – Proposed Development Context - presents the proposed development schedule, the proposed car parking provisions, pick-up/drop-off arrangement and the vehicular and pedestrian access arrangements.

Chapter 3 – Existing Traffic Conditions - describes the existing road network, public transport and pedestrian facilities in the vicinity of the proposed development, presents the traffic survey findings and assesses the existing traffic conditions.

Chapter 4 – Traffic Forecast - summarizes the methodology of traffic forecasts and presents the traffic generations and attractions of the proposed development.

Chapter 5 – Traffic Impact Assessment - presents the findings of the traffic impact assessment for the design year.

Chapter 6 – Summary and Conclusion - presents the findings of the study and conclusion regarding the traffic issue related to the proposed development.

2. PROPOSED DEVELOPMENT CONTEXT

2.1 Overview

- 2.1.1 The Scheme is located in the north-eastern part of Mong Kok. The location of the Scheme is shown on **Drawing No. 2.1**. The Scheme has a total gross site area of 29,315m² and is divided into Site A and Site B.
- 2.1.2 The Application Site, i.e. Site B of the Scheme, is currently occupied by various leisure, recreation and GIC facilities, including Boundary Street Sports Centre No.1 and No.2, Boundary Street Recreation Ground, Sai Yee Street Children's Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department ("LCSD") Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath. There is no private lot within Site B.
- 2.1.3 Site A of the Scheme (not forming the Application Site) comprises five land parcels occupied by low-rise residential/ composite buildings aged 60 and above.
- 2.1.4 According to the approved DSP of the Scheme, Site B, the Application Site, is zoned "Other Specified Uses (Mixed Use) 2" ("OU(MU)2"), and is further divided into Sub-area (1) and Sub area (2). Sub-area (1) of Site B will be for a high-rise development with a maximum domestic gross floor area ("GFA") of 46,605m² and a total GFA of 64,530 m², as well as a building height restriction ("BHR") of 150mPD adopting a stepped height profile. Sub-area (2) of "OU(MU)2" zone comprises the Waterway Park and ancillary retail/ commercial uses and LCDS's sports/ GIC facilities with a BHR of 30mPD. It has a maximum non-domestic GFA of 8,955 m².
- 2.1.5 Site A (not forming the Application Site) is zoned "Other Specified Uses (Mixed Use) 1" ("OU(MU)1") and it consists of 5 Sub-areas – Sub-areas (1) to (5) (i.e. Sites A1 – A5) . Site A1 will be developed for residential development cum commercial podium, with a BHR of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5.
- 2.1.6 Under this minor relaxation application , the maximum domestic GFA of Sub-area (1) in Site B is proposed to increase from 46,605m² to approximately 53,775m², equivalent to an increase in DPR from 6.5 to 7.5 (see **Table 2-1**). The total GFA for Sub-area (1) remains at 64,530m² (PR = 9.0). The development parameters of Sub-area (2) of Site B remain the same as the under the previously endorsed DSP.

Table 2-1 Comparison between the Approved DSP and the Current S.16 Application Proposal (Site B)

DEVELOPMENT PARAMETERS OF SITE B	APPROVED DSP [A]			CURRENT S.16 APPLICATION [B]			DIFFERENCE [B] – [A] (% CHANGE)
Zoning	OU(MU)2			OU(MU)2			N/A
Gross Site Area of the Application Site (m ²)	About 24,870			About 24,870			N/A
	SUB-AREA (1)	SUB-AREA (2)	TOTAL [A]	SUB-AREA (1)	SUB-AREA (2)	TOTAL [B]	
Net Site Area (m²) (for PR Calculation) ⁽¹⁾	About 7,170	About 17,700	About 24,870	About 7,170	About 17,700	About 24,870	N/A
Maximum GFA							
- Total GFA (m ²)	64,530	8,955	73,485	64,530	8,955	73,485	N/A
- Domestic GFA (m ²)	46,605	N/A	46,605	53,775	N/A	53,775	+15.4%
Maximum Building Height (mPD)	150	30	N/A	150	30	N/A	N/A

Note: (1) Subject to site survey.

2.2 Proposed Development Schedule

- 2.2.1 As shown in **Drawing No. 2.2**, a notional design is prepared based on the development parameters to demonstrate the proposed planning intention and development concepts of the Scheme. Compared with the notional design of the approved DSP, the current notional design for S.16 Application has only revised the design at Sub-area (1) of Site B, while keeping the notional design of other parts in the DSP unchanged. Both Site A and Site B will be taken into account to demonstrate the accumulated traffic impacts of the whole Scheme.
- 2.2.2 Regarding the Application Site, under current notional design at Sub-area (1) of Site B, a development featuring 3 high-rise developments, including 2 residential towers and 1 mixed-use composite tower with residential/ hotel uses, along with retail/ recreation and GIC facilities at the podium level, is proposed. Ancillary parking and public vehicle park (PVP) are proposed at the basement levels in Site B. An at-grade open space, named as “Waterway Park”, is proposed within Sub-area (2) of Site B. Ancillary retail facilities are proposed at ground floor and the Waterway Park to bring retail activities and vibrancy.
- 2.2.3 Compared to the approved Scheme for approved DSP, the major change is at Sub-area (1) of Site B, where the hotel/ office tower in the approved Scheme is changed to a composite tower of residential/ hotel tower, with the same height (130mPD) in the current S.16 Application.
- 2.2.4 The notional design of Site A is the same as the approved DSP and will be referenced for the purpose of technical assessments to support the S.16 Application. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2-A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.

- 2.2.5 To enhance walkability and connectivity of pedestrian circulation, the following potential pedestrian connections proposed in the approved DSP are maintained:
- (i) Footbridge to connect between Site B and Tai Hang Tung Recreation Ground;
 - (ii) Subway to connect between Site A1 and Site B; and
 - (iii) Potential subway connection from Site A1 across Prince Edward Road West towards the Prince Edward MTR Station and/or the commercial spine along Nathan Road.

All these pedestrian footbridges/ subways shall be subject to technical feasibility, detailed design and agreement with relevant Government departments. Footbridge/ subways that fall outside DSP boundaries shall be under separate public works / revitalization initiatives not forming part of the Scheme.

- 2.2.6 Referring to the ownership, management and maintenance (M&M) of these connections, for connection (i), it will be designed to land at public pavement and is proposed to be handed over to TD/HyD for ownership, M&M upon completion. For connections (ii) and (iii), their ownership, M&M are subject to detailed design and further liaison with relevant Government departments before land grant execution.
- 2.2.7 The proposed development in Site A and Site B of the Scheme will be redeveloped in phases and the tentative completion year of the whole project is in 2036.
- 2.2.8 This assessment is prepared based on the current notional design of the S.16 Application. The following tables illustrate the development parameters and notional layout of the proposed development, which is subject to changes at detailed design stage. The proposed development schedule is summarized in **Tables 2-2** and **2-3**.

Table 2-2 Proposed Development Schedule for Sites A1 – A5

SITE	A1	A2	A3	A4	A5
Gross Site Area	About 3,570 m ²	About 268 m ²	About 123 m ²	About 233 m ²	About 251 m ²
	About 4,445 m ²				
Net Site Area (subject to survey)	About 2,640 m ²	About 239 m ²	About 109 m ²	About 202 m ²	About 198 m ²
	About 3,388 m ²				
Development Parameters under the Approved DSP					
Zoning	OU (MU)1				
Maximum Domestic GFA	28,798 m ²				
Maximum Total GFA	30,492 m ²				
At-grade Open Space	About 800 m ²				
Notional Design					
Domestic GFA ⁽¹⁾	23,716 m ²	-	-	-	-
Non-Domestic GFA ⁽¹⁾	6,576 m ²	-	-	100 m ²	100 m ²
Total GFA	30,492 m ²				
No. of building blocks ⁽²⁾	2	-	-	1	1
Building Height	150 mPD	-	-	1 storey	1 storey
No. of Flats ⁽²⁾	474	-	-	-	-
Average Flat Size ⁽²⁾	50 m ²	-	-	-	-

Notes: (1) Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed mix in the current notional design is indicative only and subject to changes in detailed design stage.

(2) Number of blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-4 Proposed Parking and Service Provision for Site A1 (Domestic)

INTERNAL TRANSPORT FACILITY	HKPSG REQUIREMENT	PROPOSED PROVISION
Private Car Parking	For average flat size 50 sqm: 1.2 spaces per 4 – 7 flats with adjustment factors ⁽¹⁾ No. of flats = 474 Low-end: $474 / 7 \times 1.2 \times 0.75 \times 0.9 = 55$ nos. High-end: $474 / 4 \times 1.2 \times 0.75 \times 0.9 = 96$ nos. Required range of provision = 55 – 96 nos.	65
Visitors' Private Car Parking	5 visitor spaces per block with more than 75 unit No. of blocks with more than 75 units = 2 Required spaces = $5 \times 2 = 10$ nos.	10
Accessible Car Parking	2 spaces for 51 – 150 total car parking spaces Proposed total residential private car parking spaces = 65 + 10 = 75 nos. Required spaces = 2 nos. (include in 75 nos.)	2
Motorcycle Parking	1 space per 100 - 150 flats No. of flats = 474 Low-end: $474 / 150 \times 1 = 4$ nos. High-end: $474 / 100 \times 1 = 5$ nos. Required range of provision = 4 – 5 nos.	5
Loading and Unloading Bay	1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block No. of blocks = 2 Required loading / unloading bays = $2 \times 1 = 2$ nos.	2

Note: (1) Demand Adjustment Ratio (R1 = 1.2 for flat size of 40-70sqm), Accessibility Adjustment Ratio (R2 = 0.75 for rail accessibility < 500m) and Development Intensity Adjustment Ratio (R3 = 0.9 for Domestic PR >5.0 and ≤8.0) have been incorporated according to the latest HKPSG requirements.

Table 2-5 Proposed Parking and Service Provision for Site A1 (Non-Domestic)

INTERNAL TRANSPORT FACILITY	HKPSG REQUIREMENT	PROPOSED PROVISION
Private Car Parking (Retail)	Retail Development: 1 space per 150 – 300m² GFA GFA = 6,576 m² Low-end: 6,576 / 300 x 1 = 22 nos. High-end: 6,576 / 150 x 1 = 44 nos. Required range of provision = 22 – 44 nos.	33
Accessible Car Parking (Retail)	1 space for 1 – 50 total car parking spaces Proposed private car parking spaces (retail) = 33 nos. Required space = 1 no. (include in 33 nos.)	1
Motorcycle Parking (Retail)	Non-residential development: 5 to 10% of the total provision for private cars Proposed private car parking spaces (retail) = 33 nos. Low-end: 33 x 5 % = 2 nos. High-end: 33 x 10 % = 4 nos. Required range of provision = 2 – 4 nos.	4
Loading / Unloading Bay (Retail)	1 loading/ unloading bay for goods vehicles for every 800 to 1,200m², or part thereof, GFA. GFA = 6,576 m² Required spaces: Low-end: 6,576 / 1200 x 1 = 5.5 High-end: 6,576 / 800 x 1 = 8.2 Required range of provision = 6 – 9 nos.	6

Table 2-6 Proposed Parking and Service Provision for Site B (Domestic)

INTERNAL TRANSPORT FACILITY	HKPSG REQUIREMENT	PROPOSED PROVISION
Private Car Parking	For average flat size 50 sqm: 1.2 spaces per 4 – 7 flats with adjustment factors ⁽¹⁾ No. of flats = 1,080 Low-end: $1,080 / 7 \times 1.2 \times 0.75 \times 0.9 = 125$ nos. High-end: $1,080 / 4 \times 1.2 \times 0.75 \times 0.9 = 219$ nos. Required range of provision = 125 – 219 nos.	219
Visitors' Private Car Parking	5 visitor spaces per block with more than 75 units No. of blocks with more than 75 units = 3 Required spaces = $5 \times 3 = 15$ nos.	15
Accessible Car Parking	3 spaces for 151 – 250 total car parking spaces Proposed total residential private car parking spaces = $219 + 15 = 234$ nos. Required spaces = 3 nos. (include in 234 nos.)	3
Motorcycle Parking	1 space per 100 - 150 flats No. of flats = 1,080 Low-end: $1,080 / 150 \times 1 = 8$ nos. High-end: $1,080 / 100 \times 1 = 11$ nos. Required range of provision = 8 – 11 nos.	11
Loading and Unloading Bay	1 loading / unloading bay for goods vehicles within the site for every 800 flats or part thereof, subject to a minimum of 1 bay for each housing block No. of blocks = 3 Required loading / unloading bays = $3 \times 1 = 3$ nos.	3

Note: (1) Demand Adjustment Ratio (R1 = 1.2 for flat size of 40-70sqm), Accessibility Adjustment Ratio (R2 = 0.75 for rail accessibility < 500m) and Development Intensity Adjustment Ratio (R3 = 0.9 for Domestic PR >5.0 and ≤8.0) have been incorporated according to the latest HKPSG requirements.

Table 2-7 Proposed Parking and Service Provision for Site B (Non-Domestic)

INTERNAL TRANSPORT FACILITY	HKPSG REQUIREMENT	PROPOSED PROVISION
Private Car Parking (Retail)	Retail Development: 1 space per 150 – 300m ² GFA GFA = 14,710 m ² Low-end: 14,710 / 300 x 1 = 50 nos. High-end: 14,710 / 150 x 1 = 99 nos. Required range of provision = 50 – 99 nos.	99
Accessible Car Parking (Retail)	2 spaces for 51 – 150 total car parking spaces Proposed private car parking spaces (retail) = 99 nos. Required spaces = 2 nos. (include in 99 nos.)	2
Motorcycle Parking (Retail)	Non-residential development: 5 to 10% of the total provision for private cars Proposed private car parking spaces (retail) = 99 nos. Low-end: 99 x 5 % = 5 nos. High-end: 99 x 10 % = 10 nos. Required range of provision = 5 – 10 nos.	10
Loading / Unloading Bay (Retail)	1 loading/ unloading bay for goods vehicles for every 800 to 1,200m ² , or part thereof, GFA. GFA = 14,710m ² Low-end: 14,710 / 1,200 = 13 nos High-end: 14,710 / 800 = 19 nos Required range of provision = 13 – 19 nos.	19
Private Car Parking (Office)	Office Development: For the first 15,000m ² GFA: 1 car space per 150 – 200m ² GFA. Above 15,000m ² GFA: 1 car space per 200 – 300m ² GFA. GFA = 5,000m ² For first 15,000m ² , Low-end: 5,000 / 200 = 25 nos. High-end: 5,000 / 150 = 34 nos. Required range of provision = 25 – 34 nos.	34
Accessible Car Parking (Office)	1 space for 1 – 50 total car parking spaces Proposed private car parking spaces (retail) = 34 nos. Required spaces = 1 no. (include in 34 nos.)	2

INTERNAL TRANSPORT FACILITY	HKPSG REQUIREMENT	PROPOSED PROVISION
Motorcycle Parking (Office)	Non-residential development: 5 to 10% of the total provision for private cars Proposed private car parking spaces (office) = 34 nos. Low-end: $34 \times 5\% = 2$ nos. High-end: $34 \times 10\% = 4$ nos. Required range of provision = 2 – 4 nos.	4
Loading / Unloading Bay (Office)	1 loading/unloading bay for goods vehicles for every 2,000 to 3,000m² or part thereof, GFA. GFA = 5,000m² Low-end: $5,000 / 3,000 = 2$ nos. High-end: $5,000 / 2,000 = 3$ nos. Required range of provision = 2 – 3 nos.	3

- 2.3.2 Similar to the approved DSP, a high-end parking ratio is adopted for all categories of parking requirements at Site B for the proposed development. The carparking provision standard of office is adopted for the proposed hotel for conservative purpose. In addition, a Public Vehicle Park (PVP) will be provided at Site B for public use. Given the early planning stage of the Scheme, the detailed layout of the PVP in Site B is subject to detailed design and the exact number of the car parking spaces can only be ascertained at design stage. However, it is preliminarily estimated that about 220 car parking spaces and about 10 loading/ unloading bays (subject to detailed design) could be provided in the PVP. The provision of PVP is considered beneficiary from traffic point view as there is only one carpark in the surrounding area of the proposed development which could provide such a large number of car parking spaces, where is at the Grand Century Plaza.
- 2.3.3 The actual provision of parking spaces, including the possibility to provide motorcycle spaces in the PVP will be explored at the detailed design stage. Nevertheless, under the current notional design, motorcycle spaces are provided for retail portion of the proposed development at Site B, which can be used by the public while visiting the development.
- 2.3.4 The car parking spaces provision for Site A1 could only be provided in a mid-range parking requirement, taken into account of the following considerations:
- a major portion of Site A1 covers the existing decked nullah and its reserve area, space allowed for excavation for basement carpark is highly restrained;
 - Site A1 is proximate and easily accessible to public transport services, including both MTR station (Prince Edward Station) and major bus stops at Prince Edward Road West, Tung Choi Street and Nathan Road near Site A1 with lot of bus routes and GMB routes as shown in **Table 3-1**; and
 - a Public Vehicle Park (PVP) is proposed at Site B of the Scheme to address the parking demand.

2.3.5 The summary of parking facilities provision of the Proposed Development is shown in **Table 2-8**.

Table 2-8 Summary of Proposed Parking Facilities of the Proposed Development

FACILITY	SITE A1 (NOS.)	SITE B (NOS.)	SITES A2 – A5 (NOS.) ⁽⁴⁾	TOTAL
Residential Private Car Parking	65 ⁽¹⁾	219 ⁽²⁾	-	284
Visitors' Private Car Parking	10 ⁽¹⁾	15 ⁽¹⁾	-	25
Non-domestic Private Car Parking – Retail	33 ⁽¹⁾	99 ⁽²⁾	-	132
Non-domestic Private Car Parking – Office	-	34 ⁽¹⁾	-	34
Private Car Parking – GIC Uses ⁽³⁾	-	35 ⁽¹⁾	-	35
Total Car Parking Spaces	108	402	-	510
Residential Motorcycle Parking	5	11	-	16
Non-domestic Motorcycle Parking – Retail	4	10	-	14
Non-domestic Motorcycle Parking – Office	-	4	-	4
Total Motorcycle Parking Spaces	9	25	-	34
Residential Loading and Unloading space	2	3	-	5
Non-domestic Loading and Unloading bay – Retail	6	19	-	25
Non-domestic Loading and Unloading bay – Office	-	3	-	3
Total Loading and Unloading Spaces	8	25	-	33
Public Vehicle Park (PVP)				
Private Car Parking	-	About 220	-	About 220
Loading / Unloading Bay	-	About 10	-	About 10

Notes: (1) Including 1 no. of accessible parking spaces for disabled person.
(2) Including 2 nos. of accessible parking spaces for disabled person.
(3) Since the use for the GIC in Site B are still not confirmed at this stage of the project and so it will assume 35 car parking spaces will be provided for conservative purpose.
(4) As the GFA of Sites A2 to A5 are very minor (around 100 sqm), and thus no car parking spaces will be provided for all Sites A2 to A5.

2.4 Vehicular Access Arrangement

2.4.1 The proposed runs-in/out in Site A1 and Site B are the same as the TIA under the approved DSP. One run-in/out of Site A1 would be in all movement arrangement, which all vehicles could access to/from Fa Yuen Street as shown in **Drawing No 2.2**. The future major vehicular ingress/egress routings accessing Site A1 are shown in **Drawing No. 2.3**.

2.4.2 As shown in **Drawing No. 2.3**, vehicles from Kowloon East / New Territories East / Hong Kong will travel via Prince Edward Road West and Sai Yee Street to enter the development at Site A1. Vehicles from Kowloon West / New Territories West sides will travel via Cheung Sha Wan Road and Boundary Street to enter the development. Vehicles from Kowloon Central will travel via Sai Yee Street to enter the development. Vehicles from Shek Kip Mei will travel via Tai Hang Tung Road, Boundary Street, Knight Street, Prince Edward Road West and Sai Yee Street to enter the development. Vehicles leaving the development

toward Hong Kong / Kowloon Central sides will mainly travel via Prince Edward Road West and Nathan Road. Vehicles leaving the development toward Kowloon West / New Territories West sides will mainly travel via Prince Edward Road West and Portland Street. Vehicles leaving the development toward Kowloon East / New Territories East sides will mainly travel via Tung Choi Street and Boundary Street.

- 2.4.3 Two run-in/outs will be provided for Site B. One will be located at Boundary Street near Sai Yee Street which would be in all movement arrangement, all vehicles could access to/from Boundary Street. The other access will be located at the junction of Boundary Street / Tai Hang Tung Road which would be in ingress movement only for vehicles from Boundary Street as shown in **Drawing No 2.2**. The two run in/outs will be used by both ancillary car park for the development of Site B and the PVP. Proper management measures/ arrangement will be adopted in the future for different operational needs of the ancillary car park and the PVP. To ensure that no over-spill of queuing vehicles onto the public roads, subject to detailed design, the ticketing gate will be located at a deeper level to utilise the internal ramp as queueing spaces. With the proposed PVP, the two run-in/outs approach of Site B will help relieve the potential traffic bottleneck (J/O Prince Edward Road West / Sai Yee Street) caused by the converging trips reaching the vicinity of the Scheme area. The future major vehicular ingress/egress routings accessing Site B are shown in **Drawing No. 2.4**.
- 2.4.4 As shown in **Drawing No. 2.4**, for vehicles from Kowloon Central access to the development at the run-in/out at Boundary Street near Sai Yee Street, it will travel via Sai Yee Street. Vehicles from Kowloon West / New Territories West will travel via Cheung Sha Wan Road and Boundary Street to enter the development. For vehicles from Hong Kong / New Territories East / Kowloon East / Shek Kip Mei, it could be diverted from Sai Yee Street to the run-in at the junction of Boundary Street / Tai Hang Tung Road, it will travel via Prince Edward Road West and Embankment Road.
- 2.4.5 Vehicles leaving the development toward Kowloon East / Hong Kong / New Territories East sides will mainly travel via Boundary Street. Vehicles leaving the development toward Kowloon West / New Territories West sides will mainly travel via Boundary Street, Knight Street, Prince Edward Road West (including the flyover) and Lai Chi Kok Road. Vehicles leaving the development toward Kowloon Central will mainly travel via Boundary Street, Knight Street, Prince Edward Road West and Sai Yee Street. Vehicles leaving the development toward Shek Kip Mei will mainly travel will travel via Boundary Street eastbound, Knight Street and Embankment Road, Boundary Street westbound and Tai Hang Tung Road.

3. EXISTING TRAFFIC CONDITIONS

3.1 Existing Road Network

- 3.1.1 The existing road network in the vicinity of the proposed development at Mong Kok is shown in the location plan in **Drawing No. 2.1**.
- 3.1.2 The proposed development (Site A1 to A5 and Site B) is bounded by Boundary Street to the north, Fa Yuen Street to the east, Prince Edward Road West to the south and Yuen Po Street to the west.
- 3.1.3 Boundary Street and Prince Edward Road West act as the key primary distributors for the traffic access to/from the development.
- 3.1.4 The local streets surrounding the proposed developments such as Fa Yuen Street, Playing Field Road, Sai Yee Street and Flower Market Road are either provided with metered parking spaces, or are characterised by intensive kerbside activities, and are mainly in one-way directional traffic movement.

3.2 Public Transport Services

- 3.2.1 There is a well-established public transport system including railway, franchised buses, green mini-buses and taxis in the area surrounding the proposed developments. The details of the public transport services are summarized in **Table 3-1** and the location of public transport facilities are shown in **Drawing No. 3.1**.
- 3.2.2 There are currently 2 MTR stations (Prince Edward Station and Mong Kok East Station) located within 500m walking distance from the subject sites, and around 120 nos. of bus routes and 20 nos. of GMB routes serving the vicinity of subject sites.

Table 3-1 Public Transport Services in the vicinity of the Proposed Development

Franchised Bus

ROUTE NO.	ROUTING			FREQUENCY (MINUTES)
1	Chuk Yuen Estate	<->	Star Ferry	8-25
1A	Sau Mau Ping (Central)	<->	Star Ferry	7-20
2	Cheung Sha Wan (So Uk Estate)	<->	Star Ferry	15-20
2A	Mei Foo	<->	Lok Wah	10-25
2D	Wong Tai Sin	<->	Chak On Estate	20-30
2X	Choi Fook	<->	Mei Foo	20-30
3C	Tsz Wan Shan (North)	<->	China Ferry Terminal	12-30
3X ⁽²⁾	Tsz Wan Shan (North)	->	China Ferry Terminal	15-35
	Jordan (West Kowloon Station)	->	Tsz Wan Shan (North)	30
6	Lai Chi Kok	<->	Star Ferry	8-25
6C	Kowloon City Ferry	<->	Mei Foo	10-25

ROUTE NO.	ROUTING			FREQUENCY (MINUTES)
6D	Ngau Tau Kok	<->	Mei Foo	12-30
6E ⁽²⁾	Lei Yue Mun Estate	->	Cheung Sha Wan (So Uk Estate)	07:40 (1 departure)
	Cheung Sha Wan (So Uk Estate)	->	Lei Yue Mun Estate	18:05 (1 departure)
6F	Kowloon City Ferry	<->	Cheung Sha Wan (Lai Kok Estate)	25-35
6P ⁽²⁾	Lei Yue Mun Estate	<->	Cheung Sha Wan (So Uk Estate)	20
12A	Cheung Sha Wan (Hoi Tat Estate)	<->	Whampoa Garden	10-30
13P ⁽²⁾	Po Tat	->	Cheung Sha Wan (Lai Kok Estate)	07:40 (1 departure)
20A	Kai Tak Cruise Terminal	<->	West Kowloon Station	20-40
24	Kai Yip	<->	Mong Kok (Circular)	25-35
27	Shun Tin	<->	Mong Kok (Circular)	6-20
30X	Tsuen Wan (Allway Gardens)	<->	Whampoa Garden	13-30
32	Olympic Station	<->	Tsuen Wan (Shek Wai Kok)	20-30
33A	Tsuen Wan (Nina Tower)	<->	Mong Kok (Park Avenue)	17-30
35A	Kwai Chung (On Yam Estate)	<->	Tsim Sha Tsui East	5-20
35X ⁽¹⁾	Kwai Chung (On Yam Estate)	<->	Tsim Sha Tsui East	20-30
36B	Lei Muk Shue	<->	Jordan (West Kowloon Station)	12-25
36X ⁽²⁾	Lei Muk Shue	<->	Tsim Sha Tsui East (Mody Road)	20-30
37	Olympic Station	<->	Kwai Shing (Central)	10-20
41A	Tsing Yi (Cheung On Estate)	<->	Tsim Sha Tsui East	10-25
42	Tsing Yi (Cheung Hong Estate)	<->	Shun Lee	15-25
42A	Tsing Yi (Cheung Hang Estate)	<->	Jordan (West Kowloon Station)	4-20
43C ⁽¹⁾	Tsing Yi (Cheung Hong Estate)	<->	Island Harbourview	15-33
44	Mong Kok East Station	<->	Tsing Yi Estate	9-25
45	Kowloon City Ferry	<->	Kwai Chung (Lai Yiu Estate)	20-40
50	Tuen Mun (Ching Tin Estate)	<->	Kowloon Station	20-30
52X	Tuen Mun Central	<->	Mong Kok (Park Avenue)	6-25
52P	So Kwun Wat	->	Mong Kok (Park Avenue)	08:00 (1 departure)
58X	Tuen Mun (Leung King Estate)	<->	Mong Kok East Station	5-25
59X	Tuen Mun Pier Head	<->	Mong Kok East Station	3-21
60X	Tuen Mun Central	<->	Jordan (West Kowloon Station)	6-21
63X	Hung Shui Kiu (Hung Fuk Estate)	<->	Jordan (West Kowloon Station)	12-30
66X	Tuen Mun (Tai Hing Estate)	<->	Olympic Station	10-30
67X	Tuen Mun (Siu Hong Court)	<->	Mong Kok East Station	7-25
68X	Hung Shui Kiu (Hung Fuk Estate)	<->	Mong Kok (Park Avenue)	9-25
69X	Tin Shui	<->	Jordan (West Kowloon Station)	12-30

ROUTE NO.	ROUTING			FREQUENCY (MINUTES)
79X	Cheung Sha Wan (Kom Tsun Street)	<->	Queen's Hill	20-45
81	Wo Che	<->	Jordan (West Kowloon Station)	11-30
87B	Sun Tin Wai	<->	Island Harbourview	15-30
87C	Kam Ying Court	<->	Hung Hom Station	12-20
87D	Kam Ying Court	<->	Hung Hom Station	6-25
87E ⁽²⁾	Nai Chung	<->	Tsim Sha Tsui	07:40 (1 departure)
	Tsim Sha Tsui East (Mody Road)	->	Nai Chung	18:00 (1 departure)
93K	Po Lam	<->	Mong Kok East Station	17-30
95	Tsui Lam	<->	Kowloon Station	12-30
98C	Hang Hau (North)	<->	Mei Foo	10-30
98E ⁽²⁾	Hang Hau (North)	<->	Mei Foo	20
98S ⁽²⁾	Hang Hau (North)	<->	Mei Foo	20
102	Mei Foo	<->	Shau Kei Wan	5-20
102P ⁽²⁾	Mei Foo	<->	Shau Kei Wan	13-15
102R ⁽⁴⁾	Happy Valley Race Course	->	Mei Foo	-
104	Sham Shui Po (Pak Tin Estate)	<->	Kennedy Town	10-30
112	North Point (Pak Fuk Road)	<->	Cheung Sha Wan (So Uk Estate)	5-30
113	Choi Hung	<->	Kennedy Town (Belcher Bay)	15-30
117	Sham Shui Po (Yen Chow St)	<->	Happy Valley (Lower)	12-30
118	Siu Sai Wan (Island Resort)	<->	Cheung Sha Wan (Sham Mong Road)	4-17
118P ⁽¹⁾	Siu Sai Wan (Island Resort)	<->	Cheung Sha Wan (Sham Mong Road)	7-20
171	Lai Chi Kok	<->	South Horizons	12-30
171A ⁽¹⁾	Lei Tung Estate	->	Lai Chi Kok	15-30
171P ⁽¹⁾	South Horizons	->	Lai Chi Kok	25
203C	Tsim Sha Tsui East (Mody Road)	<->	Sham Shui Po (Tai Hang Tung)	20-30
203S ⁽¹⁾	Chak On Estate	->	Tsim Sha Tsui East (Mody Road)	07:45 (1 departure)
213D	Sau Mau Ping (Central)	<->	Mong Kok (Circular)	10-30
230X ⁽¹⁾	Tsuen Wan (Allway Gardens)	->	Whampoa Garden	15-30
234P ⁽²⁾	Tsuen Wan (Bayview Garden)	->	Star Ferry	08:10 (1 departure)
234X	Tsim Sha Tsui East (Mody Road)	<->	Tsuen Wan (Bayview Garden)	15-25
238P ⁽¹⁾	Tsuen Wan (Riviera Gardens)	->	China Ferry Terminal	12-34
238X	Tsuen Wan (Riviera Gardens)	<->	China Ferry Terminal	12-25
242X ⁽²⁾	Tsing Yi (Cheung Hang Estate)	<->	Tsim Sha Tsui	15-20
252B ⁽¹⁾	Handsome Court	->	Tsim Sha Tsui	15-20

ROUTE NO.	ROUTING			FREQUENCY (MINUTES)
259B ⁽²⁾	Tuen Mun Pier Head	->	Tsim Sha Tsui	10-15
259C ⁽²⁾	Sun Tuen Mun Centre	->	Tsim Sha Tsui	35
260B ⁽²⁾	Tuen Mun Central	->	Tsim Sha Tsui	11-12
261B ⁽¹⁾	Tuen Mun (Sam Shing Estate)/ So Kwun Wat	->	Kowloon Station	15
265B	Tin Heng Estate	<->	Mong Kok (Park Avenue)	6-25
268X	Hung Shui Kiu (Hung Fuk Estate)	<->	Jordan (West Kowloon Station)	6-35
269X ⁽²⁾	Tin Shui	<->	Jordan (West Kowloon Station)	15
270B	Sheung Shui	<->	Olympic Station	12-35
272E ⁽²⁾	Tai Po (Tai Wo)	<->	Mong Kok (Park Avenue)	10-30
272X	Tai Po Central	<->	Mong Kok East Station	25-35
281A	Kwong Yuen	<->	Kowloon Station	10-30
293S ⁽³⁾	Mei Foo	<->	Hang Hau (Ngan O Road)	20-40
296C	Sheung Tak	<->	Cheung Sha Wan (Hoi Ying Estate)	15-30
296P ⁽²⁾	Sheung Tak	->	Lai Chi Kok Station	07:45 (1 departure)
	Lai Chi Kok Station	->	Sheung Tak	17:45 (1 departure)
298X ⁽¹⁾	Hang Hau (North)	<->	Mei Foo	20-30
793	Tseung Kwan O Industrial Estate	<->	So Uk	15-20
795 ⁽²⁾	Tseung Kwan O Industrial Estate	<->	Cheung Sha Wan (Hoi Tat)	15-20
795X	Oscar By The Sea	<->	So Uk	15-30
904	Kennedy Town (Belcher Bay)	<->	Lai Chi Kok	18-30
905	Exhibition Centre Station	<->	Lai Chi Kok	6-30
970	So Uk Estate	<->	Cyberport	5-20
970X	Aberdeen	<->	Cheung Sha Wan (Kom Tsun Street)	9-25
A20	Airport	<->	Hung Hom Station	60-120
A21	Airport	<->	Hung Hom Station	8-30
E21	SKYCITY Transport Terminal	<->	Island Harbourview	12-30
E21A	Ho Man Tin (Oi Man Estate)	<->	Tung Chung (Yat Tung Estate)	20-30
E21B	Ho Man Tin (Oi Man Estate)	<->	Tung Chung (Yat Tung Estate)	20-30
E21C ⁽²⁾	Island Harbourview	->	Aircraft Maintenance Area	06:30 (1 departure)
	Aircraft Maintenance Area	->	Island Harbourview	18:05 (1 departure)
E21D	SKYCITY Transport Terminal	<->	Island Harbourview	15-30
N21 ⁽³⁾	Airport (Ground Transportation Centre)	<->	Tsim Sha Tsui (Star Ferry)	20-30
N21A ⁽³⁾	Tsim Sha Tsui (Star Ferry)	->	Airport (Ground Transportation Centre)	60

ROUTE NO.	ROUTING			FREQUENCY (MINUTES)
	Airport (Ground Transportation Centre)	->	Tsim Sha Tsui (Star Ferry)	05:00 (1 departure)
N50 ⁽³⁾	Tuen Mun (Ching Tin Estate)	<->	Kowloon Station	30
N118 ⁽³⁾	Cheung Sha Wan (Sham Mong Road)	<->	Siu Sai Wan (Island Resort)	20-30
N122 ⁽³⁾	Mei Foo	<->	Shau Kei Wan	17-35
N171 ⁽³⁾	Lai Chi Kok	<->	Ap Lei Chau Estate	30
N216 ⁽³⁾	Yau Tong	<->	Hung Hom Station	25-30
N241 ⁽³⁾	Hung Hom Station	<->	Tsing Yi (Cheung Wang Estate)	25-30
N293 ⁽³⁾	Sheung Tak	<->	Mong Kok (Park Avenue)	25-30
NA20 ⁽³⁾	HZMB Hong Kong Port	->	Whampoa Garden	00:25 (1 departure)
	Whampoa Garden	->	HZMB Hong Kong Port	04:30 (1 departure)
X6C ⁽²⁾	Mei Foo	<->	Hong Kong Children's Hospital	20-30
X970 ⁽²⁾	South Horizons	->	Cheung Sha Wan (Kom Tsun Street)	07:50 (1 departure)

Notes: (1) Service on Monday to Saturday Peak Hour only, except Public Holidays
(2) Service on Monday to Friday Peak Hour only, except Public Holidays
(3) Overnight service
(4) Happy Valley Race Day Service

Green Mini Bus

ROUTE NO.	ROUTING			FREQUENCY (MINUTES)
2	Whampoa Garden	<->	Festival Walk	10-25
2A	Whampoa Garden	<->	Festival Walk	10-25
12	Pak Tin Estate	<->	Mong Kok East Station	60
12A	Cosmopolitan Estate	<->	Mong Kok East Station	7-9
12B	Metro Harbour View	<->	Mong Kok East Station	6-8
12S	Tai Kok Tsui (Cherry Street)	<->	Mong Kok East Station	10-15
17M	Prince Edward Station	<->	Kowloon Hospital	7-15
27M	Lok Man Sun Chuen	<->	Mong Kok Station	7-15
27MS	Ho Man Tin Estate	<->	Mong Kok Station	15-35
30A	Chak On Estate	<->	Mong Kok Station	35-50
41M	Festival Walk	<->	Shek Kip Mei	8-10
46	Richland Gardens	<->	Island Harbourview	3-15
65S ⁽¹⁾	Sha Tin (Wong Nai Tau)	<->	Mong Kok (Bute Street)	20-25
69A	Laguna City	<->	Prince Edward Station	15-20
70	Diamond Hill Station	<->	Island Harbourview	4-15
70A	Diamond Hill Station	<->	Olympic Station	30-60

ROUTE NO.	ROUTING			FREQUENCY (MINUTES)
74	Kowloon Station	<->	Mong Kok (Pioneer Centre)	10-20
79K	Park Avenue	<->	Mong Kok East Station	5-10
606S ⁽¹⁾	Yuen Long (Fung Cheung Road)	<->	Tsim Sha Tsui East	6-13
616S ⁽¹⁾	Mong Kok (Sai Yeung Choi Street S)	<->	Lok Ma Chau Control Point	5-15

Note: (1) Overnight service

3.3 Traffic Survey

3.3.1 In order to investigate the traffic impact to the surrounding road network of the proposed developments, 8 key junctions near the development site are identified for traffic survey and assessment and as shown in **Table 3-2** and their locations are shown in **Drawing No. 3.2**. The existing junction layout of the surveyed junctions are shown in **Drawing Nos. 3.3 to 3.10**.

Table 3-2 Identified Key Junctions for Traffic Survey and Assessment

REFERENCE	JUNCTION	TYPE	DRAWING NO.
J1	Boundary Street / Nathan Road / Cheung Sha Wan Road	Signal	3.3
J2	Bute Street / Sai Yee Street	Signal	3.4
J3	Boundary Street / Tai Hang Tung Road	Signal	3.5
J4	Boundary Street / Embankment Road	Signal	3.6
J5	Nathan Road / Prince Edward Road West	Signal	3.7
J6	Prince Edward Road West / Sai Yee Street	Signal	3.8
J7	Prince Edward Road West / Embankment Road	Signal	3.9
J8	Lai Chi Kok Road / Nathan Road	Signal	3.10

3.3.2 The classified traffic survey had been conducted at 8 identified key junctions in a normal weekday and weekend in February 2026. According to Annual Traffic Census (ATC) 2024, the traffic flow in vicinity of the proposed development in Saturday is generally higher than Sunday. Therefore, the survey is carried out in one normal Saturday and identified as weekend peak. Weekday's AM, PM peak hour and weekend peak are identified from 07:45 to 08:45, 17:45 to 18:45 and 17:15 and 18:15 respectively. The existing traffic flows for weekday and weekend are shown in **Drawing No. 3.11**.

3.3.3 In order to investigate the traffic impact to the surrounding pedestrian network in the vicinity of the proposed developments, 19 sections of pedestrian walkways including footpaths and crossings surrounding the development sites are also identified for traffic survey in a normal weekday, Saturday and Sunday in March 2026 as shown in **Table 3-3** and their locations are shown in **Drawing No. 3.12**. Weekday's AM, PM peak 15-minutes period are identified from 07:50 to 08:05 and 18:00 to 18:15 respectively. Saturday and Sunday peak 15-minutes period are identified from 16:10 to 16:25 and 15:00 to 15:15 respectively.

Table 3-3 Identified Pedestrian Walkways for Traffic Survey and Assessment

SECTION	LOCATION	TYPE
P1	Boundary Street (between Sai Yee Street and Tai Hang Tung Road – near Sai Yee Street)	Footpath
P2	Across Boundary Street (near Tai Hang Tung Road)	Signalised Crossing
P3	Prince Edward Road West (between Fa Yuen Street and Sai Yee Street)	Footpath
P4	Across Prince Edward Road West (near Fa Yuen Street)	Signalised Crossing
P5	Across Flower Market Road (near Sai Yee Street)	Cautionary Crossing
P6	Flower Market Road (between Yuen Ngai Street and Yuen Po Street – near Yuen Po Street)	Footpath
P7	Fa Yuen Street (between Prince Edward Road West and Playing Field Road)	Footpath
P8	Across Fa Yuen Street (near Prince Edward Road West)	Signalised Crossing
P9	Sai Yee Street (between Playing Field Road and Boundary Street)	Footpath
P10	Sai Yee Street (near Playing Field Road)	Footpath
P11	Across Sai Yee Street (near Playing Field Road)	Cautionary Crossing
P12	Sai Yee Street (between Flower Market Road and Playing Field Road)	Footpath
P13	Across Sai Yee Street (near Flower Market Road)	Cautionary Crossing
P14	Sai Yee Street (between Prince Edward Road West and Flower Market Road)	Footpath
P15	Sai Yee Street (between Prince Edward Road West and Flower Market Road)	Footpath
P16	Across Sai Yee Street (near Prince Edward Road West)	Signalised Crossing
P17	Yuen Ngai Street (between Prince Edward Road West and Flower Market Road)	Footpath
P18	Yuen Ngai Street (between Prince Edward Road West and Flower Market Road)	Footpath
P19	Flower Market Path (near Flower Market Road)	Footpath

3.4 Existing Junction Capacity Assessment

3.4.1 **Table 3-4** and **Table 3-5** show the existing junction capacity assessment results of the identified key junctions during weekday and weekend. The junction calculations are attached in the **Appendix A1** and **A2** respectively.

Table 3-4 Junction Capacity Assessment – Weekday, Existing (2026)

JUNCTION	LOCATION	R.C. ⁽¹⁾	
		AM PEAK	PM PEAK
J1	Boundary Street / Nathan Road / Cheung Sha Wan Road	71%	46%
J2	Bute Street / Sai Yee Street	>100%	>100%
J3	Boundary Street / Tai Hang Tung Road	58%	47%
J4	Boundary Street / Embankment Road	>100%	>100%
J5	Nathan Road / Prince Edward Road West	39%	30%
J6	Prince Edward Road West / Sai Yee Street	>100%	44%
J7	Prince Edward Road West / Embankment Road	57%	49%
J8	Lai Chi Kok Road / Nathan Road	23%	55%

Note: (1) Reserve Capacity (R.C.) indicated in %, provides an indication of signal junction performance. R.C. <0% suggests that it is overloaded.

Table 3-5 Junction Capacity Assessment – Weekend, Existing (2026)

JUNCTION	LOCATION	R.C. ⁽¹⁾
		PM PEAK
J1	Boundary Street / Nathan Road / Cheung Sha Wan Road	67%
J2	Bute Street / Sai Yee Street	>100%
J3	Boundary Street / Tai Hang Tung Road	71%
J4	Boundary Street / Embankment Road	>100%
J5	Nathan Road / Prince Edward Road West	30%
J6	Prince Edward Road West / Sai Yee Street	56%
J7	Prince Edward Road West / Embankment Road	74%
J8	Lai Chi Kok Road / Nathan Road	42%

Note: (1) Reserve Capacity (R.C.) indicated in %, provides an indication of signal junction performance. R.C. <0% suggests that it is overloaded.

3.4.2 Results of the junction capacity assessment indicate that all assessed junctions are currently operating with adequate capacity during both weekday and weekend.

3.5 Existing Pedestrian Assessment

3.5.1 **Table 3-6** and **Table 3-7** present the existing Level-of-Service (LOS) and V/C ratio assessment results of the identified pedestrian walkways. Locations of surveyed pedestrian walkways are shown in **Drawing No. 3.12**.

Table 3-6 Pedestrian Walkway Assessment – Weekday (Existing)

SECTION	EFFECTIVE WIDTH (M)	TWO-WAY PEDESTRIAN FLOW (PED/15-MIN)		TWO-WAY PEDESTRIAN RATE (PED/M/MIN)		LOS ⁽¹⁾	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK
P1	1.5	58	39	2.6	1.7	A	A
P3	2.0	237	538	7.9	17.9	A	B
P5	3.0	278	165	6.2	3.7	A	A
P6	1.4	22	97	1.0	4.6	A	A
P7	1.5	130	169	5.8	7.5	A	A
P9	1.5	58	39	2.6	1.7	A	A
P10	1.8	10	9	0.4	0.3	A	A
P11	3.0	53	82	1.2	1.8	A	A
P12	1.9	10	14	0.4	0.5	A	A
P13	3.0	60	96	1.3	2.1	A	A
P14	1.0	63	163	4.2	10.9	A	A
P15	2.0	178	200	5.9	6.7	A	A
P17	1.2	48	85	2.7	4.7	A	A
P18	1.0	30	66	2.0	4.4	A	A
P19	1.8	105	62	3.9	2.3	A	A

Note: (1) Level of Service ("LOS") is the assessment criteria for walkways and sidewalks according to Chapter 18 Pedestrian Exhibit 18-3 in Highway Capacity Manual 2000 published from Transportation Research Board of U.S. National Research Council. The LOS thresholds are summarized in Appendix B for reference.

CROSSING	LOCATION	CROSSING WIDTH (M)	PEAK	GREEN TIME PROPORTION	CAPACITY (PED/HR) ⁽¹⁾	2-WAY PED FLOW (PED/HR)	V/C RATIO
P2	Boundary Street	3.6	Weekday AM	0.57	3,900	832	0.21
			Weekday PM	0.52	3,550	392	0.11
P4	Prince Edward Road West	6.5	Weekday AM	0.22	2,700	700	0.26
			Weekday PM	0.22	2,700	2,300	0.85
P8	Fa Yuen Street	4.0	Weekday AM	0.82	6,250	836	0.13
			Weekday PM	0.82	6,250	1,724	0.28
P16	Sai Yee Street	6.0	Weekday AM	0.24	2,750	696	0.25
			Weekday PM	0.24	2,750	1,748	0.64

Note: (1) According to TPDM Vol. 4 Ch. 3 Clause 3.2.5.6, Pedestrian crossing capacity = $K \times \text{Green time proportion} \times \text{Pedestrian crossing width}$, where K = A constant equivalent to saturation flow for pedestrians may be taken as 1900 ped/metre/hours.

Table 3-7 Pedestrian Walkway Assessment – Saturday and Sunday (Existing)

SECTION	EFFECTIVE WIDTH (M)	TWO-WAY PEDESTRIAN FLOW (PED/15-MIN)		TWO-WAY PEDESTRIAN RATE (PED/M/MIN)		LOS ⁽¹⁾	
		Saturday Peak	Sunday Peak	Saturday Peak	Sunday Peak	Saturday Peak	Sunday Peak
P1	1.5	49	40	2.2	1.8	A	A
P3	2.0	1,033	827	34.4	27.6	D	C
P5	3.0	131	255	2.9	5.7	A	A
P6	1.4	322	261	15.3	12.4	A	A
P7	1.5	253	201	11.2	8.9	A	A
P9	1.5	44	22	2.0	1.0	A	A
P10	1.8	17	24	0.6	0.9	A	A
P11	3.0	75	89	1.7	2.0	A	A
P12	1.9	17	40	0.6	1.4	A	A
P13	3.0	203	234	4.5	5.2	A	A
P14	1.0	201	151	13.4	10.1	A	A
P15	2.0	424	438	14.1	14.6	A	A
P17	1.2	111	161	6.2	8.9	A	A
P18	1.0	86	55	5.7	3.7	A	A
P19	1.8	79	73	2.9	2.7	A	A

Note: (1) Level of Service ("LOS") is the assessment criteria for walkways and sidewalks according to Chapter 18 Pedestrian Exhibit 18-3 in Highway Capacity Manual 2000 published from Transportation Research Board of U.S. National Research Council. The LOS thresholds are summarized in Appendix B for reference.

CROSSING	LOCATION	CROSSING WIDTH (M)	PEAK	GREEN TIME PROPORTION	CAPACITY (PED/HR) ⁽¹⁾	2-WAY PED FLOW (PED/HR)	V/C RATIO
P2	Boundary Street	3.6	Saturday	0.52	3,550	544	0.15
			Sunday	0.52	3,550	348	0.10
P4	Prince Edward Road West	6.5	Saturday	0.22	2,700	3,156	1.17
			Sunday	0.22	2,700	3,488	1.29
P8	Fa Yuen Street	4.0	Saturday	0.82	6,250	2,292	0.37
			Sunday	0.82	6,250	2,140	0.34
P16	Sai Yee Street	6.0	Saturday	0.24	2,750	3,328	1.21
			Sunday	0.24	2,750	3,304	1.20

Note: (1) According to TPDM Vol. 4 Ch. 3 Clause 3.2.5.6, Pedestrian crossing capacity = $K \times \text{Green time proportion} \times \text{Pedestrian crossing width}$, where K = A constant equivalent to saturation flow for pedestrians may be taken as 1900 ped/metre/hours.

3.5.2 The results indicated that the existing operations of most pedestrian walkways (including footpaths and crossings) during weekday, Saturday and Sunday are adequate within capacity, except the signalised crossing at Prince Edward Road West (P4) and Sai Yee Street (P16) at Junction of Prince Edward Road West / Sai Yee Street / Fa Yuen Street is observed to be overloaded during Sunday PM peak and during Saturday PM peak.

4. TRAFFIC FORECAST

4.1 Methodology of Traffic Forecast

4.1.1 The Proposed Development is tentatively scheduled for completion by year 2036. According to the “Guidelines and Requirements of Traffic Impact Assessment (TIA) for Proposed Developments and Transport Facilities” from Transport Department in February 2011, the TIA for the planned developments in the vicinity on an area/district basis should take at least 3 years after the planned completion of the development. Thus, year 2039 will be adopted for traffic impact assessment.

4.1.2 The traffic forecast has been derived by taking into account of the following information:

- i. Historical traffic growth in Annual Traffic Census published by Transport Department;
- ii. 2021-Based Territorial Population and Employment Data Matrix (TPEDM) planning data published by Planning Department; and
- iii. Projections of Population Distribution 2023-2031 published by Planning Department.

(i) Traffic growth trend from Annual Traffic Census

4.1.3 Transport Department has traffic count stations in the vicinity of the proposed development. The traffic count at the concerned stations over a period of 6 years between 2019 and 2024 are reported in the latest ATC published by Transport Department and are summarized in **Table 4-1**.

Table 4-1 Traffic Growth Rates between 2019 and 2024 from ATC

STATION NO.	LOCATION	ANNUAL AVERAGE DAILY TRAFFIC (VEH/DAY)						AVERAGE ANNUAL GROWTH RATE (%)
		2019	2020	2021	2022	2023	2024	2019-2024
3224	Cheung Sha Wan Road	31,500	29,560	29,980	28,400	30,650	32,740	0.78%
4025	Boundary Street	16,990	15,950	16,170	13,530	15,640	15,830	-1.40%
3424	Nathan Road	32,410	28,350	28,740	27,230	29,240	29,620	-1.78%
3232	Boundary Street	22,700	21,300	21,600	20,460	16,390	22,700	0.00%
4610	Fa Yuen Street	2,330	2,770	2,440	2,270	2,100	2,030	-2.72%
3844	Sai Yee Street	4,520	4,350	4,860	4,050	4,280	4,020	-2.32%
3435	Boundary Street	32,520	34,830	35,320	33,460	35,930	30,530	-1.25%
4048	Tai Hang Tung Road	24,100	22,550	23,510	22,090	19,970	19,350	-4.30%
4202	Boundary Street	42,030	46,880	46,860	43,310	47,260	44,450	1.13%
3637	Boundary Street	42,530	45,250	41,740	39,530	42,460	42,980	0.21%
4060	Embankment Road	11,800	11,370	11,690	10,970	11,440	10,740	-1.86%
3492	Knight Street	6,010	5,620	5,780	5,510	5,840	5,200	-2.85%
3828	Prince Edward Road Road W	53,880	50,570	53,820	45,670	49,060	49,650	-1.62%

STATION NO.	LOCATION	ANNUAL AVERAGE DAILY TRAFFIC (VEH/DAY)						AVERAGE ANNUAL GROWTH RATE (%)
		2019	2020	2021	2022	2023	2024	2019-2024
3286	Kadoorie Aveune	3,790	3,650	3,750	3,570	3,810	3,880	0.47%
3635	Prince Edward Road W	53,040	54,180	56,570	53,590	57,560	58,260	1.90%
4203	Prince Edward Road W	47,950	45,620	45,760	42,480	45,700	43,820	-1.79%
3640	Lai Chi Kok Road FO (K38)	17,870	15,480	18,680	17,690	19,000	19,240	1.49%
3634	Prince Edward Road W (GL)	29,960	25,830	24,420	23,130	24,850	25,150	-3.44%
3433	Prince Edward Road W (GL)	30,200	24,900	25,250	23,910	25,680	26,260	-2.76%
3230	Prince Edward Road W (GL)	26,980	25,320	25,680	24,320	25,240	27,290	0.23%
4023	Prince Edward Road W (GL)	19,970	18,740	19,000	20,550	20,560	20,810	0.83%
3222	Nathan Road	37,180	34,890	35,380	33,510	38,760	35,520	-0.91%
3821	Lai Chi Kok Road	16,920	15,880	16,940	17,310	18,590	18,820	2.15%
4015	Nathan Road	41,380	38,840	39,390	40,460	41,510	42,020	0.31%
3653	Sai Yee Street	17,970	16,230	17,320	16,500	17,460	16,390	-1.82%
3453	Sai Yee Street	28,190	22,170	22,780	21,700	22,960	25,100	-2.30%
3015	Shanghai Street	11,250	10,830	10,580	10,600	11,020	11,180	-0.12%
4019	Lai Chi Kok Road	18,810	17,650	17,900	18,780	18,960	19,190	0.40%
3426	Cheung Sha Wan Road	13,180	13,540	13,730	13,010	13,970	13,540	0.54%
3652	Mong Kok Road	28,950	24,430	28,410	27,060	28,630	26,870	-1.48%
3452	Mong Kok Road	17,750	17,320	17,800	16,950	17,940	18,270	0.58%
3253	Tai Hang Tung Road	11,170	10,450	10,900	10,380	9,670	9,580	-3.02%
3881	Tat Chee Avenue	12,450	11,650	13,180	11,680	12,320	11,940	-0.83%
Total:		808,280	766,950	785,930	743,660	784,450	782,970	-0.63%

4.1.4 As shown in **Table 4-1**, it can be noted that over the past 6 years trend, the average annual daily traffic growth pattern in the vicinity of the Site from 2019 to 2024 has a decrease trend of -0.63% per annum.

(ii) Planning Data from 2021-Based TPEDM

4.1.5 Reference has also been made to the 2021-Based Territorial Population and Employment Data Matrix (TPEDM) planning data published by Planning Department for years 2021, 2026 and 2031 in the relevant Planning Data District (i.e. Yau Tsim Mong). The population and employment data in 2021, 2026 & 2031 are summarized in **Table 4-2** and the annual growth rate between 2021/2026 & 2026/2031 are summarized in **Table 4-3**.

Table 4-2 2021, 2026 & 2031 Population and Employment Growth in Yau Tsim Mong from TPDEM

PLANNING DATA DISTRICT	2021		2026		2031	
	Population	Employment	Population	Employment	Population	Employment
Yau Tsim Mong	310,650	413,950	291,700	439,300	267,100	428,850

Table 4-3 Population and Employment Growth Rate in Yau Tsim Mong from TPDEM

PLANNING DATA DISTRICT	ANNUAL GROWTH RATE (%)			
	Population 2021/ 2026	Employment 2021/ 2026	Population 2026/ 2031	Employment 2026/ 2031
Yau Tsim Mong	-1.25%	1.20%	-1.75%	-0.48%

- 4.1.6 As shown in **Table 4-3**, the population growth rate in Yau Tsim Mong has an decreasing trend of -1.25% per annum from 2021 to 2026, and -1.75% per annum from 2026 to 2031. The employment growth rate in Mong Kok also has an increasing trend of 1.20% per annum from 2021 to 2026, and a decreasing trend of -0.48% per annum from 2026 to 2031.

(iii) Projections of Population Distribution

- 4.1.7 For traffic forecast beyond 2026, reference has also been made to the “Projections of Population Distribution 2023-2031” published by Planning Department. The projected population in Yau Tsim Mong District from 2026 to 2031 are extracted and the average population growth rate from 2026 to 2031 are as shown in **Table 4-4**.

Table 4-4 Yau Tsim Mong District Projected Population from 2026 to 2029

YEAR	POPULATION
2026	291,700
2027	286,400
2028	281,700
2029	276,400
2030	272,500
2031	267,100
Average Population Growth Rate from 2026 to 2031 = -1.75% p.a.	

- 4.1.8 Taking into account the ATC, TPEDM planning data and the Projections of Population Distribution, considering the long-term traffic growth from 2026 onwards, there is a steady decreasing trend, therefore 0.20 % annual growth rate is proposed for the traffic growth forecast from 2026 to 2039 (i.e. Design Year) for conservative purpose to account for the minimal background traffic growth. The adopted growth rate would be able to ensure a reasonable estimation of future traffic.
- 4.1.9 It is deemed sufficient to allow for any unexpected future growth as a result of some changes in land use or redevelopment in the area. The adopted growth rate would be able to ensure a reasonable estimation of future traffic flows.
- 4.1.10 The reference traffic flows in year 2039 are derived by applying the adopted growth factor to 2026 existing traffic flows. The 2039 reference traffic flows are shown in **Drawing No. 4.1**.

4.2 Proposed Development's Vehicular Traffic Generation

4.2.1 The volume of traffic that will be generated by the proposed developments (Residential, Retail and Office proportion) during AM and PM peak periods were estimated using the trip rates with reference to the "Traffic Generation and Attraction Rates" as stated in Annex D of Volume 1 – Chapter 3 in Transport Planning and Design Manual (TPDM) published by Transport Department, and the adopted trip rates and estimated traffic trips are shown in **Table 4-5** and **Table 4-8** respectively. For conservative purpose, the development traffic trips are provided with 5% increase in flexibility for these land uses for traffic assessment, the weekend trip generations will adopt the weekday PM peak generations and office trip generation is adopted to estimate the trip generation of the proposed hotel use in Site B.

Table 4-5 Adopted Traffic Trip Rates from TPDM

DEVELOPMENT	UNIT	AM PEAK		PM PEAK	
		GENERATION	ATTRACTION	GENERATION	ATTRACTION
Residential ⁽¹⁾	pcu/hr/flat	0.1021	0.0709	0.0415	0.0464
Retail ⁽²⁾	pcu/hr/100 m ² GFA	0.3307	0.3342	0.3839	0.4504
Office ⁽²⁾	pcu/hr/100 m ² GFA	0.2361	0.3257	0.1928	0.1510

Notes: (1) Private Housing: 60 sqm average flat size is adopted for Residential Development
(2) Mean values of the Traffic Trip Rates are adopted

4.2.2 Currently, there is no standard trip generation rate for Public Vehicle Park (PVP) and GIC (sports centre) is provided in "Traffic Generation and Attraction Rates" as stated in Annex D of Volume 1 – Chapter 3 in the TPDM published by Transport Department. Same methodology of deducing the trip generation rates in the TIA under the approved DSP is applied.

4.2.3 In order to estimate the vehicular trip generated by the proposed Public Vehicle Park (PVP) and sports centre, vehicular traffic trip generation and attraction surveys had been conducted in a public car park in Mong Kok and a sports ground with public car parking in Cheung Sha Wan on a normal weekday and weekend in October 2023 from 12:00 to 19:00 to identify the daily peak traffic generations. With the same considerations as discussed in paragraph 3.3.2, car park survey was carried out on one normal Saturday and identified as weekend peak. The results are summarized in **Table 4-6**.

Table 4-6 Observed Vehicular Trip Generation at Surveyed Public Car Parks

SURVEYED CAR PARK	WEEKDAY PEAK [18:00 – 19:00]		WEEKEND PEAK [15:45 – 16:45]	
	GENERATION [PCU/HR]	ATTRACTION [PCU/HR]	GENERATION [PCU/HR]	ATTRACTION [PCU/HR]
Pioneer Centre Public Car Park, Mong Kok (No. of Public Parking Spaces for Private Car = 113)	32	49	56	67
Sham Shui Po Sports Ground Public Car Park (No. of Public Parking Spaces for Private Car = 12)	9	6	10	8

4.2.4 The observed trip generation rates for the vehicular traffic will be derived based on the car parking space for each surveyed development. The observed trip generation rates are summarized in **Table 4-7**.

Table 4-7 Observed Trip Generation Rates at Surveyed Public Car Parks

SURVEYED CAR PARK	WEEKDAY PEAK		WEEKEND PEAK	
	GENERATION [PCU/HR/NO. OF SPACE]	ATTRACTION [PCU/HR/NO. OF SPACE]	GENERATION [PCU/HR/NO. OF SPACE]	ATTRACTION [PCU/HR/NO. OF SPACE]
Pioneer Centre Public Car Park, Mong Kok (No. of Public Parking Spaces for Private Car = 113)	0.283	0.434	0.496	0.593
Sham Shui Po Sports Ground Public Car Park (No. of Public Parking Spaces for Private Car = 12)	0.750	0.500	0.833	0.667

4.2.5 According to the adopted trip rates in **Table 4-5** and **Table 4-7**, the future vehicular traffic trip generation of the development are estimated and are summarized in **Table 4-8**.

Table 4-8 Estimated Traffic Trip Generations of Proposed Development (Site A1 and B)

SITE	USES	NO. OF FLATS / GFA (m ²) / NO. OF PKG SPACES	WEEKDAY AM PEAK		WEEKDAY PM PEAK		WEEKEND PEAK	
			GEN. (PCU/HR)	ATT. (PCU/HR)	GEN. (PCU/HR)	ATT. (PCU/HR)	GEN. (PCU/HR)	ATT. (PCU/HR)
A1	Residential ⁽¹⁾	474	51	36	21	24	21	24
A1	Retail ⁽¹⁾	6,576	23	24	27	32	27	32
A1	Sub-total		74	60	48	56	48	56
B	Residential ⁽¹⁾	1,080	116	81	48	53	48	53
B	Retail ⁽¹⁾	14,710	52	52	60	70	60	70
B	Office ⁽¹⁾	5,000	13	18	11	8	11	8
B	Proposed PVP ⁽²⁾	220	-	-	63	96	110	131
B	Proposed Sport Centre ⁽²⁾	35	-	-	27	18	30	24
B	Sub-total		181	151	209	245	259	286

Notes: (1) The trips for residential, retail and office are provided with 5% increase in flexibility.
(2) AM Peak is unlikely for trips in GIC & PVP occasion. Therefore, trip rate for GIC & PVP does not take into account at AM Peak.

4.2.6 The proposed development traffic flows in **Table 4-8** are then superimposed onto the 2039 Reference Traffic Flows (without development) as shown in **Drawing No. 4.1** to derive the 2039 Design Traffic Flows (with development) as shown in **Drawing No. 4.2**.

4.3 Proposed Development Pedestrian Generation

Domestic – Residential Development Trips

4.3.1 The estimated population from the proposed residential development is approximately 1,185 for Site A1 and 2,700 for Site B, based on 474 and 1,080 no. of flats with 2.5 people per household (According to Table D201b : Average Domestic Household Size by District Council District and Year, from “2021 Population Census” published by Census and Statistics Department).

4.3.2 With reference to “Table 110-06815 : Land-based non-institutional population by District Council district and economic activity status” from the Census and Statistics Department,

54.9% of the population are economically active and 14.6% of the population are full-time students in Yau Tsim Mong District.

4.3.3 It is assumed that workers and students' trips will be generated during AM peak and since after-school peak is out of normal PM peak, only the workers' trips are assumed to be generated during PM peak period.

4.3.4 For the proportion of the peak hour trips generation, the following assumptions had been made referring to "Travel Characteristics Survey 2022 Final Report" from Transport Department.

- 42% of trips from home to work were made in morning peak hour, which is applied to workers AM trip generation;
- 40% of work-to-home trips were made during evening peak hour, which is applied to workers PM trip attraction;
- 64% of the trips from home to school were made during morning peak hour, which is applied to student AM trip attraction.

4.3.5 The mode of transport in Yau Tsim Mong district from 2021 Population By-census could be broadly split into two group, namely to place of work and to place of study. The details are summarized and presented below in **Table 4-9**.

Table 4-9 Main Mode of Transport to Place of Work / Place of Study

TRIP NATURE	MASS TRANSIT RAIL (MTR)	MODES OTHER THAN MTR ⁽¹⁾
To place of work	64,501	43,025
	56%	37%
To place of study	12,702	20,887
	30%	49%

Note: (1) Include franchised bus, public light bus, company bus/van, residential coach service, excluding taxi, school bus and private car.

4.3.6 The pedestrian trips generation of residential development trips are summarized in **Table 4-10**.

Table 4-10 Residential Development Trip (Domestic)

PROPOSED RESIDENTIAL DEVELOPMENT	WEEKDAY AM PEAK		WEEKDAY PM PEAK	
	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]
Site A1 – Workers	70	0	0	70
Site A1 – Students	30	0	0	0
Site B – Workers	165	0	0	155
Site B – Students	65	0	0	0

Non-domestic – Office Trips

- 4.3.7 For office in Site B, worker density of 5.20 workers/100m² for Grade A Office is assumed based on “Commercial and Industrial Floor Space Utilization Survey” from the Planning Department. Referring to Table 8 – Worker Density by Economic Activity and Planned Usage Type (workers per GFA (in 100 m²), from “Travel Characteristics Survey 2022 Final Report” from Transport Department, 42% of trips from home to work were made in morning peak hour and 40% of work-to-home trips were made during evening peak hour. The pedestrian trips generations are summarized in **Table 4-11**.

Table 4-11 Office Pedestrian Trip (Non-domestic)

PROPOSED DEVELOPMENT	WEEKDAY AM PEAK		WEEKDAY PM PEAK	
	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]
Office – Site B	0	30	30	0

Retail Development

- 4.3.8 In order to estimate the pedestrian trip generated by the proposed retail development, pedestrian trip generation and attraction survey had been conducted at a retail mall with similar distance away from the MTR station and bus stops in Mong Kok on a normal weekday and weekend in October 2023 from 12:00 to 19:00 to identify the daily peak pedestrian generations. The results are summarized in **Tables 4-12**.

Table 4-12 Observed Pedestrian Trip Generation at Surveyed Retail Mall

SURVEYED RETAIL MALL	WEEKDAY PEAK		WEEKEND PEAK	
	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]
The Forest (Approximate GFA = 4,955 m ²)	192	242	416	402

- 4.3.9 The observed pedestrian trip generation rates for the pedestrian flow will be derived based on the GFA of the surveyed development. The observed pedestrian generation rates are summarized in **Tables 4-13**.

Table 4-13 Observed Pedestrian Generation Rates at Surveyed Retail Mall

SURVEYED RETAIL MALL	WEEKDAY PEAK		WEEKEND PEAK	
	GENERATION [PED/15 MINS/ M2 GFA]	ATTRACTION [PED/15 MINS/ M2 GFA]	GENERATION [PED/15 MINS/ M2 GFA]	ATTRACTION [PED/15 MINS/ M2 GFA]
The Forest (Approximate GFA = 4,955 m ²)	0.039	0.049	0.084	0.081

- 4.3.10 According to the observed pedestrian generation rates estimated in **Table 4-13**, the future pedestrian trip generation of the proposed retail mall at Site A1 and Site B during weekday and weekend peak hour are estimated and are summarized in **Tables 4-14**.

Table 4-14 Estimated Pedestrian Trip Generation of the Proposed Retail Mall at Site A1 and Site B

PROPOSED DEVELOPMENT	WEEKDAY PEAK		WEEKEND PEAK	
	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]
Retail Mall – Site A1 (GFA = 6,576 m ²)	255	320	550	535
Retail Mall – Site B (GFA = 14,710 m ²)	570	720	1235	1195

4.3.11 In review of Site B which has provided PVP and parking spaces for retail development, it is assumed that some proportions of the pedestrian trips will be arrived by private car. Assumption has been made such that 70% of the estimated pedestrian trips will arrive by public transport or by walk. The estimated pedestrian trip generation of the proposed retail mall to the surrounding pedestrian footpaths are summarized in **Table 4-15**.

Table 4-15 Adopted Pedestrian Trip Generation of the Proposed Retail Mall at Site A1 and Site B

PROPOSED DEVELOPMENT	WEEKDAY PEAK		WEEKEND PEAK	
	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]	GENERATION [PED/15 MINS]	ATTRACTION [PED/15 MINS]
Retail Mall – Site A1 (GFA = 6,576 m ²)	180	225	385	375
Retail Mall – Site B (GFA = 14,710 m ²)	400	505	865	835

4.3.12 The estimated flows from **Table 4-10**, **Table 4-11** and **Table 4-15** will then superimposed onto the 2039 weekend Reference Pedestrian Flows (without development) to derive the 2039 weekend Design Pedestrian Flows (with development). **Table 4-16** summarizes and shows the pedestrian trips generation for weekday and weekend scenario.

Table 4-16 Estimated Pedestrian Trip Generation of the Proposed Development Site A1 and Site B

PROPOSED DEVELOPMENT	TRIPS CATEGORY	WEEKDAY AM PEAK		WEEKDAY PM PEAK		SATURDAY / SUNDAY PM PEAK	
		GENERATION [PED/15MINS]	ATTRACTION [PED/15MINS]	GENERATION [PED/15MINS]	ATTRACTION [PED/15MINS]	GENERATION [PED/15MINS]	ATTRACTION [PED/15MINS]
Site A1	Domestic – Workers	70	0	0	70	0	0
	Domestic – Students	30	0	0	0	0	0
	Retail	0	0	180	225	385	375
	Total	100	0	180	295	385	375
Site A2 to A5 ⁽¹⁾	Open Space/ Retail	5 Each Site	5 Each Site	5 Each Site	5 Each Site	5 Each Site	5 Each Site
Site B	Domestic – Workers	165	0	0	155	0	0
	Domestic – Students	65	0	0	0	0	0
	Office	0	30	30	0	0	0
	Retail	0	0	400	505	865	835
	Total	230	30	430	660	865	835

Note: (1) As the GFA of Sites A2 to A5 are very minor (around 100 sqm), it is assumed that minimal pedestrian trips (5 ped/ 15 min) to be generated solely for Site A2 to A5.

5. TRAFFIC IMPACT ASSESSMENT

5.1 Junction Capacity Assessment

5.1.1 The traffic impact of the proposed developments on the surrounding road network and junctions have been assessed under the weekday AM and PM peak hour and weekend peak hour periods. Locations of assessed junctions are shown in **Drawing No. 3.2**.

5.1.2 The junction capacity analysis of the selected key junctions in the reference scenario (without development traffic) and design scenarios during weekday AM and PM peak hours in Year 2039 (with development traffic) are shown in **Table 5-1**. The junction calculations are attached in the **Appendix A1** for reference.

Table 5-1 Junction Capacity Analysis – 2039 Weekday Peak

JUNCTION	LOCATION	2039 REFERENCE (WITHOUT DEVELOPMENT)		2039 DESIGN (WITH DEVELOPMENT)	
		R.C. ⁽¹⁾		R.C. ⁽¹⁾	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK
J1	Boundary Street / Nathan Road / Cheung Sha Wan Road	50%	27%	50%	27%
J2	Bute Street / Sai Yee Street	>100%	>100%	>100%	>100%
J3	Boundary Street / Tai Hang Tung Road	50%	40%	32%	21%
J4	Boundary Street / Embankment Road	>100%	>100%	93%	78%
J5	Nathan Road / Prince Edward Road West	34%	26%	34%	26%
J6	Prince Edward Road West / Sai Yee Street	70%	28%	65%	18%
J7	Prince Edward Road West / Embankment Road	46%	37%	41%	32%
J8	Lai Chi Kok Road / Nathan Road	20%	51%	20%	51%

Notes: (1) Reserve Capacity (R.C.) indicated in %, provides an indication of signal junction performance. R.C. <0% implies that it is overloaded.

5.1.3 As shown in **Table 5-1**, the results indicated all junctions would be operated within capacity in the design scenario with development traffic during weekday AM and PM peak hour, similar to the findings of the approved DSP.

5.1.4 The junction capacity analysis of the selected key junctions in the reference scenario (without development traffic) and design scenarios during weekend peak hour in Year 2039 (with development traffic) are shown in **Table 5-2**. The junction calculations are attached in the **Appendix A2** for reference.

Table 5-2 Junction Capacity Analysis – 2039 Weekend Peak

JUNCTION	LOCATION	2039 REFERENCE (WITHOUT DEVELOPMENT)	2039 DESIGN (WITH DEVELOPMENT)
		R.C. ⁽¹⁾	R.C. ⁽¹⁾
		WEEKEND PEAK	WEEKEND PEAK
J1	Boundary Street / Nathan Road / Cheung Sha Wan Road	43%	43%
J2	Bute Street / Sai Yee Street	>100%	>100%
J3	Boundary Street / Tai Hang Tung Road	62%	37%
J4	Boundary Street / Embankment Road	>100%	>100%
J5	Nathan Road / Prince Edward Road West	26%	26%
J6	Prince Edward Road West / Sai Yee Street	36%	27%
J7	Prince Edward Road West / Embankment Road	58%	52%
J8	Lai Chi Kok Road / Nathan Road	38%	38%

Notes: (1) Reserve Capacity (R.C.) indicated in %, provides an indication of signal junction performance. R.C. <0% implies that it is overloaded.

5.1.5 As shown in **Table 5-2**, the results indicated all junctions would still be operated within capacity in the design scenario with development traffic during weekend peak hour.

5.2 Pedestrian Walkway Assessment

5.2.1 The traffic impact of the proposed developments on the surrounding footpaths and pedestrian crossings have also been assessed during weekday AM, PM, Saturday and Sunday peak hour periods. Locations of assessed pedestrian walkways are shown in **Drawing No. 3.12**.

5.2.2 The reference pedestrian flows in year 2039 during both weekday and weekend are derived by applying the adopted growth factor in Chapter 4 to 2026 existing pedestrian flows. **Tables 5-3** and **5-4** present the assessment results of the identified walkways in 2039 (Reference case without proposed development).

Table 5-3 Pedestrian Walkway Assessment – 2039 Weekday (Reference Without Development)

SECTION	EFFECTIVE WIDTH (M)	TWO-WAY PEDESTRIAN FLOW (PED/15-MIN)		TWO-WAY PEDESTRIAN RATE (PED/M/MIN)		LOS ⁽¹⁾	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK
P1	1.5	60	40	2.7	1.8	A	A
P3	2.0	245	550	8.2	18.3	A	B
P5	3.0	285	170	6.3	3.8	A	A
P6	1.4	25	100	1.2	4.8	A	A
P7	1.5	135	175	6.0	7.8	A	A
P9	1.5	60	40	2.7	1.8	A	A
P10	1.8	10	10	0.4	0.4	A	A
P11	3.0	55	85	1.2	1.9	A	A
P12	1.9	10	15	0.4	0.5	A	A
P13	3.0	60	100	1.3	2.2	A	A
P14	1.0	65	165	4.3	11.0	A	A
P15	2.0	185	205	6.2	6.8	A	A
P17	1.2	50	85	2.8	4.7	A	A
P18	1.0	30	70	2.0	4.7	A	A
P19	1.8	110	65	4.1	2.4	A	A

Note: (1) Level of Service ("LOS") is the assessment criteria for walkways and sidewalks according to Chapter 18 Pedestrian Exhibit 18-3 in Highway Capacity Manual 2000 published from Transportation Research Board of U.S. National Research Council. The LOS thresholds are summarized in Appendix B for reference.

CROSSING	LOCATION	CROSSING WIDTH (M)	PEAK	GREEN TIME PROPORTION	CAPACITY (PED/HR) ⁽¹⁾	2-WAY PED FLOW (PED/HR)	V/C RATIO
P2	Boundary Street	3.6	Weekday AM	0.57	3,900	855	0.22
			Weekday PM	0.52	3,550	400	0.11
P4	Prince Edward Road West	6.5	Weekday AM	0.22	2,700	720	0.27
			Weekday PM	0.22	2,700	2,360	0.87
P8	Fa Yuen Street	4.0	Weekday AM	0.82	6,250	860	0.14
			Weekday PM	0.82	6,250	1,770	0.28
P16	Sai Yee Street	6.0	Weekday AM	0.24	2,750	715	0.26
			Weekday PM	0.24	2,750	1,795	0.65

Note: (1) According to TPDM Vol. 4 Ch. 3 Clause 3.2.5.6, Pedestrian crossing capacity = $K \times \text{Green time proportion} \times \text{Pedestrian crossing width}$, where K = A constant equivalent to saturation flow for pedestrians may be taken as 1900 ped/metre/hours.

Table 5-4 Pedestrian Walkway Assessment – 2039 Weekend (Reference Without Development)

SECTION	EFFECTIVE WIDTH (M)	TWO-WAY PEDESTRIAN FLOW (PED/15-MIN)		TWO-WAY PEDESTRIAN RATE (PED/M/MIN)		LOS ⁽¹⁾	
		Saturday Peak	Sunday Peak	Saturday Peak	Sunday Peak	Saturday Peak	Sunday Peak
P1	1.5	50	40	2.2	1.8	A	A
P3	2.0	1,060	850	35.3	28.3	D	C
P5	3.0	135	260	3.0	5.8	A	A
P6	1.4	330	270	15.7	12.9	A	A
P7	1.5	260	205	11.6	9.1	A	A
P9	1.5	45	25	2.0	1.1	A	A
P10	1.8	15	25	0.6	0.9	A	A
P11	3.0	75	90	1.7	2.0	A	A
P12	1.9	15	40	0.5	1.4	A	A
P13	3.0	210	240	4.7	5.3	A	A
P14	1.0	205	155	13.7	10.3	A	A
P15	2.0	435	450	14.5	15.0	A	A
P17	1.2	115	165	6.4	9.2	A	A
P18	1.0	90	55	6.0	3.7	A	A
P19	1.8	80	75	3.0	2.8	A	A

Note: (1) Level of Service ("LOS") is the assessment criteria for walkways and sidewalks according to Chapter 18 Pedestrian Exhibit 18-3 in Highway Capacity Manual 2000 published from Transportation Research Board of U.S. National Research Council. The LOS thresholds are summarized in **Appendix B** for reference.

CROSSING	LOCATION	CROSSING WIDTH (M)	PEAK	GREEN TIME PROPORTION	CAPACITY (PED/HR) ⁽¹⁾	2-WAY PED FLOW (PED/HR)	V/C RATIO
P2	Boundary Street	3.6	Saturday	0.52	3,550	560	0.16
			Sunday	0.52	3,550	355	0.10
P4	Prince Edward Road West	6.5	Saturday	0.22	2,700	3,240	1.20
			Sunday	0.22	2,700	3,580	1.33
P8	Fa Yuen Street	4.0	Saturday	0.82	6,250	2,350	0.38
			Sunday	0.82	6,250	2,195	0.35
P16	Sai Yee Street	6.0	Saturday	0.24	2,750	3,415	1.24
			Sunday	0.24	2,750	3,390	1.23

Note: (1) According to TPDM Vol. 4 Ch. 3 Clause 3.2.5.6, Pedestrian crossing capacity = $K \times \text{Green time proportion} \times \text{Pedestrian crossing width}$, where K = A constant equivalent to saturation flow for pedestrians may be taken as 1900 ped/metre/hours.

5.2.3 The design pedestrian flows in year 2039 during both weekday and weekend are derived by adding the estimated pedestrian trips in **Table 4-16** to the reference pedestrian flows in 2039. **Table 5-5** and **Table 5-6** present the assessment results of the identified walkways in 2039 (Design case with proposed development).

Table 5-5 Pedestrian Walkway Assessment – 2039 Weekday (Design With Development)

SECTION	EFFECTIVE WIDTH (M)	TWO-WAY PEDESTRIAN FLOW (PED/15-MIN)		TWO-WAY PEDESTRIAN RATE (PED/M/MIN)		LOS ⁽¹⁾	
		AM PEAK	PM PEAK	AM PEAK	PM PEAK	AM PEAK	PM PEAK
P1	1.5	95	295	4.2	13.1	A	A
P3	5.0 ⁽²⁾	350	1,485	4.7	19.8	A	B
P5	3.0	345	665	7.7	14.8	A	A
P6	1.4	25	110	1.2	5.2	A	A
P7	1.5	135	375	6.0	16.7	A	B
P9	1.5	90	265	4.0	11.8	A	A
P10	1.8	15	315	0.6	11.7	A	A
P11	3.0	145	770	3.2	17.1	A	B
P12	1.9	10	320	0.4	11.2	A	A
P13	3.0	95	385	2.1	8.6	A	A
P14	1.0	100	445	6.7	29.7	A	C
P15	2.0	245	700	8.2	23.3	A	C
P17	1.2	55	495	3.1	27.5	A	C
P18	1.0	35	110	2.3	7.3	A	A

Notes: (1) Level of Service (“LOS”) is the assessment criteria for walkways and sidewalks according to Chapter 18 Pedestrian Exhibit 18-3 in Highway Capacity Manual 2000 published from Transportation Research Board of U.S. National Research Council. The LOS thresholds are summarized in **Appendix B** for reference.

(2) Under the notional design, section P3 will merge with the layout of Site A1 and a minimum footpath width of 5.0m will be provided, which is adopted for design scenario assessment.

(3) Section P19 will no longer exist in design scenario and will become part of the Waterway Park in the future development.

CROSSING	LOCATION	CROSSING WIDTH (M)	PEAK	GREEN TIME PROPORTION	CAPACITY (PED/HR) ⁽¹⁾	2-WAY PED FLOW (PED/HR)	V/C RATIO
P2	Boundary Street	3.6	Weekday AM	0.57	3,900	860	0.22
			Weekday PM	0.52	3,550	420	0.12
P4	Prince Edward Road West	6.5	Weekday AM	0.22	2,700	735	0.27
			Weekday PM	0.22	2,700	2,505	0.93
P8	Fa Yuen Street	4.0	Weekday AM	0.82	6,250	960	0.15
			Weekday PM	0.82	6,250	2,645	0.42
P16	Sai Yee Street	6.0	Weekday AM	0.24	2,750	760	0.28
			Weekday PM	0.24	2,750	2,380	0.87

Note: (1) According to TPDM Vol. 4 Ch. 3 Clause 3.2.5.6, Pedestrian crossing capacity = $K \times \text{Green time proportion} \times \text{Pedestrian crossing width}$, where K = A constant equivalent to saturation flow for pedestrians may be taken as 1900 ped/metre/hours.

5.2.4 The results from **Table 5-5** indicate that all assessed pedestrian walkways (including footpaths and crossings) are operating within capacity during weekday AM and PM peak. While P16 (the northern crossing at Sai Yee Street near Prince Edward Road West) will be reaching the capacity level.

Table 5-6 Pedestrian Walkway Assessment – 2039 Weekend (Design With Development)

SECTION	EFFECTIVE WIDTH (M)	TWO-WAY PEDESTRIAN FLOW (PED/15-MIN)		TWO-WAY PEDESTRIAN RATE (PED/M/MIN)		LOS ⁽¹⁾	
		Saturday Peak	Sunday Peak	Saturday Peak	Sunday Peak	Saturday Peak	Sunday Peak
P1	1.5	305	295	13.6	13.1	A	A
P3	5.0 ⁽²⁾	1,995	1,785	26.6	23.8	C	C
P5	3.0	630	755	14.0	16.8	A	B
P6	1.4	340	280	16.2	13.3	B	A
P7	1.5	460	405	20.4	18.0	B	B
P9	1.5	270	250	12.0	11.1	A	A
P10	1.8	320	330	11.9	12.2	A	A
P11	3.0	760	775	16.9	17.2	B	B
P12	1.9	320	345	11.2	12.1	A	A
P13	3.0	495	525	11.0	11.7	A	A
P14	1.0	485	435	32.3	29.0	C	C
P15	2.0	930	945	31.0	31.5	C	C
P17	1.2	525	575	29.2	31.9	C	C
P18	1.0	130	95	8.7	6.3	A	A

Notes: (1) Level of Service ("LOS") is the assessment criteria for walkways and sidewalks according to Chapter 18 Pedestrian Exhibit 18-3 in Highway Capacity Manual 2000 published from Transportation Research Board of U.S. National Research Council. The LOS thresholds are summarized in **Appendix B** for reference.

(2) Under the notional design, section P3 will merge with the layout of Site A1 and a minimum footpath width of 5.0m will be provided, which is adopted for design scenario assessment.

(3) Section P19 will no longer exist in design scenario and will become part of the Waterway Park in the future development.

CROSSING	LOCATION	CROSSING WIDTH (M)	PEAK	GREEN TIME PROPORTION	CAPACITY (PED/HR) ⁽¹⁾	2-WAY PED FLOW (PED/HR)	V/C RATIO
P2	Boundary Street	3.6	Saturday	0.52	3,550	580	0.16
			Sunday	0.52	3,550	375	0.11
P4	Prince Edward Road West	6.5	Saturday	0.22	2,700	3,385	1.25
			Sunday	0.22	2,700	3,725	1.38
P8	Fa Yuen Street	4.0	Saturday	0.82	6,250	3,225	0.52
			Sunday	0.82	6,250	3,070	0.49
P16	Sai Yee Street	6.0	Saturday	0.24	2,750	4,000	1.45
			Sunday	0.24	2,750	3,975	1.45

Note: (1) According to TPDM Vol. 4 Ch. 3 Clause 3.2.5.6, Pedestrian crossing capacity = $K \times \text{Green time proportion} \times \text{Pedestrian crossing width}$, where K = A constant equivalent to saturation flow for pedestrians may be taken as 1900 ped/metre/hours.

5.2.5 Similar to the findings of the approved DSP, the results from **Table 5-6** indicate that most assessed pedestrian walkways (including footpaths and crossings) are operating within capacity during weekend peak with implementation of the subject S.16 Application. The podium setback at Site A1 provides extra width for P3 which slightly improves its capacity. For the signalised crossing at Prince Edward Road West near Fa Yuen Street (P4) and the northern signalised crossing at Sai Yee Street near Prince Edward Road West (P16), they will be more overloaded ($V/C > 1.0$), compared with existing conditions and 2039 reference scenario which are already overloaded.

5.2.6 In order to enhance the capacity at the concerned signalised crossings (P4 and P16), possible improvement measures by widening at the crossings are proposed and shown in **Drawing No. 5.1**.

5.2.7 The results of pedestrian assessment at P4 and P16 with proposed widening schemes in 2039 design scenario are summarized in **Tables 5-7** and **Table 5-8**. The results indicate that the V/C ratio will be within capacity (< 1.0) under the proposed improvement schemes.

Table 5-7 Pedestrian Walkway Assessment – 2039 Weekday (Design With Development and Proposed Improvement)

CROSSING	LOCATION	CROSSING WIDTH (M)	PEAK	GREEN TIME PROPORTION	CAPACITY (PED/HR) ⁽¹⁾	2-WAY PED FLOW (PED/HR)	V/C RATIO
P4	Boundary Street	3.6	Weekday AM	0.22	4,600	735	0.16
			Weekday PM	0.22	4,600	2,505	0.54
P16	Prince Edward Road West	6.5	Weekday AM	0.24	4,350	760	0.17
			Weekday PM	0.24	4,350	2,380	0.55

Note: (1) According to TPDM Vol. 4 Ch. 3 Clause 3.2.5.6, Pedestrian crossing capacity = K x Green time proportion x Pedestrian crossing width, where K = A constant equivalent

Table 5-8 Pedestrian Walkway Assessment – 2039 Weekend (Design With Development and Proposed Improvement)

CROSSING	LOCATION	CROSSING WIDTH (M)	PEAK	GREEN TIME PROPORTION	CAPACITY (PED/HR) ⁽¹⁾	2-WAY PED FLOW (PED/HR)	V/C RATIO
P4	Boundary Street	3.6	Saturday	0.22	4,600	3,385	0.74
			Sunday	0.22	4,600	3,725	0.81
P16	Prince Edward Road West	6.5	Saturday	0.24	4,350	4,000	0.92
			Sunday	0.24	4,350	3,975	0.91

Note: (1) According to TPDM Vol. 4 Ch. 3 Clause 3.2.5.6, Pedestrian crossing capacity = K x Green time proportion x Pedestrian crossing width, where K = A constant equivalent

6. SUMMARY AND CONCLUSION

6.1 Summary

6.1.1 This Traffic Impact Assessment has been undertaken to assess the potential traffic impact of the proposed development and to serve as a supporting document for the S.16 Planning Application for minor relaxation of maximum domestic GFA of Site B with its notional proposal to the TPB for consideration.

6.1.2 The parking facilities provision of the Proposed Development are proposed as shown in **Table 6-1**. The internal parking provision is based on HKPSG and the levels of provision proposed in the TIA of the approved DSP, to which TD has no in-principle objection.

Table 6-1 Summary of Proposed Parking Facilities of the Proposed Development

FACILITY	SITE A1 (NOS.)	SITE B (NOS.)	SITES A2 – A5 (NOS.) ⁽⁴⁾	Total
Residential Private Car Parking	65 ⁽¹⁾	219 ⁽²⁾	-	284
Visitors' Private Car Parking	10 ⁽¹⁾	15 ⁽¹⁾	-	25
Non-domestic Private Car Parking – Retail	33 ⁽¹⁾	99 ⁽²⁾	-	132
Non-domestic Private Car Parking – Office	-	34 ⁽¹⁾	-	34
Private Car Parking – GIC Uses ⁽³⁾	-	35 ⁽¹⁾	-	35
Total Car Parking Spaces	108	402	-	510
Residential Motorcycle Parking	5	11	-	16
Non-domestic Motorcycle Parking - Retail	4	10	-	14
Non-domestic Motorcycle Parking - Office	-	4	-	4
Total Motorcycle Parking Spaces	9	25	-	34
Residential Loading and Unloading space	2	3	-	5
Non-domestic Loading and Unloading bay – Retail	6	19	-	25
Non-domestic Loading and Unloading bay – Office	-	3	-	3
Total Loading and Unloading Spaces	8	25	-	33
Public Vehicle Park (PVP)				
Private Car Parking	-	About 220	-	About 220
Loading / Unloading Bay	-	About 10	-	About 10

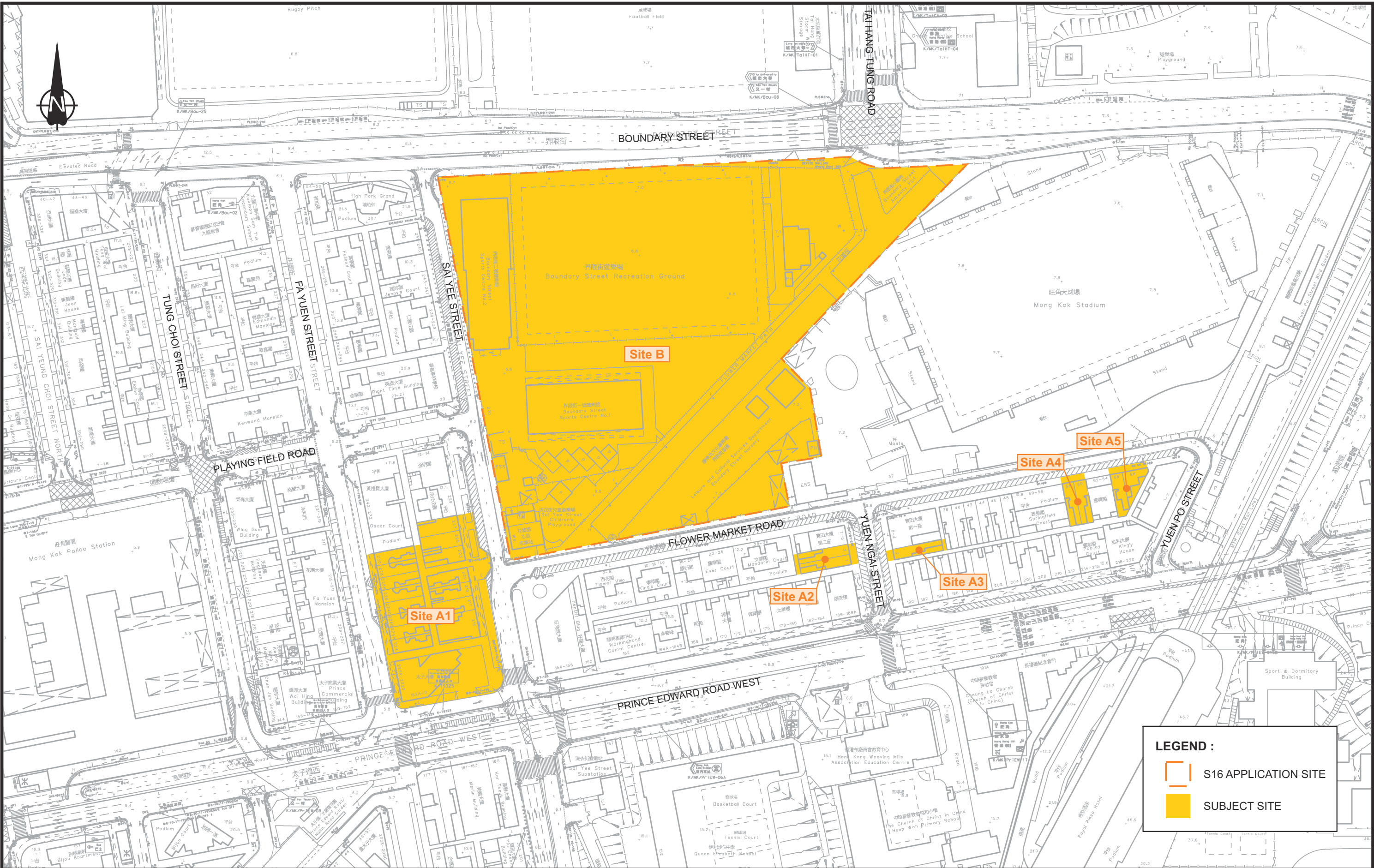
Notes: (1) Including 1 no. of accessible parking spaces for disabled person.
(2) Including 2 nos. of accessible parking spaces for disabled person.
(3) Since the use for the GIC in Site B are still not confirmed at this stage of the project and so it will assume 35 car parking spaces will be provided for conservative purpose.
(4) As the GFA of Sites A2 to A5 are very minor (around 100 sqm), and thus no car parking spaces will be provided for all Sites A2 to A5.

6.1.3 In order to investigate the traffic impact to the surrounding road and pedestrian network of the proposed developments, 8 key junctions and 19 sections of footpath adjacent to the development site are identified for traffic survey and assessment.

- 6.1.4 The junction capacity analysis of the selected key junctions in the reference and design scenarios during weekday and weekend peak hours in Year 2039 had been assessed as shown in Chapter 5. The results indicated all junctions would be operated within capacity in the design scenario with development traffic, same as the findings of the TIA in the approved DSP.
- 6.1.5 LOS and V/C ratio assessment at the identified pedestrian walkways in the reference and design scenarios during weekday and weekend peak hours in Year 2039 had been assessed as shown in Chapter 5. The results indicated that most assessed pedestrian walkways (including footpaths and crossings) during weekday, Saturday and Sunday are operating within capacity, except the signalised crossings at Prince Edward Road West (P4) and Sai Yee Street (P16) which are overloaded during weekend peak. Possible improvement scheme had been proposed to widen the crossing width to enhance the capacity issue at the concerned crossings.

6.2 Conclusion

- 6.2.1 Based on the above findings, it is concluded that the proposed development with the proposed increase in domestic GFA in Site B is feasible from a traffic perspective and will not lead to adverse traffic impact to the surrounding road and footpath network.



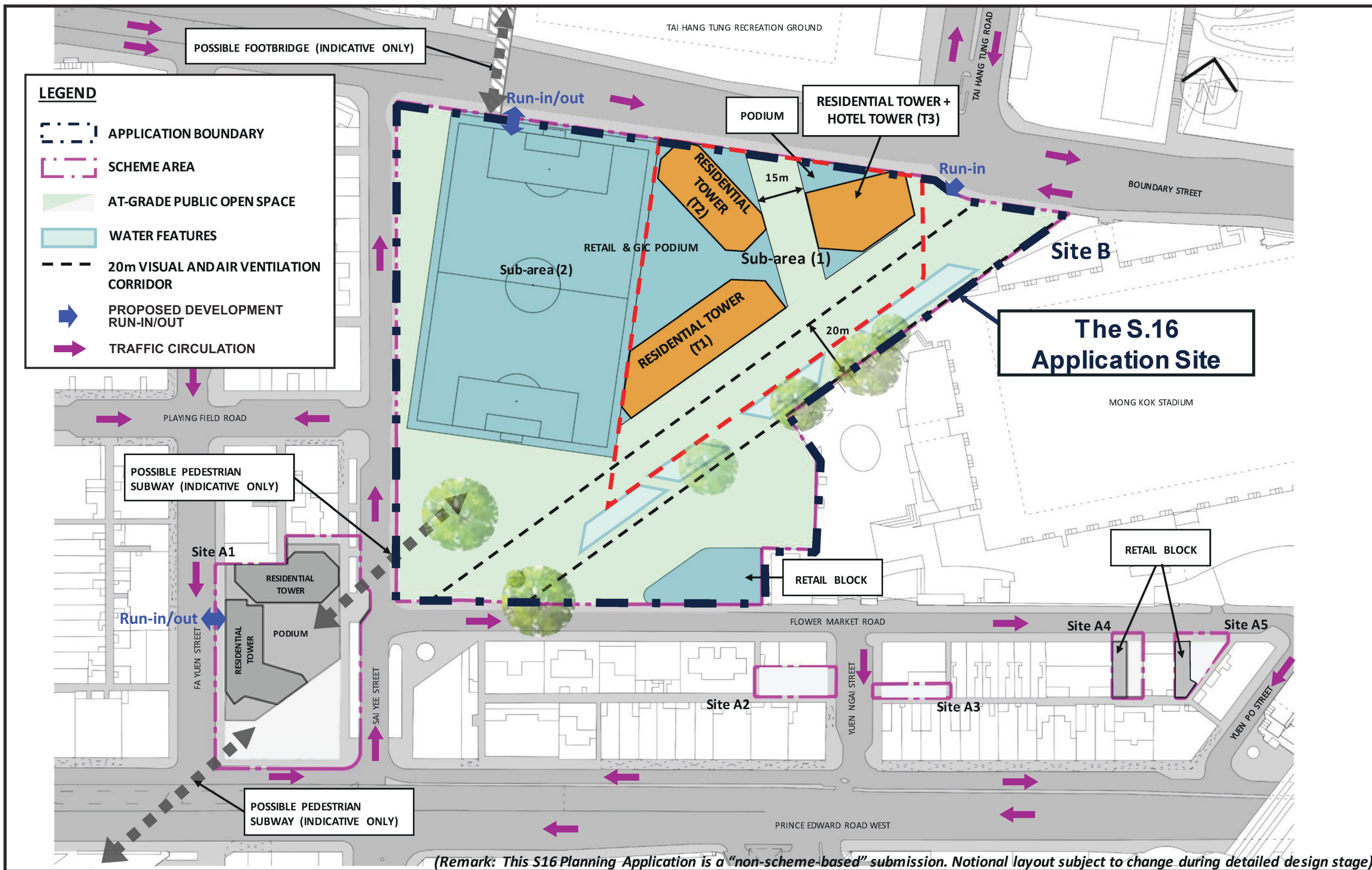
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Project Title

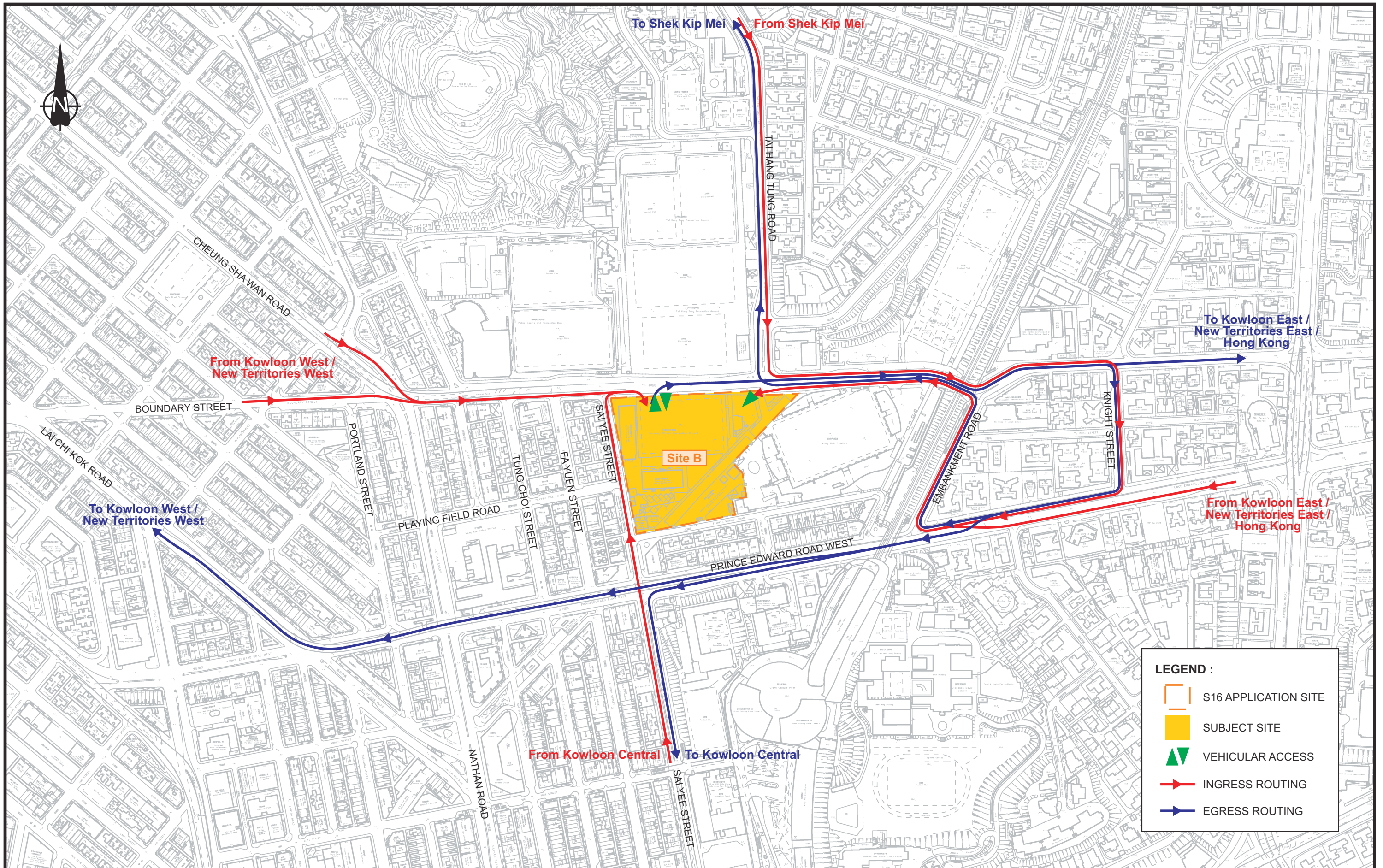
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				NTS
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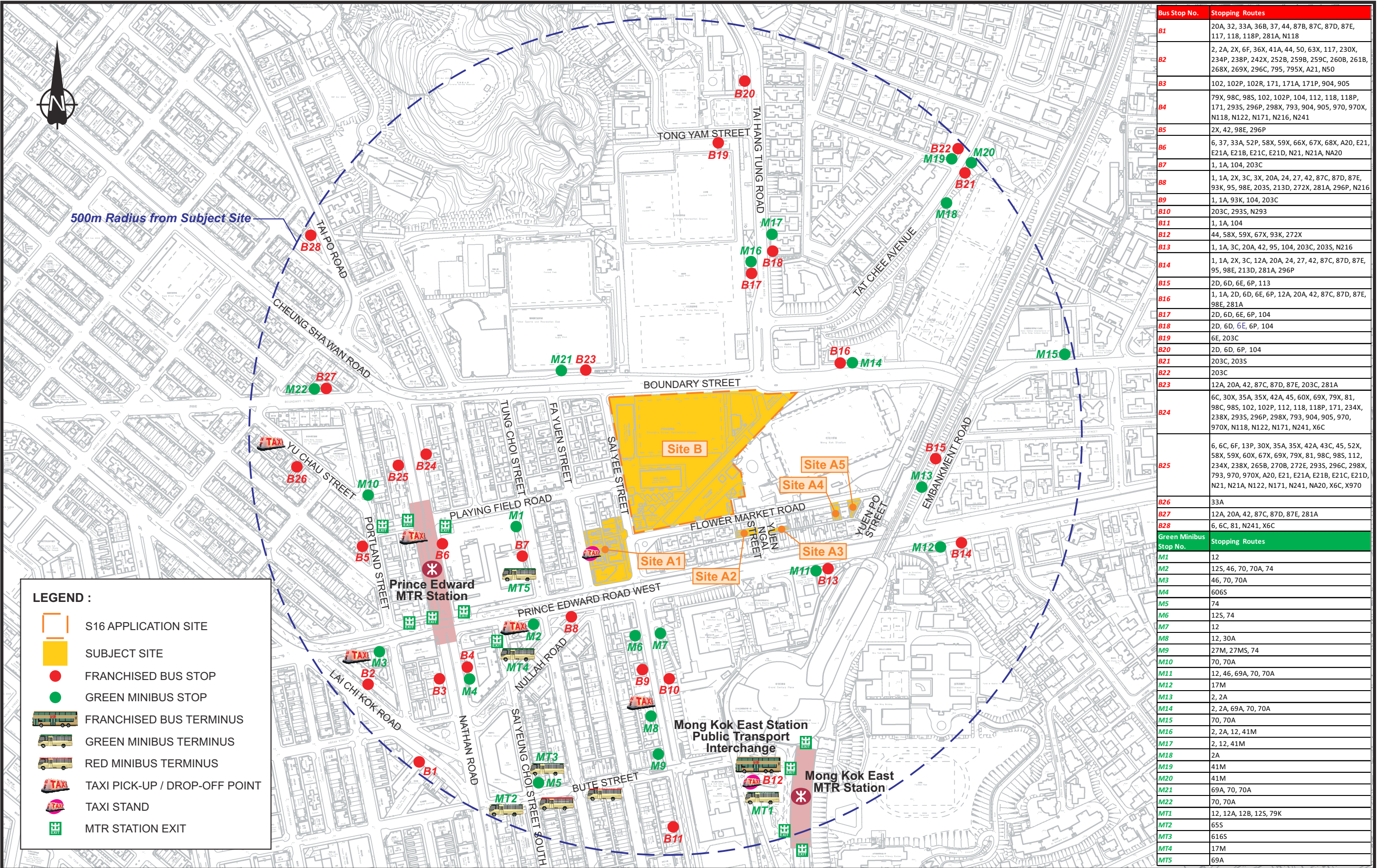




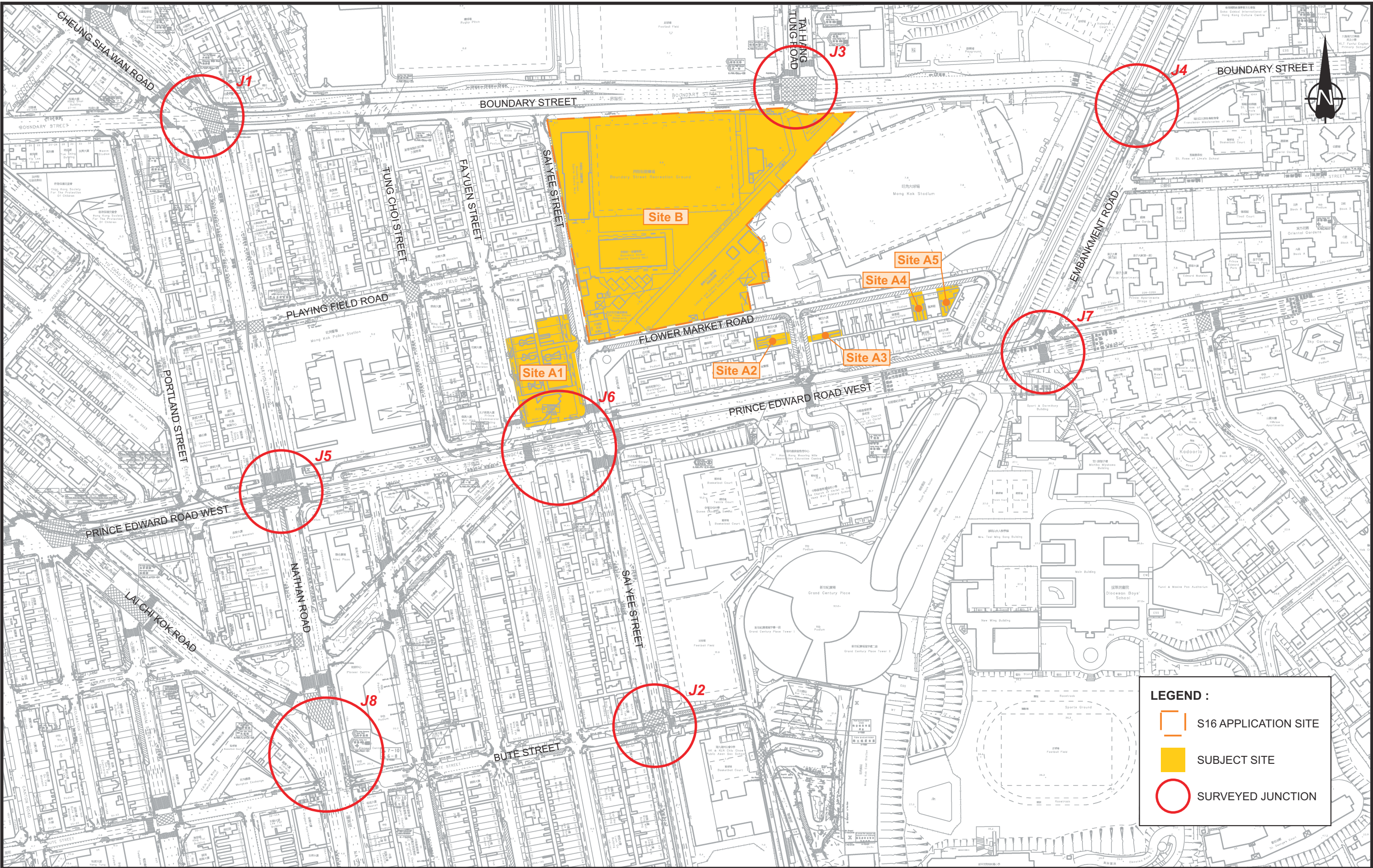
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Bus Stop No.	Stopping Routes
B1	20A, 32, 33A, 36B, 37, 44, 87B, 87C, 87D, 87E, 117, 118, 118P, 281A, N118
B2	2, 2A, 2X, 6F, 36X, 41A, 44, 50, 63X, 117, 230X, 234P, 238P, 242X, 252B, 259B, 259C, 260B, 261B, 268X, 269X, 296C, 795, 795X, A21, N50
B3	102, 102P, 102R, 171, 171A, 171P, 904, 905
B4	79X, 98C, 98S, 102, 102P, 104, 112, 118, 118P, 171, 293S, 296P, 298X, 793, 904, 905, 970, 970X, N118, N122, N171, N216, N241
B5	2X, 42, 98E, 296P
B6	6, 37, 33A, 52P, 58X, 59X, 66X, 67X, 68X, A20, E21, E21A, E21B, E21C, E21D, N21, N21A, NA20
B7	1, 1A, 104, 203C
B8	1, 1A, 2X, 3C, 3X, 20A, 24, 27, 42, 87C, 87D, 87E, 93K, 95, 98E, 203S, 213D, 272X, 281A, 296P, N216
B9	1, 1A, 93K, 104, 203C
B10	203C, 293S, N293
B11	1, 1A, 104
B12	44, 58X, 59X, 67X, 93K, 272X
B13	1, 1A, 3C, 20A, 42, 95, 104, 203C, 203S, N216
B14	1, 1A, 2X, 3C, 12A, 20A, 24, 27, 42, 87C, 87D, 87E, 95, 98E, 213D, 281A, 296P
B15	2D, 6D, 6E, 6P, 113
B16	1, 1A, 2D, 6D, 6E, 6P, 12A, 20A, 42, 87C, 87D, 87E, 98E, 281A
B17	2D, 6D, 6E, 6P, 104
B18	2D, 6D, 6E, 6P, 104
B19	6E, 203C
B20	2D, 6D, 6P, 104
B21	203C, 203S
B22	203C
B23	12A, 20A, 42, 87C, 87D, 87E, 203C, 281A
B24	6C, 30X, 35A, 35X, 42A, 45, 60X, 69X, 79X, 81, 98C, 98S, 102, 102P, 112, 118, 118P, 171, 234X, 238X, 293S, 296P, 298X, 793, 904, 905, 970, 970X, N118, N122, N171, N241, X6C
B25	6, 6C, 6F, 13P, 30X, 35A, 35X, 42A, 43C, 45, 52X, 58X, 59X, 60X, 67X, 69X, 79X, 81, 98C, 98S, 112, 234X, 238X, 265B, 270B, 272E, 293S, 296C, 298X, 793, 970, 970X, A20, E21, E21A, E21B, E21C, E21D, N21, N21A, N122, N171, N241, NA20, X6C, X970
B26	33A
B27	12A, 20A, 42, 87C, 87D, 87E, 281A
B28	6, 6C, 81, N241, X6C
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M1	12
M2	12S, 46, 70, 70A, 74
M3	46, 70, 70A
M4	606S
M5	74
M6	12S, 74
M7	12
M8	12, 30A
M9	27M, 27MS, 74
M10	70, 70A
M11	12, 46, 69A, 70, 70A
M12	17M
M13	2, 2A
M14	2, 2A, 69A, 70, 70A
M15	70, 70A
M16	2, 2A, 12, 41M
M17	2, 12, 41M
M18	2A
M19	41M
M20	41M
M21	69A, 70, 70A
M22	70, 70A
MT1	12, 12A, 12B, 12S, 79K
MT2	65S
MT3	616S
MT4	17M
MT5	69A



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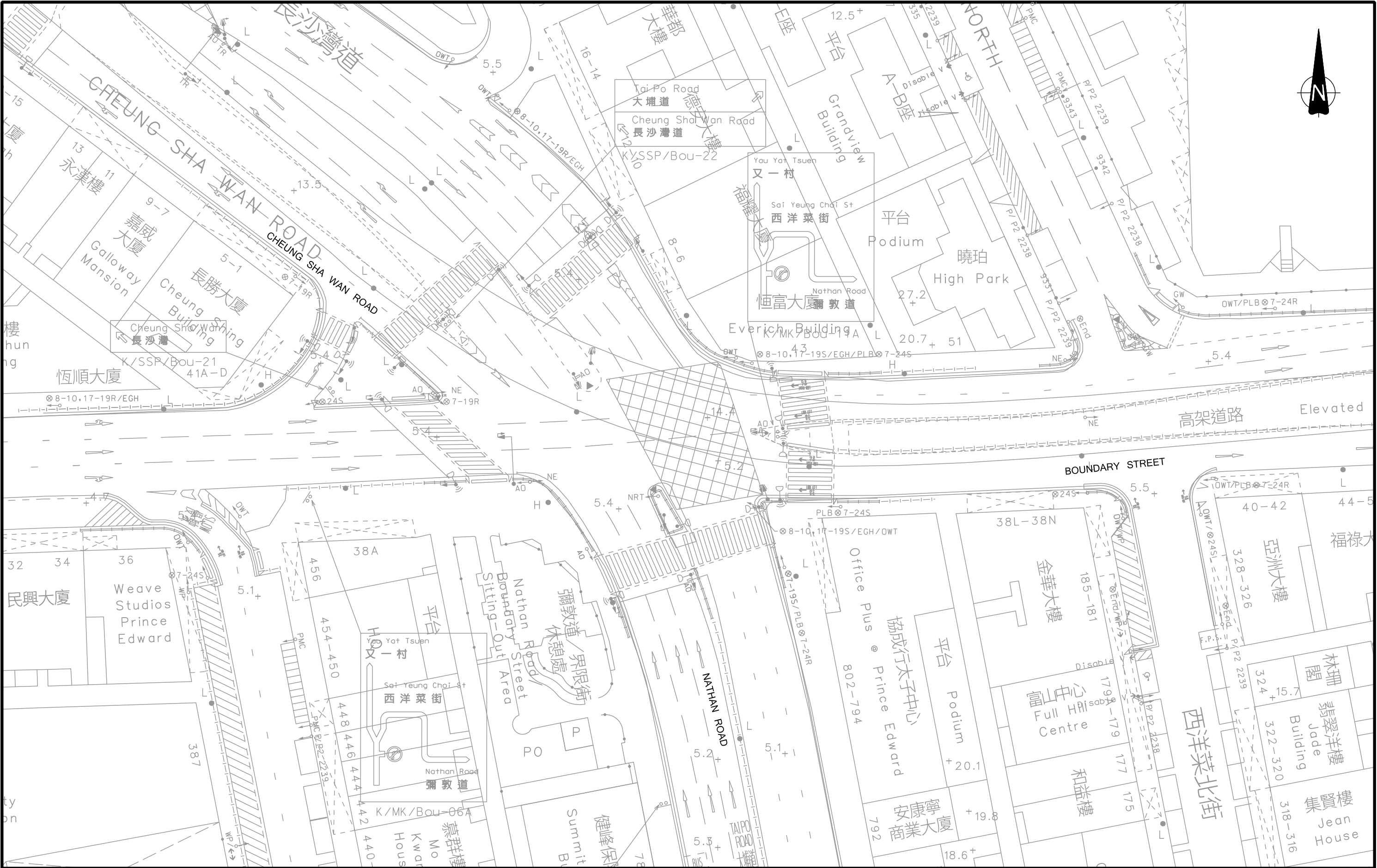
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SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF THE MAXIMUM DOMESTIC GFA OF SITE B FOR THE URBAN RENEWAL AUTHORITY SAI YEE STREET / FLOWER MARKET ROAD DEVELOPMENT SCHEME ("YTM-013"), MONG KOK, KOWLOON

Drawing Title			
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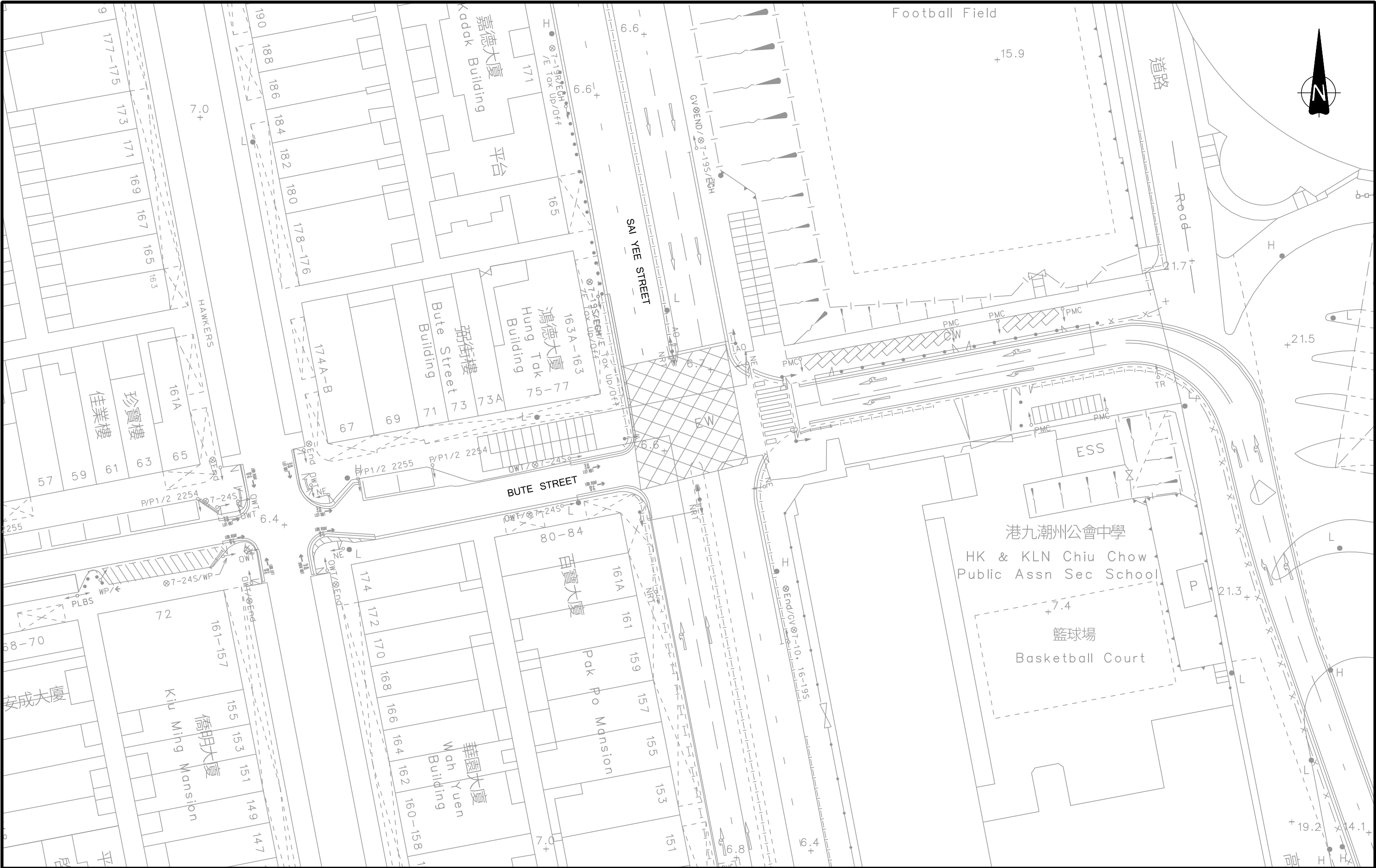


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Drawing Title				
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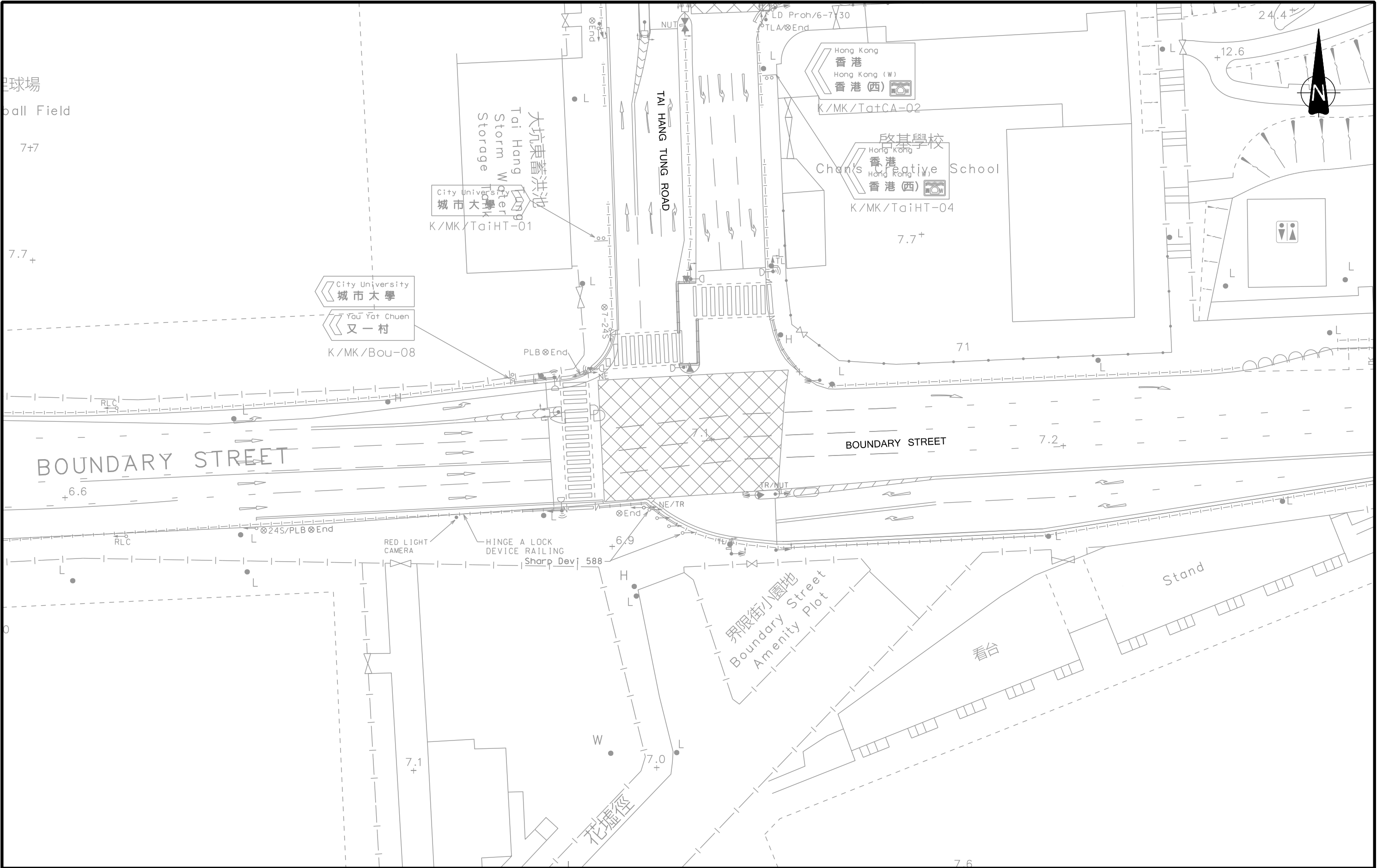


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Project Title
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Drawing Title			
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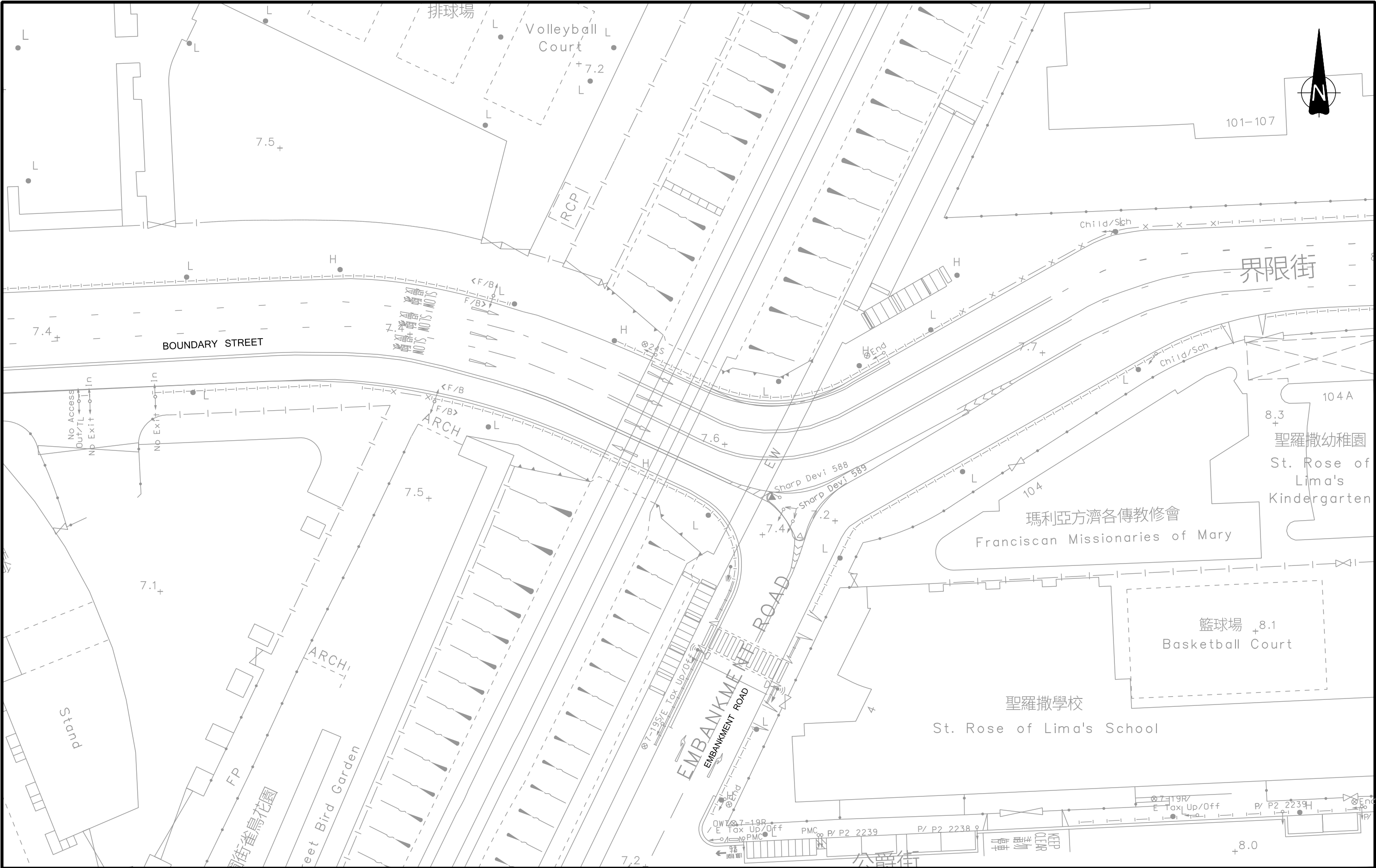
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SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF THE MAXIMUM DOMESTIC GFA OF SITE B FOR THE URBAN RENEWAL AUTHORITY SAI YEE STREET / FLOWER MARKET ROAD DEVELOPMENT SCHEME ("YTM-013"), MONG KOK, KOWLOON

Drawing Title			
EXISTING JUNCTION LAYOUT OF BOUNDARY STREET/ TAI HANG TUNG ROAD (J3)			
Designed	HMC	Checked	CYH
Scale	1:500(A3)	Date	MAY 2026
Drawing No.	3.5	Rev.	-



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Rev.	Description	Checked	Date

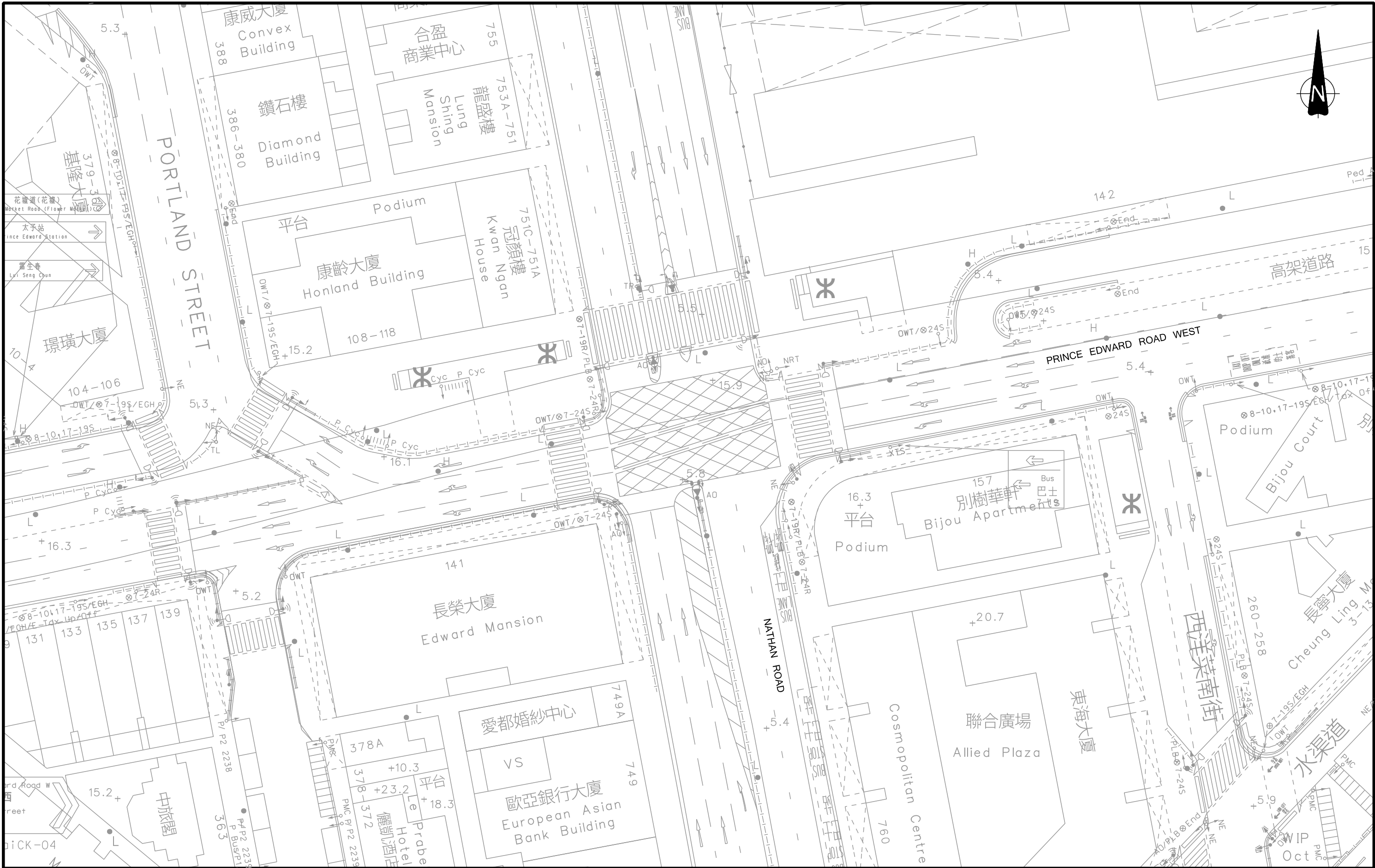
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Drawing Title				
EXISTING JUNCTION LAYOUT OF BOUNDARY STREET/ EMBANKMENT ROAD				
Designed	HMC	Checked	CYH	Scale
				1:500(A3)
Date	MAY 2026		Drawing No.	3.6
				Rev.
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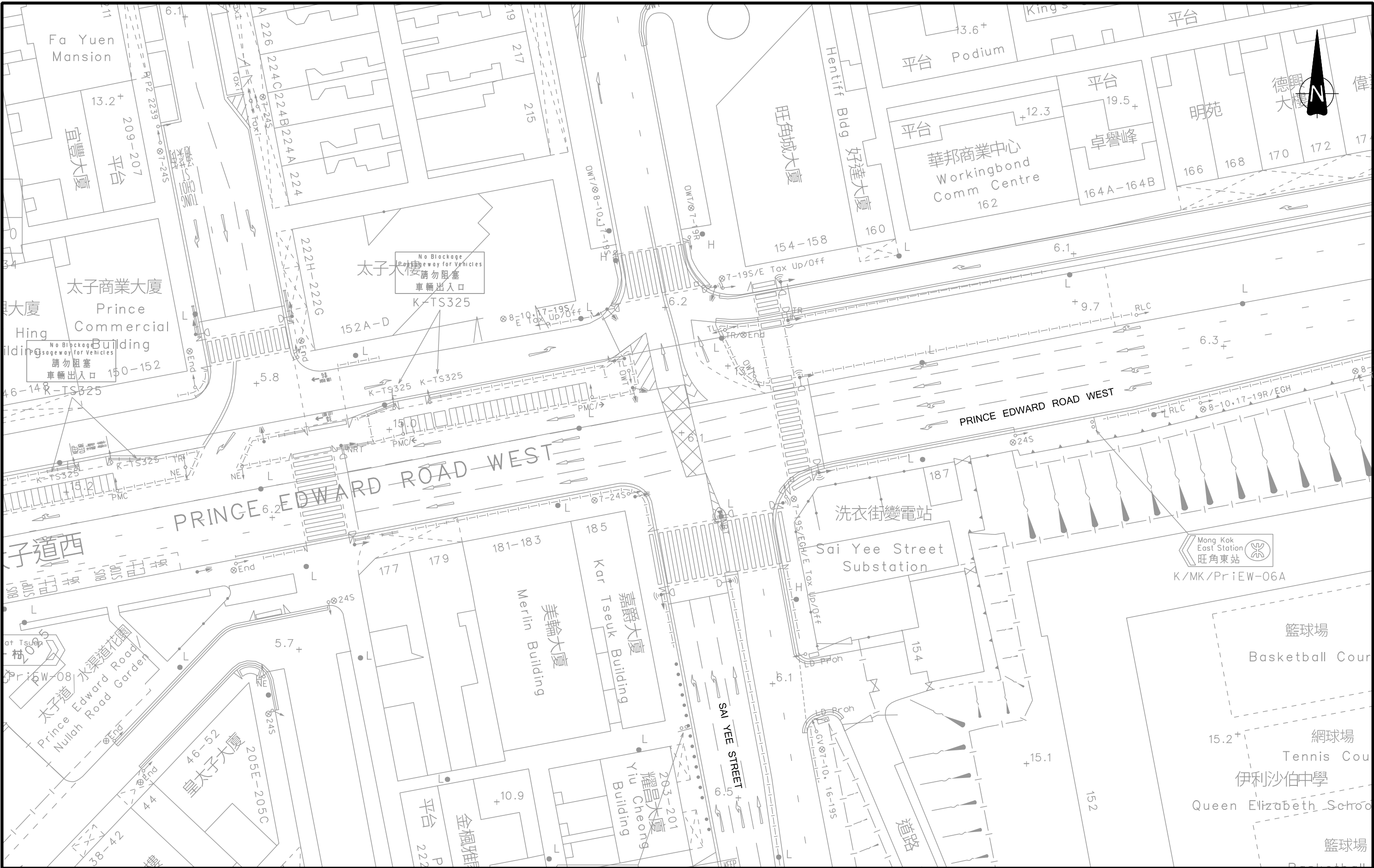
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Rev.	Description	Checked	Date

Project Title
SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF THE MAXIMUM DOMESTIC GFA OF SITE B FOR THE URBAN RENEWAL AUTHORITY SAI YEE STREET / FLOWER MARKET ROAD DEVELOPMENT SCHEME ("YTM-013"), MONG KOK, KOWLOON

Drawing Title				
EXISTING JUNCTION LAYOUT OF PRINCE EDWARD ROAD WEST/ NATHAN ROAD (J5)				
Designed	HMC	Checked	CYH	Scale
				1:500(A3)
Date	MAY 2026	Drawing No.	3.7	Rev.
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Rev.	Description	Checked	Date

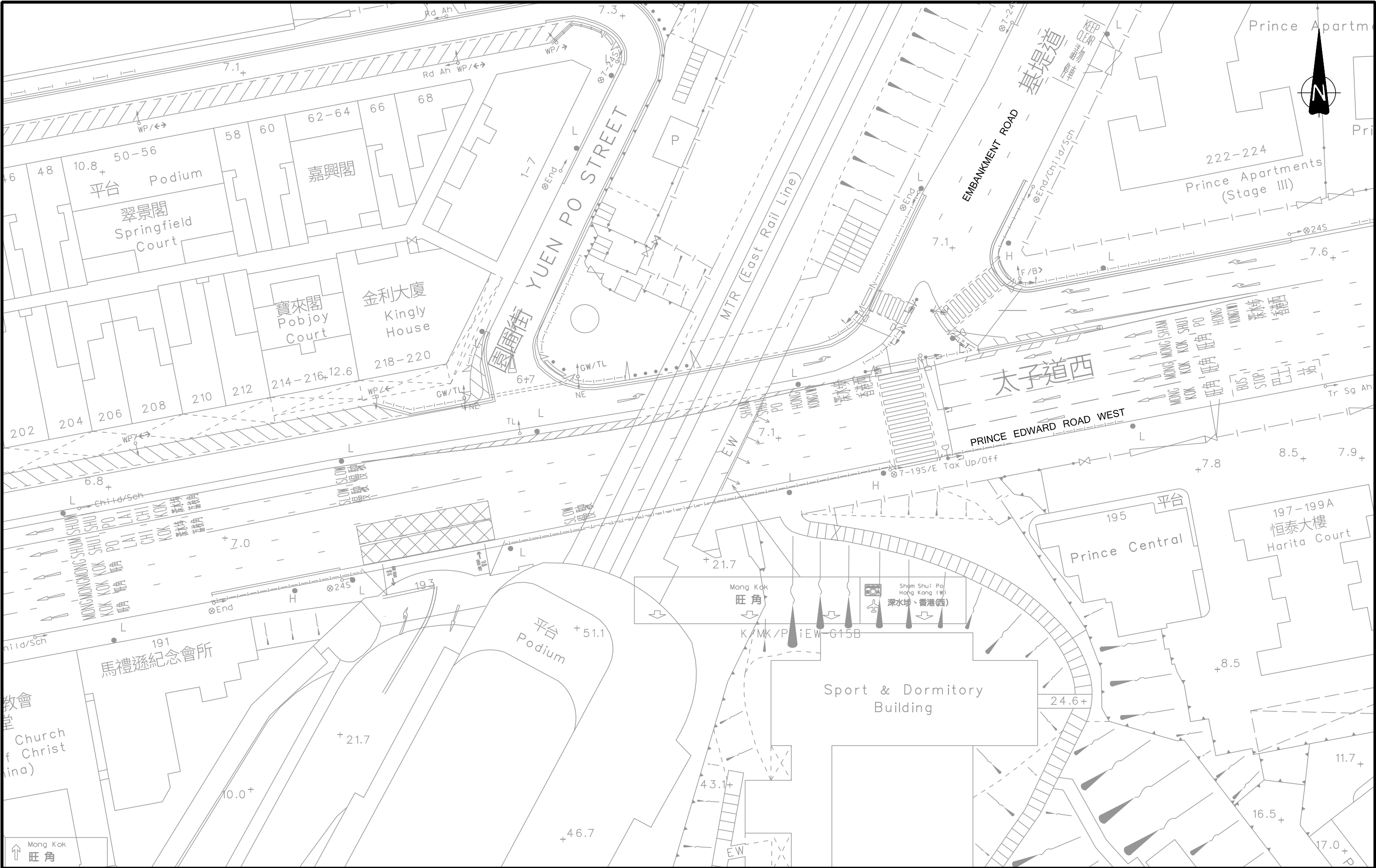
Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF THE MAXIMUM DOMESTIC GFA OF SITE B FOR THE URBAN RENEWAL AUTHORITY SAI YEE STREET / FLOWER MARKET ROAD DEVELOPMENT SCHEME ("YTM-013"), MONG KOK, KOWLOON

Drawing Title			
EXISTING JUNCTION LAYOUT OF PRINCE EDWARD ROAD WEST/ SAI YEE STREET (J6)			
Designed	HMC	Checked	CYH
Scale	1:500(A3)	Date	MAY 2026
Drawing No.	3.8	Rev.	-



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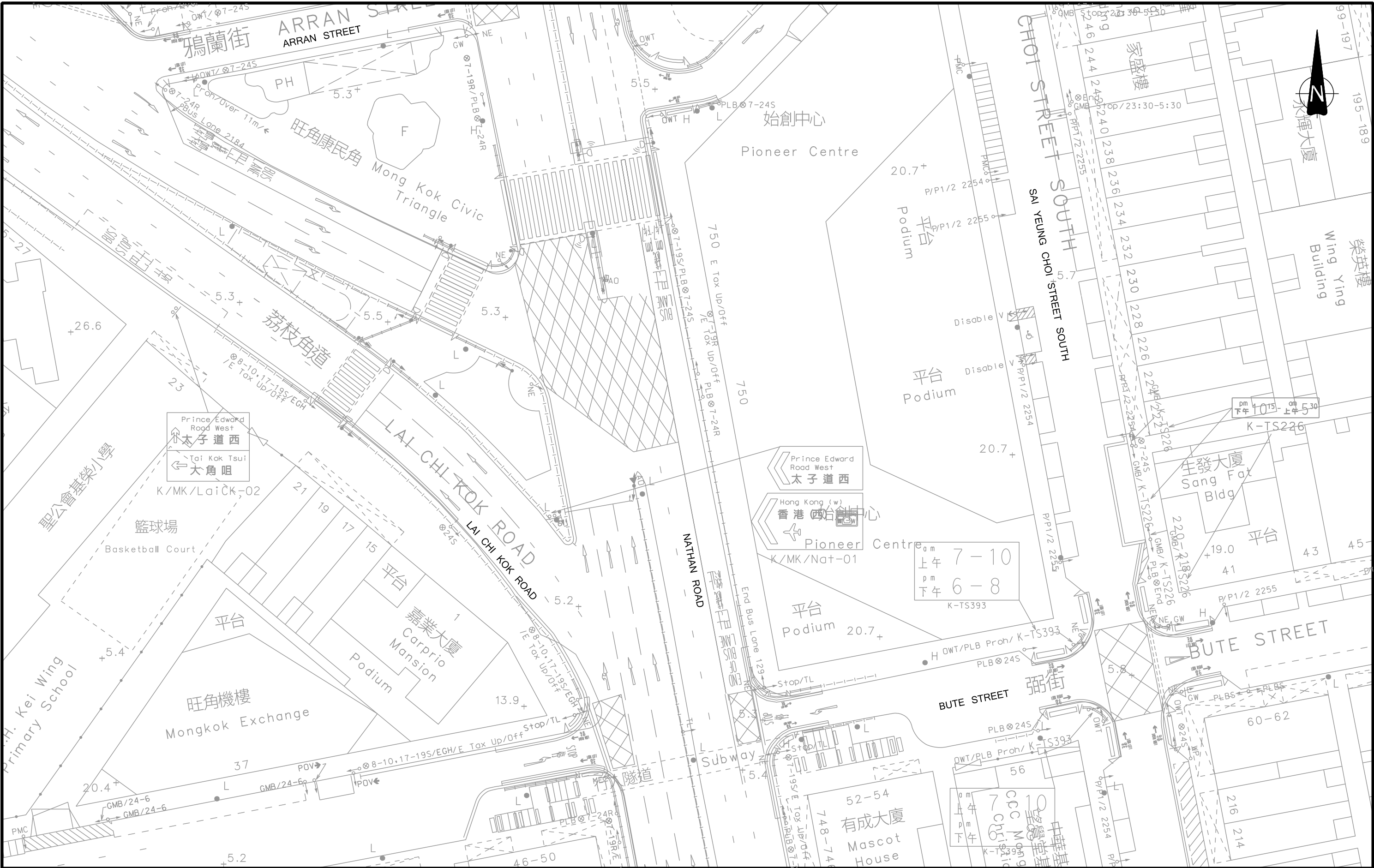
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Rev.	Description	Checked	Date

Project Title
SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF THE MAXIMUM DOMESTIC GFA OF SITE B FOR THE URBAN RENEWAL AUTHORITY SAI YEE STREET / FLOWER MARKET ROAD DEVELOPMENT SCHEME ("YTM-013"), MONG KOK, KOWLOON

Drawing Title				
EXISTING JUNCTION LAYOUT OF PRINCE EDWARD ROAD WEST/ EMBANKMENT ROAD (J7)				
Designed	HMC	Checked	CYH	Scale
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		Date	APR 2026	Drawing No.
				3.9
		Rev.		
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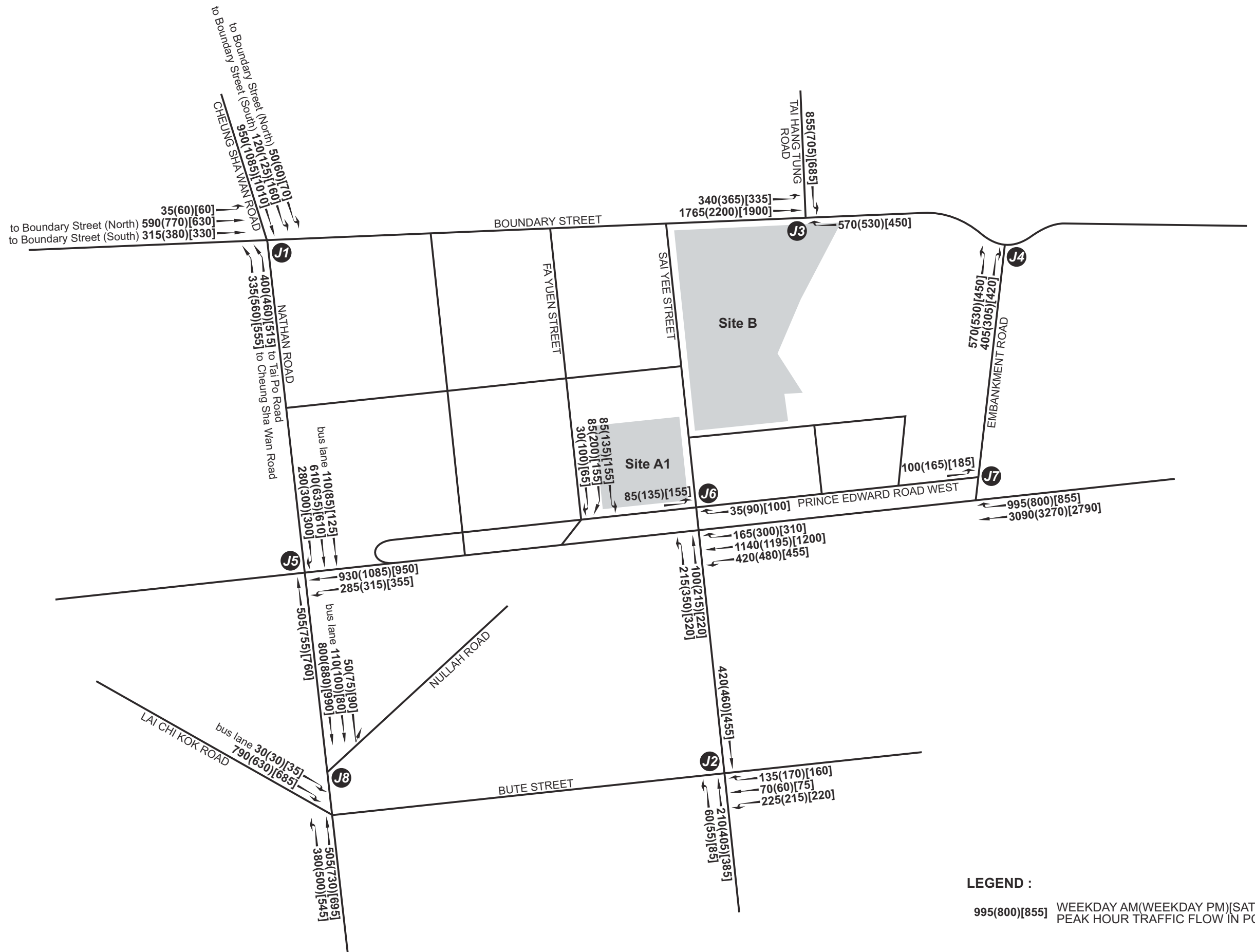
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Rev.	Description	Checked	Date

Project Title

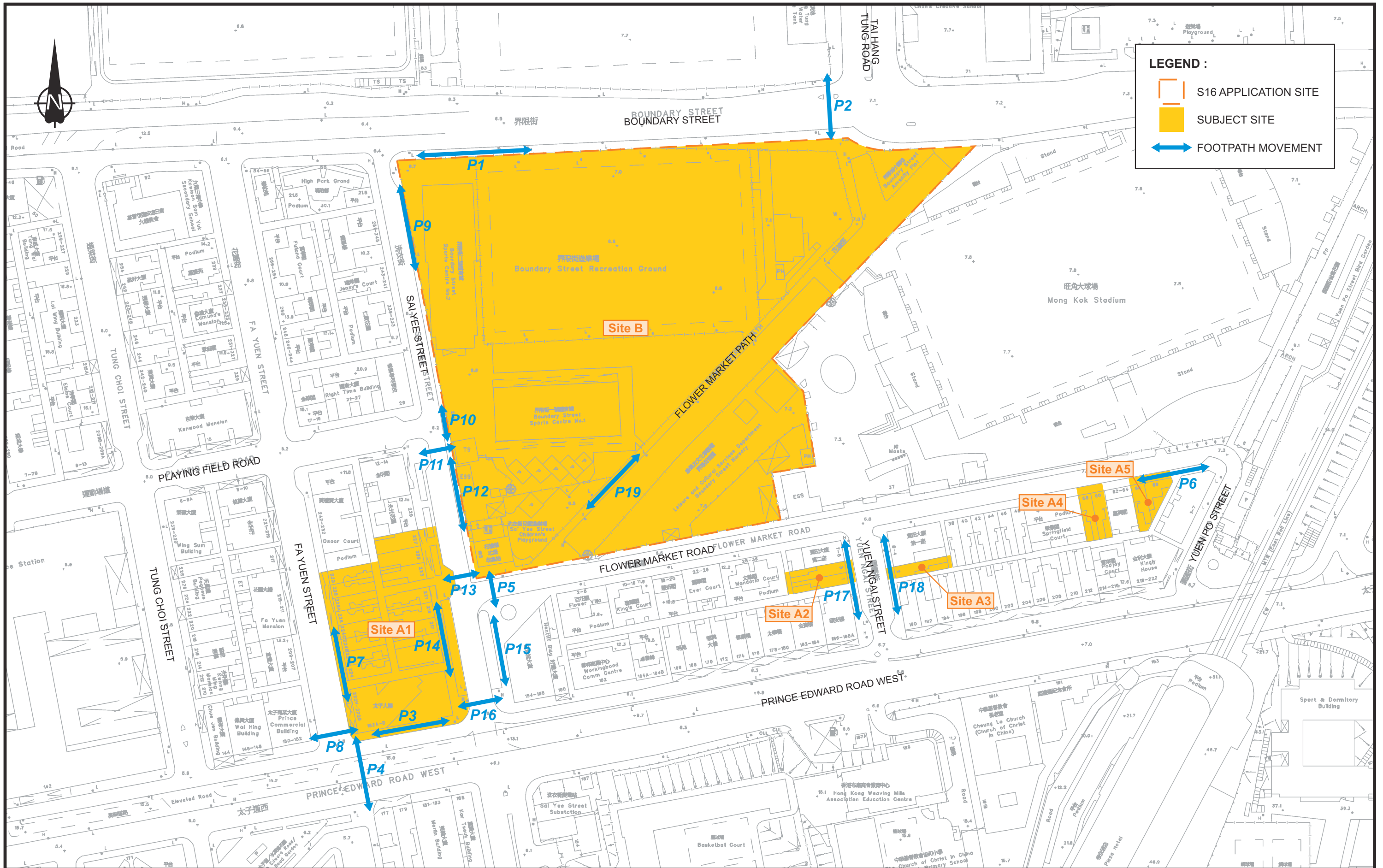
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Drawing Title			
EXISTING JUNCTION LAYOUT OF LAI CHI KOK ROAD/ NATHAN ROAD (J8)			
Designed	HMC	Checked	CYH
Scale	1:500(A3)	Date	MAY 2026
Drawing No.	3.10	Rev.	-





-	-	-	-	Project Title SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF THE MAXIMUM DOMESTIC GFA OF SITE B FOR THE URBAN RENEWAL AUTHORITY SAI YEE STREET / FLOWER MARKET ROAD DEVELOPMENT SCHEME ("YTM-013"), MONG KOK, KOWLOON	Drawing Title 2026 OBSERVED TRAFFIC FLOW DesignedHMC CheckedCYH ScaleNTS DateMAY 2026 Drawing No.3.11 Rev.-	SYSTRAMVA
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Rev.	Description	Checked	Date			



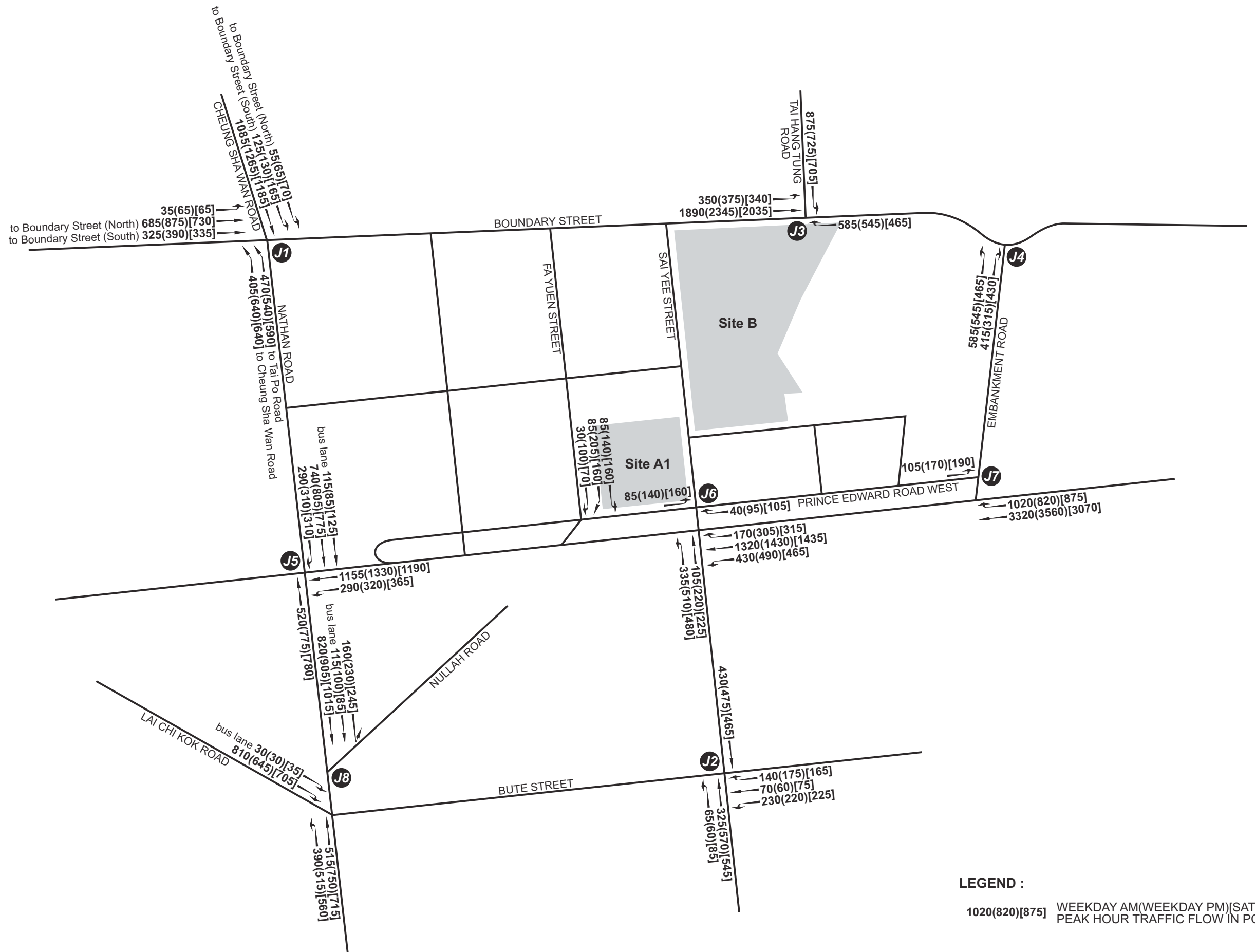
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Rev.	Description	Checked	Date

Project Title

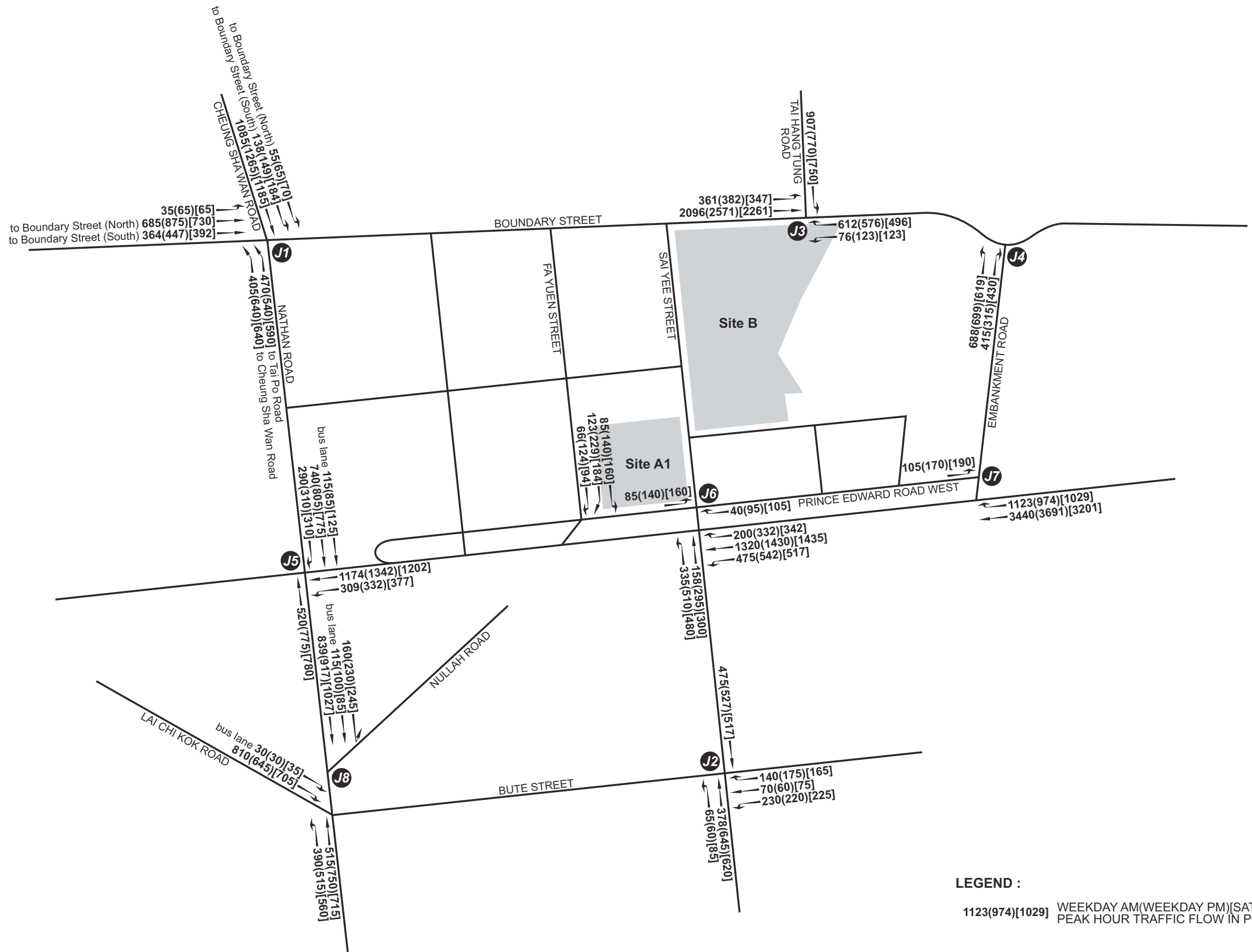
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Drawing Title			
SURVEYED PEDESTRIAN WALKWAY FOR ASSESSMENT			
Designed	HMC	Checked	CYH
Scale	NTS	Date	MAY 2026
Drawing No.	3.12	Rev.	-



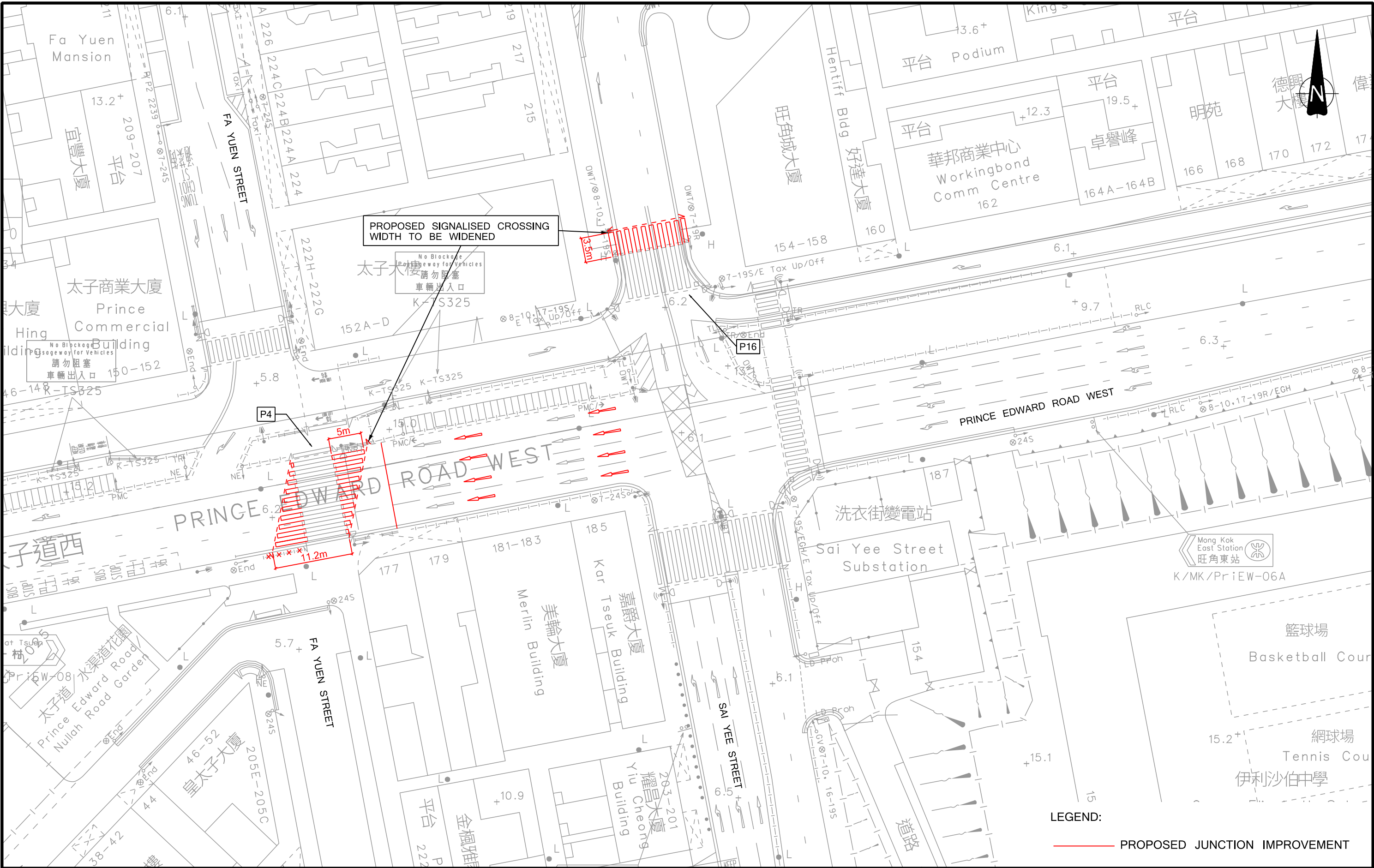


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Rev.	Description	Checked	Date			



-	-	-	-	Project Title SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF THE MAXIMUM DOMESTIC GFA OF SITE B FOR THE URBAN RENEWAL AUTHORITY SAI YEE STREET / FLOWER MARKET ROAD DEVELOPMENT SCHEME ("YTM-013"), MONG KOK, KOWLOON	Drawing Title 2039 DESIGN TRAFFIC FLOW DesignedHMC CheckedCYH ScaleNTS DateMAY 2026 Drawing No.4.2 Rev.-	SYSTRAMVA
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Rev.	Description	Checked	Date

Project Title

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF THE MAXIMUM DOMESTIC GFA OF SITE B FOR THE URBAN RENEWAL AUTHORITY SAI YEE STREET / FLOWER MARKET ROAD DEVELOPMENT SCHEME ("YTM-013"), MONG KOK, KOWLOON

Drawing Title			
PROPOSED WIDENING OF SIGNALISED CROSSINGS			
Designed	HMC	Checked	CYH
Scale	1:500(A3)	Date	JUN 2026
Drawing No.	5.1	Rev.	-



Appendix A1

JUNCTION CALCULATIONS (WEEKDAY)

Junction: J1 - Boundary Street / Nathan Road / Cheung Sha Wan Road

Design Year: 2026

Description: 2026 Observed Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Cheung Sha Wan Road - SB	↓	B	1	3.500	15					1785	1785	170	0.095	0.152	185	0.104	0.174
	↓	B	1	3.300						2085	2085	317	0.152		362	0.174	
	↓	B	1	3.300						2085	2085	317	0.152		362	0.174	
Nathan Road - NB	↑	A	1,3	3.500						1965	1965	234	0.119		325	0.165	
	↑	A	1,3	3.500						2105	2105	250	0.119		347	0.165	
	↑	A	1,3	3.500						2105	2105	251	0.119		348	0.165	
Boundary Street - EB	→	C	2	3.500	15			12%	15%	1940	1935	299	0.154	0.154	397	0.205	0.205
	→	C	2	3.600						2115	2115	326	0.154		433	0.205	
	→	C	2	3.600						2115	2115	315	0.149		380	0.180	
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =		19	+	13	=	32				*			*
		Fp	1,3	MIN GREEN + FLASH =		13	+	13	=	26							
		Gp	2,3	MIN GREEN + FLASH =		14	+	13	=	27							
		Hp	2	MIN GREEN + FLASH =		31	+	10	=	41							

Notes:

Flow: (pcu/hr)

Group	A,C	B,C,Ep	Group	A,C	B,C,Ep
y	0.273	0.306	y	0.371	0.379
L (sec)	10	50	L (sec)	10	50
C (sec)	120	120	C (sec)	130	130
y pract.	0.825	0.525	y pract.	0.831	0.554
R.C. (%)	202%	71%	R.C. (%)	124%	46%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 3

I/G=

I/G= 11

I/G= 11

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50908510** **MVA HONG KONG LIMITED**

Junction: J1 - Boundary Street / Nathan Road / Cheung Sha Wan Road Design Year: 2039
Description: 2039 Reference Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Cheung Sha Wan Road - SB	↓	B	1	3.500	15					1785	1785	180	0.101	0.174	195	0.109	0.202
	↓	B	1	3.300						2085	2085	362	0.174		422	0.202	
	↓	B	1	3.300						2085	2085	362	0.174		422	0.202	
Nathan Road - NB	↑	A	1,3	3.500						1965	1965	278	0.141		375	0.191	
	↑	A	1,3	3.500						2105	2105	299	0.142		403	0.191	
	↑	A	1,3	3.500						2105	2105	298	0.142		402	0.191	
Boundary Street - EB	→	C	2	3.500	15			10%	14%	1945	1935	345	0.177	0.177	449	0.232	0.232
	→	C	2	3.600						2115	2115	375	0.177		491	0.232	
	→	C	2	3.600						2115	2115	325	0.154		390	0.184	
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =		19	+	13	=	32				*			*
		Fp	1,3	MIN GREEN + FLASH =		13	+	13	=	26							
		Gp	2,3	MIN GREEN + FLASH =		14	+	13	=	27							
		Hp	2	MIN GREEN + FLASH =		31	+	10	=	41							

Notes:	Flow: (pcu/hr)	Group	A,C	B,C,Ep	Group	A,C	B,C,Ep
		y	0.319	0.351	y	0.424	0.435
		L (sec)	10	50	L (sec)	10	50
		C (sec)	120	120	C (sec)	130	130
		y pract.	0.825	0.525	y pract.	0.831	0.554
		R.C. (%)	158%	50%	R.C. (%)	96%	27%

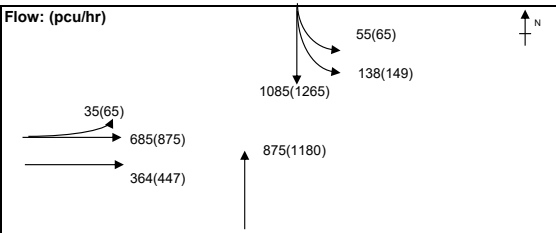
Stage / Phase Diagrams				
1.	2.	3.	4.	5.
I/G= 3	I/G=	I/G= 11		
I/G= 3	I/G=	I/G= 11		

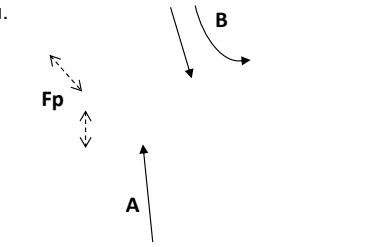
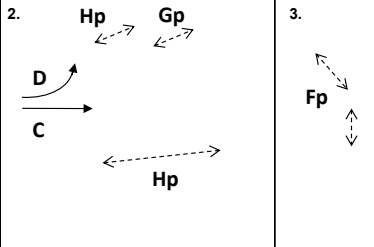
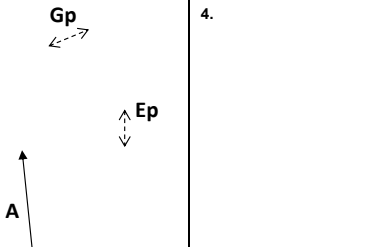
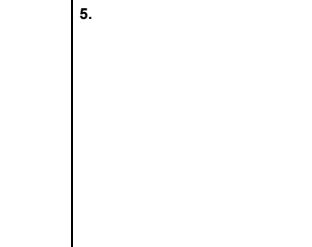
TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50908510** **MVA HONG KONG LIMITED**

Junction: J1 -Boundary Street / Nathan Road / Cheung Sha Wan Road Design Year: 2039
Description: 2039 Design Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Cheung Sha Wan Road - SB	↓	B	1	3.500	15					1785	1785	193	0.108	0.174	214	0.120	0.202
	↓	B	1	3.300						2085	2085	362	0.174		422	0.202	
	↓	B	1	3.300						2085	2085	362	0.174		422	0.202	
Nathan Road - NB	↑	A	1,3	3.500						1965	1965	278	0.141		375	0.191	
	↑	A	1,3	3.500						2105	2105	299	0.142		403	0.191	
	↑	A	1,3	3.500						2105	2105	298	0.142		402	0.191	
Boundary Street - EB	→	C	2	3.500	15			10%	14%	1945	1935	345	0.177	0.177	449	0.232	0.232
	→	C	2	3.600						2115	2115	375	0.177		491	0.232	
	→	C	2	3.600						2115	2115	364	0.172		447	0.211	
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =				+	13	=	32			*			*
		Fp	1,3	MIN GREEN + FLASH =				+	13	=	26						
		Gp	2,3	MIN GREEN + FLASH =				+	13	=	27						
		Hp	2	MIN GREEN + FLASH =				+	10	=	41						

Notes:		Flow: (pcu/hr)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

Stage / Phase Diagrams				
1. 	2. 	3. 	4. 	5. 
I/G= 3	I/G=		I/G= 11	
I/G= 3	I/G=		I/G= 11	

Date: APR, 2026 Junction: J1 -Boundary Street / Nathan Road / Cheung Sha Wan Road (J1)

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50908510 MVA HONG KONG LIMITED

Junction: J2 - Bute Street / Sai Yee Street Design Year: 2026
Description: 2026 Observed Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Bute Street (EB)	↕	B	2	3.200		13		73%	80%	1785	1770	205	0.115		230	0.130	0.130
	↙	B	2	3.200	10					1685	1685	225	0.134	0.134	215	0.128	
Sai Yee Street (SB)	↓	A	1	3.500						1965	1965	203	0.103	0.103	222	0.113	
	↓	A	1	3.500						2105	2105	217	0.103		238	0.113	
Sai Yee Street (NB)	* ↕	A	1	3.500	10			53%	46%	910	920	80	0.088		141	0.153	0.153
	↑	A	1	3.500						2105	2105	190	0.090		319	0.152	
Pedestrian Crossing Cp 1 MIN GREEN + FLASH = 5 + 8 = 13																	

Notes:
* Site Factor = 0.5 (Kerbside Activities)

Group	Cp,B	A,B	Group	Cp,B	A,B
y	0.134	0.237	y	0.130	0.283
L (sec)	19	9	L (sec)	19	9
C (sec)	130	130	C (sec)	130	130
y pract.	0.768	0.838	y pract.	0.768	0.838
R.C. (%)	475%	254%	R.C. (%)	491%	196%

Stage / Phase Diagrams

1.

I/G= 6
I/G= 6

2.

I/G=
I/G=

3.

I/G=
I/G=

4.

5.

Job No.: CHK50908510 MVA HONG KONG LIMITED

Design Year: 2039

Checked By: CYH

Notes: * Site Factor = 0.5 (Kerbside Activities)		Group	Cp,B	A,B	Group	Cp,B	A,B
		y	0.136	0.266	y	0.132	0.339
		L (sec)	19	9	L (sec)	19	9
		C (sec)	130	130	C (sec)	130	130
		y pract.	0.768	0.838	y pract.	0.768	0.838
		R.C. (%)	463%	215%	R.C. (%)	482%	147%

1.	2.	3.	4.	5.
$I/G = 6$ $I/G = 6$	$I/G =$ $I/G =$	$I/G =$ $I/G =$		

Date: APR, 2026	Junction: J2 - Bute Street / Sai Yee Street	(J2)
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TRAFFIC SIGNALS CALCULATION

Job No.: CHK50908510 MVA HONG KONG LIMITED

Junction: J2 - Bute Street / Sai Yee Street Design Year: 2039
Description: 2039 Design Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Bute Street (EB)	↑	B	2	3.200		13		67%	74%	1795	1780	210	0.117		235	0.132	0.132
	↖	B	2	3.200	10					1685	1685	230	0.136	0.136	220	0.131	
Sai Yee Street (SB)	↓	A	1	3.500						1965	1965	229	0.117		254	0.129	
	↓	A	1	3.500						2105	2105	246	0.117		273	0.130	
Sai Yee Street (NB)	* ↗	A	1	3.500	10			49%	28%	915	945	134	0.146		218	0.231	
	↑	A	1	3.500						2105	2105	309	0.147	0.147	487	0.231	0.231
Pedestrian Crossing Cp 1 MIN GREEN + FLASH = 5 + 8 = 13																	

Notes:
* Site Factor = 0.5 (Kerbside Activities)

Group	Cp,B	A,B	Group	Cp,B	A,B
y	0.136	0.283	y	0.132	0.363
L (sec)	19	9	L (sec)	19	9
C (sec)	130	130	C (sec)	130	130
y pract.	0.768	0.838	y pract.	0.768	0.838
R.C. (%)	463%	196%	R.C. (%)	482%	131%

Stage / Phase Diagrams

1.

I/G= 6
I/G= 6

2.

I/G=
I/G=

3.

I/G=
I/G=

4.

I/G=
I/G=

5.

I/G=
I/G=

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50908510** MVA HONG KONG LIMITED

Junction: J3 - Boundary Street / Tai Hang Tung Road Design Year: 2026
Description: 2026 Observed Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Boundary Street - WB	←	A	1	3.300		20				1810	1810	274	0.151		255	0.141	0.141
	←	A	1	3.300		23				1955	1955	296	0.151	0.151	275	0.141	
Tai Hang Tung Road - SB	↓	B	1,2	3.300	15					1770	1770	269	0.152		221	0.125	
	↓	B	1,2	3.300	18					1925	1925	292	0.152		241	0.125	
	↓	B	1,2	3.300	20					1940	1940	294	0.152		243	0.125	
Boundary Street - EB	→	D	3	3.800	10					1735	1735	340	0.196		365	0.210	
Boundary Street - EB	→	C	3	3.300						2085	2085	449	0.215	0.215	559	0.268	0.268
	→	C	3	3.300						2085	2085	449	0.215		559	0.268	
	→	C	3	3.300						2085	2085	449	0.215		559	0.268	
	→	C	3	3.300						1945	1945	419	0.215		522	0.268	
Pedestrian Crossing																	
		Ep	2	MIN GREEN + FLASH =		17	+	10	=	27				*			*
		Fp	3	MIN GREEN + FLASH =		33	+	8	=	41							
		Gp	1,2	MIN GREEN + FLASH =		5	+	12	=	17							

Notes:

Flow: (pcu/hr)

Group	B,C	A,Ep,C	Group	B,C	A,Ep,C
y	0.367	0.367	y	0.394	0.409
L (sec)	9	43	L (sec)	9	43
C (sec)	120	120	C (sec)	130	130
y pract.	0.833	0.578	y pract.	0.838	0.602
R.C. (%)	127%	58%	R.C. (%)	113%	47%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 5

I/G= 5

I/G=

I/G= 27

27

I/G= 2

I/G= 2

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50908510** MVA HONG KONG LIMITED

Junction: J3 - Boundary Street / Tai Hang Tung Road Design Year: 2039
Description: 2039 Reference Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Boundary Street - WB	←	A	1	3.300		20				1810	1810	281	0.155		262	0.145	
	←	A	1	3.300		23				1955	1955	304	0.155	0.155	283	0.145	0.145
Tai Hang Tung Road - SB	↓	B	1,2	3.300	15					1770	1770	275	0.155		228	0.129	
	↓	B	1,2	3.300	18					1925	1925	299	0.155		247	0.128	
	↓	B	1,2	3.300	20					1940	1940	301	0.155		250	0.129	
Boundary Street - EB	→	D	3	3.800	10					1735	1735	350	0.202		375	0.216	
Boundary Street - EB	→	C	3	3.300						2085	2085	481	0.230	0.230	596	0.286	0.286
	→	C	3	3.300						2085	2085	481	0.230		596	0.286	
	→	C	3	3.300						2085	2085	481	0.230		596	0.286	
	→	C	3	3.300						1945	1945	448	0.230		556	0.286	
Pedestrian Crossing																	
		Ep	2	MIN GREEN + FLASH =		17	+	10	=	27				*			*
		Fp	3	MIN GREEN + FLASH =		33	+	8	=	41							
		Gp	1,2	MIN GREEN + FLASH =		5	+	12	=	17							

Notes:

Flow: (pcu/hr)

Group

B,C

A,Ep,C

Group

B,C

A,Ep,C

y

0.386

0.386

y

0.415

0.431

L (sec)

9

43

L (sec)

9

43

C (sec)

120

120

C (sec)

130

130

y pract.

0.833

0.578

y pract.

0.838

0.602

R.C. (%)

116%

50%

R.C. (%)

102%

40%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 5

I/G=

I/G= 2

I/G= 5

I/G= 27

27

I/G= 2

Date:

APR, 2026

Junction:

J3 - Boundary Street / Tai Hang Tung Road

J3

Junction:

J3 - Boundary Street / Tai Hang Tung Road

Design Year:

2039

Description:

2039 Design Flow

Designed By:

HMC

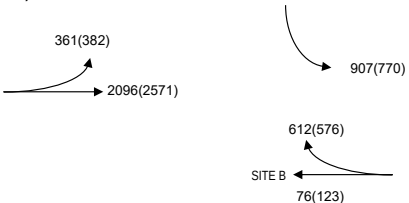
Checked By:

CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Boundary Street - WB		A	1	3.300	15	23		77%	64%	1850	1865	336	0.182	0.182	343	0.184	0.184
		A	1	3.300		20						1940	1940	352	0.181		356
Tai Hang Tung Road - SB		B	1,2	3.300	15					1770	1770	285	0.161		242	0.137	
		B	1,2	3.300	18					1925	1925	310	0.161		263	0.137	
		B	1,2	3.300	20					1940	1940	312	0.161		265	0.137	
Boundary Street - EB		D	3	3.800	10					1735	1735	361	0.208		382	0.220	
Boundary Street - EB		C	3	3.300						2085	2085	533	0.256	0.256	654	0.314	0.314
		C	3	3.300						2085	2085	533	0.256		654	0.314	
		C	3	3.300						2085	2085	533	0.256		654	0.314	
		C	3	3.300						1945	1945	497	0.256		610	0.314	
Pedestrian Crossing		Ep	2	MIN GREEN + FLASH =		17		+	10	=	27	*			*		
		Fp	3	MIN GREEN + FLASH =		33		+	8	=	41						
		Gp	1,2	MIN GREEN + FLASH =		5		+	12	=	17						
		Hp	2,3	MIN GREEN + FLASH =		5		+	5	=	10						

Notes:

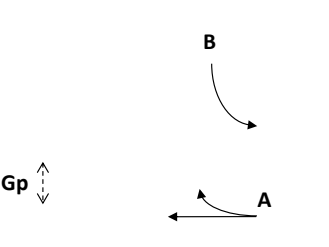
Flow: (pcu/hr)



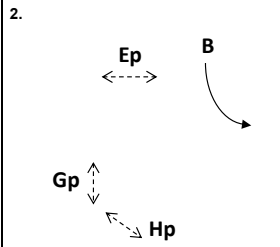
Group	B,C	A,Ep,C	Group	B,C	A,Ep,C
y	0.417	0.437	y	0.450	0.497
L (sec)	9	43	L (sec)	9	43
C (sec)	120	120	C (sec)	130	130
y pract.	0.833	0.578	y pract.	0.838	0.602
R.C. (%)	100%	32%	R.C. (%)	86%	21%

Stage / Phase Diagrams

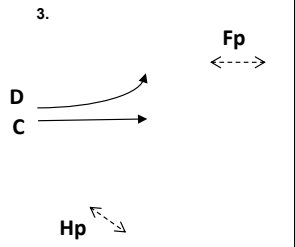
1.



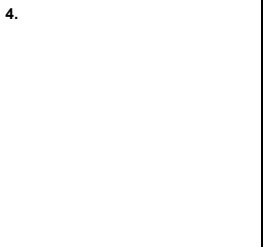
2.



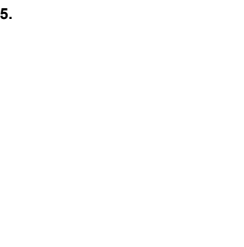
3.



4.



5.



I/G= 5	I/G=	I/G= 2		
I/G= 5	I/G= 27	I/G= 2		

Job No.: CHK50908510 MVA HONG KONG LIMITED

Design Year: 2026

Checked By: CYH

Notes:	Flow: (pcu/hr)	Group		A.Bp	Group		A.Bp
		y		0.289	y		0.269
		L (sec)		27	L (sec)		27
		C (sec)		108	C (sec)		90
		y pract.		0.675	y pract.		0.630
		R.C. (%)		133%	R.C. (%)		134%

1.	2.	3.	4.	5.

Date: APR, 2026	Junction: J4 - Boundary Street / Embankment Road	(J4)
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Job No.: CHK50908510 MVA HONG KONG LIMITED

Design Year: 2039

Checked By: CYH

Notes: 	Flow: (pcu/hr) 	Group		A,Bp	Group		A,Bp
		y		0.297	y		0.277
		L (sec)		27	L (sec)		27
		C (sec)		108	C (sec)		90
		y pract.		0.675	y pract.		0.630
		R.C. (%)		127%	R.C. (%)		128%

1.	2.	3.	4.	5.

Date: APR, 2026	Junction: J4 - Boundary Street / Embankment Road	(J4)
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Job No.: CHK50908510 MVA HONG KONG LIMITED

Design Year: 2039

Checked By: CYH

Notes:	Flow: (pcu/hr)	Group		A.Bp	Group		A.Bp
		y		0.349	y		0.355
		L (sec)		27	L (sec)		27
		C (sec)		108	C (sec)		90
		y pract.		0.675	y pract.		0.630
		R.C. (%)		93%	R.C. (%)		78%

1.	2.	3.	4.	5.

Date: APR, 2026	Junction: J4 - Boundary Street / Embankment Road	(J4)
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Junction:

J5 - Nathan Road / Prince Edward Road West

Design Year:

2026

Description:

2026 Observed Flow

Designed By:

HMC

Checked By:

CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Nathan Road - SB (Bus only lane)	↓	A	1,2	3.200						1935	1935	110	0.057		85	0.044	
Nathan Road - SB	↓	A	1,2	3.200						2075	2075	305	0.147		318	0.153	
	↘	B	1	3.100		15				2075	2075	305	0.147		317	0.153	
Nathan Road - NB	↑	C	2	3.500						1875	1875	280	0.149	0.149	300	0.160	0.160
	↑	C	2	3.500						1965	1965	244	0.124		365	0.186	
Prince Edward Road West - WB	↙	D	3	3.500	10					2105	2105	261	0.124		390	0.185	
	↘	D	3	3.000	15			39%	36%	855	855	150	0.175		172	0.201	
	←	D	3	3.000						1980	1985	346	0.175		400	0.202	
	←	D	3	3.000						2055	2055	359	0.175		414	0.201	
Pedestrian Crossing										2055	2055	360	0.175		414	0.201	
		Ep	1,2	MIN GREEN + FLASH =			13	+	14	=	27						
		Fp	3	MIN GREEN + FLASH =			42	+	13	=	55			*			*
		Gp	2	MIN GREEN + FLASH =			17	+	10	=	27			*			*

Notes:

* Site Factor = 0.5 (Taxi Drop-off and Minibus Stop)

Flow: (pcu/hr)

Group	B, C, D	B, Gp, Fp	Group	B, C, D	B, Gp, Fp
y	0.449	0.149	y	0.547	0.160
L (sec)	21	100	L (sec)	21	100
C (sec)	130	130	C (sec)	130	130
y pract.	0.755	0.208	y pract.	0.755	0.208
R.C. (%)	68%	39%	R.C. (%)	38%	30%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 5

I/G= 5

I/G= 27

I/G= 3

I/G= 3

MVA HONG KONG LIMITED

Design Year: 2039

Checked By: CYH

Notes:	Flow: (pcu/hr)	Group	B, C, D	B, Gp, Fp	Group	B, C, D	B, Gp, Fp
* Site Factor = 0.5 (Taxi Drop-off and Minibus Stop)		y	0.490	0.155	y	0.593	0.165
		L (sec)	21	100	L (sec)	21	100
		C (sec)	130	130	C (sec)	130	130
		y pract.	0.755	0.208	y pract.	0.755	0.208
		R.C. (%)	54%	34%	R.C. (%)	27%	26%

1.	
2.	
3.	
4.	
5.	

Date: APR. 2026	Junction: J5 - Nathan Road / Prince Edward Road West	(J5)
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MVA HONG KONG LIMITED

Design Year: 2039

Checked By: CYH

Notes: * Site Factor = 0.5 (Taxi Drop-off and Minibus Stop)	Flow: (pcu/hr) N ↑ 290(310) 740(805) 115(85) 520(775) 1174(1342) 309(332) Bus lane only			Group	B,C,D	B,Gp,Fp	Group	B,C,D	B,Gp,Fp
	y	0.496	0.155	y	0.596	0.165			
	L (sec)	21	100	L (sec)	21	100			
	C (sec)	130	130	C (sec)	130	130			
	y pract.	0.755	0.208	y pract.	0.755	0.208			
	R.C. (%)	52%	34%	R.C. (%)	27%	26%			

1.	
2.	
3.	
4.	
5.	

Date: APR. 2026	Junction: J5 - Nathan Road / Prince Edward Road West	J5
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Junction: J6 - Prince Edward Road West / Sai Yee Street

Design Year: 2026

Description: 2026 Observed Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - EB	→	A	1	5.500	10					1885	1885	85	0.045		135	0.072	
	↘	A	1	4.000	10					1750	1750	383	0.219		442	0.253	
Prince Edward Road West - WB	←	A	1	3.300	15			8%	7%	2070	2070	453	0.219		524	0.253	0.253
	↘	A	1	3.300						2085	2085	457	0.219		527	0.253	
	↙	A	1	3.300		10		38%	62%	1970	1905	432	0.219	0.219	482	0.253	
Prince Edward Road West - WB	* ←	B	1,2	3.500						1955	1955	430	0.220		490	0.251	
	←	B	1,2	3.500						2105	2105	462	0.219		527	0.250	
	←	B	1,2	3.500						2105	2105	463	0.220		528	0.251	
Sai Yee Street - NB	↑	C	2	3.300	10					1690	1690	102	0.060		166	0.098	
	↑	C	2	3.300	13					1870	1870	113	0.060	0.060	184	0.098	
	* ↑	C	2	3.300						1875	1875	100	0.053		215	0.115	0.115
Prince Edward Road West - WB	↙	C	2	3.300		10				1690	1690	35	0.021		90	0.053	
Fa Yuen Street - SB	↘	D	3	3.500		10				1710	1710	110	0.064		295	0.173	0.173
	** ↘	D	3	3.500		15				1915	1915	5	0.003		5	0.003	
	↙	D	3	3.500	10					1710	1710	85	0.050		135	0.079	
Pedestrian Crossing		Ep	1,2	MIN GREEN + FLASH =			9	+	11	=	20						
		Fp	3	MIN GREEN + FLASH =			24	+	11	=	35			*			
		Gp	2,3	MIN GREEN + FLASH =			5	+	13	=	18						
		Hp	3	MIN GREEN + FLASH =			18	+	11	=	29						
		Ip	1,3	MIN GREEN + FLASH =			6	+	9	=	15						

Notes:

* Site Factor = 0.9 (Kerbside activities reduces lane capacity)
** Allowable traffic flow to be reduced due to observed illegal parking at Fa Yuen Street right lane

Flow: (pcu/hr)

Group	A,C,Hp	A,C,Fp	Group	A,C,Fp	A,C,D
y	0.280	0.280	y	0.368	0.540
L (sec)	44	47	L (sec)	47	18
C (sec)	130	130	C (sec)	130	130
y pract.	0.595	0.575	y pract.	0.575	0.775
R.C. (%)	113%	105%	R.C. (%)	56%	44%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 2

I/G=

I/G= 6

I/G= 5

I/G=

I/G= 10

Date: APR, 2026

Junction: J6 - Prince Edward Road West / Sai Yee Street (J6)

Junction: J6 - Prince Edward Road West / Sai Yee Street

Design Year: 2039

Description: 2039 Reference Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - EB	→	A	1	5.500	10					1885	1885	85	0.045		140	0.074	
	↘	A	1	4.000	10					1750	1750	425	0.243		490	0.280	
Prince Edward Road West - WB	←	A	1	3.300	15			1%	0%	2085	2085	507	0.243	0.243	594	0.285	0.285
	↙	A	1	3.300						2085	2085	507	0.243		593	0.284	
	↗	A	1	3.300		10		35%	56%	1980	1925	481	0.243		548	0.285	
Prince Edward Road West - WB	* ←	B	1,2	3.500						1955	1955	525	0.269		615	0.315	
	←	B	1,2	3.500						2105	2105	565	0.268		663	0.315	
	↙	B	1,2	3.500						2105	2105	565	0.268		662	0.314	
Sai Yee Street - NB	↑	C	2	3.300	10					1690	1690	159	0.094		242	0.143	
	↗	C	2	3.300	13					1870	1870	176	0.094	0.094	268	0.143	0.143
	* ↑	C	2	3.300						1875	1875	105	0.056		220	0.117	
Prince Edward Road West - WB	↖	C	2	3.300		10				1690	1690	40	0.024		95	0.056	
Fa Yuen Street - SB	↘	D	3	3.500		10				1710	1710	110	0.064		300	0.175	0.175
	** ↘	D	3	3.500		15				1915	1915	5	0.003		5	0.003	
	↗	D	3	3.500	10					1710	1710	85	0.050		140	0.082	
Pedestrian Crossing		Ep	1,2	MIN GREEN + FLASH =			9	+	11	=	20						
		Fp	3	MIN GREEN + FLASH =			24	+	11	=	35			*			
		Gp	2,3	MIN GREEN + FLASH =			5	+	13	=	18						
		Hp	3	MIN GREEN + FLASH =			18	+	11	=	29						
		Ip	1,3	MIN GREEN + FLASH =			6	+	9	=	15						

Notes:

* Site Factor = 0.9 (Kerbside activities reduces lane capacity)
** Allowable traffic flow to be reduced due to observed illegal parking at Fa Yuen Street right lane

Flow: (pcu/hr)

Group	A,C,Hp	A,C,Fp	Group	A,C,Fp	A,C,D
y	0.337	0.337	y	0.428	0.604
L (sec)	44	47	L (sec)	47	18
C (sec)	130	130	C (sec)	130	130
y pract.	0.595	0.575	y pract.	0.575	0.775
R.C. (%)	77%	70%	R.C. (%)	34%	28%

Stage / Phase Diagrams				
1. 	2. 	3. 	4.	5.
I/G= 2	I/G=	I/G= 6		
I/G= 5	I/G=	I/G= 10		

Junction: J6 - Prince Edward Road West / Sai Yee Street

Design Year: 2039

Description: 2039 Design Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - EB	→	A	1	5.500	10					1885	1885	85	0.045		140	0.074	
	↘	A	1	4.000	10					1750	1750	443	0.253		515	0.294	
Prince Edward Road West - WB	←	A	1	3.300	15			6%	4%	2070	2075	525	0.254		611	0.294	
	↘	A	1	3.300						2085	2085	529	0.254	0.254	614	0.294	
	↗	A	1	3.300		10		40%	59%	1965	1915	498	0.253		564	0.295	0.295
Prince Edward Road West - WB	* ←	B	1,2	3.500						1955	1955	525	0.269		615	0.315	
	←	B	1,2	3.500						2105	2105	565	0.268		663	0.315	
	←	B	1,2	3.500						2105	2105	565	0.268		662	0.314	
Sai Yee Street - NB	↗	C	2	3.300	10					1690	1690	159	0.094		242	0.143	
	↘	C	2	3.300	13					1870	1870	176	0.094	0.094	268	0.143	
	* ↑	C	2	3.300						1875	1875	158	0.084		295	0.157	0.157
Prince Edward Road West - WB	↗	C	2	3.300		10				1690	1690	40	0.024		95	0.056	
Fa Yuen Street - SB	↘	D	3	3.500		10				1710	1710	184	0.108		348	0.204	0.204
	** ↘	D	3	3.500		15				1915	1915	5	0.003		5	0.003	
	↗	D	3	3.500	10					1710	1710	85	0.050		140	0.082	
Pedestrian Crossing		Ep	1,2	MIN GREEN + FLASH =			9	+	11	=	20						
		Fp	3	MIN GREEN + FLASH =			24	+	11	=	35			*			
		Gp	2,3	MIN GREEN + FLASH =			5	+	13	=	18						
		Hp	3	MIN GREEN + FLASH =			18	+	11	=	29						
		Ip	1,3	MIN GREEN + FLASH =			6	+	9	=	15						

Notes:

* Site Factor = 0.9 (Kerbside activities reduces lane capacity)
** Allowable traffic flow to be reduced due to observed illegal parking at Fa Yuen Street right lane

Flow: (pcu/hr)

Group	A,C,D	A,C,Fp	Group	A,C,Fp	A,C,D
y	0.455	0.348	y	0.452	0.655
L (sec)	18	47	L (sec)	47	18
C (sec)	130	130	C (sec)	130	130
y pract.	0.775	0.575	y pract.	0.575	0.775
R.C. (%)	70%	65%	R.C. (%)	27%	18%

Stage / Phase Diagrams				
1. 	2. 	3. 	4.	5.
I/G= 2	I/G=	I/G= 6		
I/G= 5	I/G=	I/G= 10		

Junction: J7 - Prince Edward Road West / Embankment Road

Design Year: 2026

Description: 2026 Observed Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - WB	←	A	1	3.300		15				1770	1770	477	0.269	0.383	383	0.216	0.405
	←	A	1	3.300		18			1925	1925	518	0.269	417		0.217		
	←	B	1,2	4.000					1610	1610	616	0.383	652		0.405		
	←	B	1,2	4.000					2155	2155	825	0.383	873		0.405		
	←	B	1,2	4.000					2155	2155	825	0.383	873		0.405		
	←	B	1,2	4.000					2155	2155	825	0.383	873		0.405		
Prince Edward Road West - EB	→	C	2,3	4.500	15					1875	1875	100	0.053		165	0.088	
Pedestrian Crossing		Dp	1	MIN GREEN + FLASH =		73	+	6	=	79							
		Ep	2,3	MIN GREEN + FLASH =		5	+	9	=	14							
		Fp	3	MIN GREEN + FLASH =		21	+	14	=	35							
														*			*

Notes:

* Site Factor = 0.8 (Bus Stop and Shop Ingress)

Flow: (pcu/hr)

100(165)

995(800)

3090(3270)

N

Group	A,C	B,Fp	Group	A,C	B,Fp
y	0.323	0.383	y	0.305	0.405
L (sec)	9	43	L (sec)	9	43
C (sec)	130	130	C (sec)	130	130
y pract.	0.838	0.602	y pract.	0.838	0.602
R.C. (%)	159%	57%	R.C. (%)	175%	49%

Stage / Phase Diagrams

1.

Dp

A

B

2.

C

Ep

B

3.

C

Ep

Fp

4.

5.

I/G= 4

I/G=

I/G= 5

I/G= 4

I/G=

I/G= 5

Date:

APR, 2026

Junction:

J7 - Prince Edward Road West / Embankment Road

J7

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50908510** MVA HONG KONG LIMITED

Junction: J7 - Prince Edward Road West / Embankment Road Design Year: 2039
Description: 2039 Reference Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - WB	↗	A	1	3.300		15				1770	1770	489	0.276		393	0.222	
	↖	A	1	3.300		18				1925	1925	531	0.276		427	0.222	
	←	B	1,2	4.000						1610	1610	662	0.411	0.411	710	0.441	0.441
	←	B	1,2	4.000						2155	2155	886	0.411		950	0.441	
	←	B	1,2	4.000						2155	2155	886	0.411		950	0.441	
	←	B	1,2	4.000						2155	2155	886	0.411		950	0.441	
Prince Edward Road West - EB	↗	C	2,3	4.500	15					1875	1875	105	0.056		170	0.091	
Pedestrian Crossing		Dp	1	MIN GREEN + FLASH =		73	+	6	=	79							
		Ep	2,3	MIN GREEN + FLASH =		5	+	9	=	14							
		Fp	3	MIN GREEN + FLASH =		21	+	14	=	35				*			*

Notes: * Site Factor = 0.8 (Bus Stop and Shop Ingress)	Flow: (pcu/hr) 	Group	A,C	B,Fp	Group	A,C	B,Fp
		y	0.332	0.411	y	0.313	0.441
		L (sec)	9	43	L (sec)	9	43
		C (sec)	130	130	C (sec)	130	130
		y pract.	0.838	0.602	y pract.	0.838	0.602
		R.C. (%)	152%	46%	R.C. (%)	168%	37%

Stage / Phase Diagrams				
1. 	2. 	3. 	4.	5.
I/G= 4	I/G=	I/G= 5		
I/G= 4	I/G=	I/G= 5		

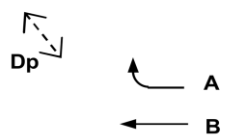
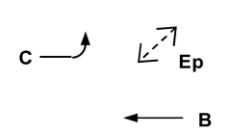
TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50908510** MVA HONG KONG LIMITED

Junction: J7 - Prince Edward Road West / Embankment Road Design Year: 2039
Description: 2039 Design Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - WB	↗	A	1	3.300		15				1770	1770	538	0.304		467	0.264	
	↖	A	1	3.300		18				1925	1925	585	0.304		507	0.263	
	←	B	1,2	4.000						1610	1610	686	0.426	0.426	736	0.457	0.457
	←	B	1,2	4.000						2155	2155	918	0.426		985	0.457	
	←	B	1,2	4.000						2155	2155	918	0.426		985	0.457	
	←	B	1,2	4.000						2155	2155	918	0.426		985	0.457	
Prince Edward Road West - EB	↘	C	2,3	4.500	15					1875	1875	105	0.056		170	0.091	
Pedestrian Crossing		Dp	1	MIN GREEN + FLASH =		73	+	6	=	79							
		Ep	2,3	MIN GREEN + FLASH =		5	+	9	=	14							
		Fp	3	MIN GREEN + FLASH =		21	+	14	=	35				*			*

Notes: * Site Factor = 0.8 (Bus Stop and Shop Ingress)	Flow: (pcu/hr) 		Group	A,C	B,Fp	Group	A,C	B,Fp
			y	0.360	0.426	y	0.355	0.457
			L (sec)	9	43	L (sec)	9	43
			C (sec)	130	130	C (sec)	130	130
			y pract.	0.838	0.602	y pract.	0.838	0.602
			R.C. (%)	133%	41%	R.C. (%)	136%	32%

Stage / Phase Diagrams				
1. 	2. 	3. 	4.	5.
I/G= 4	I/G=	I/G= 5		
I/G= 4	I/G=	I/G= 5		

Junction: J8 - Lai Chi Kok Road / Nathan Road

Design Year: 2026

Description: 2026 Observed Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Nathan Road - SB (Bus only lane)	↓	A	1	3.300						1945	1945	110	0.057		100	0.051	
Nathan Road - SB	↓	A	1	3.300						2085	2085	400	0.192		440	0.211	
		A	1	3.300						2085	2085	400	0.192		440	0.211	
Nathan Road - NB	* ↑	B	2	3.500						1570	1570	121	0.077		159	0.101	
	* ↑	B	2	3.500						1685	1685	129	0.077		170	0.101	
	* ↑	B	2	3.500						1685	1685	130	0.077		171	0.101	
	** ↑	A	1	3.400						195	195	22	0.113		32	0.164	
	↑	A	1	3.400						2095	2095	242	0.116		349	0.167	
	↑	A	1	3.400						2095	2095	241	0.115		349	0.167	
Lai Chi Kok Road - EB (Bus only lane)	***→	B	2	3.300		25				1470	1470	30	0.020		30	0.020	
Lai Chi Kok Road - EB	***→	B	2	3.300		20				1550	1550	400	0.258	0.258	319	0.206	0.206
Lai Chi Kok Road - EB	***→	B	2	3.300		15				1515	1515	390	0.257		311	0.205	
Pedestrian Crossing		Cp	1	MIN GREEN + FLASH =		65	+	10	=	75				*			*
		Dp	2	MIN GREEN + FLASH =		47	+	10	=	57							

Notes:

* Site Factor = 0.8 (Observed kerbside activities ahead of junction)
** Site Factor = 0.1 (Flare lane)
*** Site Factor = 0.8 (Observed queue back from junction ahead)

Flow: (pcu/hr)

Group	A,B	Cp,B	Group	A,B	Cp,B
y	0.450	0.258	y	0.417	0.206
L (sec)	20	84	L (sec)	20	84
C (sec)	130	130	C (sec)	130	130
y pract.	0.762	0.318	y pract.	0.762	0.318
R.C. (%)	69%	23%	R.C. (%)	83%	55%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 6

I/G=

I/G=

I/G=

Junction: J8 - Lai Chi Kok Road / Nathan Road

Design Year: 2039

Description: 2039 Reference Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Nathan Road - SB (Bus only lane)	↓	A	1	3.300						1945	1945	115	0.059		100	0.051	
Nathan Road - SB	↓	A	1	3.300						2085	2085	410	0.197		453	0.217	
		A	1	3.300						2085	2085	410	0.197		452	0.217	
Nathan Road - NB	* ↑	B	2	3.500						1570	1570	124	0.079		164	0.104	
	* ↑	B	2	3.500						1685	1685	133	0.079		175	0.104	
	* ↑	B	2	3.500						1685	1685	133	0.079		176	0.104	
	** ↑	A	1	3.400						195	195	23	0.118		33	0.169	
	↑	A	1	3.400						2095	2095	246	0.117		359	0.171	
	↑	A	1	3.400						2095	2095	246	0.117		358	0.171	
Lai Chi Kok Road - EB (Bus only lane)	***→	B	2	3.300		25				1470	1470	30	0.020		30	0.020	
Lai Chi Kok Road - EB	***→	B	2	3.300		20				1550	1550	410	0.265	0.265	326	0.210	
Lai Chi Kok Road - EB	***→	B	2	3.300		15				1515	1515	400	0.264		319	0.211	0.211
Pedestrian Crossing		Cp	1	MIN GREEN + FLASH =		65	+	10	=	75				*			*
		Dp	2	MIN GREEN + FLASH =		47	+	10	=	57							

Notes:

* Site Factor = 0.8 (Observed kerbside activities ahead of junction)
** Site Factor = 0.1 (Flare lane)
*** Site Factor = 0.8 (Observed queue back from junction ahead)

Flow: (pcu/hr)

Group	A,B	Cp,B	Group	A,B	Cp,B
y	0.461	0.265	y	0.428	0.211
L (sec)	20	84	L (sec)	20	84
C (sec)	130	130	C (sec)	130	130
y pract.	0.762	0.318	y pract.	0.762	0.318
R.C. (%)	65%	20%	R.C. (%)	78%	51%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 6

I/G=

I/G=

I/G= 6

I/G=

I/G=

Date: **APR, 2026**

Junction: **J8 - Lai Chi Kok Road / Nathan Road**

J8

Junction: J8 - Lai Chi Kok Road / Nathan Road

Design Year: 2039

Description: 2039 Design Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Nathan Road - SB (Bus only lane)	↓	A	1	3.300						1945	1945	115	0.059		100	0.051	
Nathan Road - SB	↓	A	1	3.300						2085	2085	420	0.201		459	0.220	
		A	1	3.300						2085	2085	419	0.201		458	0.220	
Nathan Road - NB	* ↑	B	2	3.500						1570	1570	124	0.079		164	0.104	
	* ↑	B	2	3.500						1685	1685	133	0.079		175	0.104	
	* ↑	B	2	3.500						1685	1685	133	0.079		176	0.104	
	** ↑	A	1	3.400						195	195	23	0.118		33	0.169	
	↑	A	1	3.400						2095	2095	246	0.117		359	0.171	
	↑	A	1	3.400						2095	2095	246	0.117		358	0.171	
Lai Chi Kok Road - EB (Bus only lane)	***→	B	2	3.300		25				1470	1470	30	0.020		30	0.020	
Lai Chi Kok Road - EB	***→	B	2	3.300		20				1550	1550	410	0.265	0.265	326	0.210	
Lai Chi Kok Road - EB	***→	B	2	3.300		15				1515	1515	400	0.264		319	0.211	0.211
Pedestrian Crossing		Cp	1	MIN GREEN + FLASH =			65	+	10	=	75						
		Dp	2	MIN GREEN + FLASH =			47	+	10	=	57						

Notes:

* Site Factor = 0.8 (Observed kerbside activities ahead of junction)
** Site Factor = 0.1 (Flare lane)
*** Site Factor = 0.8 (Observed queue back from junction ahead)

Flow: (pcu/hr)

Group	A,B	Cp,B	Group	A,B	Cp,B
y	0.466	0.265	y	0.431	0.211
L (sec)	20	84	L (sec)	20	84
C (sec)	130	130	C (sec)	130	130
y pract.	0.762	0.318	y pract.	0.762	0.318
R.C. (%)	63%	20%	R.C. (%)	77%	51%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 6

I/G=

I/G=

I/G= 6

I/G=

I/G=

Date: **APR, 2026**

Junction: **J8 - Lai Chi Kok Road / Nathan Road**

J8

Appendix A2

JUNCTION CALCULATIONS (WEEKEND)

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50908510** MVA HONG KONG LIMITED

Junction: J1 - Boundary Street / Nathan Road / Cheung Sha Wan Road Design Year: 2026
Description: 2026 Observed Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)					PM Peak		
					Left	Right			PM		PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Cheung Sha Wan Road - SB	↓	B	1	3.500	15						1785				230	0.129	0.162
	↓	B	1	3.300							2085				337	0.162	
	↓	B	1	3.300							2085				336	0.161	
	↓	B	1	3.300							2085				337	0.162	
Nathan Road - NB	↑	A	1,3	3.500							1965				340	0.173	
	↑	A	1,3	3.500							2105				365	0.173	
	↑	A	1,3	3.500							2105				365	0.173	
Boundary Street - EB	↔	C	2	3.500	15				18%		1930				329	0.170	0.171
	→	C	2	3.600							2115				361	0.171	
	→	C	2	3.600							2115				330	0.156	
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =			19	+	13	=	32						*
		Fp	1,3	MIN GREEN + FLASH =			13	+	13	=	26						
		Gp	2,3	MIN GREEN + FLASH =			14	+	13	=	27						
		Hp	2	MIN GREEN + FLASH =			31	+	10	=	41						

Notes:	Flow: (pcu/hr)			
		Group	A,C	B,C,Ep
		y	0.344	0.332
		L (sec)	10	50
		C (sec)	130	130
		y pract.	0.831	0.554
		R.C. (%)	141%	67%

Stage / Phase Diagrams				
1.	2.	3.	4.	5.
I/G= 3	I/G=	I/G= 11		
I/G= 3	I/G=	I/G= 11		

Junction: J1 - Boundary Street / Nathan Road / Cheung Sha Wan Road

Design Year: 2039

Description: 2039 Reference Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)					PM Peak		
					Left	Right			PM		PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Cheung Sha Wan Road - SB	↓	B	1	3.500	15						1785				235	0.132	0.189
	↓	B	1	3.300							2085				395	0.189	
	↓	B	1	3.300							2085				395	0.189	
	↓	B	1	3.300							2085				395	0.189	
Nathan Road - NB	↑	A	1,3	3.500							1965				391	0.199	
	↑	A	1,3	3.500							2105				420	0.200	
	↑	A	1,3	3.500							2105				419	0.199	
Boundary Street - EB	↔	C	2	3.500	15				17%		1930				380	0.197	0.197
	→	C	2	3.600							2115				415	0.196	
	→	C	2	3.600							2115				335	0.158	
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =		19	+	13	=	32							
		Fp	1,3	MIN GREEN + FLASH =		13	+	13	=	26							
		Gp	2,3	MIN GREEN + FLASH =		14	+	13	=	27							
		Hp	2	MIN GREEN + FLASH =		31	+	10	=	41							
																	*

Notes:

Flow: (pcu/hr)

Group	A,C	B,C,Ep
y	0.396	0.386
L (sec)	10	50
C (sec)	130	130
y pract.	0.831	0.554
R.C. (%)	110%	43%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 3

I/G=

I/G= 11

I/G= 11

TRAFFIC SIGNALS CALCULATION

Job No.: **CHK50908510** MVA HONG KONG LIMITED

Junction: J1 -Boundary Street / Nathan Road / Cheung Sha Wan Road Design Year: 2039
Description: 2039 Design Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Cheung Sha Wan Road - SB	↓	B	1	3.500	15							1785			254	0.142	0.189
	↓	B	1	3.300								2085			395	0.189	
	↓	B	1	3.300								2085			395	0.189	
	↓	B	1	3.300								2085			395	0.189	
Nathan Road - NB	↑	A	1,3	3.500				17%				1965			391	0.199	
	↑	A	1,3	3.500								2105			420	0.200	
	↑	A	1,3	3.500								2105			419	0.199	
Boundary Street - EB	→	C	2	3.500								1930			380	0.197	0.197
	→	C	2	3.600								2115			415	0.196	
	→	C	2	3.600								2115			392	0.185	
Pedestrian Crossing		Ep	3	MIN GREEN + FLASH =	19	+	13	=	32								*
		Fp	1,3	MIN GREEN + FLASH =	13	+	13	=	26								
		Gp	2,3	MIN GREEN + FLASH =	14	+	13	=	27								
		Hp	2	MIN GREEN + FLASH =	31	+	10	=	41								

Notes:			Group	A,C	B,C,Ep
			y	0.396	0.386
			L (sec)	10	50
			C (sec)	130	130
			y pract.	0.831	0.554
			R.C. (%)	110%	43%

Stage / Phase Diagrams				
1.	2.	3.	4.	5.
I/G= 3	I/G=	I/G= 11		
I/G= 3	I/G=	I/G= 11		

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50908510 MVA HONG KONG LIMITED

Junction: J2 - Bute Street / Sai Yee Street Design Year: 2026
Description: 2026 Observed Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Bute Street (EB)	↑	B	2	3.200		13		80%			1770				235	0.133	0.133
	↖	B	2	3.200	10						1685				220	0.131	
Sai Yee Street (SB)	↓	A	1	3.500							1965				220	0.112	
	↓	A	1	3.500							2105				235	0.112	
Sai Yee Street (NB)	* ↗	A	1	3.500	10			46%			920				141	0.153	
	↑	A	1	3.500							2105				329	0.156	0.156
Pedestrian Crossing Cp 1 MIN GREEN + FLASH = 5 + 8 = 13																	

Notes:
* Site Factor = 0.5 (Kerbside Activities)

Group	Cp,B	A,B
y	0.133	0.289
L (sec)	19	9
C (sec)	130	130
y pract.	0.768	0.838
R.C. (%)	479%	190%

Stage / Phase Diagrams																	
1.		2.		3.		4.		5.									
I/G= 6		I/G=		I/G=													
I/G= 6		I/G=		I/G=													

Junction:

J2 - Bute Street / Sai Yee Street

Design Year:

2039

Description:

2039 Reference Flow

Designed By:

HMC

Checked By:

CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Bute Street (EB)	↕	B	2	3.200		13		69%			1795				240	0.134	0.134
	↙	B	2	3.200	10						1685				225	0.134	
Sai Yee Street (SB)	↓	A	1	3.500							1965				225	0.115	
	↓	A	1	3.500							2105				240	0.114	
Sai Yee Street (NB)	* ↕	A	1	3.500	10			44%			920				192	0.209	0.209
	↑	A	1	3.500							2105				438	0.208	
Pedestrian Crossing																	
		Cp	1	MIN GREEN + FLASH =		5	+	8	=	13							

Notes:

* Site Factor = 0.5 (Kerbside Activities)

Group	Cp,B	A,B
y	0.134	0.342
L (sec)	19	9
C (sec)	130	130
y pract.	0.768	0.838
R.C. (%)	475%	145%

Stage / Phase Diagrams				
1.	2.	3.	4.	5.
I/G= 6	I/G=	I/G=		
I/G= 6	I/G=	I/G=		

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50908510 MVA HONG KONG LIMITED

Junction: J2 - Bute Street / Sai Yee Street Design Year: 2039
Description: 2039 Design Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Bute Street (EB)	↑	B	2	3.200		13		69%			1795				240	0.134	0.134
	↖	B	2	3.200	10						1685				225	0.134	
Sai Yee Street (SB)	↓	A	1	3.500							1965				250	0.127	
	↓	A	1	3.500							2105				267	0.127	
Sai Yee Street (NB)	* ↗	A	1	3.500	10			39%			930				216	0.232	
	↑	A	1	3.500							2105				489	0.232	0.232
Pedestrian Crossing Cp 1 MIN GREEN + FLASH = 5 + 8 = 13																	

Notes:
* Site Factor = 0.5 (Kerbside Activities)

Group	Cp,B	A,B
y	0.134	0.366
L (sec)	19	9
C (sec)	130	130
y pract.	0.768	0.838
R.C. (%)	475%	129%

Stage / Phase Diagrams																	
1.		2.		3.		4.		5.									
I/G= 6		I/G=		I/G=													
I/G= 6		I/G=		I/G=													

TRAFFIC SIGNALS CALCULATION

Job No.:

CHK50908510

MVA HONG KONG LIMITED

Junction:

J3 - Boundary Street / Tai Hang Tung Road

Design Year:

2026

Description:

2026 Observed Flow

Designed By:

HMC

Checked By:

CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)					PM Peak		
					Left	Right			PM		PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Boundary Street - WB	↶	A	1	3.300		20					1810				216	0.119	
	↷	A	1	3.300		23					1955				234	0.120	0.120
Tai Hang Tung Road - SB	↵	B	1,2	3.300	15						1770				215	0.121	
	↶	B	1,2	3.300	18						1925				234	0.122	
	↷	B	1,2	3.300	20						1940				236	0.122	
Boundary Street - EB	↶	D	3	3.800	10						1735				335	0.193	
Boundary Street - EB	→	C	3	3.300							2085				483	0.232	0.232
	→	C	3	3.300							2085				483	0.232	
	→	C	3	3.300							2085				483	0.232	
	→	C	3	3.300						1945	1945				451	0.232	
Pedestrian Crossing		Ep	2	MIN GREEN + FLASH =	17	+	10	=	27								*
		Fp	3	MIN GREEN + FLASH =	33	+	8	=	41								
		Gp	1,2	MIN GREEN + FLASH =	5	+	12	=	17								

Notes:

Flow: (pcu/hr)

↶

335(335)

→

1900(1900)

↷

685(685)

↵

450(450)

↑

N

Group	B,C	A,Ep,C
y	0.353	0.351
L (sec)	9	43
C (sec)	130	130
y pract.	0.838	0.602
R.C. (%)	137%	71%

Stage / Phase Diagrams

1.

Gp↕↕

B↶

A↷

2.

Gp↕↕

Ep↔↔

B↶

3.

D↶

C↶

Fp↶

4.

5.

I/G= 5

I/G= 5

I/G=

I/G= 27

27

I/G= 2

I/G= 2

Date:

APR, 2026

Junction:

J3 - Boundary Street / Tai Hang Tung Road

J3

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50908510 MVA HONG KONG LIMITED

Junction: J3 - Boundary Street / Tai Hang Tung Road Design Year: 2039
Description: 2039 Reference Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Boundary Street - WB	←	A	1	3.300		20						1810			224	0.124	0.124
	←	A	1	3.300		23						1955			241	0.123	
Tai Hang Tung Road - SB	↓	B	1,2	3.300	15							1770			221	0.125	
	↓	B	1,2	3.300	18							1925			241	0.125	
	↓	B	1,2	3.300	20							1940			243	0.125	
Boundary Street - EB	→	D	3	3.800	10							1735			340	0.196	
Boundary Street - EB	→	C	3	3.300								2085			517	0.248	
	→	C	3	3.300								2085			517	0.248	
	→	C	3	3.300								2085			517	0.248	
	→	C	3	3.300						1945	1945				483	0.248	0.248
Pedestrian Crossing																	
		Ep	2	MIN GREEN + FLASH =		17	+	10	=	27							
		Fp	3	MIN GREEN + FLASH =		33	+	8	=	41							
		Gp	1,2	MIN GREEN + FLASH =		5	+	12	=	17							

Notes:

Flow: (pcu/hr)

Group	B,C	A,Ep,C
y	0.373	0.372
L (sec)	9	43
C (sec)	130	130
y pract.	0.838	0.602
R.C. (%)	124%	62%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 5

I/G= 5

I/G=

I/G= 27

27

I/G= 2

I/G= 2

Date: APR, 2026 Junction: J3 - Boundary Street / Tai Hang Tung Road (J3)

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50908510

MVA HONG KONG LIMITED

Junction: J3 - Boundary Street / Tai Hang Tung Road

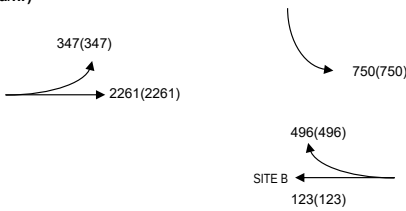
Design Year: 2039

Description: 2039 Design Flow

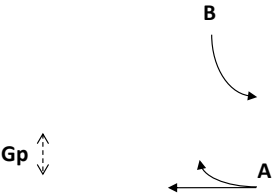
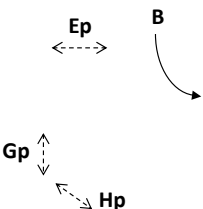
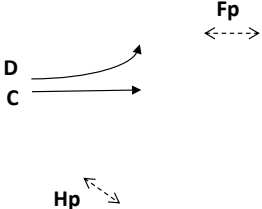
Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Boundary Street - WB		A	1	3.300	15	23		60%			1870				304	0.163	0.163
		A	1	3.300		20					1940				315	0.162	
Tai Hang Tung Road - SB		B	1,2	3.300	15						1770				236	0.133	
		B	1,2	3.300	18						1925				256	0.133	
		B	1,2	3.300	20						1940				258	0.133	
Boundary Street - EB		D	3	3.800	10						1735				347	0.200	
Boundary Street - EB		C	3	3.300							2085				575	0.276	0.276
		C	3	3.300							2085				575	0.276	
		C	3	3.300							2085				575	0.276	
		C	3	3.300						1945	1945				536	0.276	
Pedestrian Crossing																	
		Ep	2	MIN GREEN + FLASH =		17	+	10	=	27							
		Fp	3	MIN GREEN + FLASH =		33	+	8	=	41							
		Gp	1,2	MIN GREEN + FLASH =		5	+	12	=	17							
		Hp	2,3	MIN GREEN + FLASH =		5	+	5	=	10							

Notes:	Flow: (pcu/hr) 		Group	B,C	A,Ep,C
			y	0.409	0.438
			L (sec)	9	43
			C (sec)	130	130
			y pract.	0.838	0.602
			R.C. (%)	105%	37%

Stage / Phase Diagrams

1. 	2. 	3. 	4.	5.
I/G= 5	I/G=	I/G= 2		
I/G= 5	I/G= 27	I/G= 2		

Date: MAY, 2026

Junction: J3 - Boundary Street / Tai Hang Tung Road

(J3)

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50908510 MVA HONG KONG LIMITED

Junction: J4 - Boundary Street / Embankment Road Design Year: 2026
Description: 2026 Observed Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)					PM Peak		
					Left	Right			PM		PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Embankment Road - NB	↰	A	1	5.500	15						1970				450	0.228	0.228
	↱	A	1	4.500		25				1950	420				0.215		

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50908510 MVA HONG KONG LIMITED

Junction: J4 - Boundary Street / Embankment Road Design Year: 2039
Description: 2039 Reference Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)					PM Peak		
					Left	Right			PM		PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Embankment Road - NB	↶	A	1	5.500	15						1970				465	0.236	0.236
	↷	A	1	4.500		25				1950	430				0.221		

Job No.: CHK50908510 MVA HONG KONG LIMITED

Design Year: 2039

Checked By: CYH

Notes:	Flow: (pcu/hr)		Group		A,Bp
			y		0.314
			L (sec)		27
			C (sec)		90
			y pract.		0.630
			R.C. (%)		101%

1.	2.	3.	4.	5.

Date: APR, 2026	Junction: J4 - Boundary Street / Embankment Road	J4
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Job No.: CHK50908510 MVA HONG KONG LIMITED

Design Year: 2026

Checked By: CYH

Notes: * Site Factor = 0.5 (Taxi Drop-off and Minibus Stop)	Flow: (pcu/hr) 300(300) 610(610) 125(125) 760(760) 950(950) 355(355) Bus lane only			
		Group	B, C, D	B, Gp, Fp
		y	0.536	0.160
		L (sec)	21	100
		C (sec)	130	130
		y pract.	0.755	0.208
		R.C. (%)	41%	30%

1.	
2.	
3.	
4.	
5.	

Date: APR 2026	Junction: J5 - Nathan Road / Prince Edward Road West	J5
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Junction: J5 - Nathan Road / Prince Edward Road West

Design Year: 2039

Description: 2039 Reference Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Nathan Road - SB (Bus only lane)	↓	A	1,2	3.200							1935				125	0.065	
Nathan Road - SB	↓	A	1,2	3.200							2075				388	0.187	
	↓	A	1,2	3.200							2075				387	0.187	
Nathan Road - SB	↘	B	1	3.100		15					1875				310	0.165	0.165
Nathan Road - NB	↑	C	2	3.500							1965				377	0.192	
	↑	C	2	3.500							2105				403	0.191	
Prince Edward Road West - WB	* ↖	D	3	3.500	10						855				192	0.225	
	* ↖	D	3	3.000	15						1980				443	0.224	
	←	D	3	3.000					39%		2055				460	0.224	
	←	D	3	3.000							2055				460	0.224	
Pedestrian Crossing		Ep	1,2	MIN GREEN + FLASH =			13	+	14	=	27						
		Fp	3	MIN GREEN + FLASH =			42	+	13	=	55						*
		Gp	2	MIN GREEN + FLASH =			17	+	10	=	27						*

Notes:
* Site Factor = 0.5 (Taxi Drop-off and Minibus Stop)

Flow: (pcu/hr)

Group	B,C,D	B,Gp,Fp
y	0.582	0.165
L (sec)	21	100
C (sec)	130	130
y pract.	0.755	0.208
R.C. (%)	30%	26%

Stage / Phase Diagrams				
1. 	2. 	3. 	4.	5.
I/G= 5	I/G=	I/G= 3		
I/G= 5	I/G= 27	I/G= 3		

MVA HONG KONG LIMITED

Design Year: 2039

Checked By: CYH

Notes: * Site Factor = 0.5 (Taxi Drop-off and Minibus Stop)	Flow: (pcu/hr) 			

1.	
2.	
3.	
4.	
5.	

Date: APR 2026	Junction: J5 - Nathan Road / Prince Edward Road West	(J5)
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Junction: J6 - Prince Edward Road West / Sai Yee Street

Design Year: 2026

Description: 2026 Observed Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - EB	→	A	1	5.500	10							1885			155	0.082	
	↘	A	1	4.000	10							1750			440	0.251	
Prince Edward Road West - WB	←	A	1	3.300	15				3%			2080			523	0.251	
	↙	A	1	3.300								2085			524	0.251	
	↘	A	1	3.300		10			65%			1900			478	0.252	0.252
Prince Edward Road West - WB	* ←	B	1,2	3.500								1955			482	0.247	
	←	B	1,2	3.500								2105			519	0.247	
	←	B	1,2	3.500								2105			519	0.247	
Sai Yee Street - NB	↑	C	2	3.300	10							1690			152	0.090	
	↑	C	2	3.300	13							1870			168	0.090	
	* ↑	C	2	3.300								1875			220	0.117	0.117
Prince Edward Road West - WB	↙	C	2	3.300		10						1690			100	0.059	
Fa Yuen Street - SB	↘	D	3	3.500		10						1710			215	0.126	
	** ↘	D	3	3.500		15						1915			5	0.003	
	↘	D	3	3.500	10							1710			155	0.091	
Pedestrian Crossing																	
		Ep	1,2	MIN GREEN + FLASH =			9	+	11	=	20						
		Fp	3	MIN GREEN + FLASH =			24	+	11	=	35						
		Gp	2,3	MIN GREEN + FLASH =			5	+	13	=	18						
		Hp	3	MIN GREEN + FLASH =			18	+	11	=	29						
		Ip	1,3	MIN GREEN + FLASH =			6	+	9	=	15						

Notes:
* Site Factor = 0.9 (Kerbside activities reduces lane capacity)
** Allowable traffic flow to be reduced due to observed illegal parking at Fa Yuen Street right lane

Flow: (pcu/hr)

Group	A,C,D	A,C,Fp
y	0.495	0.369
L (sec)	18	47
C (sec)	130	130
y pract.	0.775	0.575
R.C. (%)	57%	56%

Stage / Phase Diagrams				
1. 	2. 	3. 	4.	5.
I/G= 2	I/G=	I/G= 6		
I/G= 2	I/G=	I/G= 6		
Date: <u>APR, 2026</u>			Junction: <u>J6 - Prince Edward Road West / Sai Yee Street</u>	

Junction: J6 - Prince Edward Road West / Sai Yee Street

Design Year: 2039

Description: 2039 Reference Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - EB	→	A	1	5.500	10						1885				160	0.085	
	↘	A	1	4.000	10						1750				465	0.266	
Prince Edward Road West - WB	←	A	1	3.300	15				0%		2085				599	0.287	
	↙	A	1	3.300							2085				599	0.287	
	↗	A	1	3.300		10			57%		1920				552	0.288	0.288
Prince Edward Road West - WB	* ←	B	1,2	3.500							1955				607	0.310	
	←	B	1,2	3.500							2105				654	0.311	
	←	B	1,2	3.500							2105				654	0.311	
Sai Yee Street - NB	↑	C	2	3.300	10						1690				228	0.135	0.135
	↑	C	2	3.300	13						1870				252	0.135	
	* ↑	C	2	3.300							1875				225	0.120	
Prince Edward Road West - WB	↖	C	2	3.300		10					1690				105	0.062	
Fa Yuen Street - SB	↘	D	3	3.500		10					1710				225	0.132	
	** ↘	D	3	3.500		15					1915				5	0.003	
	↗	D	3	3.500	10						1710				160	0.094	
Pedestrian Crossing		Ep	1,2	MIN GREEN + FLASH =			9	+	11	=	20						
		Fp	3	MIN GREEN + FLASH =			24	+	11	=	35						*
		Gp	2,3	MIN GREEN + FLASH =			5	+	13	=	18						
		Hp	3	MIN GREEN + FLASH =			18	+	11	=	29						
		Ip	1,3	MIN GREEN + FLASH =			6	+	9	=	15						

Notes:
* Site Factor = 0.9 (Kerbside activities reduces lane capacity)
** Allowable traffic flow to be reduced due to observed illegal parking at Fa Yuen Street right lane

Flow: (pcu/hr)

Group	A,C,D	A,C,Fp
y	0.554	0.422
L (sec)	18	47
C (sec)	130	130
y pract.	0.775	0.575
R.C. (%)	40%	36%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 2

I/G=

I/G= 6

I/G= 2

I/G=

I/G= 6

Date: APR, 2026

Junction: J6 - Prince Edward Road West / Sai Yee Street

(J6)

Junction: J6 - Prince Edward Road West / Sai Yee Street

Design Year: 2039

Description: 2039 Design Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - EB	→	A	1	5.500	10							1885			160	0.085	
	↘	A	1	4.000	10							1750			513	0.293	
Prince Edward Road West - WB	←	A	1	3.300	15				1%			2085			610	0.293	
	↙	A	1	3.300								2085			611	0.293	
	↘	A	1	3.300		10			61%			1910			560	0.293	0.293
Prince Edward Road West - WB	* ←	B	1,2	3.500								1955			607	0.310	
	←	B	1,2	3.500								2105			654	0.311	
	←	B	1,2	3.500								2105			654	0.311	
Sai Yee Street - NB	↑	C	2	3.300	10							1690			228	0.135	
	↑	C	2	3.300	13							1870			252	0.135	
	* ↑	C	2	3.300								1875			300	0.160	0.160
Prince Edward Road West - WB	↙	C	2	3.300		10						1690			105	0.062	
Fa Yuen Street - SB	↘	D	3	3.500		10						1710			273	0.160	0.160
	** ↘	D	3	3.500		15						1915			5	0.003	
	↘	D	3	3.500	10							1710			160	0.094	
Pedestrian Crossing																	
		Ep	1,2	MIN GREEN + FLASH =			9	+	11	=	20						
		Fp	3	MIN GREEN + FLASH =			24	+	11	=	35						
		Gp	2,3	MIN GREEN + FLASH =			5	+	13	=	18						
		Hp	3	MIN GREEN + FLASH =			18	+	11	=	29						
		Ip	1,3	MIN GREEN + FLASH =			6	+	9	=	15						

Notes:

* Site Factor = 0.9 (Kerbside activities reduces lane capacity)
** Allowable traffic flow to be reduced due to observed illegal parking at Fa Yuen Street right lane

Flow: (pcu/hr)

Group	A,C,Fp	A,C,D
y	0.453	0.613
L (sec)	47	18
C (sec)	130	130
y pract.	0.575	0.775
R.C. (%)	27%	27%

Stage / Phase Diagrams				
1. 	2. 	3. 	4.	5.
I/G= 5	I/G=	I/G= 10		
I/G= 5	I/G=	I/G= 10		
Date: APR, 2026			Junction: J6 - Prince Edward Road West / Sai Yee Street	

Junction: J7 - Prince Edward Road West / Embankment Road

Design Year: 2026

Description: 2026 Observed Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - WB	↗	A	1	3.300		15					1770				410	0.232	
	↖	A	1	3.300		18					1925				445	0.231	
	←	B	1,2	4.000							1610				556	0.346	0.346
	↗	B	1,2	4.000							2155				745	0.346	
	↖	B	1,2	4.000							2155				745	0.346	
	←	B	1,2	4.000							2155				745	0.346	
Prince Edward Road West - EB	↗	C	2,3	4.500	15						1875				185	0.099	
Pedestrian Crossing		Dp	1	MIN GREEN + FLASH =		73	+	6	=	79							
		Ep	2,3	MIN GREEN + FLASH =		5	+	9	=	14							
		Fp	3	MIN GREEN + FLASH =		21	+	14	=	35							*

Notes:
* Site Factor = 0.8 (Bus Stop and Shop Ingress)

Flow: (pcu/hr)

Group	A,C	B,Fp
y	0.330	0.346
L (sec)	9	43
C (sec)	130	130
y pract.	0.838	0.602
R.C. (%)	154%	74%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 4	I/G=	I/G= 5		
I/G= 4	I/G=	I/G= 5		

Junction: J7 - Prince Edward Road West / Embankment Road

Design Year: 2039

Description: 2039 Reference Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - WB	↗	A	1	3.300		15					1770				419	0.237	
	↖	A	1	3.300		18					1925				456	0.237	
	←	B	1,2	4.000							1610				612	0.380	0.380
	←	B	1,2	4.000							2155				819	0.380	
	←	B	1,2	4.000							2155				819	0.380	
	←	B	1,2	4.000							2155				819	0.380	
Prince Edward Road West - EB	↗	C	2,3	4.500	15						1875				190	0.101	
Pedestrian Crossing																	
		Dp	1	MIN GREEN + FLASH =		73	+	6	=	79							
		Ep	2,3	MIN GREEN + FLASH =		5	+	9	=	14							
		Fp	3	MIN GREEN + FLASH =		21	+	14	=	35							

Notes:
* Site Factor = 0.8 (Bus Stop and Shop Ingress)

Flow: (pcu/hr)

Group	A,C	B,Fp
y	0.338	0.380
L (sec)	9	43
C (sec)	130	130
y pract.	0.838	0.602
R.C. (%)	148%	58%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 4	I/G=	I/G= 5		
I/G= 4	I/G=	I/G= 5		

Date: **APR, 2026**

Junction: **J7 - Prince Edward Road West / Embankment Road**

Junction: J7 - Prince Edward Road West / Embankment Road

Design Year: 2039

Description: 2039 Design Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Prince Edward Road West - WB	↗	A	1	3.300		15					1770				493	0.279	
	↖	A	1	3.300		18					1925				536	0.278	
	←	B	1,2	4.000							1610				638	0.396	0.396
	↗	B	1,2	4.000							2155				854	0.396	
	↖	B	1,2	4.000							2155				854	0.396	
	←	B	1,2	4.000							2155				854	0.396	
Prince Edward Road West - EB	↗	C	2,3	4.500	15						1875				190	0.101	
Pedestrian Crossing																	
		Dp	1	MIN GREEN + FLASH =		73	+	6	=	79							
		Ep	2,3	MIN GREEN + FLASH =		5	+	9	=	14							
		Fp	3	MIN GREEN + FLASH =		21	+	14	=	35							

Notes:

* Site Factor = 0.8 (Bus Stop and Shop Ingress)

Flow: (pcu/hr)

Group	A,C	B,Fp
y	0.380	0.396
L (sec)	9	43
C (sec)	130	130
y pract.	0.838	0.602
R.C. (%)	121%	52%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 4	I/G=	I/G= 5		
I/G= 4	I/G=	I/G= 5		

Date: **APR, 2026**

Junction: **J7 - Prince Edward Road West / Embankment Road**

TRAFFIC SIGNALS CALCULATION

Job No.: CHK50908510 MVA HONG KONG LIMITED

Junction: J8 - Lai Chi Kok Road / Nathan Road Design Year: 2026
Description: 2026 Observed Flow Designed By: HMC Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Nathan Road - SB (Bus only lane)	↓	A	1	3.300							1945				80	0.041	
Nathan Road - SB	↓	A	1	3.300							2085				495	0.237	
Nathan Road - SB	↓	A	1	3.300							2085				495	0.237	
Nathan Road - NB	* ↑	B	2	3.500							1570				173	0.110	
	* ↑	B	2	3.500							1685				186	0.110	
	* ↑	B	2	3.500							1685				186	0.110	
	** ↑	A	1	3.400							195				31	0.159	
	↑	A	1	3.400							2095				332	0.158	
	↑	A	1	3.400							2095				332	0.158	
Lai Chi Kok Road - EB (Bus only lane)	***→	B	2	3.300		25					1470				35	0.024	
Lai Chi Kok Road - EB	***→	B	2	3.300		20					1550				346	0.223	
Lai Chi Kok Road - EB	***→	B	2	3.300		15					1515				339	0.224	0.224
Pedestrian Crossing		Cp	1	MIN GREEN + FLASH =		65	+	10	=	75							
		Dp	2	MIN GREEN + FLASH =		47	+	10	=	57							

Notes:

* Site Factor = 0.8 (Observed kerbside activities ahead of junction)

** Site Factor = 0.1 (Flare lane)

*** Site Factor = 0.8 (Observed queue back from junction ahead)

Flow: (pcu/hr)

Group	A,B	Cp,B
y	0.461	0.224
L (sec)	20	84
C (sec)	130	130
y pract.	0.762	0.318
R.C. (%)	65%	42%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 6

I/G= 6

I/G=

I/G=

I/G=

I/G=

I/G=

I/G=

Date: APR, 2026 Junction: J8 - Lai Chi Kok Road / Nathan Road (J8)

Junction: J8 - Lai Chi Kok Road / Nathan Road

Design Year: 2039

Description: 2039 Reference Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Nathan Road - SB (Bus only lane)	↓	A	1	3.300								1945			85	0.044	
Nathan Road - SB	↓	A	1	3.300								2085			508	0.244	
Nathan Road - SB	↓	A	1	3.300								2085			507	0.243	
Nathan Road - NB	* ↑	B	2	3.500								1570			178	0.113	
	* ↑	B	2	3.500								1685			191	0.113	
	* ↑	B	2	3.500								1685			191	0.113	
	** ↑	A	1	3.400								195			32	0.164	
	↑	A	1	3.400								2095			341	0.163	
	↑	A	1	3.400								2095			342	0.163	
	↑	A	1	3.400								2095			342	0.163	
Lai Chi Kok Road - EB (Bus only lane)	***→	B	2	3.300		25						1470			35	0.024	
Lai Chi Kok Road - EB	***→	B	2	3.300		20						1550			357	0.230	0.230
Lai Chi Kok Road - EB	***→	B	2	3.300		15						1515			348	0.230	
Pedestrian Crossing		Cp	1	MIN GREEN + FLASH =		65	+	10	=	75							
		Dp	2	MIN GREEN + FLASH =		47	+	10	=	57							

Notes:

* Site Factor = 0.8 (Observed kerbside activities ahead of junction)
** Site Factor = 0.1 (Flare lane)
*** Site Factor = 0.8 (Observed queue back from junction ahead)

Flow: (pcu/hr)

Group	A,B	Cp,B
y	0.474	0.230
L (sec)	20	84
C (sec)	130	130
y pract.	0.762	0.318
R.C. (%)	61%	38%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 6

I/G=

I/G=

I/G=

Date: APR, 2026

Junction: J8 - Lai Chi Kok Road / Nathan Road

J8

Junction: J8 - Lai Chi Kok Road / Nathan Road

Design Year: 2039

Description: 2039 Design Flow

Designed By: HMC

Checked By: CYH

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		Flow (pcu/hr)	y Value	Critical y	PM Peak		
					Left	Right			PM		PM				Flow (pcu/hr)	y Value	Critical y
Nathan Road - SB (Bus only lane)	↓	A	1	3.300								1945			85	0.044	
Nathan Road - SB	↓	A	1	3.300								2085			514	0.247	
Nathan Road - SB	↓	A	1	3.300								2085			513	0.246	
Nathan Road - NB	* ↑	B	2	3.500								1570			178	0.113	
	* ↑	B	2	3.500								1685			191	0.113	
	* ↑	B	2	3.500								1685			191	0.113	
	** ↑	A	1	3.400								195			32	0.164	
	↑	A	1	3.400								2095			341	0.163	
	↑	A	1	3.400								2095			342	0.163	
	↑	A	1	3.400								2095			342	0.163	
Lai Chi Kok Road - EB (Bus only lane)	***→	B	2	3.300		25						1470			35	0.024	
Lai Chi Kok Road - EB	***→	B	2	3.300		20						1550			357	0.230	0.230
Lai Chi Kok Road - EB	***→	B	2	3.300		15						1515			348	0.230	
Pedestrian Crossing		Cp	1	MIN GREEN + FLASH =		65	+	10	=	75							
		Dp	2	MIN GREEN + FLASH =		47	+	10	=	57							

Notes:

* Site Factor = 0.8 (Observed kerbside activities ahead of junction)
** Site Factor = 0.1 (Flare lane)
*** Site Factor = 0.8 (Observed queue back from junction ahead)

Flow: (pcu/hr)

Group	A,B	Cp,B
y	0.477	0.230
L (sec)	20	84
C (sec)	130	130
y pract.	0.762	0.318
R.C. (%)	60%	38%

Stage / Phase Diagrams

1.

2.

3.

4.

5.

I/G= 6

I/G=

I/G=

I/G=

Date: APR, 2026

Junction: J8 - Lai Chi Kok Road / Nathan Road

Appendix B

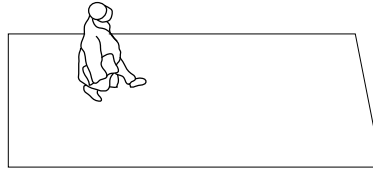
DEFINITION OF LEVEL-OF SERVICE (LOS) IN PEDESTRIAN WALKWAY SYSTEMS

EXHIBIT 11-8. PEDESTRIAN WALKWAY LOS

LOS A

Pedestrian Space $> 5.6 \text{ m}^2/\text{p}$ *Flow Rate* $\leq 16 \text{ p/min/m}$

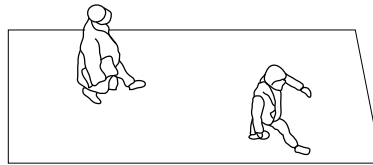
At a walkway LOS A, pedestrians move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.



LOS B

Pedestrian Space $> 3.7\text{--}5.6 \text{ m}^2/\text{p}$ *Flow Rate* $> 16\text{--}23 \text{ p/min/m}$

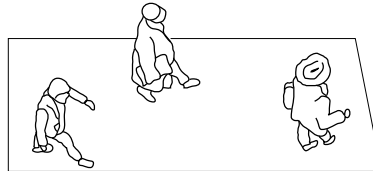
At LOS B, there is sufficient area for pedestrians to select walking speeds freely, to bypass other pedestrians, and to avoid crossing conflicts. At this level, pedestrians begin to be aware of other pedestrians, and to respond to their presence when selecting a walking path.



LOS C

Pedestrian Space $> 2.2\text{--}3.7 \text{ m}^2/\text{p}$ *Flow Rate* $> 23\text{--}33 \text{ p/min/m}$

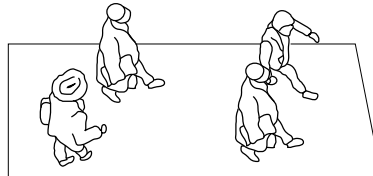
At LOS C, space is sufficient for normal walking speeds, and for bypassing other pedestrians in primarily unidirectional streams. Reverse-direction or crossing movements can cause minor conflicts, and speeds and flow rate are somewhat lower.



LOS D

Pedestrian Space $> 1.4\text{--}2.2 \text{ m}^2/\text{p}$ *Flow Rate* $> 33\text{--}49 \text{ p/min/m}$

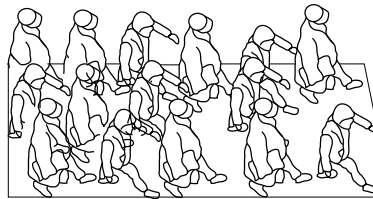
At LOS D, freedom to select individual walking speed and to bypass other pedestrians is restricted. Crossing or reverse-flow movements face a high probability of conflict, requiring frequent changes in speed and position. The LOS provides reasonably fluid flow, but friction and interaction between pedestrians is likely.



LOS E

Pedestrian Space $> 0.75\text{--}1.4 \text{ m}^2/\text{p}$ *Flow Rate* $> 49\text{--}75 \text{ p/min/m}$

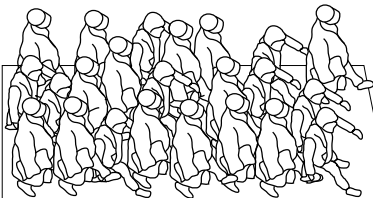
At LOS E, virtually all pedestrians restrict their normal walking speed, frequently adjusting their gait. At the lower range, forward movement is possible only by shuffling. Space is not sufficient for passing slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity, with stoppages and interruptions to flow.



LOS F

Pedestrian Space $\leq 0.75 \text{ m}^2/\text{p}$ *Flow Rate* varies p/min/m

At LOS F, all walking speeds are severely restricted, and forward progress is made only by shuffling. There is frequent, unavoidable contact with other pedestrians. Cross- and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.



Source: Adapted from Fruin (2).

**Section 16 Planning Application for Proposed Minor Relaxation of the
Maximum Domestic GFA of Site B for the Urban Renewal Authority
Sai Yee Street/ Flower Market Road Development Scheme
("YTM-013"), Mong Kok, Kowloon**

**Environmental Assessment Report
(V1.0)**

June 2026

Approved By 
(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

CINOTECH CONSULTANTS LIMITED

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Shatin, NT, Hong Kong

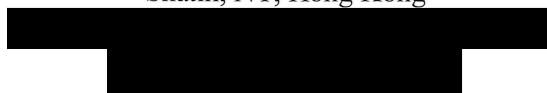


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1 INTRODUCTION

1.1 Background

- 1.1.1 The Urban Renewal Authority (URA) has proposed the Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under Section 25 of the Urban Renewal Authority Ordinance (URAO). The Chief Executive in Council (CE in C) approved the draft Development Scheme Plan (DSP) on April 8, 2025, and published this decision in the Government Gazette on 17th April 2025. The approved DSP No. S/K3/URA5/2 was exhibited for public inspection on the same day.
- 1.1.2 To optimize the utilization of the Scheme area and in view to the current unoptimistic office market sentiment with a high office vacancy rate and the Government’s directive of suspending the sales of commercial sites, the URA proposes to increase the maximum domestic Gross Floor Area (GFA) to allow flexibility for future development to meet the market needs and enhance market attractiveness of the Scheme. A Section 16 planning application (S.16 Application) is proposed to seek for minor relaxation of domestic GFA in Sub-area (1) of Site B (the whole Site B as the Application Site), zoned as “OU(MU)2” from 46,605 m² (equivalent to a Domestic Plot Ratio (DPR) 6.5) to 53,775 m² (equivalent to a DPR 7.5), while keeping the total maximum GFA of Site B unchanged. The Application Site of the current S.16 Application will only cover Site B of the approved DSP. **Figure 1-1** shows the Application Site of the current S.16 Application.
- 1.1.3 This S.16 Application is a non-scheme-based submission. The notional design is prepared based on the proposed minor relaxation of the Approved DSP parameters. Under the non-scheme-based approach, the notional design and indicative development parameters provided are only for illustrative purposes and for conducting necessary technical assessments to demonstrate the impacts of the proposed minor relaxation. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S.16 Application.
- 1.1.4 Cinotech Consultants Limited has been commissioned by the URA to conduct an Environmental Assessment (EA) to support the submission of the S.16 Application to the Town Planning Board (TPB) for consideration.

1.2 Purpose and Scope of Report

- 1.2.1 This EA is prepared to assess the potential environmental impact/ benefit associated with the implementation of the Scheme in supporting the submission of the S.16 Application to TPB’s consideration. It has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 “Environment” of the Hong Kong Planning Standards and Guidelines (HKPSG).
- 1.2.2 This EA presents the study of the potential environmental impacts of the following aspects:
- Review of Operation Phase Air Quality Impact
 - Noise Impact
 - Waste Management
- 1.2.3 Drainage Impact, Sewerage Impact and Water Supply Impact will be assessed in separate reports.

- 1.2.4 It should be noted that the conclusions for other environmental aspects in the previously approved EA report associated with the approved DSP, such as construction-phase air quality and preliminary land contamination, remain valid. Therefore, no adverse impacts are anticipated, and no reassessment of those aspects is necessary.
- 1.2.5 However, as the methodology for the operation phase air quality model has been updated since the previously approved EA report, justification shall be provided to demonstrate that the previous conclusions are still valid.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Overview of Existing Developments and Major Roads in the Surroundings

- 2.1.1 To demonstrate the complete picture of the future development in the urban context, the assessment will describe the proposed development of the whole DSP (i.e. both Site A and Site B) (the Scheme). The Scheme is located in the northeastern part of Mong Kok. With a total gross site area of 29,315m², the Scheme is divided into Site A (about 4,445m²) and Site B (about 24,870m²). The location of the Scheme is shown on **Figure 1-1**.
- 2.1.2 Site B of the Scheme (the Application Site) is currently occupied by various leisure, recreation and GIC facilities, including Boundary Sports Centre No.1 and No.2, Boundary Street Recreation Ground, Sai Yee Street Children’s Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department (“LCSD”) Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath. There is no private lot within Site B.
- 2.1.3 Site A of the Scheme (not forming the Application Site) comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.
- 2.1.4 The existing developments in the vicinity are residential, commercial, and recreational uses. There are a few open recreational areas in the vicinity such as Police Sports and Recreation Club, Tai Hang Tung Recreation Ground, and Mong Kok Stadium.
- 2.1.5 There are several major roads in the vicinity of the Scheme according to the Annual Traffic Census by Transport Department. Boundary Street (Station 3435), which is a primary distributor with AADT of 30,530 in year 2024, is located at the immediately north of Site B. Another primary distributor Prince Edward Road West (Station 4203), is located at the immediately south of Sites A1 to A5 with AADT of 43,820 in year 2024. Nathan Road (Station 3424), which is around 170m in the west of Site A1, is also a primary distributor with AADT of 29,620 in year 2024. Another two primary distributors within 500m from Scheme boundary, Lai Chi Kok Road (station 3629) and Cheung Sha Wan Road (Station 3224), are having AADT of 36,420 & 32,740 in year 2022, respectively. Due to the heavy traffic flow in the vicinity, potential air quality impact and traffic noise impact are to be assessed in the early stage of the Project.

2.2 The Proposed Development

Approved DSP and S.16 Application

- 2.2.1 According to the approved DSP of the Scheme, Site B, the Application Site, is zoned “Other Specified Uses (Mixed Uses) 2” (“OU(MU)2”), and is further divided into Sub-area (1) and Sub area (2). Sub-area (1) of Site B will be for a high-rise development with a maximum domestic gross floor area (“GFA”) of 46,605m² and a total GFA of 64,530 m², as well as a building height restriction (“BHR”) of 150mPD adopting a stepped height profile. Sub-area (2) of “OU(MU)2” zone comprises the Waterway Park and ancillary retail/ commercial uses and LCDS’s sports/ GIC facilities with a BHR of 30mPD. It has a maximum non-domestic GFA of 8,955 m².

2.2.2 Site A (not forming the Application Site) is zoned “Other Specified Uses (Mixed Use) 1” (“OU(MU)1”) and it consists of 5 Sub-areas – Sub-areas (1) to (5) (i.e. Sites A1 – A5). Site A1 will be developed for residential development cum commercial podium, with a BHR of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5.

2.2.3 Under this minor relaxation application, the maximum domestic GFA of Sub-area (1) in Site B is proposed to increase from 46,605m² to approximately 53,775m², equivalent to an increase in DPR from 6.5 to 7.5 (see **Table 2-1**). The total GFA for Sub-area (1) remains at 64,530m² (PR = 9.0). The development parameters of Sub-area (2) of Site B remain the same as the under the previously endorsed DSP.

Comparison between the Approved DSP and Current S.16 Application Proposal (Site B)

2.2.4 A comparison between the development parameters of the approved DSP and that of the S.16 Application is provided in **Table 2-1** below.

Table 2-1 Comparison between the Approved DSP and the Current S.16 Application Proposal (Site B)

Development Parameters of Site B	Approved DSP [A]			Current S.16 Application [B]			Difference [B] – [A] (% change)
Zoning	OU(MU)2			OU(MU)2			N/A
Gross Site Area (m ²)	About 24,870			About 24,870			N/A
	Sub-area (1)	Sub-area (2)	Total [A]	Sub-area (1)	Sub-area (2)	Total [B]	
Net Site Area (m²) (for PR Calculation) [1]	About 7,170	About 17,700	About 24,870	About 7,170	About 17,700	About 24,870	N/A
Maximum GFA							
-Total GFA (m ²)	64,530	8,955	73,485	64,530	8,955	73,485	N/A
-Domestic GFA (m ²)	46,605	N/A	46,605	53,775	N/A	53,775	+15.4%
Maximum Building Height (mPD)	150	30	N/A	150	30	N/A	N/A

Remark:

[1] Subject to site survey

Notional Design

2.2.5 A notional design, which is illustrated in **Figure 2-1 & Appendix 2-1**, is prepared based on the development parameters to demonstrate the proposed planning intention and development concepts of the Scheme. Compared to the notional design for the approved DSP, the current notional design for S.16 Application has only revised the design of Site B, while keeping the notional design of other parts in the DSP unchanged from the approved DSP.

2.2.6 Regarding the Application Site, under the current notional design for Sub-area (1) of Site B (the north-east corner of Site B), a development featuring 3 high-rise developments, including 2 residential towers and 1 mixed-use composite tower with residential/ hotel uses, along with retail/ recreation and GIC facilities at the podium level, is proposed. Ancillary parking and a public vehicle park (PVP) are proposed in the basement levels of Site B. An at-grade open space, named “Waterway Park,” is proposed in the Sub-area (2) of Site B. Ancillary retail facilities are planned at the ground level and the Waterway Park to enhance retail activities and vibrancy adjoining the existing Flower Market.

- 2.2.7 Compared to the approved Scheme for approved DSP, the major change is at Sub-area (1) of Site B, where the hotel/ office tower in the approved Scheme is changed to a composite tower of residential/ hotel tower, with the same height (130 mPD) in the current S.16 Application.
- 2.2.8 The notional design for Site A is the same as the approved DSP at planning stage and will be referenced for the purpose of technical assessments to support the S.16 Application. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2-A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.
- 2.2.9 The proposed development of the Scheme will be redeveloped in phases. Phased development and completion may be adopted by further sub-division of Site B, subject to liaison and agreement with relevant government departments at the implementation stage. The tentative completion year of the whole Scheme is in 2036.

Development Parameters of the Notional Design

- 2.2.10 The development parameters of the notional design of Site A shown in **Table 2-2** remains the same as those under the approved DSP. This assessment is prepared based on the development parameters in **Table 2-2** & **Table 2-3** of the notional design, which are subject to changes at detailed design stage.

Table 2-2 Development Parameters of the Notion Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m ²	About 268m ²	About 123m ²	About 233m ²	About 251m ²
	About 4,445m ²				
Net Site Area (subject to survey)	About 2,640m ²	About 239m ²	About 109m ²	About 202m ²	About 198m ²
	About 3,388m ²				
Zoning	OU(MU)1				
Domestic GFA [1]	23,716m ²	-	-	-	-
Non-Domestic GFA [1]	6,576m ²	-	-	100m ²	100m ²
No. of Building Blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m ²	-	-	-	-
At-grade Open Space	About 800m ²				

Note

- [1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
- [2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-3 Development Parameters of the Notion Design (Site B – Application Site)

Site B			
Gross Site Area	About 24,870m ²		
Zoning	OU(MU)2		
	Sub-area (1)	Sub-area (2)	Total
Net Site Area (subject to survey)	7,170m ²	17,700m ²	24,870m ²
Domestic GFA [1]	53,775m ²	-	53,775m ²
Non-Domestic GFA [1]	10,755m ²	8,955m ²	19,710m ²
- Retail	(5,755m ²)	(8,955m ²)	(14,710m ²)
- Hotel	(5,000m ²)	-	(5,000m ²)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m ²		
No. of Building Blocks [2]	2 residential towers and 1 composite tower with residential and hotel uses on top of GIC/ recreation/ retail podia + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (composite tower) 1 storey (retail block)		
No. of Flats [2]	About 1,080	-	About 1,080
Average Flat Size [2]	50m ²	-	50m ²
At-grade Open Space	About 8,800m ²		
Public Vehicle Park [4]	About 220 private car parking spaces + About 10 loading/unloading bays		

Note

- [1] Under the proposed “OU(MU)” zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
- [2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
- [3] The actual GIC GFA is subject to liaison with Government departments. As a conservative approach, 30,000m² GIC GFA is assumed in this assessment.
- [4] Subject to liaison with Transport Department.

3 REVIEW OF OPERATION PHASE AIR QUALITY IMPACT

3.1 Introduction

- 3.1.1 In the previously approved EA report, air model results with additional 5% traffic generation induced by the Scheme as a sensitivity test show that the predicted air quality at all proposed residential flats, external façades of non-residential areas, and Scheme boundaries complies with the AQOs for RSP, FSP, and NO₂. Under the subject S.16 Application, there is no major change in the notional building layout and no change of building height of towers despite the proposed increase in domestic GFA in Site B. Therefore, no adverse air quality impact due to vehicular or marine traffic emissions is anticipated for the Scheme area.
- 3.1.2 Since then, the methodology for the air quality model has been updated. The key differences are (1) the update of the PATH background; and (2) the use of AERMOD instead of CALINE4 for the calculation of open-road traffic emission dispersion. Before adopting the previous conclusions, it is necessary to confirm that the changes in methodology will not adversely affect the model results.

3.2 Updated PATH Background

- 3.2.1 In the approved EA report of the approved DSP, background concentrations for Year 2025 from PATH v2.1 were adopted. With introduction of PATH v3.0, background concentrations for Year 2035 (the closest available year prior to population intake) are available.
- 3.2.2 The previously adopted PATH background and the PATH v3.0 background are provided in **Table 3-1** for comparison. As the PATH v3.0 background is clearly lower than the previously adopted PATH background, the updated PATH background will not adversely affect the results of the air quality model.
- 3.2.3 It should be noted that ozone (O₃) is not considered a key criteria pollutant for the Proposed Development, as it is not a primary pollutant emitted from vehicular emissions. Instead, its concentration was used as a parameter to estimate the conversion of nitrogen oxides (NO_x) to nitrogen dioxide (NO₂) in the approved EA report.

Table 3-1 Comparison between the PATH v2.1 Background in the Approved EA Report and the Current PATH v3.0

Pollutant	Averaging Time	AQOs [$\mu\text{g}/\text{m}^3$] [i]	PATH Model Concentration [$\mu\text{g}/\text{m}^3$] at Grid [40,34] - L1 (0-17m)	
			Year 2025 in PATH v2.1 (Adopted in the approved EA report) [ii]	Year 2035 in PATH v3.0 (Closest available year prior to population intake [iii])
Respirable Suspended Particulates (RSP)	10th Highest 24-hour	75 (9)	62.11	49.66
	Annual	30	27.56	19.92
Fine Suspended Particulates (FSP)	19th Highest 24-hour	37.5 (18)	31.78	28.7
	Annual	15	15.03	12.26
Nitrogen Dioxide (NO_2)	19th Highest 1-hour	200 (18)	123.89	84.98
	10th Highest 24-hour	120 (9)	--	33.44
	Annual	40	21.95	15.56
Sulphur Dioxide (SO_2)	4th Highest 10-Min	500 (3)	58.78	22.91
	4th Highest 24-hour	40 (3)	9.74	6.53
Ozone (O_3)	10th Highest 8-hour	160 (9)	188.56	170.15
	Peak season	100	--	118.11
Carbon Monoxide (CO)	1st Highest 1-hour	30000 (0)	945.47	521.79
	1st Highest 8-hour	10000 (0)	766.85	492.5
	1st Highest 24-hour	4000 (0)	--	464.39

Note:

- [i] The numbers in brackets () refer to number of exceedances allowed per calendar year.
 [ii] The pollution concentrations are obtained from the Smart Air Modelling Platform v2.0.
 [iii] The pollution concentrations are obtained from the Smart Air Modelling Platform v2.1.
 [iv] Exceedance has been highlighted in orange.

3.3 The use of AERMOD with SAMP instead of CALINE4

- 3.3.1 CALINE4 was adopted in the air quality model of the approved EA for handling the dispersion of open-road traffic emissions. AERMOD, together with traffic emission source strength from the Smart Air Modelling Platform (SAMP), is the currently accepted method for modelling open-road traffic emissions. Compared with CALINE4, AERMOD is a much newer modelling tool with many additional configuration options and functions. As both CALINE4 and AERMOD are Gaussian-based modelling tools, with identical source configuration and meteorological data, both models should provide similar results.
- 3.3.2 The traffic emission source strength in both the approved EA report and the current method relies on traffic emission factors from EMFAC-HK v4.3. Therefore, the traffic emission source strength remains the same.
- 3.3.3 It should be noted that the source locations in CALINE4 differ from those in the current method. CALINE4 models traffic emissions as a line source on the road surface, with a limitation on the height of flyovers to 10 m above ground. In contrast, the current method

(AERMOD with SAMP) models traffic emissions as a line source 0.65–4.4 m above the road surface, depending on the proportions of various vehicle types. The restriction on the elevation of flyovers also does not exist in AERMOD. Therefore, the emission heights in the current method are spread across various elevations and are generally farther from ground level.

- 3.3.4 Considering that the worst-hit level was ground level (1.5 mAG) in the approved EA report, with the same traffic emission strength but higher emission elevations and a wider vertical spread, traffic pollutants are less likely to concentrate at ground level; thus, the change in methodology will not adversely affect the worst locations.

3.4 Conclusion

- 3.4.1 With the changes in the air quality modelling methodology, the model results are not expected to be adversely affected. Therefore, the conclusions in the approved EA report remain valid, and no adverse air quality impact due to vehicular or marine traffic emissions is anticipated for the Scheme area.

4 NOISE IMPACT ASSESSMENT

4.1 Introduction

- 4.1.1 The purpose of this chapter is to assess whether the noise sensitive receivers (NSRs) of the proposed development within the Scheme comply with the noise criteria of The Hong Kong Planning Standards and Guidelines (HKPSG).
- 4.1.2 The potential noise impact from the following aspects have been assessed: (i) Construction noise - the potential noise impact generated from the construction activities of the proposed development to the surroundings; (ii) Fixed noise - the potential fixed noise impact generated from the surrounding fixed noise sources to the proposed development and potential fixed noise impact arising from the proposed development to the surrounding developments; (iii) Traffic noise - the potential noise impact generated from the nearby road networks to the proposed development during operation phase; (iv) Railway noise - the potential noise impact generated from the East Rail Line to the proposed development; (v) Stadium noise – the potential noise impact generated by the events in Mong Kok Stadium.
- 4.1.3 Effective mitigation measures and recommendations are proposed to mitigate the excessive noise level to achieve an acceptable compliance level under the current notional design.

4.2 Standards, Guidelines and Criteria

Construction Noise

- 4.2.1 Construction noise is governed by the Noise Control Ordinance (NCO) (Cap. 400) which prohibits the use of PME during the restricted hours (7 p.m. to 7 a.m. on Monday to Saturday and any time on a general holiday, including Sunday) without a valid Construction Noise Permit (CNP) issued by the Authority. The criteria and procedures for issuing the permit are specified in the “Technical Memorandum on Noise from Construction Works Other than Percussive Piling” - (GW-TM).
- 4.2.2 For construction works other than percussive piling, although GW-TM does not provide control over non-restricted hours (7:00 a.m. to 7:00 p.m., Monday to Saturday not being a public holiday including Sunday) daytime construction activities, the noise limits are set out in the “Practice Note for Professional Persons Environmental Consultative Committee” (ProPECC) “Minimizing Noise from Construction Activities” (PN1/24).

Fixed Plant Noise

- 4.2.3 Fixed noise sources, such as the building services system, ventilation system, and the operation of the Project is controlled under the NCO and “Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites” (IND-TM). According to the IND-TM, the Acceptable Noise Level (ANL) for a Noise Sensitive Receiver (NSR) is determined by the Area Sensitive Ratings (ASR); which classify a NSR based on the type of the area within, and the degree of the effect on the NSR of particular Influencing Factors (IFs). The different types of area containing the NSR are categorized into the rural area, low density residential area, urban area and other areas, with reference to Table 1 of the IND-TM. While the Ifs, defined as industrial areas or area containing a number of factories or major road with an annual average daily traffic flow (AADT) in excess of 30,000, should be assessed for their influence on the

NSR according to the degree of influence ("not affected", "indirectly affected" and "directly affected").

- 4.2.4 The HKPSG states that all planned fixed noise sources should be located and designed so that when assessed in accordance with the IND-TM, the level of the intruding noise at the façade of the nearest sensitive use should be at least 5 dB(A) below the appropriate ANL shown in Table 2 of the IND-TM or the background noise level, whichever is lower. When the prevailing background noise levels would be adopted as the assessment criteria, the prevailing background noise levels, at the relevant NSRs shall be measured during the typical operation hours of the fixed plant within daytime, evening and night times. The Acceptable Noise Levels (ANLs) for different Area Sensitivity Ratings (ASRs) are given in **Table 4-2**.

Table 4-1 Acceptable Noise Levels for different Area Sensitivity Rating (ASRs), dB(A), L_{eq} , (30mins)

Time Period	Acceptable Noise Levels, L_{eq} , 30mins		
	ASR A	ASR B	ASR C
Day (0700 to 1900 hours)	60 (55)*	65 (60)*	70 (65)*
Evening (1900 to 2300 hours)			
Night (2300 to 0700 hours)	50 (45)*	55 (50)*	65 (55)*

* Numbers in () limit indicates the ANL-5dB(A) limit for planned fixed plant.

- 4.2.5 The Scheme is located in the urban area of Mong Kok. According to TD's Annual Traffic Census (ATC2024), Boundary Street (Station 3435), which is a primary distributor with AADT of 30,530 in year 2024, is located at the immediately north of Site B. Another primary distributor Prince Edward Road West (Station 4203), is located at the immediately south of Sites A1 to A5 with AADT of 43,820 in year 2024. Therefore, the Scheme and its surroundings are considered either directly affected or indirectly affected by Influencing Factor (IF); the ASR of the site would be classified as "C".

- 4.2.6 As the site is subject to traffic noise impact from the nearby primary distributor roads, it is expected that the prevailing background noise level would be higher than ANL-5dB for both daytime and night-time, thus ANL-5 dB would be adopted as the planned fixed noise sources criterion. The planning criteria would be 65 dB(A) for day and evening time and 55 dB(A) for night time.

Road Traffic Noise

- 4.2.7 HKPSG provides guidance on acceptable road traffic noise levels at the openable windows of various types of noise sensitive buildings. The relevant criteria are shown in **Table 4-2**.

Table 4-2 HKPSG Road Traffic Noise Planning Criteria

Uses	Road Traffic Noise L ₁₀ , (1hr) dB(A)
Domestic Premises	70
Hotel and Hostels	70
Offices	70
Educational institutions	65
Hospital & Clinics	55
Places of public worship and courts of law	65

Note: The above criteria apply to noise sensitive uses which rely on opened window for ventilation.

4.2.8 The following Practise Notes provide guideline to facilitate the project planning and design against road traffic noise impact.

- “ProPECC PN3/23 Application of Sound Insulation in Residential Buildings to Reduce Noise Transmission Between Units” provides technical information on the design and application of sound insulation on partition walls and floors between residential units for better privacy protection and indoor sound environment.
- “ProPECC PN4/23 Practice Note for the Planning of Residential Developments against Road Traffic Noise” recommends mitigation measures against road traffic noise in planning stage and promulgates self-assessment procedures to facilitate the planning approval
- “ProPECC PN5/23 Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact” provides guidance on technical information for innovative mitigation measures (Acoustic Window and Enhanced Acoustic Balcony) against road traffic noise.

Railway Noise

4.2.9 Railway noise is governed by the Noise Control Ordinance (NCO). The proposed development is classified as ASR C (**Section 4.2.5**) and the ANLs of ASR C stipulated in the IND-TM shall be complied. Moreover, HKPSG provide guidance on acceptable railway noise levels at the openable windows of various types of noise sensitive buildings. An averaged 24 hours noise level of 65 dB(A) and a L_{max} (2300-0700) of 85 dB(A) are recommended. The railway noise criteria are summarised in **Table 4-3**.

4.2.10 HKPSG also provides guidance on the necessary horizontal distance from the railway to noise sensitive buildings to avoid potential noise impact.

Table 4-3 Railway Noise Criteria

Time period	Noise Criteria, dB(A)	
Day (0700 to 1900 hours) & Evening (1900 to 2300 hours)	$L_{eq,30min}$	70 ^[1]
Night (2300 to 0700 hours)	$L_{eq,30min}$	60 ^[1]
	$L_{max, (2300 to 0700)}$	85 ^[2]
All Day	$L_{eq, (24hrs)}$	65 ^[2]

Noted

[1] Criteria for Fixed Noise Sources stipulated in the IND-TM.

[2] Recommendations from HKPSG Chapter 9

Stadium Noise

4.2.11 The noise arising from the operation of Mong Kok Stadium is regulated under the Noise Control Ordinance (NCO) and IND-TM. The proposed development is classified as “ASR C” (**Section 4.2.5**) and ANL of ASR C shall be applied as the noise criteria against stadium noise. Therefore, the noise criterion for the proposed development is 70dB(A) for daytime and evening time. The night-time criterion is not applicable as the stadium is not expected to be operated during night-time.

4.3 Noise Sensitive Receivers and Noise Assessment Points

4.3.1 NSRs within 300m assessment area from Scheme boundary have been reviewed. The assessment boundary is illustrated in **Figure 4-1**. Sites A1 and B consists of residential flats that rely on openable windows for ventilation, while Sites A2 – A5 will be either open space or 1-storey retail shops. Therefore, NSR is not anticipated at Sites A2 – A5. The NSRs at Sites A1 and B will be further assessed.

Representative Noise Sensitive Receivers for Construction Noise

4.3.2 The proposed development is located in a densely populated urban area surrounded by various types of developments, including residential developments, commercial developments, G/IC facilities, and schools. Given the small scale of Sites A2 to A5 and that only light structures will be provided, no significant construction noise impact is anticipated from these Sites. The representative noise sensitive receivers (NSRs) for the construction of Proposed Development are illustrated in **Figure 4-2** and summarized in **Table 4-4**.

Table 4-4 Representative Noise Sensitive Receivers for Construction Noise

NSR ID	Description	Type	Nearest Horizontal Distance to Scheme Boundary, m	
			Site A1	Site B
NSR01	Mandarin Court	Domestic Premises	113	14
NSR02	Flower Vila	Domestic Premises	40	14
NSR03	Mong Kok City Building	Domestic Premises	18	29
NSR04	Merlin Building	Domestic Premises	28	90
NSR05	Fa Yuen Mansion	Domestic Premises	16	76
NSR06	Oscar Court	Domestic Premises	7	50
NSR07	Circle Garden	Domestic Premises	<5	25
NSR08	Heung To College of Professional Studies	Domestic Premises	48	12
NSR09	Jenny's Court	Domestic Premises	100	12
NSR10	Chan's Creative School	Educational institutions	284	33

Representative Noise Sensitive Receivers for Planned Fixed Noise Sources

- 4.3.3 Large building service equipment for Podium of Site A1, Podiums & Hotel of Site B are the potential fixed noise sources during operation phase of the Scheme. For Sites A2, A3, A4 & A5, no large building service equipment is anticipated due to the type and scale of the Sites.
- 4.3.4 The surrounding and planned NSRs with direct line-of-sight to the podium of Sites A1 & B and the Hotel are considered as the representative NSRs against planned fixed noise sources. The representative NSRs are summarized in **Table 4-5** and illustrated in **Figure 4-3a**. The NSRs in the east of the Site B are relatively far thus those NSRs are not considered as representative NSRs.
- 4.3.5 The potential fixed noise sources are not expected to be visible to the same building (e.g. the noise sources of podium of Site A1 shall not be visible from Towers 1 & 2 aloft). In addition, since the podium of Site A1 is located at close proximity to the surrounding residential building, no fixed noise sources or ventilation exhausts shall be provided at north façade of the Podium as marked in **Figure 4-3b**.

Table 4-5 Representative Noise Sensitive Receivers for Fixed Noise

NSR ID	Description	Nearest Horizontal Distance, m		
		Podium of Site A1	Podium of Site B (Towers 1 and 2)	Non-residential Portion of Site B (Tower 3)
NSR01	Mandarin Court	122	70	129
NSR02	Flower Vila	49	67	165
NSR03	Mong Kok City Building	26	85	193
NSR04	Merlin Building	46	146	261
NSR05	Fa Yuen Mansion	19	97	243
NSR06	Oscar Court	13	66	212
NSR07	Circle Garden	12	46	189
NSR08	Heung To College of Professional Studies	59	17	159
NSR09	Jenny's Court	111	25	148
NSR10	Chan's Creative School	294	118	68
NSR11	Tower 2 in Site B	181	N/A	15
NSR12	Tower 3 in Site B (Residential Portion)	196	15	N/A

Note:

- [1] The nearest Representative Noise Sensitive Receivers for each corresponding source are **bold underlined**
- [2] Location for fixed noise sources (northern side of the podium) is restricted at Site A1.

Noise Assessment Points for Traffic Noise

- 4.3.6 Noise sensitive receivers are identified at residential towers at Sites A1 and B, while no noise sensitive receivers are identified at Sites A2 – A5. All living rooms and bedrooms of the residential flats were identified as NSRs according to the nature of use. The noise assessment points (NAPs) were assigned at 1.2m above the slab level and 1m away from the façade. All potential windows locations of all residential flats are covered.
- 4.3.7 Commercial, hotel, clubhouse and GIC facilities are assumed to be equipped with air-conditioning system and will not rely on openable windows for ventilation, and thus the noise standard is not applicable.
- 4.3.8 There are a total of 1,554 residential flats based on the notional layout of the typical floor. Towers 1 and 2 at Site A1 each consist of a low zone and a high zone, separated by a refuge floor.
- 4.3.9 For assessment purpose, the traffic noise level at all 1,554 flats have been assessed. The assessment points are summarized in **Table 4-6** and their locations are illustrated in **Figures 4-4a to 4-4g**. It should be noted that the notional layout of the Scheme is for assessment purpose only and subject to change in detailed design stage.

Table 4-6 Summary of Representative Noise Sensitive Receivers and Assessment Points for Traffic Noise Impact Assessment

Location	NSR ID ^[1,2]	Number of Flat	Total Number of Flat	Elevation of the Assessment Point ^[3]
Tower 1 – Low Zone (Site A1)	AT1-LZ-F01-O01 to AT1-LZ-F07-O22	7 flats per floor (Low Zone: 1/F to 19/F)	252	30.7mPD for 1/F, +3.15m for each floor
Tower 1 – High Zone (Site A1)	AT1-HZ-F01-O01 to T1-HZ-F07-O22	7 flats per floor (High Zone: 22/F to 38/F)		96.85mPD for 22/F, +3.15m for each floor
Tower 2 – Low Zone (Site A1)	AT2-LZ-F01-O01 to T2-LZ-F06-O22	6 flats per floor (Low Zone: 1/F to 19/F)	222	30.7mPD for 1/F, +3.15 for each floor
Tower 2 – High Zone (Site A1)	AT2-HZ-F01-O01 to AT2-HZ-F06-O22	6 flats per floor (High Zone: 21/F to 38/F)		93.70mPD for 21/F, +3.15m for each floor
Tower 1 (Site B)	BT1-F01-O01 to BT1-F15-O39	15 flats per floor (1/F to 35/F)	525	40.6mPD for 1/F, +3.15 for each floor
Tower 2 (Site B)	BT2-F01-O01 to BT2-F12-O30	12 flats per floor (1/F to 35/F)	420	40.6mPD for 1/F, +3.15 for each floor
Tower 3 (Site B)	BT1-F01-O01 to BT1-F09-O24	9 flats per floor (Residential Floor: 1/F to 15/F)	135	83.6mPD for 15/F, +3.15 for each floor
Total			1,554	

Note:

- [1] NSR ID for Tower 1 & 2 at Site A1 is in the form of ATT-XX-FFF-ZZZ, where "A" represents the Site A (Site A1), "TT" is tower identity = T1/T2, "XX" is the zone = LZ/HZ, "FFF" is the number of flats; "ZZZ" is the number of openings.
- [2] NSR ID for Tower 1, 2 & 3 at Site B is in the form of BTT-FFF-ZZZ, where "B" represents the Site B, "TT" is tower identity = T1/T2/T3, "FFF" is the number of flats; "ZZZ" is the number of openings.
- [3] The notional design including the elevation is subject to change.

Representative Noise Assessment Points for Stadium Noise

4.3.10 The NSRs that rely on openable windows for ventilation are the residential flats in the Residential Towers of Sites A1 and B. As Site A1 is relatively far from Mong Kok Stadium, with a horizontal distance of approximately 200 meters, it is unlikely to be adversely affected by noise from the stadium. Therefore, only representative NSRs in Site B are assessed.

4.3.11 Representative noise assessment points are assigned at 1.2m above the slab and 1m away from the facades of Towers 1, 2 and 3 of Site B. Four additional noise assessment points, designated as A to D, are assigned within or near Mong Kok Stadium for validation purposes.

4.3.12 The representative noise assessment points representing the are listed in **Table 4-7** and illustrated in **Figure 4-5**.

Table 4-7 Representative Noise Assessment Points for Stadium Noise

Location	NAP ID	Floor	Assessment Height ^[1]
Tower 1 (Site B)	BT1-F07-O17 BT1-F08-O18 BT1-F08-O19 [2] BT1-F09-O23 BT1-F11-O28 BT1-F13-O32 BT1-F14-O35 BT1-F15-O39	1/F to 35/F	1 st Residential Floor = 40.6mPD +3.15m for each subsequent floor
Tower 2 (Site B)	BT1-F06-O15 BT1-F07-O16		
Tower 3 (Site B)	BT3-F05-O12 BT3-F06-O13 BT3-F06-O16 BT3-F07-O17 BT3-F08-O21 BT3-F08-O22	1/F to 15/F	1 st Residential Floor = 83.6mPD +3.15m for each subsequent floor
Mong Kok Stadium	A, B, C & D	--	A: 1.5m above the stand B: 3.0m above the roof C: 3.5m above the roof D: 3.0m above the ground outside of the Stadium

Note:

[1] The notional design including the elevation is subject to change.

[2] The worst affected location identified in preliminary study.

4.4 Construction Noise Impact Assessment

4.4.1 The use of powered mechanical equipment (PME) will generate construction noise impact to the nearby NSRs. The major noise emitting activities will be the demolition of existing structures and foundation works of future development.

4.4.2 As the site is situated in a well-developed urban area, the number of PME that it can accommodate is limited, however, the noise from construction activities may still be an impact if the construction works are not planned and arranged properly.

4.4.3 ProPECC PN1/24 "Minimizing Noise from Construction Activities" provides construction noise requirements and recommendations on practices such as quieter construction methods and equipment to minimize construction noise. Subject to detailed site works arrangement, the contractor shall consider the following noise mitigation measures, if necessary and applicable:

- Use non-percussive equipment such as hydraulic crusher, sawing, coring machines for demolishing existing building and structure
- Use non-percussive piling driving method such as hydraulic press-in method, vibration or jacking method for foundation work
- Use Quality Powered Mechanical Equipment (QPME) recognized by the Environmental Protection Department (EPD). The QPME shall be registered with EPD, and valid label issued by EPD shall be affixed on the QPME all times.

- Use Quieter Construction Methods¹ as far as practicable
- Schedule work to minimize concurrent activity and duration of impact
- Regular maintenance of equipment to prevent noise emission due to impairment
- Adopt good site practice, such as throttle down or switch off equipment unused or intermittently used between works
- Position mobile noisy equipment in locations away from nearby NSRs and point the noise sources to directions away from NSRs
- Make good use of other structures for noise screening

4.4.4 Construction activities under the current Scheme involves concrete removal works, demolition works, site formation/excavation works and superstructure works. Subject to detailed site works arrangement, the contractor shall consider the following mitigation measures, if necessary and applicable:

Concrete Removal Works / Demolition Works:

- Use of high pressure water jetting instead of traditional jackhammers and drill hammers;
- Use of quieter type wire saws or diamond wire saws for cutting large areas and heavily reinforced concrete;
- Use of quieter type blade saws utilizing diamond blades with higher speeds and smoother blades reduces excitation of vibration;
- Use of hydraulic crushers for concrete breaking instead of traditional excavator-mounted breakers;
- Use of handheld concrete crushers instead of traditional jackhammers;
- Use of hydraulic splitters instead of traditional jackhammers and breakers.

Site Formation / Excavation Works:

- Use of silent piling by press-in method instead of traditional massive augering and piling machines or drop hammer for sheet piling / channel planking installation work;
- Use of a sheet piling noise reducer such as a suitable shock absorber to reduce collisions between sheet pile / channel planking and holding parts;
- Use of pile driving impact cushions to reduce noise generated by piling impact;
- Pre-augering/pre-trench/boring pile holes to remove underground obstruction for avoiding hard driving / soften the ground;
- Use of crack inducers instead of traditional percussive breakers.

Superstructure Works:

- Use of prefabricated structure / sections to replace in-situ construction to reduce the amount of mechanical equipment used on site;
- Use of self-compacting concrete (without the aid of a vibrator e.g. poker for compaction) for in-situ concreting;

¹ Quieter Construction Methods: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

- Use of crack inducers instead of traditional percussive breakers.

4.4.5 With proper noise mitigation measures implemented during the construction phase, no adverse noise impact arising from the construction activities is expected.

4.5 Operation Noise Impact Assessment

Planned Fixed Noise Sources of the Scheme

4.5.1 The Scheme will provide central air ventilation for commercial & retail area, clubhouse, GIC facilities, hotel, and basement carpark. The associated HVAC system may cause noise impact to surrounding or planned NSRs. Although the large exhaust fans are usually located indoor enclosed within the air ducts, the fan noise will transmit via the ventilation pipe and emit at the duct exhaust. Therefore, the potential planned fixed noise sources of the Scheme are the large exhaust fans and the outdoor units of air conditioner. Other equipment such as water pumps and lift motors will be located in enclosed rooms thus no adverse noise impact to the surrounding is anticipated.

Site A1

4.5.2 The facilities in the podium will be closed outside operation hours and the associated HVAC system are expected to stop during night time. Besides, the expected ventilation requirement of the basement carpark during night-time is expected to be very low thus the primary exhaust fan is unlikely required. Due to the relatively small size of the served zones, Variable Refrigerant Volume (VRV) system is preferred over chiller plants and/or water-cooling tower as VRV provide flexible cooling capacity with high efficiency over large range of loading. To avoid the noise from fixed plants affecting the residential portions, the large plants and large ventilation exhaust pipes are planned to be located at semi-confined areas such as plant rooms and/or entrance/exit of the carpark, with acoustic louvers if necessary. The ventilation pipes will be equipped with silencer to reduce the in-duct noise level. As there is no direct line of sight between the fixed noise sources of Site A1 and the residential flats of Site A1, no adverse noise impact from the fixed noise sources of Site A1 to the residential flats of Site A1 is anticipated. As the fixed noise source of Site A1, including the louvers serving the fixed noise sources, may be visible from the NSRs in the surrounding, maximum allowable sound power levels will be recommended.

4.5.3 Since existing residential buildings are in close proximity to the Site A1, fixed noise source or ventilation exhausts shall be avoided to be provided at the north facing facades of the podium of Site A1, as marked in **Figure 4-3b**.

Site B (Podium of Towers 1 and 2)

4.5.4 For Podium of Residential Portion of Site B, chiller plants and large ventilation exhaust pipes are also planned to be located at semi-confined areas. The ventilation pipes will also be equipped with in-line silencer to reduce the in-duct noise level. Same as Site A1, there is no direct line of sight between the fixed noise sources of Podium and the residential flats aloft. However, the fixed noise source at the podium of Towers 1 and 2 may be visible to the residential flats at the Tower 3 and the NSRs in surrounding, the maximum allowable sound power levels at the podium of Tower 1 and 2 will be recommended.

Site B (Non-residential Portion of Tower 3)

- 4.5.5 For the non-residential portion of Tower 3 in Site B, chiller plants and large ventilation exhaust pipes are also planned to be located at semi-confined areas. The ventilation pipes will also be equipped with in-line silencer to reduce the in-duct noise level. As the fixed noise source, or the louvers connected to the fixed noise sources of the non-residential portion may be visible to Towers 1 & 2 of Site B and the NSRs in the surrounding. Since the western side of Tower 3 directly faces Towers 1 and 2 of Site B, it is recommended to place the noisy plants on the opposite side to avoid direct impact. Maximum allowable sound power levels will be recommended.

Maximum Allowable Sound Power Levels (SWL)

- 4.5.6 The maximum allowable SWL for the planned fixed noise sources are present in **Table 4-8** and detailed in **Appendix 4-1**.
- 4.5.7 According to the calculation based on the horizontal distance of the nearest NSRs for each corresponding source, the cumulative SWL of the building service equipment at podium of Site A should not exceed 86 dB(A) during day and evening time, and should not exceed 76 dB(A) during night time. For the podium of Towers 1 and 2 of Site B, the limits of the cumulative SWL are 88 dB(A) during day and evening time, and 78 dB(A) during night time. For the non-residential portion of Site B, the limits of the cumulative SWL are 88 dB(A) during day and evening time, and 78 dB(A) during night time.
- 4.5.8 It should be noted that a 6 dB correction has been adopted accounting for the tonality, intermittency and impulsiveness characteristics for assessment purpose. In case the noise exhibits tonality, intermittency and impulsiveness characteristics during the operation, the maximum allowable SWLs of the fixed plants should be corrected based on the recommendation given in Section 3.3 of the IND-TM.

Maximum Sound Pressure Levels (SWL) at Receivers

- 4.5.9 Based on the maximum allowable SWLs, the cumulative noise levels at NSRs from the planned fixed noise sources of the Scheme has been calculated and the results show that cumulative noise levels will comply with the criteria when the maximum allowable SWLs has been implemented properly. The results are present in **Table 4-9** and detailed in **Appendix 4-1**.
- 4.5.10 Although the Scheme is still in early stage thus no detailed design including the location of the noisy plants is available, no adverse fixed noise impact to the NSRs with the proposed increase in domestic GFA in Site B is anticipated if the choice of equipment, installation locations, installation and mitigations are properly designed.

Table 4-8 Allowable Sound Power Level for the Building Service Equipment of the Proposed Development

Time Period	Maximum Allowable SPL at NSR, dB(A)	Maximum Allowable Sound Power Level at Source, dB(A) ^{[1][2]}
Site A1		
Day and Evening Time (07:00-23:00)	65	86
Night Time (23:00 – 07:00)	55	76
Site B (Podium of Residential Portion)		
Day and Evening Time (07:00-23:00)	65	88
Night Time (23:00 – 07:00)	55	78
Site B (Hotel and Podium Portion of Tower 3)		
Day and Evening Time (07:00-23:00)	65	88
Night Time (23:00 – 07:00)	55	78

[1] For assessment purpose, a 6 dB of tonality, intermittency & impulsiveness correction has been adopted.

[2] The Maximum Allowable Sound Power Level at Source should be corrected by the tonality, intermittency, & impulsiveness correction of the selected equipment, according to Section 3.3 of the IND-TM.

Table 4-9 Cumulative Noise level form the Planned the Building Service Equipment of the Proposed Development

NSR ID	Description	SPL at NSR, dB(A)			
		Day and Evening Time (07:00-23:00)		Night Time (23:00 – 07:00)	
		Cumulative	Criteria	Cumulative	Criteria
NSR01	Mandarin Court	53	65	43	55
NSR02	Flower Vila	56		46	
NSR03	Mong Kok City Building	59		49	
NSR04	Merlin Building	54		44	
NSR05	Fa Yuen Mansion	61		51	
NSR06	Oscar Court	65		55	
NSR07	Circle Garden	65		55	
NSR08	Heung To College of Professional Studies	64		54	
NSR09	Jenny's Court	61		51	
NSR10	Chan's Creative School	53		43	
NSR11	Tower 2 in Site B	65		55	
NSR12	Tower 3 in Site B (Residential Portion)	65		55	

Existing Fixed Noise Sources in the Surroundings

Site A1

- 4.5.11 Site A1 is surrounded by residential developments and therefore, major fixed noisy plants is not anticipated in the residential development. However, there are exposed chillers or outdoor units identified on the rooftop of the Grand Century Place Tower I and Grand Century Place Tower II, where located at approximately 180m and 250m respectively. Given the considerable distance from Site A1 to the Grand Century Place Tower I and Grand Century Place Tower II, fixed noise impact is not anticipated.
- 4.5.12 For the near-by non-residential developments, no exposed large chiller plant is identified thus the potential noise impact shall be limited. Compared with the traffic noise from the Prince Edward Road West, which is directly or indirectly affecting the Site A1, the potential fixed noise in the surrounding shall be insignificant.
- 4.5.13 Site visit is conducted in March 2026 to identify the changes since the previous site audit (Feb 2024) conducted for the environmental assessment in the approved DSP. It is observed that the environment of Site A1 is similar to previous site audit and no noticeable noise is perceived during the site audit. Therefore, adverse fixed noise impact on Site A1 is not anticipated.

Site A2 – A5

- 4.5.14 Since no NSRs have been identified in Site A2 to A5, no noise assessment point is assigned to Site A2 to A5 for further assessment.

Site B

- 4.5.15 For the Boundary Street Sports Ground Substation in Site B, no noticeable noise was perceived during site visit.
- 4.5.16 Site B is currently occupied by public open space. Similar to that of Site A1, Site B is close to residential developments thus no major fixed noise source in the vicinity is anticipated. Comparing with the traffic noise from the Boundary Street, which is directly or indirectly affecting the Site B, the potential fixed noise in the surrounding shall be insignificant. Therefore, no adverse impact from existing fixed noise source to NSRs of Site B (the residential flats) is anticipated.

Road Traffic Noise

Assessment Methodology

- 4.5.17 A computational noise model “CadnaA” developed by DataKustik was used to predict the traffic noise levels arising from the road network. Calculation of Road Traffic Noise (CRTN) 1988 has been adopted in the noise model. Road traffic noise levels are presented in terms of noise levels exceeded for 10% of the one-hour period for the hour having the peak traffic flow [L_{10} (1-hour) dB(A)].
- 4.5.18 The assessment was based on the projected peak hour flows for the worst year within 15 years after completion of the Project in Year 2036. Based on the traffic forecast provided by

the traffic consultant, the peak hour flows in Year 2051 will generate the highest road traffic noise within 15 years from the completion of the Scheme. The major roads within 300m from the boundary of the Scheme have been included in the assessment and are shown in **Appendix 4-2**.

- 4.5.19 The peak hour traffic flow of individual roads in the assessment year (Year 2051) is listed in **Appendix 4-2**. The traffic forecast, with additional 5% traffic generation by the Scheme as a sensitivity test, has been submitted to the Transport Department for their endorsement. The traffic noise levels for Year 2051 during both the AM Peak and PM Peak periods will be assessed to identify the highest noise level for each assessment point among the AM Peak and PM Peak. The mitigation measures based on the highest noise level will be further proposed, if necessary and applicable.

Architectural Design

- 4.5.20 To minimize the traffic noise impact to the Scheme, the following architectural design consideration has been adopted:

- The orientations of towers have been designed in a way such that most of the NSRs will not be severely affected by the major noise source.
- The orientation of the Tower 2 at Site B has been designed to block the view of the road traffic for Tower 1 at Site B.
- The podium of Site B has been designed to block the view to the road traffic for lower floor of Tower 2.

- 4.5.21 Two scenarios have been considered in the traffic noise impact assessment. The first one is a (A) Base Scenario which only considered architectural design and location of the openable windows; the second scenario is a (B) Mitigated Scenario with adopted the Receiver-End Noise Mitigated Measure (NMM) like Acoustic Windows, Acoustic Balcony and Fixed Glazing.

Impact Identification and Assessment

a) Base Scenario: Careful Design on Buildings Disposition & Windows Locations

- 4.5.22 In the Base Scenario, the residential towers have been carefully designed to avoid adverse traffic noise impact. View angle of the major road has been minimized by the architectural design like building disposition, building orientation, architectural fins and window locations. Without the design, the traffic noise level in Base Scenario is expected to be much higher.
- 4.5.23 The traffic noise results under Base Scenario are presented in **Appendix 4-3** and the traffic noise exceedances are depicted in **Figures 4-6a to 4-6d**. The results show that about 96.7% of flats complying with the noise criteria of 70dB(A). The maximum predicted traffic noise level, ~75dB(A), is found at 1/F of Flat 07 of Tower 1 in Site A1 (AT1-LZ-F07-O19), which has direct line-of-sight to Prince Edward Road West.

b) Mitigated Scenario: With Acoustic Windows, Acoustic Balcony and Fixed Glazing

- 4.5.24 Practicable mitigation measures such as acoustic window and acoustic balcony will be adopted to provide at-receiver mitigation measures to further minimize the traffic noise impact on the noise exceedance of the proposed development. Fixed Glazing shall also be adopted to mitigate excessive traffic noise and ensure the performance of the acoustic

windows and acoustic balcony. The locations of the predicted noise exceedance are illustrated in **Figures 4-6a to 4-6d**.

4.5.25 Subject to detailed design, mitigation measures are proposed in this mitigated scenario:

- Baffle Type Acoustic Window² (Noise Reduction: -4.0 dB(A))

The baffle type acoustic windows consist of two layers, i.e. an openable window with fixed side (the fixed glazing / maintenance window) at the outer layer and a sliding window at the inner side. The two-window-layer design can create an air gap for the supply of fresh air with noise mitigation effect. This type of acoustic windows has been proven that both traffic noise mitigation and air ventilation could be achieved. The design of the proposed acoustic window can meet the relevant ventilation requirement under the Building (Planning) Regulations. According to the Practice Note on Lighting and Ventilation Requirements - Performance-based Approach (APP-130) issued by Buildings Department, for optimum performance with the inner sliding glass panel in a closed position, the air gap should have a length of not less than 100mm and a width between 100mm and 175mm. The length and width of the air gap of the acoustic window also meet these conditions.

- Acoustic Balcony (Noise Reduction: -2.0 dB(A))

Acoustic Balcony with 1.2m high of solid parapet and ceiling lined with sound absorptive for shielding noise and absorbing noise respectively, can effectively reduce the traffic noise entering the premises. The depth of the balcony should be more than 1m and noise reduction of noise 2.0 dB(A)³ has been adopted in the calculation.

- Fixed Glazing (Noise Criteria not applicable)

To ensure the performance of the acoustic windows in rooms with planned acoustic windows (e.g., AT1-LZ-F07-O18), Fixed Glazing should be used for the side windows. Fixed glazing refers to windows that are not intended for ventilation purposes, and therefore, the traffic noise criteria are not applicable to them. During the operation phase, the fixed glazing should only be opened using an Allen key for cleansing and maintenance purposes. According to the Hong Kong Planning Standards and Guidelines (HKPSG), a 6mm window pane is considered sufficient to insulate traffic noise by 10 dB(A). Therefore, a minimum of 6mm window pane should be adopted for the proposed fixed glazing from a noise perspective.

4.5.26 The Baffle Type Acoustic Windows, which can typically provide 4 – 8 dB of traffic noise attenuation, have been broadly adopted in residential developments in recent years. According to the ProPECC PN5/23 Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact², a reference design can provide 6 dB(A) of traffic noise attenuation. Another 1.5 dB(A) of reduction can

² Baffle Type Acoustic Window: <https://www.epd.gov.hk/epd/Innovative/greeny/eng/innovation/baffle-type.html>

³ Acoustic Balcony - https://www.epd.gov.hk/epd/Innovative/greeny/eng/balcony_soild.html

be achieved by providing Sound Absorptive Material (SAM) at top and both side of window frame. Further noise reduction can be achieved by orientation (1 dB(A)) and effective acoustic fin (1 dB(A)). The noise reduction effectiveness and ventilation performance of baffle type acoustic windows are highly dependent on the detailed design. As the flat design may change significantly in the later stage, it is hard to estimate whether any combination of windows design can provide sufficient natural daylight and natural ventilation while providing the maximized acoustic performance. Typical design of Baffle Type Acoustic Windows is illustrated in **Figure 4-7**.

4.5.27 Since the notional layout is conceptual and indicative for assessment purposes under the subject non-scheme-based S.16 Application, both the layout and predicted traffic noise levels are subject to change during the detailed design stage. Based on the traffic noise predictions, the architectural design will be further optimized during the detailed design stage to minimize traffic noise impact. Consequently, noise exceedances that only marginally surpass the criteria can be addressed through this optimization. Noise mitigation measures will currently only be applied to locations with predicted noise levels exceeding 71 dB(A). An exception is made for the fixed glazing at AT1-F07-O18 (13/F) in Site A1, which is intended to ensure the effectiveness of the acoustic window at AT1-LZ-F07-O19 (13/F) in Site A1. The locations of the proposed mitigation measures are illustrated in **Figures 4-8a to 4-8d** and listed in **Appendix 4-4**.

4.5.28 The detailed predicted noise levels with mitigation measures are presented in **Appendix 4-4**. Given specific noise reduction measures at different assessment points, the compliance rate by flat of this notional layout has been increased to 97.8%. The maximum noise level under mitigated scenario is ~71dB(A). Detailed result of each assessment points of the flat under mitigated scenario is shown in **Appendix 4-4** and summarized in **Table 4-10**.

Table 4-10 Summary of Traffic Noise Impact Assessment

	Number of Flat	Base Scenario		Mitigated Scenario	
		Complied Flat	Compliance Rate	Complied Flat	Compliance Rate
Tower 1 (Site A1)	252	221	87.7%	234	92.9%
Tower 2 (Site A1)	222	222	100%	222	100%
Tower 1 (Site B)	525	525	100%	525	100%
Tower 2 (Site B)	420	405	96.4%	409	97.4%
Tower 3 (Site B)	135	130	96.3%	130	96.3%
Total	1,554	1,503	96.7%	1,520	97.8%

4.5.29 The traffic noise impact assessment and proposed mitigation measures will be revisited based on the finalized layout to ensure full compliance. Through architectural design optimization, the adoption of additional and suitable mitigation measures, or the enhancement of proposed mitigation measures during detailed design stage, the traffic noise impact can be addressed.

Railway Noise

- 4.5.30 The East Rail line is situated to the east of Site B (**Figure 4-9**). Section of railway within the Mong Kok East Station and in the immediately north of the station are enclosed by the station itself and the Grand Century Place. However, the railway section located ~200m from the residential portion of the Site B (Sub-area (1)) to the north of Grand Century Place remains uncovered.
- 4.5.31 Although the recommended 85m buffer distance, as per HKPSG, is met (**Figure 4-9**), part of the residential flats in Sites A1 & B (Sub-area (1)) facing the eastern side may have direct line-of-sight to the railway. Therefore, the railway is considered as a potential noise source to the residential flats.
- 4.5.32 A simplified railway noise calculation based on the methodology of approved EIA report (Shatin to Central Link - Mong Kok East to Hung Hom Section - AEIAR-165/2012) and conservative assumptions has been performed at the nearest point of the proposed development to the railway. The key information and assumptions of the railway noise calculation are as follows:
- The methodology of railway noise calculation of the approved EIA Report (AEIAR-165/2012);
 - The Reference L_{max} and Reference SEL of a single train event have been made reference to the approved EIA report (AEIAR-165/2012);
 - Ultimate train frequency of East Rail Line (ERL) has been referenced to approved EIA Report (AEIAR-165/2012) & Environmental Permit EP-437/2012/A;
 - 0700 to 2300: 30 trains / hour / direction
 - 2300 to 0700: 24 trains / hour / direction
 - 850 trains / hour / both directions
 - No barrier correction has been adopted;
 - No view angle correction has been adopted (i.e. assume 180 degree view);
 - Horizontal distance has been used instead of slant distance;
 - Train Speed
 - Based on site-observation in March 2026, the average velocity of ERL trains within the 300m assessment area are approximately 60 - 80 kph, due to the vicinity to station. The average train speed for ERL is assumed to be 80 kph in the calculation for conservative assessment.
- 4.5.33 The railway noise levels at Site B (Sub-area (1)) are summarized in **Table 4-11** and detailed in **Appendix 4-5**. The calculation shows that, with conservative assumption, the railway noise levels have complied with the relevant criteria. Therefore, the railway noise should not impose adverse impact on the proposed development with the proposed increase in domestic GFA in Site B.

Table 4-11 Summary of Predicted Railway Noise

Time Period	Criteria, dB(A)		Predicted Noise Level, dB(A)
Day (0700 to 1900 hours) & Evening (1900 to 2300 hours)	$L_{eq,30min}$	70 ^[1]	59
Night (2300 to 0700 hours)	$L_{eq,30min}$	60 ^[1]	58
	$L_{max, (2300 to 0700)}$	85 ^[2]	72
All Day	$L_{eq, (24hrs)}$	65 ^[2]	56

Noted

[1] Criteria for Fixed Noise Sources stipulated in the IND-TM.

[2] Recommendations from HKPSG

Stadium Noise

Assessment Methodology

4.5.34 Computational ray-tracing model, Odeon, has been adopted to assess the stadium noise impact. This acoustic model employs the ray-tracing method for sound reflections. Thousands of sound rays are emitted in different directions from each source. These rays reflect off the model surfaces in various directions due to scattering, losing energy due to sound absorption. A secondary source is assumed at each reflection point. When a ray hits a surface that allows sound transmission, the penetrated ray carries reduced energy, dependent on the transmission loss assigned to that surface.

Model Assumption

Human Voice Spectrum

4.5.35 Typical sound spectrums for the human voice, referenced to the American National Standards Institute (ANSI) 3.5, are applied in the Odeon noise model. Refer to the stadium noise simulations in the approved Environmental Impact Assessment (the approved EIA) for the "Kai Tak Multi-purpose Sports Complex" (Register No.: AEIAR-204/2017), the "Loud" vocal profile has been adopted, as illustrated in **Table 4-12**. The same human voice spectrum has been applied for this assessment.

Table 4-12 Typical Sound Spectrum for Human Voice

		Spectra, dB re 1pW								
Frequency, Hz		63	125	250	500	1000	2000	4000	8000	A-weighted
Typical	Normal	45.0	55.0	65.3	69.0	63.0	55.8	49.8	44.5	68.4
	Raised	48.0	59.0	69.5	74.9	71.9	63.8	57.3	48.4	75.5
	Loud	52.0	63.0	72.1	79.6	80.2	72.9	65.9	54.8	82.6
	Shouted	52.0	63.0	73.1	84.0	89.3	82.4	74.9	64.1	91.0

Note:

[1] The reference spectrum for human voice can be found in Table 1 of the following document:

http://www.odeon.dk/pdf/Application_Note_SpeechTransmissionIndex.pdf

Source Strength of the Spectator Noise

4.5.36 By the time the Kai Tak Sports Park officially starts operations in March 2025, it is anticipated that international sporting events will likely be held at Kai Tak, while the Mong Kok Stadium will focus mainly on local events. Given this updated situation, the assessment

approach used in the approved EIA appears to be overly conservative for local sports events. Therefore, the A-weighted sound power level (SWL) for the "Loud" vocal profile has been adopted for model validation.

4.5.37 In the simulation, the noise generated by the spectators are represented by 87 point sources located on the spectator stands in the Model, simulating a full-house event scenario, as shown in **Drawing 3 of Appendix 4-6**. In particular, there are 22 point sources assigned for North Stand, 19 points for East Stand, 27 points for South Stand, and 19 points for West Stand based on the seat distribution.

4.5.38 Each point source at the East Stand and West Stand represents 82 spectators, while each point source at the North Stand and South Stand represents 68 spectators. The adopted spectrums and noise levels for each point source are summarised in **Table 4-13**.

Table 4-13 Adopted Sound Spectrum for Spectator Noise

		Spectra, dB re 1pW							
Frequency, Hz		63	125	250	500	1000	2000	4000	8000
Per spectator	"Loud" Spectrum	52.0	63.0	72.1	79.6	80.2	72.9	65.9	54.8
Per point Source	West/East Stand	71.1	82.1	91.2	98.7	99.3	92.0	85.0	73.9
	South/North Stand	70.3	81.3	90.4	97.9	98.5	91.2	84.2	73.1

Source Strength for the PA System Noise

4.5.39 The public address (PA) system of Mong Kok Stadium has been incorporated into the simulation.

4.5.40 There are total of 36 loudspeakers in Mong Kok Stadium. According to the available information⁴, these loudspeakers belong to the "JBL" CBT Series. For the simulation, the sound profile of the loudspeaker model JBL CBT100LA (Speech mode – wide) has been adopted.

4.5.41 The model input for the loudspeaker in Common Loudspeaker Format (CLF), including directivity and sound power, can be downloaded from the manufacturer's website⁵.

4.5.42 The loudspeakers in Mong Kok Stadium are utilized solely for announcement purposes during sport events. As a conservative assumption, an operational time of 20% has been assumed in this assessment.

⁴ Project Description for Improvement of PA System in Mong Kok Stadium:

<https://www.ops-tec.com/project-details/mongkok-stadium/>

⁵ Download Library of Product of JBL: https://jblpro.com/en/support_downloads

Table 4-14 Parameter of the Loudspeaker (JBL CBT100LA)

Frequency, Hz	Spectra, dB re 1pW						
	125	250	500	1000	2000	4000	8000
Loudspeaker	99.3	100.3	86.8	94.7	94.3	92.9	88.3
Correction due to Operation Time	-7.0						
Loudspeaker (Adopted in the Model)	92.3	93.3	89.8	87.7	87.3	85.9	81.3

Note:

[1] Correction due to operation time of 7.0 dB, assuming the operation time of loudspeaker to be 20% during sporting events, is adopted.

Model Validation

4.5.43 The 2018 FIFA World Cup Qualifier: Hong Kong vs. Qatar, conducted on 8th September, 2015, has been adopted for noise model validation. This event had an attendance of 6,396 out of 6,664 available seats, which can be considered as full-house event. Additionally, since the Hong Kong football team was participating, the encouraging noise from local spectators was significant. Therefore, this event can be considered as worst-case scenario.

4.5.44 To ensure that the model results are reliable and provide reasonable conservative outcomes, a comparison between the model results and on-site measurements has been conducted. The building structures of the Proposed Development are not incorporated into the model validation to ensure consistency with the environment during on-site measurements. The comparison of model results at the same on-site measurement locations A to D are summarized in **Table 4-15**.

Table 4-15 Comparison of Model Result and On-site Measurement

Noise Assessment Point	Sound Pressure Level, dB(A)	
	On-site Measurement [1]	Noise Model Result (without YTM-013 Development)
A	83.0	83.1
B	71.5	74.8
C	71.0	75.3
D	60.4	62.9

Note:

[1] Refer to the EIA “Kai Tak Multi-purpose Sports Complex” measurement data for 2018 FIFA World Cup Qualifier: Hong Kong vs Qatar at Mong Kok Stadium on 8th September 2015.

4.5.45 The computational results from the Odeon noise model were found comparable to the on-site noise measurement results. None of the model results are lower than the on-site measurement noise level, therefore, the noise model does not underestimate the actual situation. Through this model validation, the adoption of A-weighted sound power level for the “Loud” vocal profile is considered reasonable.

4.5.46 The Key assumption for the stadium noise model is summarized in **Table 4-16**.

Table 4-16 Key Assumption Adopted for the Stadium Noise Model

Assumption	Description
Source Strength and Spectator Vocal Spectrum	The "Loud" vocal spectrum and A-weighted SWL of 82.6 dB(A) has been adopted for each spectator in the noise model
Source Strength of PA System	The sound profile of the loudspeaker JBL CBT100LA has been adopted, with 20% operational time.
On-site noise measurement for model validation	The 2018 FIFA World Cup Qualifier: Hong Kong vs Qatar at Mong Kok Stadium, dated 8th September 2015.

Results and Evaluations

4.5.47 The predicted noise exceedances have been identified at the openable windows and balconies along the façade of Tower 1 and Tower 3 with a direct view of the Mong Kok Stadium (see **Appendix 4-7**). No noise exceedances are identified at Tower 2, as Tower 1 and Tower 3 is designed carefully to block the view from Mong Kok Stadium. With only considered the architectural design of the building, the maximum noise level is ~72dB(A) identified in Tower 1, under full-house event. The remaining noise assessment points with exceedances are approximately ~71dB(A). The sound pressure level at the representative noise assessment shows that the highest sound pressure level at the residential flat at Site B is ~72dB(A), based on the notional plan.

Mitigation Measures

4.5.48 Acoustic Window (AW) and Acoustic Balcony (AB) are proposed as “specially provided glazing” for stadium noise reduction. These designs offer noise scattering and absorption while allowing for natural ventilation. AW and AB are designed to reduce external noise by partially reflecting noise to prevent it from entering the room, as well as partially dissipating noise when it passes through the gaps. Since they can reduce noise levels through physical means, AW and AB should be able to provide noise reduction against stadium noise as well. Nevertheless, the effectiveness and noise attenuation of AW and AB against stadium noise cannot be ascertained at the current stage.

4.5.49 Although the noise attenuation of AW and AB against stadium noise cannot be confirmed, given that the maximum exceedance is only ~ 2 dB(A) at Tower 1, AW and AB should be able to provide a noise reduction of at least 12 dB(A) between the façade noise level and the indoor noise level for the room (see **Section 4.5.52**). To ensure the effectiveness of the noise reduction of AW and AB, a detail stadium noise impact assessment for all the NAPs and mock-up test based on the finalized layout shall be conducted in the later detailed design stage.

Mock-up Test for Effectiveness of the Mitigation Measures

4.5.50 The mock-up flats shall be designed in accordance with the finalized layout to accurately reflect the actual noise reduction levels from the mitigation measures (i.e., AW and EAB) against noise from Mong Kok Stadium. Individual mock-up flats with AW and EAB for different room configuration shall be tested.

4.5.51 Noise measurements should follow the IND-TM. Since the noise is transmitted to the NSR through specially provided glazing at the façade (AW and AB), assessment points should be established both at the façade and at specific internal locations to measure the effectiveness of AW and AB for each room configuration, subject to further agreement with EPD.

- 4.5.52 The noise reduction level for each room configuration should be determined by the deviation between measured indoor and outdoor noise levels. According to IND-TM, the ANL within a building is 10 dB(A) lower than that at the façade. With a maximum noise exceedance of 2 dB(A), the indoor noise level must be at least 12 dB(A) lower than the outdoor noise level for the corresponding room configurations. The maximum noise exceedance level shall be further confirmed by the noise model based on the finalized layout plan. Details of the mock-up test will be confirmed at a later design stage based on the finalized layout.

4.6 Conclusion

- 4.6.1 The noise impact during the construction phase is considered insignificant. Subject to detailed site works arrangement, mitigation measures shall be implemented if necessary and applicable in accordance with ProPECC PN 1/24 during construction to minimize construction noise impact on the nearby NSRs.
- 4.6.2 A preliminary study of fixed noise sources based on the existing situation and the available information for planned developments show that no adverse fixed noise impact to the Scheme is anticipated. The planned fixed noise source from the proposed Scheme should not induce any adverse noise impact when the maximum allowable SWLs has been implemented properly.
- 4.6.3 Traffic noise impact has been taken into consideration when designing the notional layout of the residential development. The view angle from the windows to the road traffic has been minimized by buildings disposition, buildings orientation, architectural fins and windows locations. In the base scenario, ~96.7% of flats comply with the 70 dB(A) traffic noise assessment criterion as demonstrated. In the mitigated scenario where acoustic window, acoustic balcony and fixed glazing are incorporated into the proposed development, the compliance rate by flat has been increased to ~97.8%. The notional design is for technical assessment of the subject non-scheme-based application and will be subject to change at the detailed design stage upon approval of the subject S.16 Application. The current assessment is based on a notional design and its anticipated result, of which baffle type acoustic window, acoustic balcony and fixed glazing have been adopted to achieve the noise compliance level. The detailed layout in the future proposed development will be subject to detailed design, site constraints and feasibility.
- 4.6.4 The maximum stadium noise is found to be ~72dB(A) in Tower 1 of Site B at the representative noise assessment points based on the notional layout plan. Given the stadium noise is marginally above the criteria, the adoption of acoustic window and acoustic balcony is considered as feasible mitigation measures to address the excessive stadium noise, subject to the detailed design. Mock-up test, based on the finalised layout, will be conducted in the later detailed design stage, if required, to ensure the acoustic performance of the acoustic windows and acoustic balconies against stadium noise. With careful design and the proper implementation of the proposed mitigation measures, no adverse noise impact from Mong Kok Stadium on the proposed development is anticipated.
- 4.6.5 Based on a simplified railway noise calculation, it is expected that the railway noise level at the noise sensitive receivers of the Site will comply with the relevant criteria. Therefore, no adverse noise impact is anticipated from the East Rail Line.

5 WASTE MANAGEMENT CONSIDERATION

5.1 Introduction

Background

- 5.1.1 In general, sustainable approaches to waste management should be adopted to produce less waste and reuse or recover materials from waste stream. This section identifies the quality and quantity of waste generated from construction and operation phase of the Project, and evaluates the potential waste management implications that may result from waste generated during these phases.

Legislations, Standards, and Criteria

- 5.1.2 The assessment has been conducted with reference to the following legislations/guidelines that are related to the handling, treatment and disposal of waste in Hong Kong, and applicable to the Project:

- Waste Disposal Ordinance (Cap. 354) (WDO)
- Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)
- Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)
- Land (Miscellaneous Provisions) Ordinance (Cap. 28)
- Air Pollution Control Ordinance (Control of Asbestos (sections 51 to 84))
- ADV-19 – Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers – Construction and Demolition Waste
- Code of Practice on the Packaging, Labelling and Storage of Chemical Waste
- Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes
- DEVB TCW No. 9/2011, Enhanced Control Measures for Management of Public Fill
- Guide to the Chemical Waste Control Scheme
- Monitoring of Solid Waste in Hong Kong - Waste Statistics for 2024
- ProPECC PN2/25 Handling of Asbestos Containing Materials in Buildings
- Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK)

- 5.1.3 Waste collection and disposal is covered by the Waste Disposal Ordinance (Cap. 354) (WDO). This provides a licensing system for the disposal of certain wastes and for the control of certain wastes by regulation. All wastes should be properly stored and disposed in accordance with relevant waste management regulations and guidelines.

- 5.1.4 Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) outlines the requirement for chemical waste handling and disposal.

- 5.1.5 Under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N), construction waste delivered to a landfill for disposal must not contain more than 50% by weight of inert materials. Construction waste delivered to a sorting facility for

disposal must contain more than 50% by weight of inert materials, and construction waste delivered to a public fill reception facility for disposal must consist entirely of inert materials.

- 5.1.6 Land (Miscellaneous Provisions) Ordinance (Cap. 28) provides control over placing and maintaining of C&D materials on unleased land. If the occupier does not hold the relevant license, the Department of Lands will take action accordingly.
- 5.1.7 Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (ADV-19) provides mitigation measures on waste generation and management during the planning stage of a building development to minimise waste disposals at landfills.

5.2 Assessment Methodology for Waste Management Implications

- 5.2.1 The waste management implications during the construction and operational phases shall be assessed. The objectives and methods shall include, but not limited to, the following:
- (i) Identification/estimation of the types and quantities of waste arising from the Project;
 - (ii) addressing impacts caused by handling (including stockpiling, labelling, packaging and storage), collection, transportation and reuse/disposal of wastes in detail and propose appropriate mitigation measures;
 - (iii) adoption of waste management hierarchy with priorities towards waste reduction, on-site or off-site reuse and recycling;
 - (iv) estimation of the types and quantities of wastes required to be disposed of and their disposal method; and
 - (v) assessment of the impacts on the capacity of waste collection, transfer and disposal facilities.

5.3 Waste Management for Construction Phase

Waste Types

- 5.3.1 The site clearance, demolition of existing buildings, excavation, and superstructure construction activities to be carried out for the proposed development would generate a variety of waste that can be divided into distinct categories based on their composition and ultimate method of disposal. The identified waste types include:

- Construction and demolition (C&D) materials, comprising inert and non-inert materials, from the demolition and construction works;
- Potential asbestos containing materials;
- Chemical waste from any maintenance of construction plant and equipment; and
- General refuse from the workforce

Inert and non-inert C&D Materials

- 5.3.2 Inert C&D Material (or public fills) includes construction debris, soil, rock and concrete, should be re-used on-site as filling materials or off-site as public fill at public fill reception facilities. Non-inert C&D Material (or C&D waste) includes metal from the existing structures, wood from formwork, timber and woody materials from existing trees, equipment

parts, and materials and equipment wrappings, etc., should be re-used or recycled as far as possible.

- 5.3.3 With reference to Proposed Development, as the Scheme involves demolition of existing buildings and construction of high-rise residential towers and/or residential/hotel towers for Sites A1 & B and 1-storey retail blocks for Sites A4 & A5, there will be generation of inert and non-inert C&D materials during demolition and construction. It is estimated that about 13,000 m³ C&D materials, including both inert and non-inert C&D materials, will be generated during the demolition work.
- 5.3.4 Since excavation works shall not encroach into the nullah and its vicinity, a buffer zone of 3m is set for nullah for prohibition of any excavation work. Buffer zone and exceptional area are illustrated in **Figure 5-1**. Since no excavation work is carried out in nullah, no excavation materials will be generated from nullah and thus disposal of sediments is not required. For other area, it is estimated that about 167,000 m³ excavated materials⁶ would be generated and about 41,800 m³ would be suitable for backfilling during site formation stage.
- 5.3.5 In order to account for the quantity of both inert and non-inert C&D materials to be generated from construction of the new building, both inert and non-inert C&D materials generation rate of 0.19 m³ per m² of GFA constructed is adopted⁷, with reference to the actual volume of C&D waste generated from the superstructure stage of projects of similar scale. In the Scheme, construction of new building occurs at Sites A1, A4 & A5 and Site B. Hence, the total GFA of the proposed development will be around 134,000 m² (30,492 + 103,485 = 133,977 ≈ 134,000 m²). The inert and non-inert C&D materials generated from superstructure construction is estimated to be approximately 25,460 m³ (134,000 m² x 0.19 m³/m² = 25,460 m³).
- 5.3.6 The total amount of inert C&D materials generated by the Project, such as extensive amount of soil from excavation, rock, concrete and asphalt from demolition and superstructure construction, is projected at 201,614m³, which takes up 98.1% of total C&D waste generated. As a conservative approach, a safety factor of 5% is applied to the total amount of inert C&D materials generated, which is an estimate of 211,695 m³. On the other hand, the volume of non-inert C&D material generated by the Project, such as building materials, maintenance and packaging waste generated during demolition of existing buildings and construction of superstructure works, is projected at 3,846 m³, which will be subject to specific construction procedures and site practices. Non-inert C&D waste merely contributes to 1.9% of total C&D waste generated due to limited number of existing vegetation. An estimated amount of 4,038 m³ for non-inert C&D materials is achieved with a safety factor of 5%. The estimated amount of non-inert C&D material generated would be minimal with careful design, planning, good site management and control of ordering procedures, etc.
- 5.3.7 The estimated quantities of inert and non-inert C&D material generated from the construction of the Scheme are presented in **Table 5-1**.

⁶ Excavation Area: Site A1 – 1,850 m²; Site B – 11,650 m²
Average excavation depth: Site A1 – 21m; Site B – 11m
Total Excavation Volume: 1,850 x 21 + 11,650 x 11 = 167,000 m³

⁷ With reference to BEAM Plus Project at no.42 Lei Yue Mun, Kowloon, GFA = 29,883 m²; Total C&D waste generated = 5,675 m³. Total C&D generated per m² of GFA = 0.19 m³/m²

Table 5-1 Estimated Quantities of C&D materials to be Generated, Reused and Disposed of

Construction Activities	Waste Volume (m ³)	Wastes to be Reused/Recycled/disposed of (m ³)				
		Inert C&D materials		Non-inert C&D materials		
		Reused / Recycled On-Site	Reused Off-Site (a)	Reused / Recycled On-Site	Reused / Recycled Off-Site (b)	Disposed Off-Site
Excavation	167,000	41,800	125,200	0	0	0
Site Clearance / Demolition of Existing Buildings	13,000	0	11,700	0	130	1,170
Superstructure Construction	25,460	0	22,914	0	255	2,291
All	205,460	41,800	159,814	0	385	3,461
		201,614 (98.1%)		3,846 (1.9%)		
All (with a safety factor of 5%)	215,733	43,890	167,805	0	404	3,634
		211,695 (98.1%)		4,038 (1.9%)		

Note

- (a) The surplus inert C&D materials shall be delivered to Public Fill Reception Facilities for beneficial reuse in other projects, the destination of the surplus inert C&D materials is proposed to be Tseung Kwan O Area 137 Fill Bank (subject to designation by the Public Fill Committee in accordance with DEVB TC(W) No.6/2010).
- (b) Non-inert C&D materials should be reused or recycled as much as possible before disposed off-site, estimated to be 10% of the total generated.

5.3.8 It is estimated that about 21% of inert C&D material to be reused on-site. The surplus inert C&D materials are proposed to be transported from the Sites via Kwun Tong Bypass, Tseung Kwan O – Lam Tin Tunnel, Cross Bay Link, and Wan Po Road to Tseung Kwan O Area 137 Fill Bank (subject to designation by the Public Fill Committee in accordance with DEVB TC(W) No. 6/2010). The remaining non-recyclable C&D materials are not suitable for public fill and hence require disposal to licensed landfill facilities (the closest landfill is the South East New Territories (SENT) Landfill). The disposal of non-inert C&D materials at designated landfill shall be subject to agreement with the relevant section of the EPD.

Chemical Waste

5.3.9 Chemical waste, such as cleaning fluids, solvents, spent lubricants and fuel for equipment or waste battery, may be generated. As far as the scale of the works is small, the quantity of chemical waste generated would be minimal. It is expected that the approximate quantity of the lubrication oil is about 100L/month and hence approximately 6 m³ of chemical waste will be generated during construction period of 60 months (general assumption of construction time for URA redevelopment projects adopted). A licensed chemical waste collector should be employed to handle and dispose of the chemical waste. Furthermore, the chemical waste should be handled in accordance with the *Waste Disposal (Chemical Waste)(General) Regulation*. The Works Contractor should register as a Chemical Waste Producer under the WDO.

5.3.10 Since some of the existing structures to be demolished were built before the ban of asbestos building material, asbestos containing materials may be present at the concerned structures. Hence, asbestos investigation may be required to be carried out before the commencement of demolition works, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation and other Codes of Practice listed in Appendix III in ProPECC PN2/25 Handling of Asbestos Containing Materials in Buildings if any asbestos is found in the Site. For

asbestos wastes, if any, will be handled and disposed of in accordance with the Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes.

- 5.3.11 Asbestos Wastes are divided into three types, namely, Type 1 Waste, Type 2 Waste, and Type 3 Waste. Type 1 Waste are bonded asbestos products in good condition. Two individual layers of strong transparent plastic sheets with 0.15 mm or higher thickness must be used to pack Type 1 Waste. Complete sealing is required and the package shall not exceed 750mm; Type 2 Waste are loose asbestos fibres, which are hazardous to the public if it is exposed to air. Strong bags approved by EPD are required to contain Type 2 Waste once they are produced. These inner bags should be white in color, labelled as Type 2 Waste, and sealed by adhesive tapes. An extra transparent plastic bag is needed to store the contained Type 2 Waste bags for provision of addition protection; Type 3 Waste are blue or brown asbestos which are hazardous in tiny quantities. The handling of Type 3 Waste is similar to Type 2 Waste except that the color of inner bag for Type 3 Waste is orange. The packaging, labelling, handling and storage and transportation of the wastes should also be carried out accordingly.
- 5.3.12 Disposal of Asbestos Wastes must be carried out at designated or licensed facilities. Prior to disposal, 10 working days for notice of intention to EPD is required for site preparation. Specific instructions and directions for disposal of Asbestos Wastes will be issued by EPD. Contractor should strictly follow the direction. At the disposal site, the process of disposal operation must be ensured by waste producer or collection contractor to follow instructions of landfill site staff.
- 5.3.13 With the implementation of proper chemical waste management measures listed in **Section 5.3.27**, the impact is anticipated to be insignificant.
- 5.3.14 No hazardous materials or hazardous wastes are expected to be generated during the construction of the Site.

General Refuse

- 5.3.15 General refuse such as food scraps, waste paper, empty containers, etc., would be generated from construction workforce during construction phase.
- 5.3.16 The maximum number of construction workers employed in a day will be approximately 120. The daily arising of general refuse from the construction workforce can be estimated based on a generation rate of 0.65 kg/worker/day, the estimated quantity of the general refuse is 78 kg/day (= 120 workers x 0.65 kg/worker/day).
- 5.3.17 Such refuse should be properly managed so intentional or accidental release to the surrounding environment does not occur. If the general refuse is recyclable, such as food scraps, paper, plastics and aluminum materials, the reuse and recycling of such waste is encouraged. Effective collection of site wastes such as providing enclosed bins or compaction units would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Waste storage areas should be well maintained and cleaned regularly. As food waste is the main source of generating unpleasant odour and causing environmental hygiene concerns, on-site enclosed food waste bins should be provided and well maintained. Appropriate site waste management practices for the handling of food waste will be further studied in subsequent stage. The collected food waste shall be transported to Organic Resources Recovery Centre Phase 1 (O-PARK1) for turning food waste into energy.

- 5.3.18 With the implementation of good waste management practices as suggested in **Section 5.3.26** at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of general refuse generated by construction workers.

Mitigation Measures

- 5.3.19 Prior to the commencement of the construction works, the contractor will identify the types and amount of waste generated, and handle, store, collect and dispose waste in accordance with Waste Disposal Ordinance (Cap. 354). The associated mitigation measures and good site practice should be implemented as follows:

C&D Materials

- 5.3.20 In general, minimization/reuse/recycling of C&D materials (i.e. both inert and non-inert C&D materials) should be considered prior to disposal. Good Site Practices and Waste Reduction Measures should be adopted during construction phase, measures may include:

- On-site sorting of C&D materials;
- Recycling and reuse of excavated materials for on-site filling materials;
- Avoidance and minimization to reduce the potential quantity of C&D materials generated;
- Reuse of materials as practical as possible;
- Recovery and Recycling as practical as possible;
- Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse, recycling, public cleanliness and obstruction offences;
- All dump trucks engaged on-site for delivery of inert and non-inert C&D material from the site to the designated disposal location, including PFRFs, landfill etc., should be equipped with GPS or equivalent system for tracking and monitoring of their travel routings and parking locations by the Contractor to prohibit illegal dumping and landfilling of materials;
- The data collected by GPS or equivalent system should be recorded properly for checking and analysis the travel routing and parking locations of dump truck engaged on site.

- 5.3.21 The contractor should submit a waste management Plan (the Plan) to the project proponent for agreement, covering the types of waste and their estimated quantities, timing of waste arising; measures for reducing waste generation etc. as recommended in Section 3 of ADV-19. If the project is expected to produce more than 300,000 m³ of construction and demolition material, it is necessary to seek advice from the Director of Environmental Protection before accepting the Plan, as specified in Section 4 of ADV-19. This ensures that appropriate measures are in place to effectively manage the significant amount of C&D material generated by the project.

- 5.3.22 Waste separation should be performed by contractor prior to disposal. Stockpiling and segregating areas should be provided at site. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.

- 5.3.23 During inclement weather (e.g. heavy rainstorm), the stockpile should be covered by tarpaulin or other water-resistant fabric. This can prevent dust and waste from being blown away by wind or washed into watercourses/drainage system.
- 5.3.24 Excavated C&D materials should be reused as far as possible. If possible and applicable, excavated materials will firstly be backfilled on-site during site formation. The remaining surplus excavated materials are improbable to be reused and hence delivered to public fill reception facilities.
- 5.3.25 To reduce impacts generated from transportation of C&D materials for off-site disposal, the C&D materials would be recycled and reused on-site as practical as possible. In addition, overloading is strictly prohibited. Mechanical covers should be present in the transportation vehicles for an entire cover of C&D materials, especially dusty materials. Vehicle bodies and wheels should be thoroughly washed before leaving construction sites. Given that 163,660 m³ of C&D materials (= 159,814 + 385 + 3,461 m³) will be reused or delivered off-site during the construction phase of the Project of 60 months (general assumption of construction time for URA redevelopment projects adopted), as a conservative approach, it is estimated that a maximum of approximately 12 dump truck trips with average capacity of 7.5 m³ per day (163,660 m³ ÷ 7.5 m³/truck ÷ 1,825 days = 12 trucks/day) may be required for the transportation of C&D materials during the excavation works. Nevertheless, the C&D materials shall be exported on a regular basis to minimise dust and other potential impacts on the surrounding environment due to the transportation of C&D materials.

General Refuse

- 5.3.26 General refuse should be stored in enclosed bins or compaction units separate from C&D materials. 3-color recycle bins for the collection of recyclable municipal waste should also be provided. A reputable waste collector should be employed by the contractor to remove or recycle general refuse from the Site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of “wind-blown” light materials.

Chemical Waste

- 5.3.27 If chemical waste is produced at the construction site, the contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the *Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C)*. Chemical waste should be stored in appropriate containers and collected by a licensed chemical waste collector. The chemical waste management measures should include, but not limited to the following:
- Minimize the production of Chemical Waste
 - Registration of Chemical Waste Producers with EPD should be carried out for any person who produces chemical waste
 - Give notification of certain Chemical Waste for Disposal to EPD as required in *Section 4 of the Regulation & Section 17 of the Ordinance*
 - Carry out Packaging, Labelling and Storage of Chemical Wastes as per *Sections 9 to 19 of the Regulation*
 - Collection of Chemical Waste and the “Trip Ticket” System as per *Sections 20 to 29 of the Regulation*

- Precautions Against Dangers from Spillages, Leakages or Accidents involving Chemical Waste as per *Sections 30 to 32 of the Regulation*
- mitigation measures and good practices would be properly implemented for the handling and disposal of asbestos-containing materials according to the *Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes*.

5.3.28 Provided that good site practices are strictly followed, there would be no adverse impacts related to waste management during construction phase.

5.4 Waste Management for Operation Phase

5.4.1 Domestic wastes will be expected as the major type of waste from the redevelopment, including food residues, plastic, metal products, paper, etc.. No chemical or hazardous waste is anticipated, including waste generated during the operation and maintenance of the equipment and facilities. Wastes generated will be collected and disposed of on a regular basis. Building management will be arranged by the future owners to manage the development including waste disposal.

5.4.2 The domestic waste will be collected (at the refuse collection point) and regularly disposed of at landfill or regularly collected by recyclers, waste recycling would be carried out during operation phase. To minimize waste generation and promote recycling, it is recommended to implement source separation of domestic waste in the proposed development.

5.4.3 It should be noted that a Refuse Collection Point (RCP) will be provided within Site B, to seamlessly replace the existing Sai Yee Street (Flower Market Road) Refuse Collection Point. The operation of RCP is managed by Food and Environmental Hygiene Department (FEHD).

5.4.4 Based on the anticipated population intake for the Proposed Development, which is projected to be about 3,885 and will be further refined during the detailed design stage, it is estimated that approximately 3,341 kg per day (= 3,885 persons x 0.86kg/person/day⁸) of general refuse will be generated during the operation phase. With the proper implementation of the control measures, adverse impacts due to waste management will not be anticipated.

5.5 Hierarchy of Waste Management

5.5.1 Waste management options would be adopted and exercised in accordance with a hierarchy in order to reduce and manage waste. The hierarchy of waste management and relevant recommendations provided for the construction and operation phases of the Scheme are summarized in **Table 5-2**.

Table 5-2 Hierarchy of Waste Management

Order of Preference	Waste Management	Construction Phase	Operation Phase
1	Avoidance and Minimization	The potential quantity of C&D materials, general refuse and chemical waste generated, should be reduced and minimized.	Promote waste reduction in the community.

⁸ The domestic waste disposal rate of 0.86 kg/person/day is adopted according to the latest Monitoring of Solid Waste in Hong Kong (i.e. waste statistics 2024)

Order of Preference	Waste Management	Construction Phase	Operation Phase
2	Reuse	Inert C&D Material, including construction debris, soil, rock and concrete, should be re-used on-site as filling materials or off-site as public fill at public fill reception facilities.	N/A
3	Recovery and Recycle	- Non-inert C&D Material, including metal from the existing structures, wood from formwork, equipment parts, and materials and equipment wrappings, should be re-used or recycled; - General refuse, such as paper, plastics and aluminum materials, should be re-used or recycled. 3-color recycle bins and a reputable waste collector are provided and employed respectively to enhance recycling.	Implement source separation of domestic waste to facilitate recycling.
4	Treatment and Disposal	- Non-inert C&D waste - Chemical waste should be treated and disposed at licensed facilities. “Trip-ticket” must be provided throughout all movements for records; - General refuse is collected by a reputable waste collector. Only non-recyclable part of general refuse can be disposed at a licensed landfill.	General refuse is collected by a reputable waste collector. Only non-recyclable part of general refuse can be disposed at a licensed landfill.

5.6 Conclusion

- 5.6.1 A variety of wastes including inert C&D material, C&D waste, chemical waste, asbestos-containing materials, and general refuse would be generated during the construction phase and domestic waste would be generated during operation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and operation stage of the Scheme with the proposed increase in domestic GFA in Site B would be envisaged.

6 CONCLUSION

- 6.1.1 An Environmental Assessment has been carried out to evaluate the potential environmental impacts likely to arise from this S.16 application.
- 6.1.2 The key environmental issues associated with this S.16 Application are potential noise impacts during both the construction and operational phases, as well as waste management during the construction phase.

Air Quality (Operation Phase)

- 6.1.3 With the changes in the air quality modelling methodology, the model results are not expected to be adversely affected. Therefore, the conclusions in the approved EA report remain valid, and no adverse air quality impact due to vehicular or marine traffic emissions is anticipated for the Scheme area.

Noise

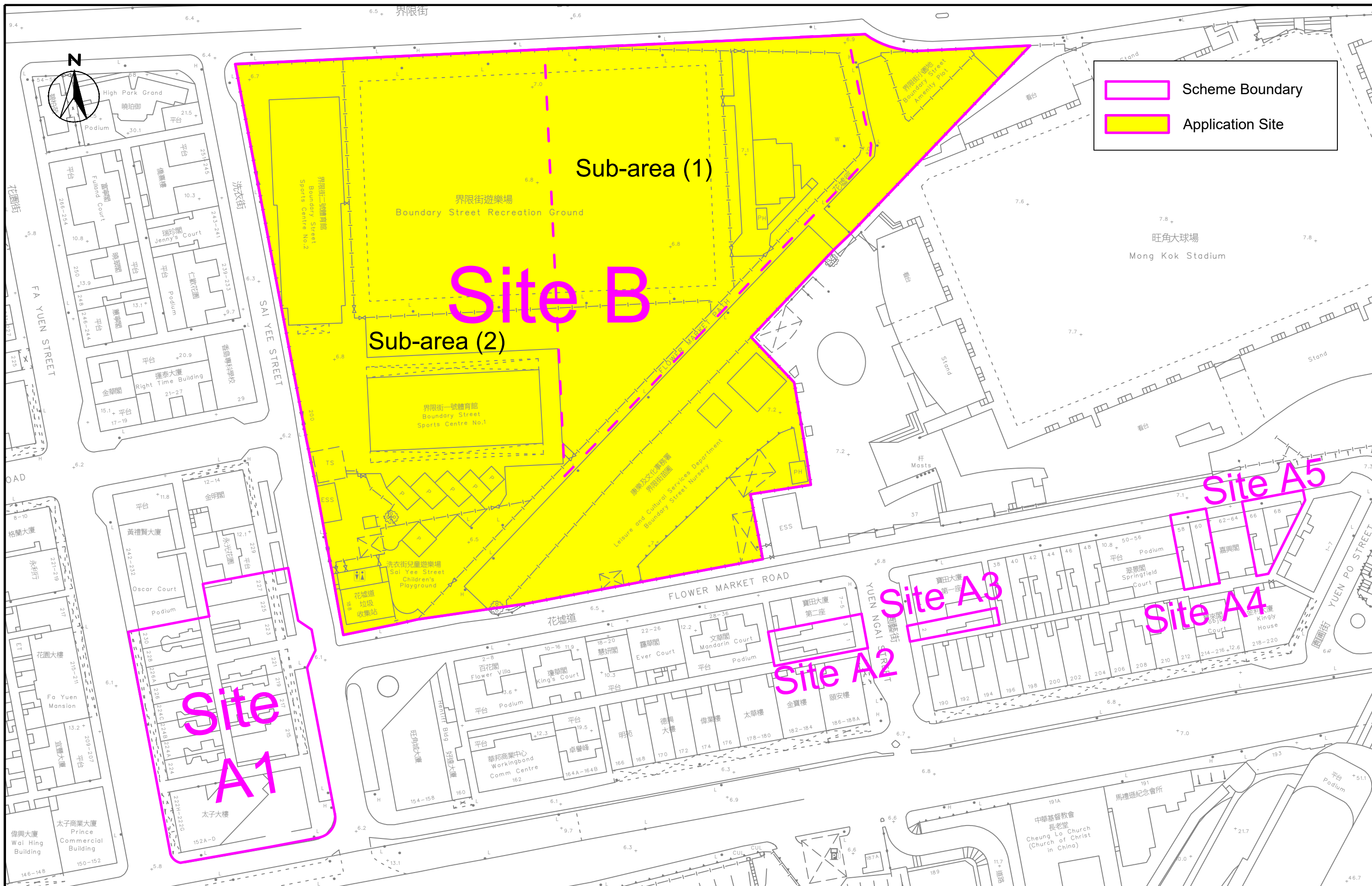
- 6.1.4 The noise impact during the construction phase is considered insignificant. Subject to detailed site works arrangement, mitigation measures shall be implemented if necessary and applicable in accordance with ProPECC PN 1/24 during construction to minimize construction noise impact on the nearby NSRs.
- 6.1.5 A preliminary study of fixed noise sources based on the existing situation and the available information for planned developments show that no adverse fixed noise impact to the Scheme is anticipated. The planned fixed noise source from the proposed Scheme should not induce any adverse noise impact when the maximum allowable SWLs has been implemented properly.
- 6.1.6 Traffic noise impact has been taken into consideration when designing the notional layout of the residential development. The view angle from the windows to the road traffic has been minimized by buildings disposition, buildings orientation, architectural fins and windows locations. In the base scenario, ~96.7% of flats comply with the 70 dB(A) traffic noise assessment criterion as demonstrated. In the mitigated scenario where acoustic window, acoustic balcony and fixed glazing are incorporated into the proposed development, the compliance rate by flat has been increased to ~97.8%. The notional design is for technical assessment of the subject non-scheme-based application and will be subject to change at the detailed design stage upon approval of the subject S.16 Application. The current assessment is based on a notional design and its anticipated result, of which baffle type acoustic window, acoustic balcony and fixed glazing have been adopted to achieve the noise compliance level. The detailed layout in the future proposed development will be subject to detailed design, site constraints and feasibility.
- 6.1.7 The maximum stadium noise is found to be ~72dB(A) in Tower 1 of Site B at the representative noise assessment points based on the notional layout plan. Given the stadium noise is marginally above the criteria, the adoption of acoustic window and acoustic balcony is considered as feasible mitigation measures to address the excessive stadium noise, subject to the detailed design. Mock-up test, based on the finalised layout, will be conducted in the later detailed design stage, if required, to ensure the acoustic performance of the acoustic windows and acoustic balconies against stadium noise. With careful design and the proper implementation of the proposed mitigation measures, no adverse noise impact from Mong Kok Stadium on the proposed development is anticipated.

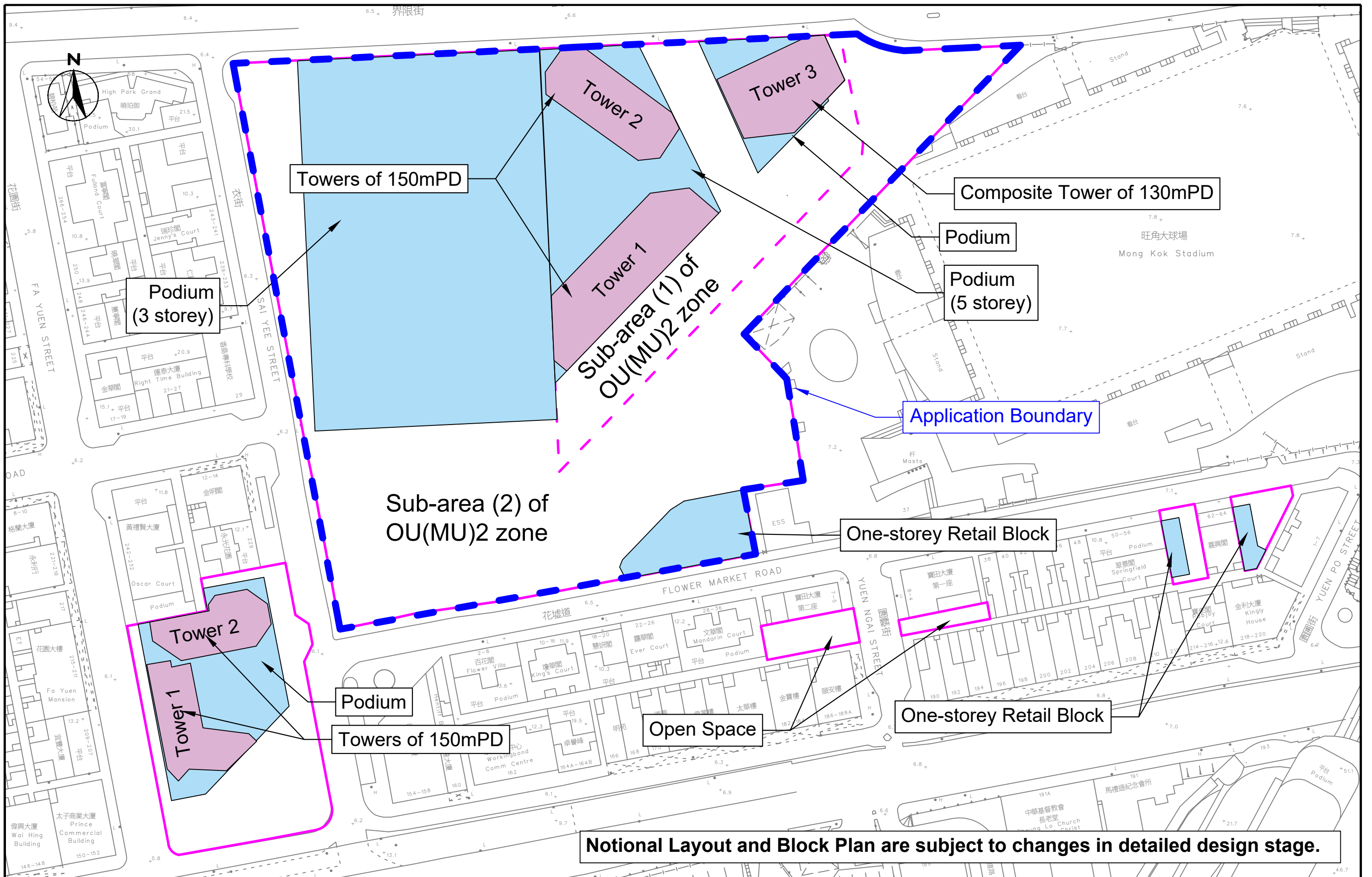
- 6.1.8 Based on a simplified railway noise calculation, it is expected that the railway noise level at the noise sensitive receivers of the Site will comply with the relevant criteria. Therefore, no adverse noise impact is anticipated from the East Rail Line.

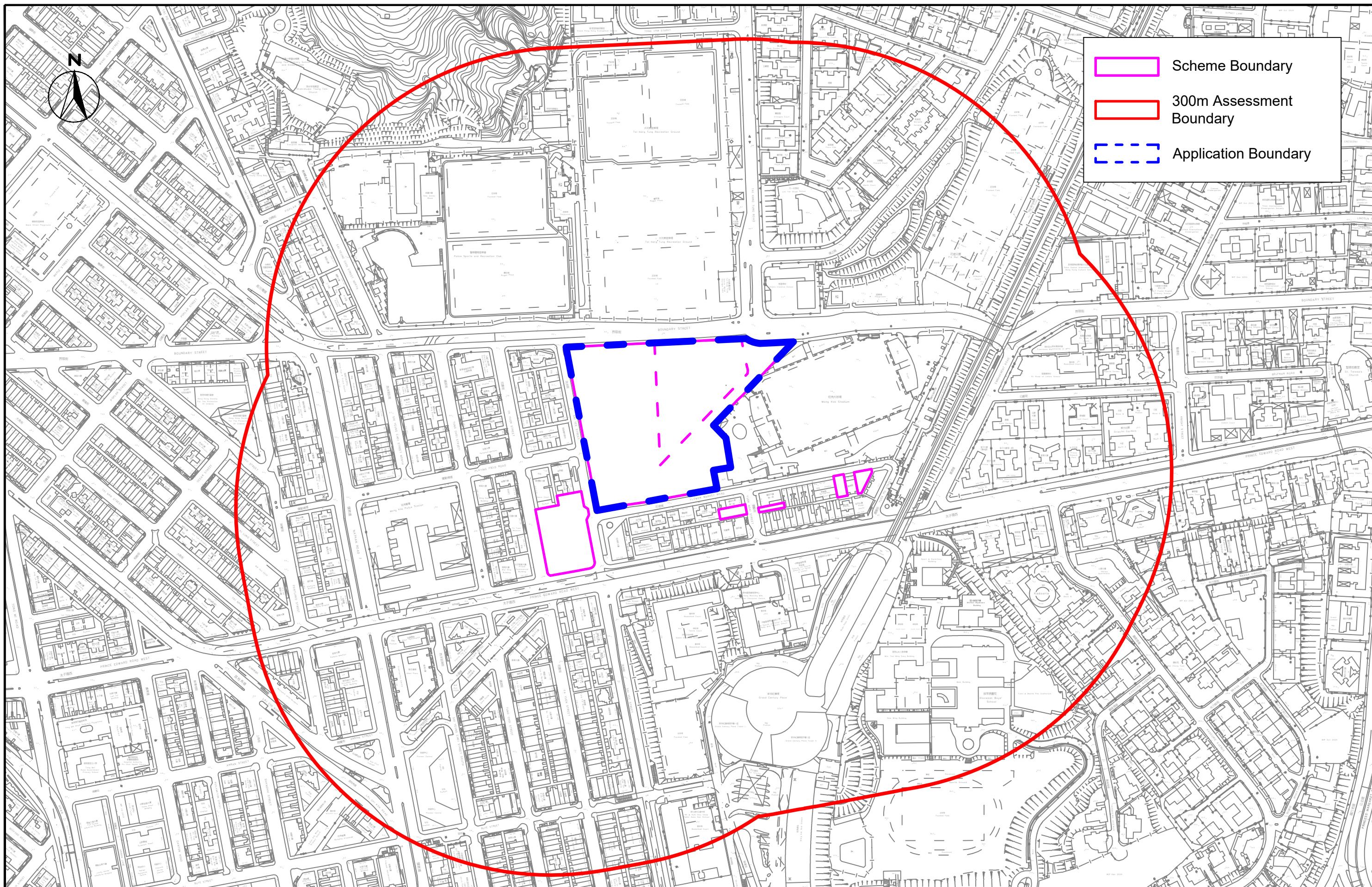
Waste Management

- 6.1.9 A variety of wastes including inert C&D material, C&D waste, chemical waste, asbestos-containing materials, and general refuse would be generated during the construction phase and domestic waste would be generated during operation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and operation stage of the Scheme would be envisaged.

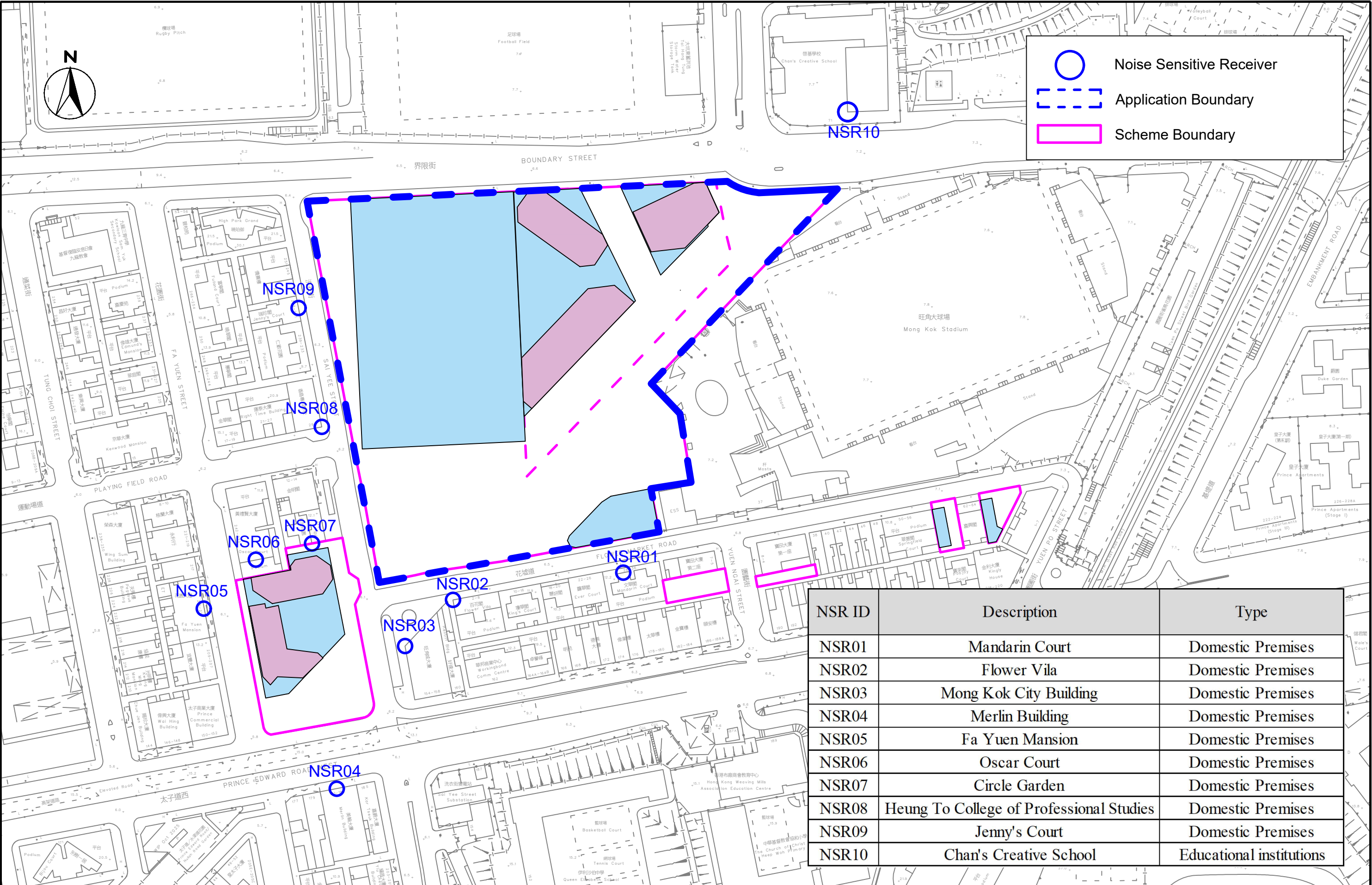
FIGURES



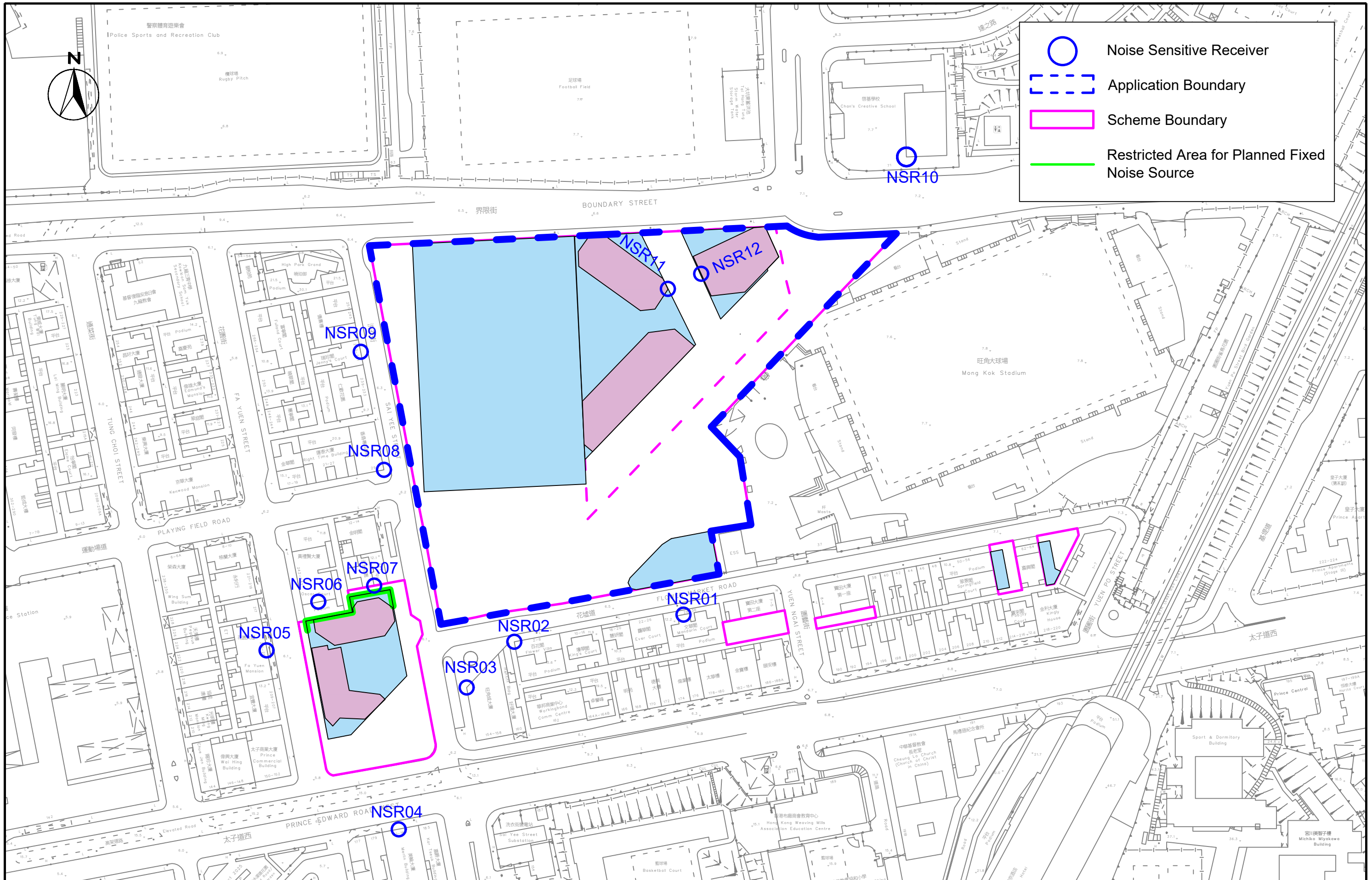




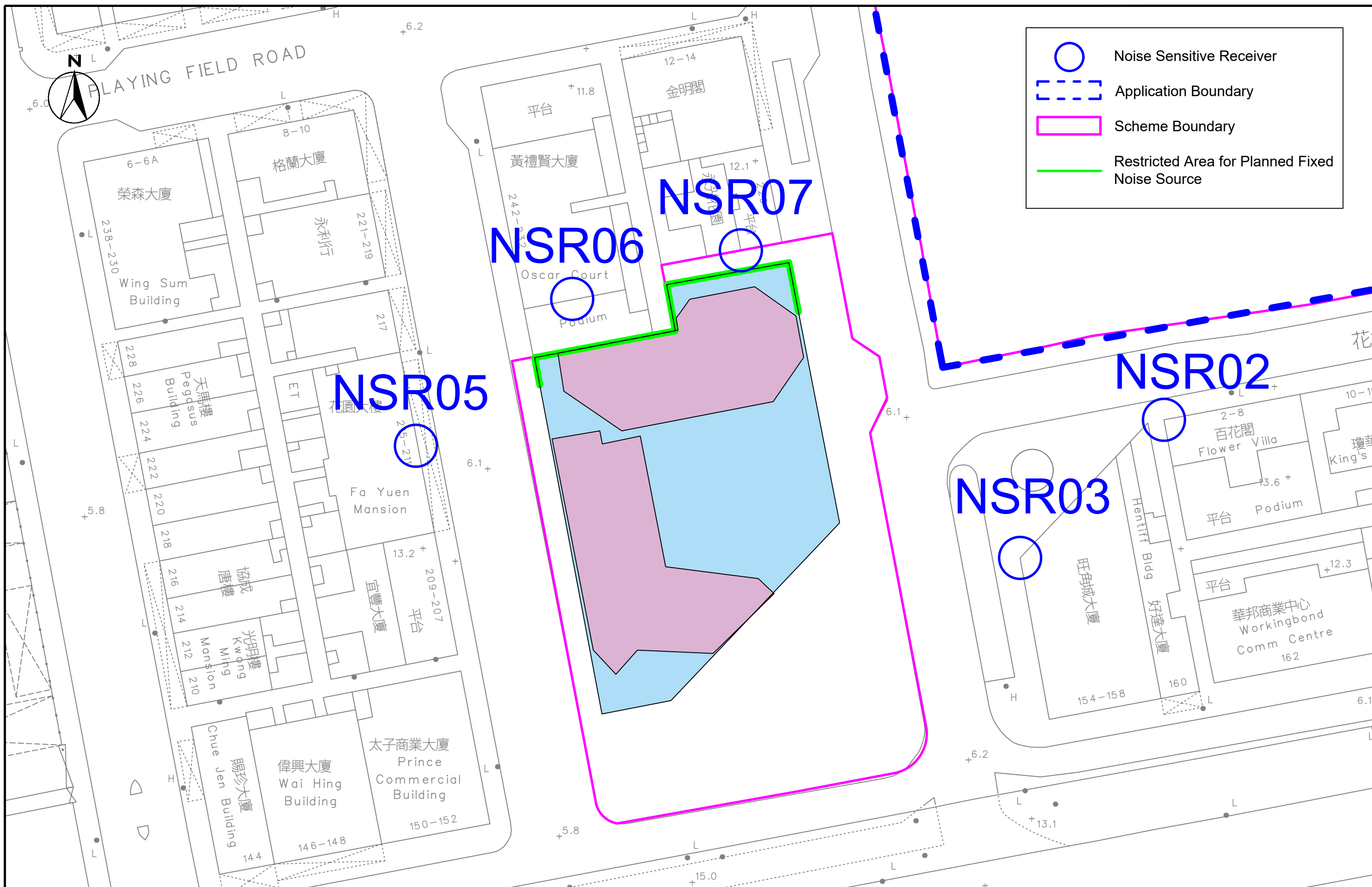
	Scheme Boundary
	300m Assessment Boundary
	Application Boundary

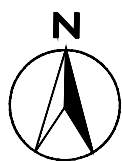


NSR ID	Description	Type
NSR01	Mandarin Court	Domestic Premises
NSR02	Flower Vila	Domestic Premises
NSR03	Mong Kok City Building	Domestic Premises
NSR04	Merlin Building	Domestic Premises
NSR05	Fa Yuen Mansion	Domestic Premises
NSR06	Oscar Court	Domestic Premises
NSR07	Circle Garden	Domestic Premises
NSR08	Heung To College of Professional Studies	Domestic Premises
NSR09	Jenny's Court	Domestic Premises
NSR10	Chan's Creative School	Educational institutions

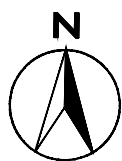


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CHECK	CC	DRAWN	LL
JOB No.	IA25056-S16	DRAWING No.	Fig. 4-3a
		REV	-

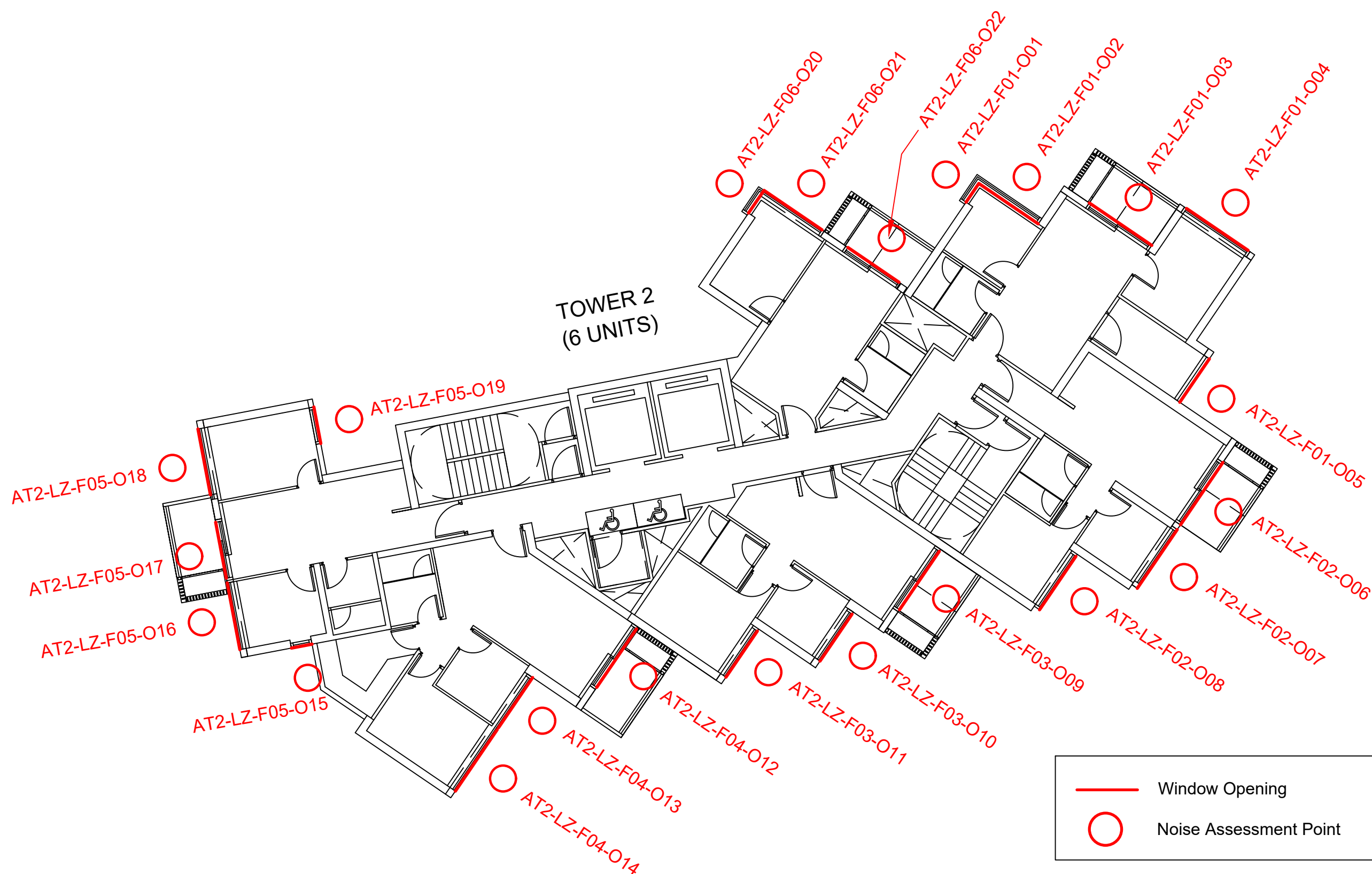
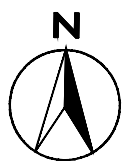




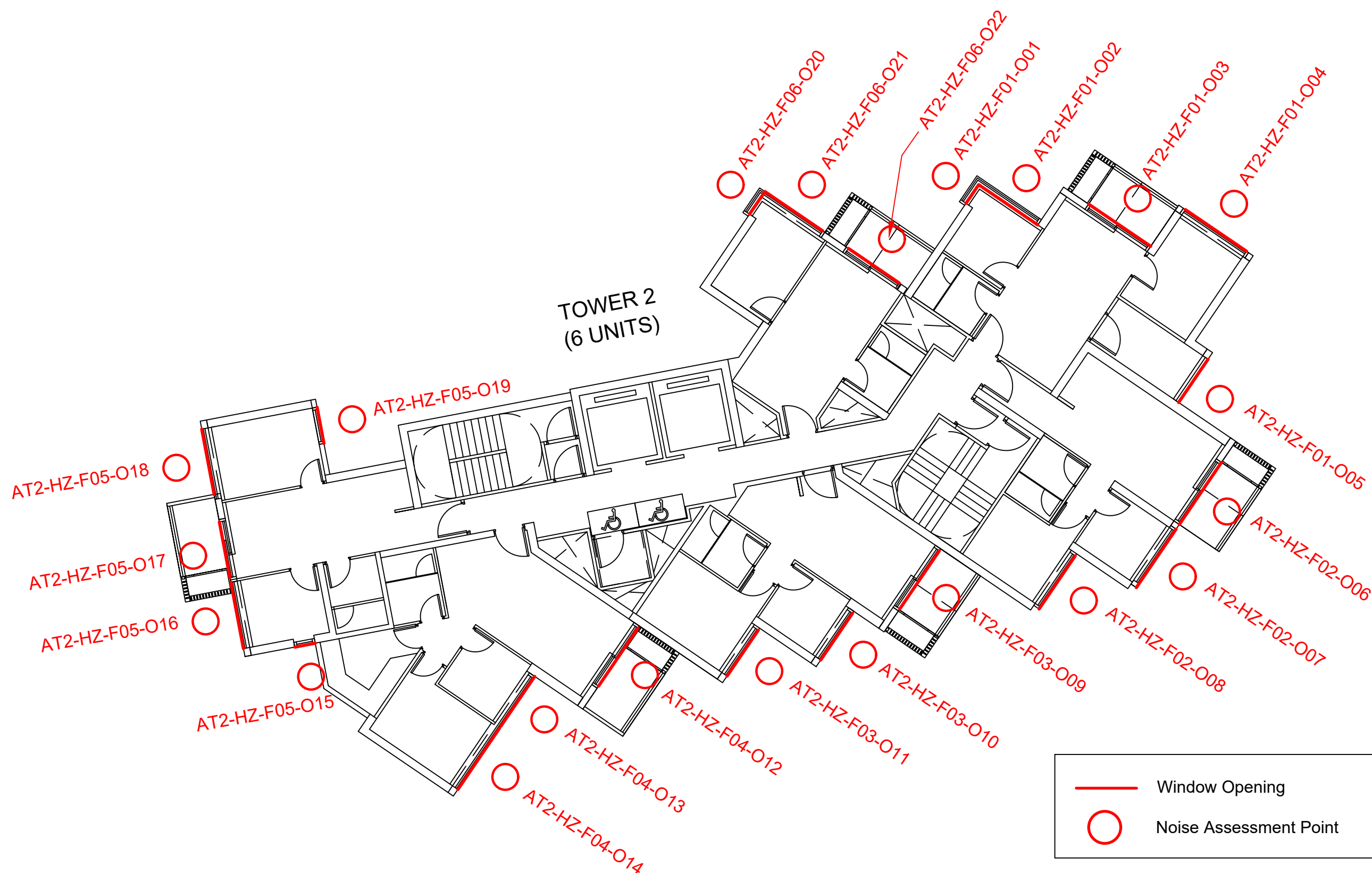
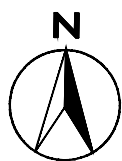
Notional Layout and Block Plan are subject to changes in detailed design stage.



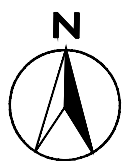
Notional Layout and Block Plan are subject to changes in detailed design stage.



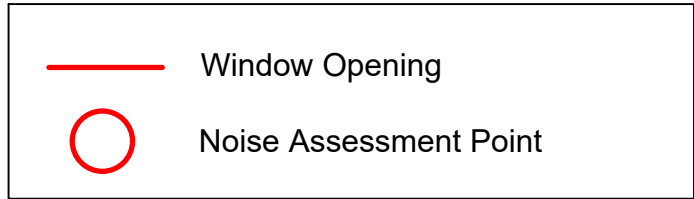
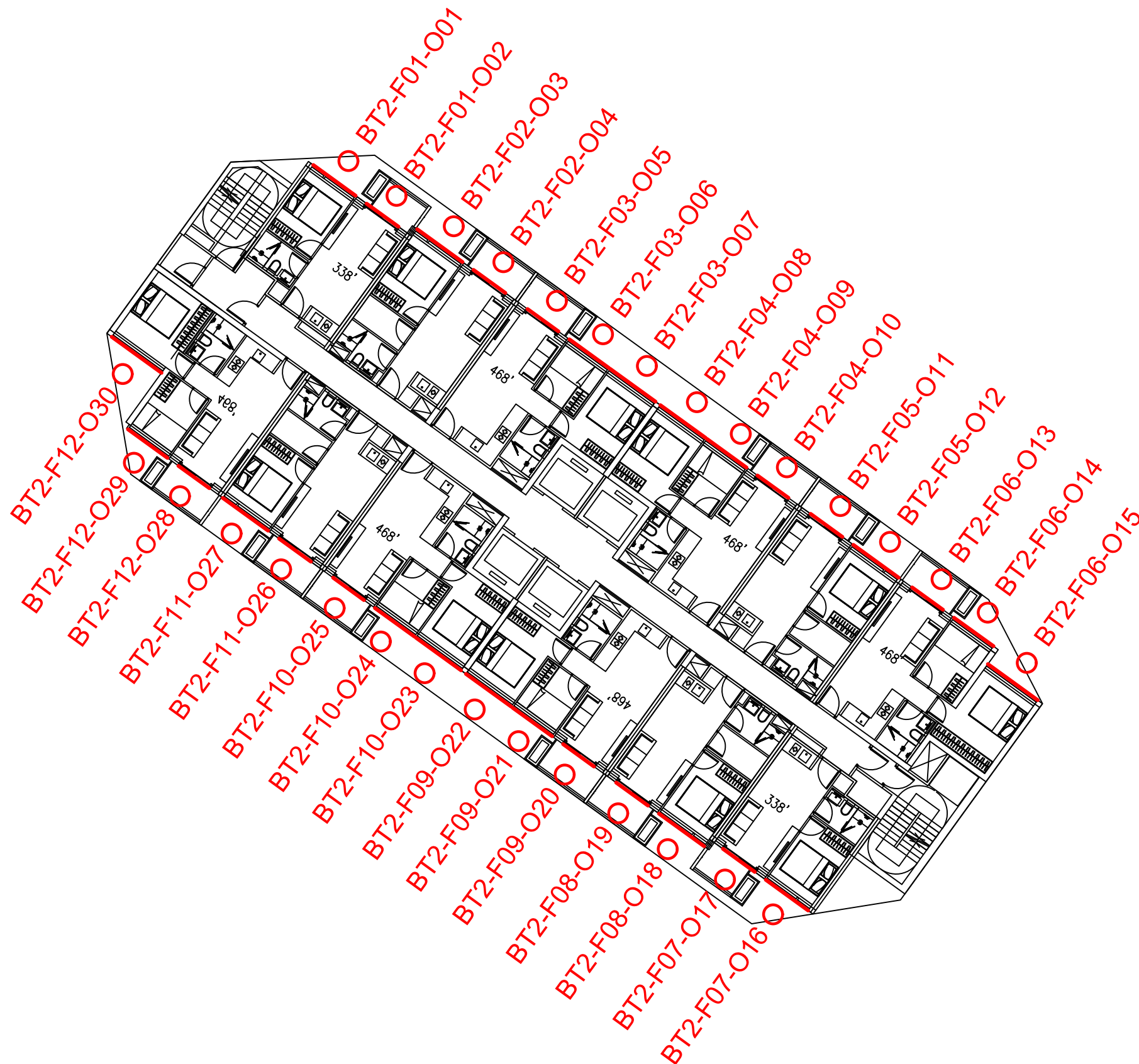
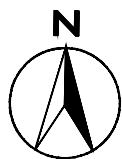
Notional Layout and Block Plan are subject to changes in detailed design stage.



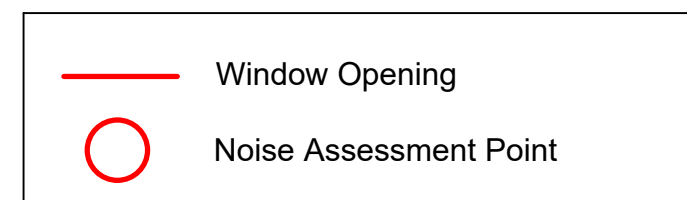
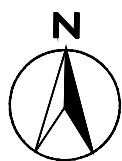
Notional Layout and Block Plan are subject to changes in detailed design stage.



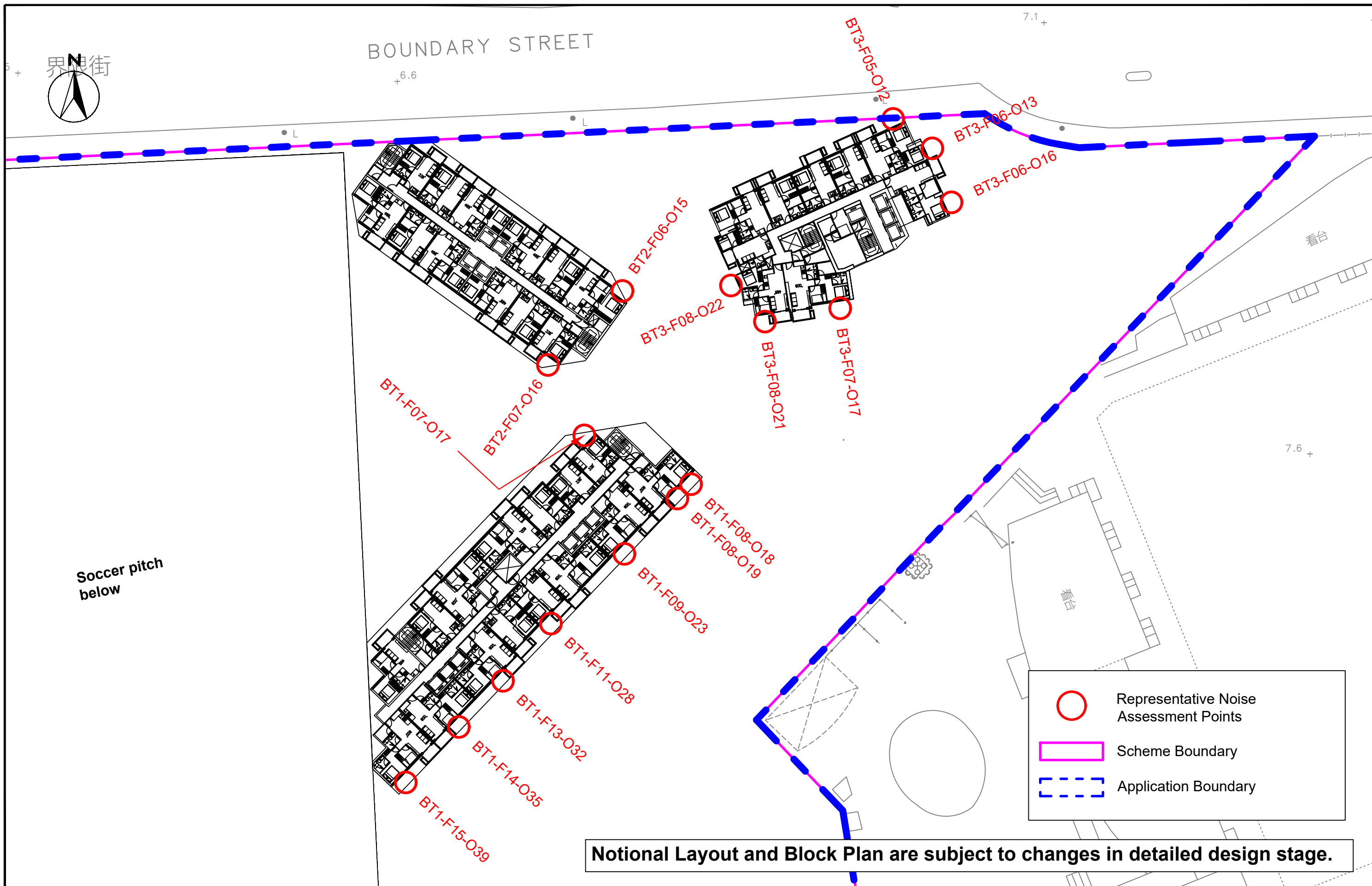
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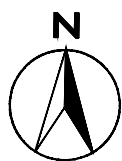


Notional Layout and Block Plan are subject to changes in detailed design stage.

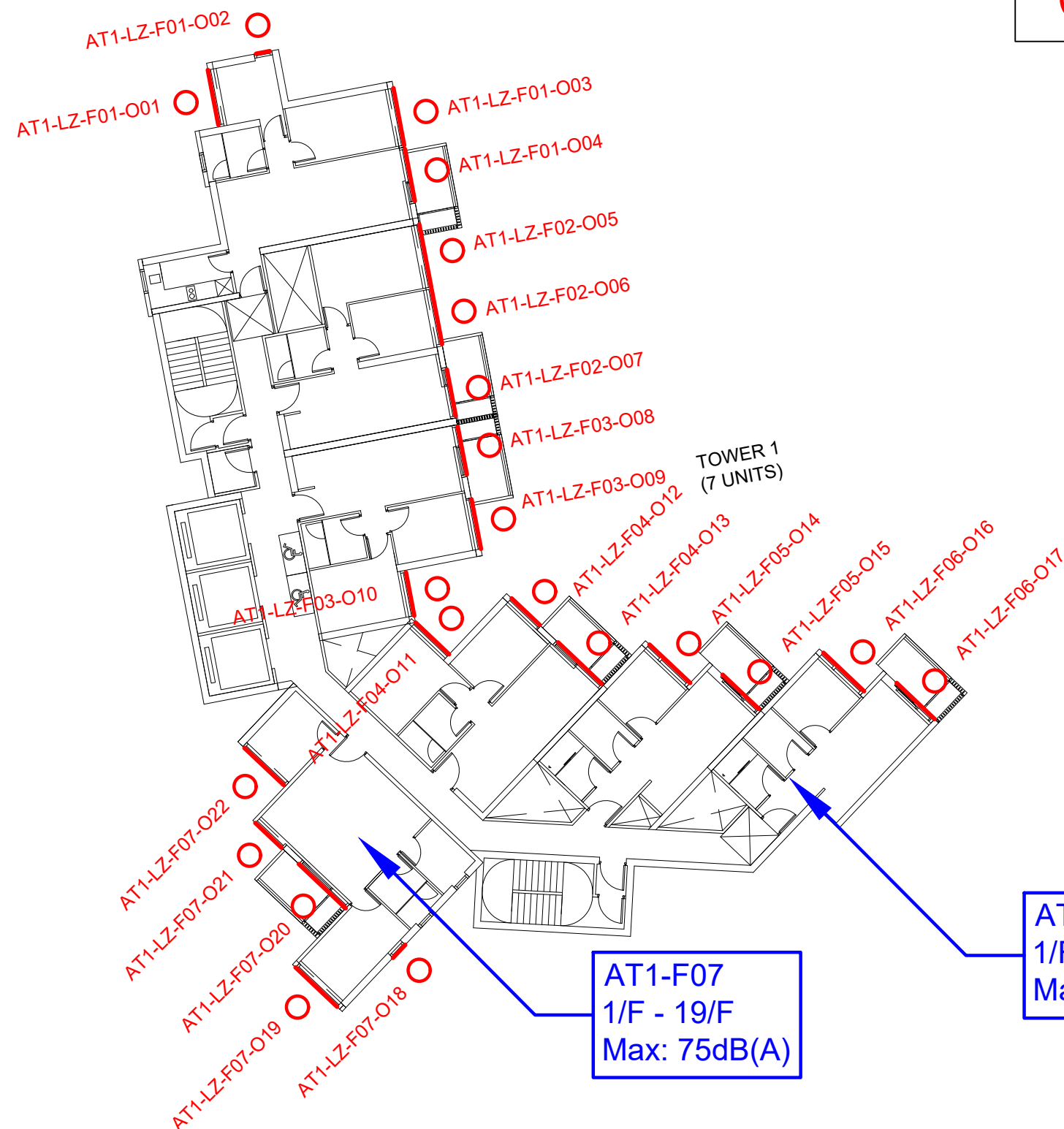


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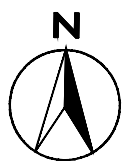




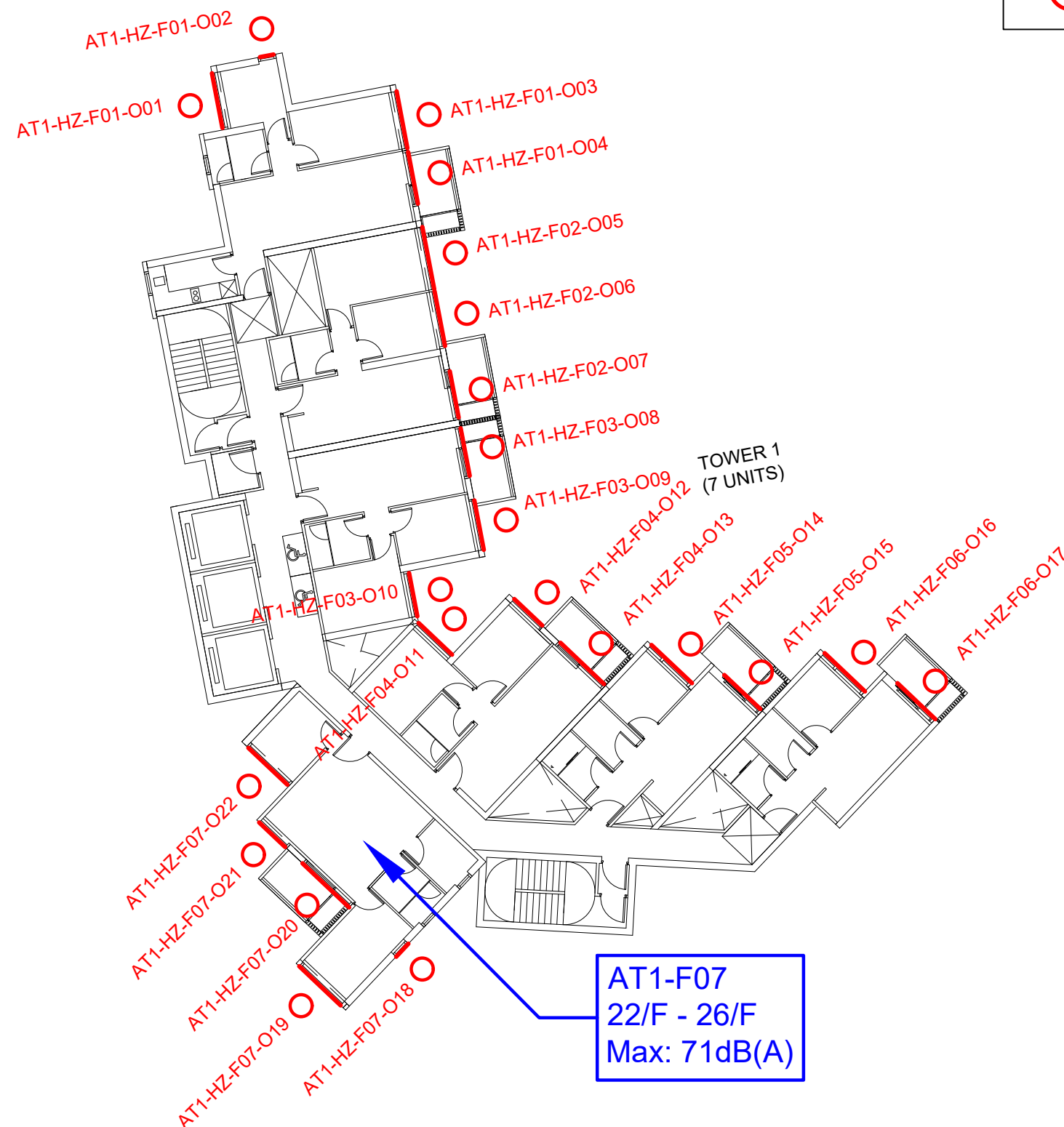
- Window Opening
- Noise Assessment Point



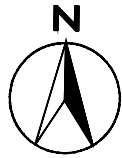
Notional Layout and Block Plan are subject to changes in detailed design stage.



- Window Opening
- Noise Assessment Point

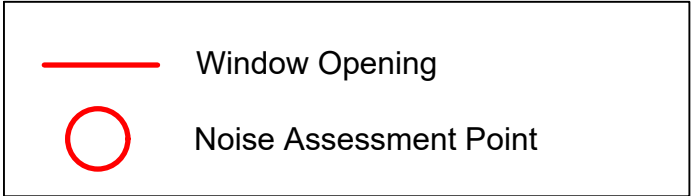
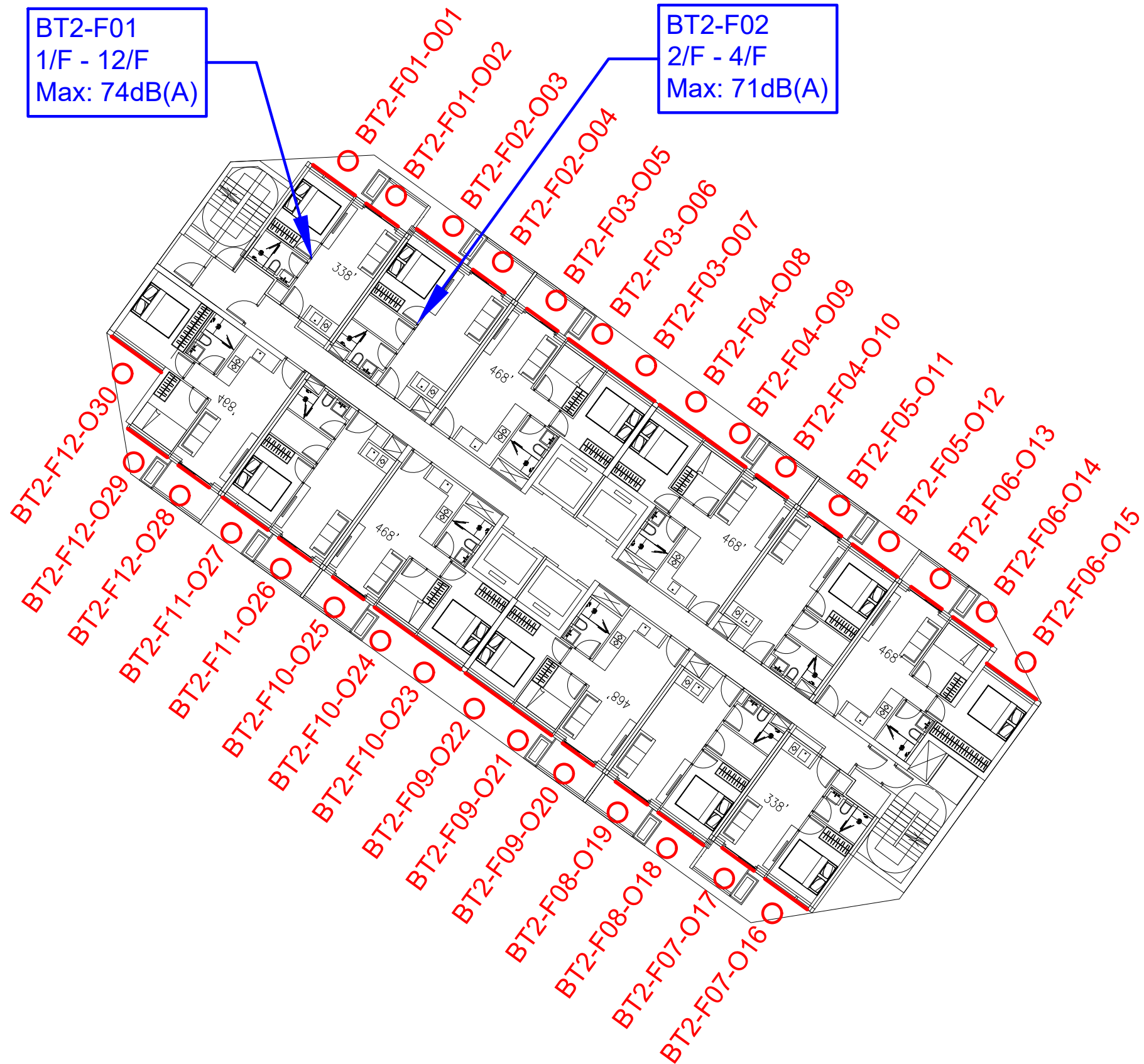


Notional Layout and Block Plan are subject to changes in detailed design stage.

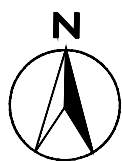


BT2-F01
1/F - 12/F
Max: 74dB(A)

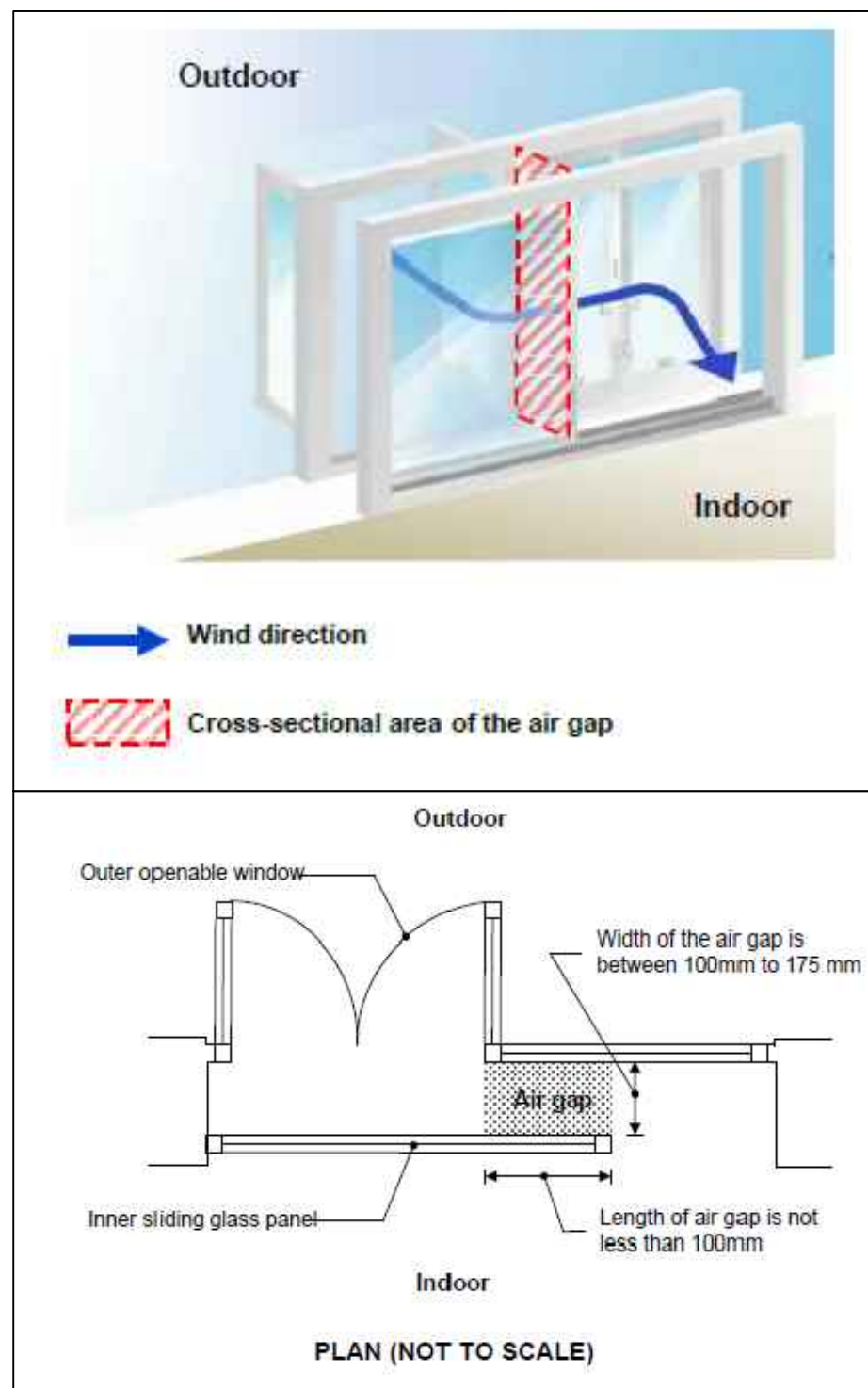
BT2-F02
2/F - 4/F
Max: 71dB(A)



Notional Layout and Block Plan are subject to changes in detailed design stage.



Notional Layout and Block Plan are subject to changes in detailed design stage.

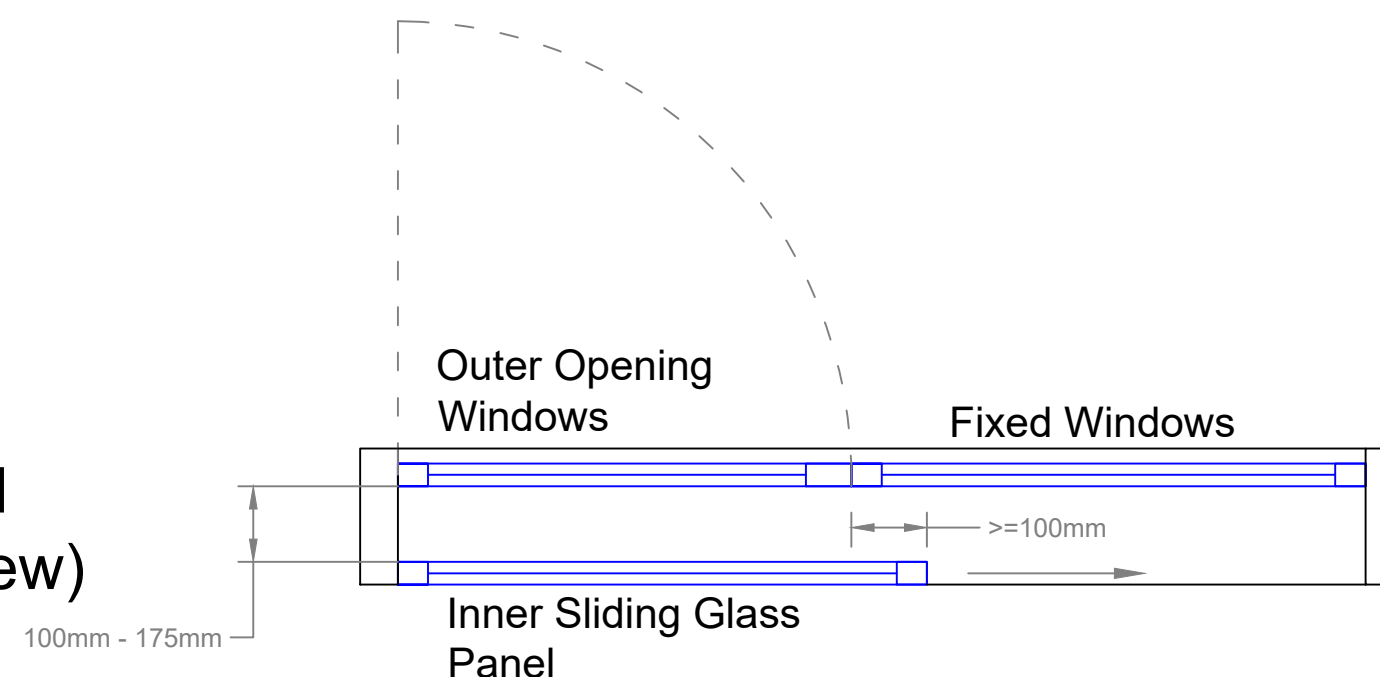


Extracted from Appendix A of Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (APP-130) by Building Department

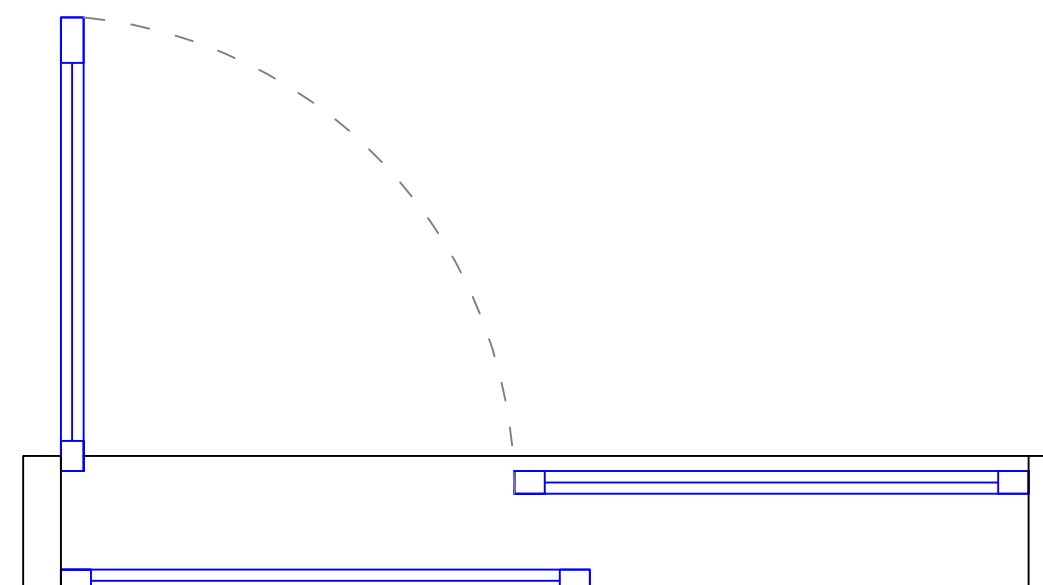
Typical Design

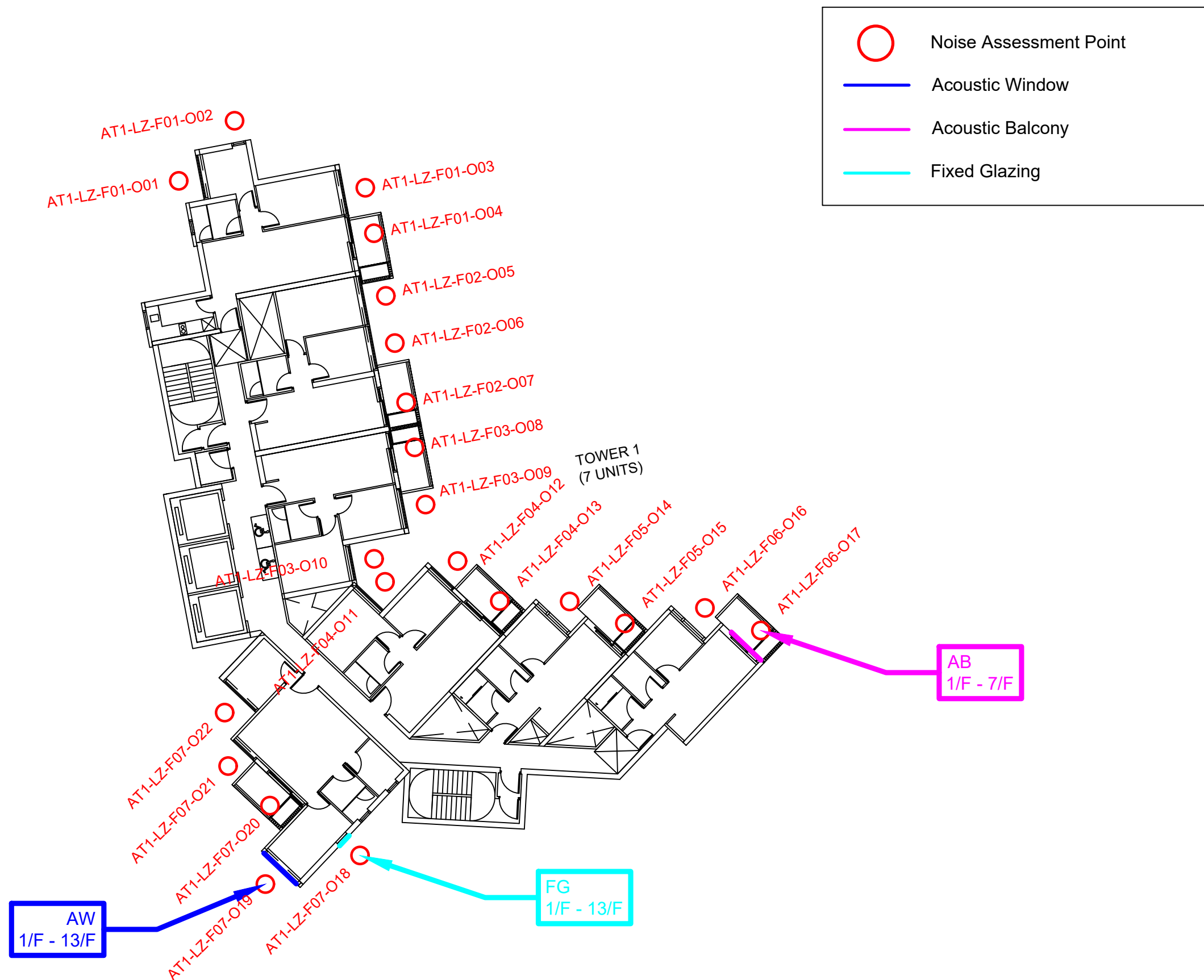
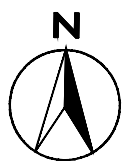
Reference to ProPECC PN 5/23 Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact

Closed
(top view)

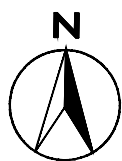


Fully Opened
(top view)

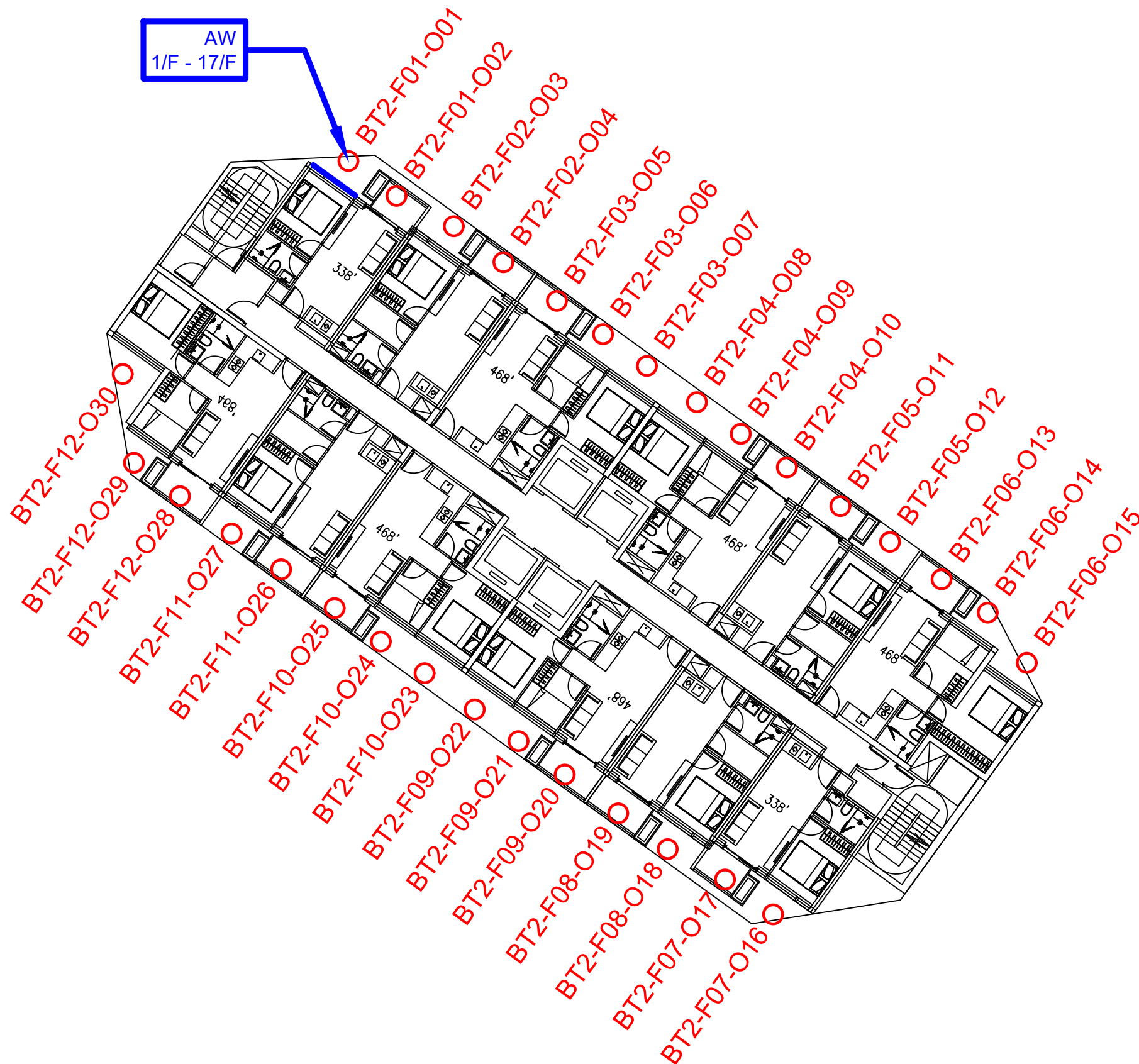




Notional Layout and Block Plan are subject to changes in detailed design stage.



AW
1/F - 17/F



Noise Assessment Point



Acoustic Window

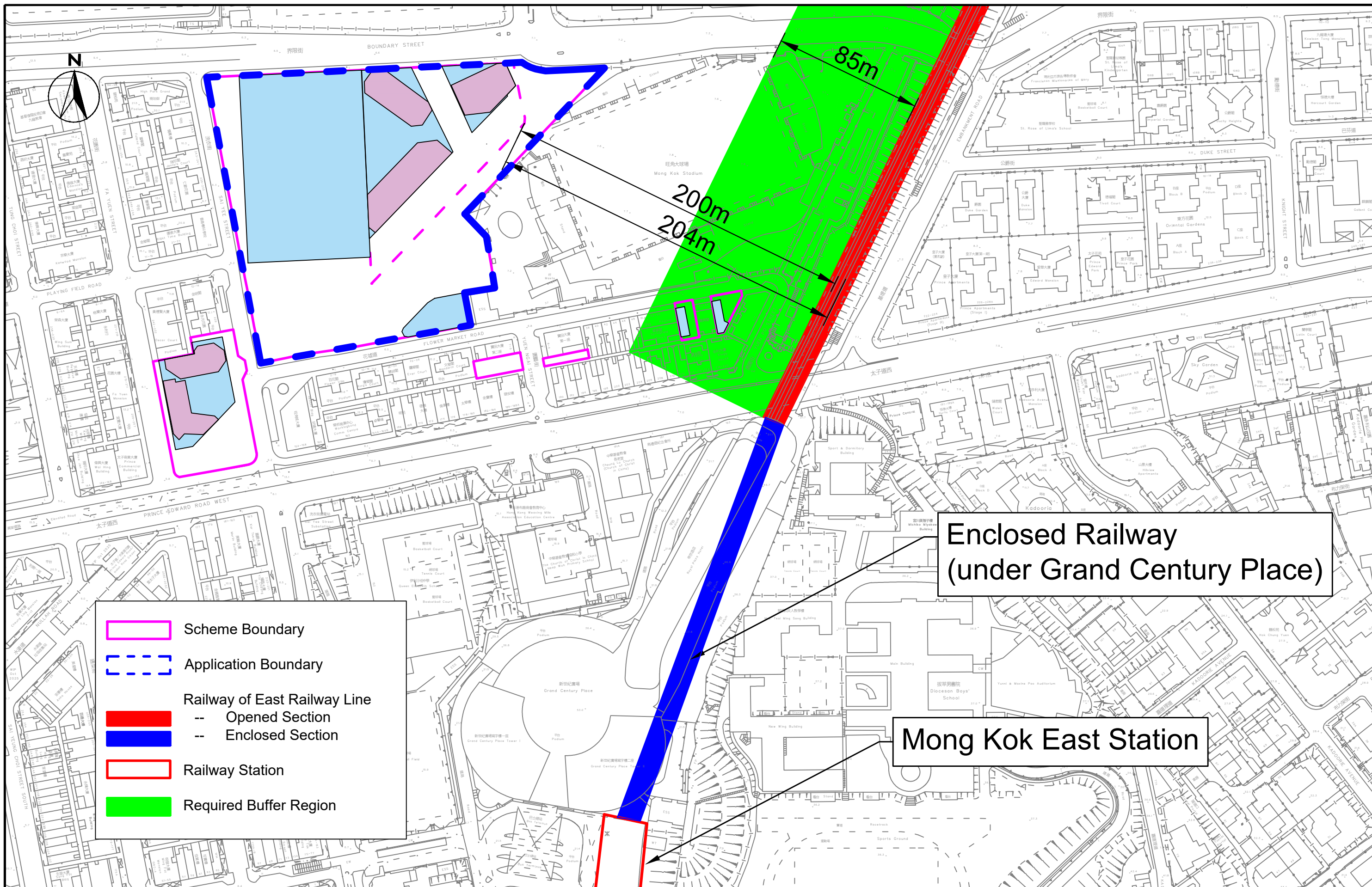


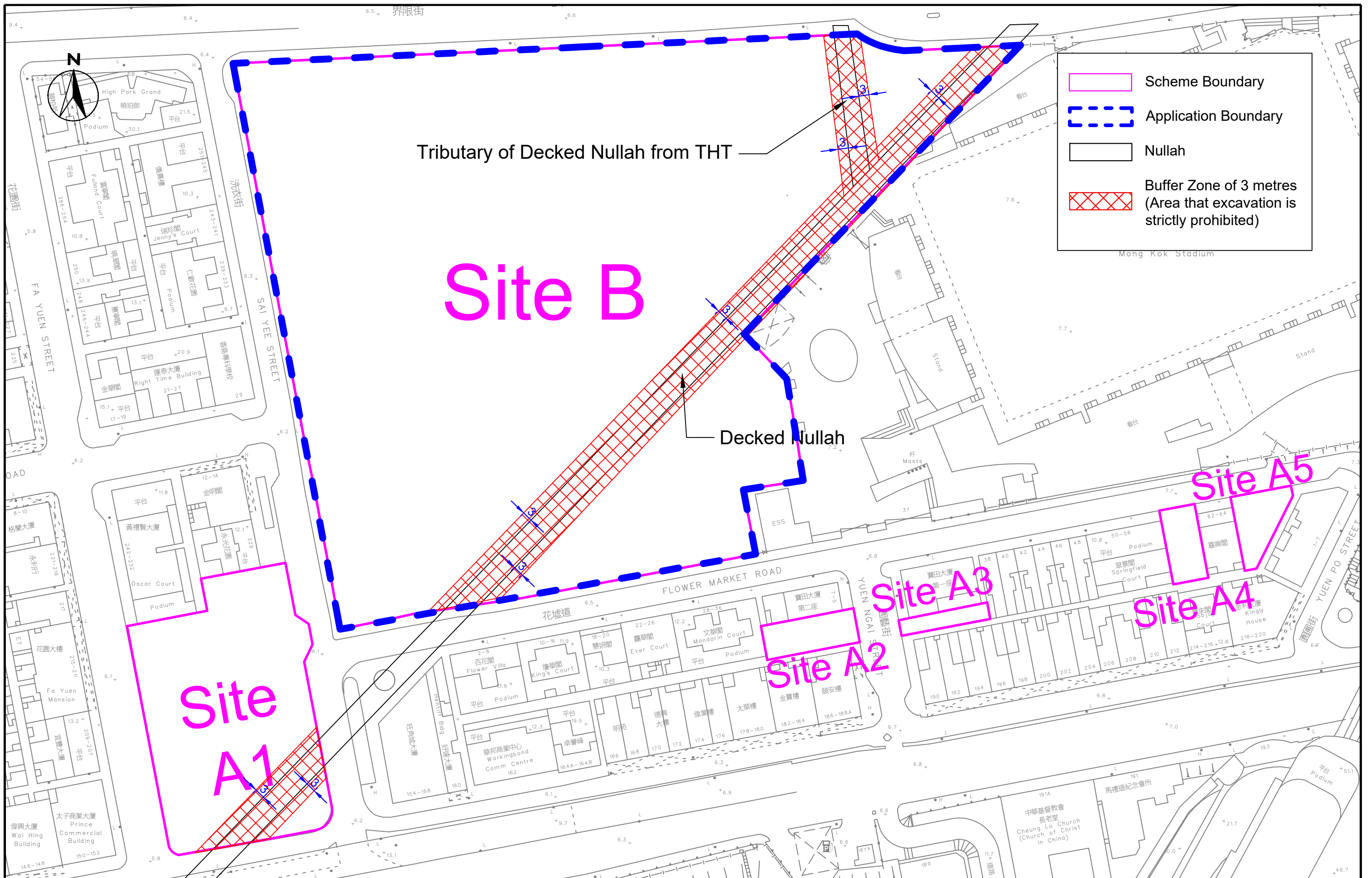
Acoustic Balcony



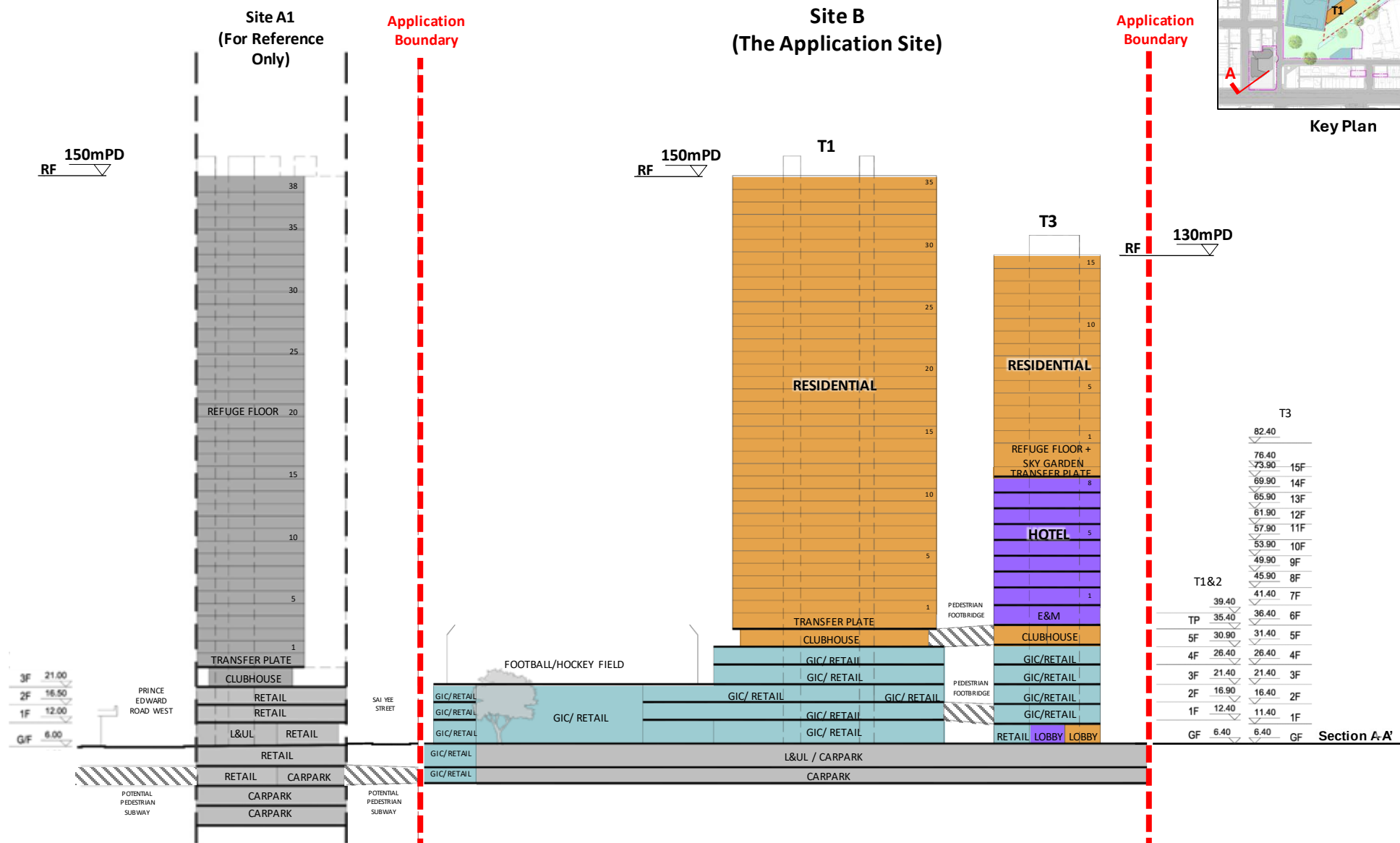
Fixed Glazing

Notional Layout and Block Plan are subject to changes in detailed design stage.

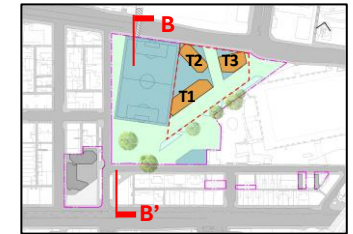




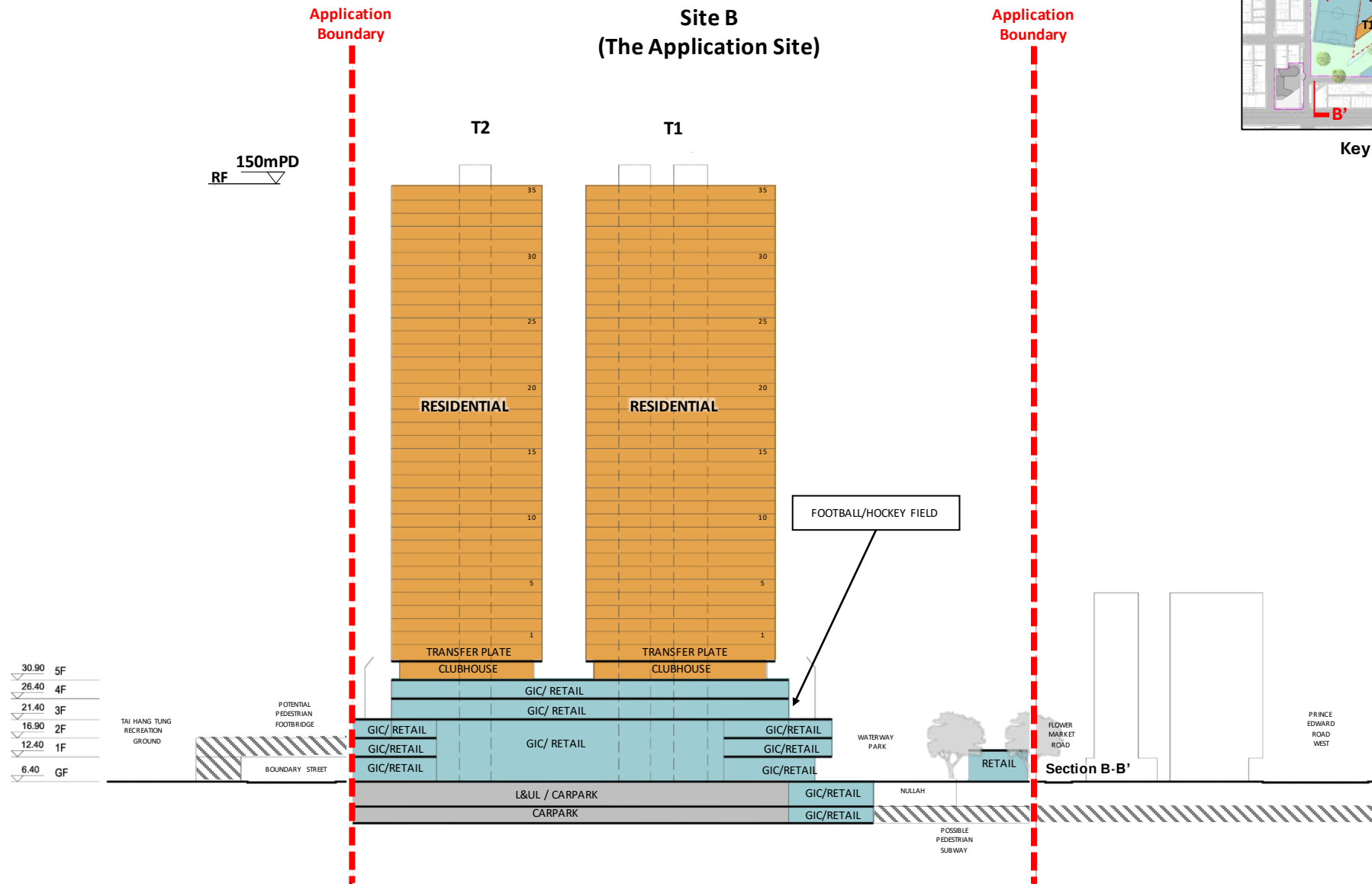
**APPENDIX 2-1
NOTIONAL SECTION PLAN OF THE
PROPOSED SCHEME**



(Remark: This S16 Planning Application is a “non-scheme-based” submission. Notional layout will be subject to change during detailed design stage)



Key Plan



(Remark: This S16 Planning Application is a “non-scheme-based” submission. Notional layout will be subject to change during detailed design stage)

**APPENDIX 4-1
MAXIMUM ALLOWABLE SOUND POWER
LEVELS FOR PLANNED FIXED NOISE
SOURCES**

Maximum Allowable Sound Power Level at Source

Time Period	Maximum Allowable SPL at NSR, dB(A)	Horizontal Distance from the Project Site Boundary to the Nearest NSR, m	Correction, dB(A)			Allowable Sound Power Level at Source, dB(A) [1]
			Distance	Facade	Tonality	
Podium of Site A1						
Day and Evening Time	65	12	30	-3	-6	86
(07:00-23:00)						
Night Time	55	12	30	-3	-6	76
(23:00 – 07:00)						
Podium of Site B (Towers 1 and 2)						
Day and Evening Time	65	15	32	-3	-6	88
(07:00-23:00)						
Night Time	55	15	32	-3	-6	78
(23:00 – 07:00)						
Non-residential Portion of Site B (Tower 3)						
Day and Evening Time	65	15	32	-3	-6	88
(07:00-23:00)						
Night Time	55	15	32	-3	-6	78
(23:00 – 07:00)						

[1] For assessment purpose, a 6 dB of tonality, intermittency & impulsiveness correction has been adopted.

[2] The Maximum Allowable Sound Power Level at Source should be corrected by the tonality, intermittency, & impulsiveness correction of the selected equipment, according to Section 3.3 of the IND-TM.

Cumulative Noise level form the Planned the Building Service Equipment of the Proposed Development

NSR ID	Description	Horizontal Distance (m) [1] [2]			Allowable Sound Power Level at Source, dB(A)						Correction, dB(A)						SPL at NSR, dB(A)											
					Day and Evening Time (07:00-23:00)			Night Time (23:00 – 07:00)			Distance			Barrier [5]			Facade	Tonality [3,4]	Day and Evening Time (07:00-23:00)					Night Time (23:00 – 07:00)				
		Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Site A1	Site B (Podium of T1 and T2)	Site B (T3)			Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Total	Criteria	Site A1	Site B (Podium of T1 and T2)	Site B (T3)	Total	Criteria
NSR01	Mandarin Court	122	70	129	86	88	88	76	78	78	-50	-45	-50	0	0	0	3	6	45	52	46	53	65	35	42	36	43	55
NSR02	Flower Vila	49	67	165							-42	-45	-52	0	0	0			53	52	44	56		43	42	34	46	
NSR03	Mong Kok City Building	26	85	193							-36	-47	-54	0	0	-5			58	50	38	59		48	40	28	49	
NSR04	Merlin Building	46	146	261							-41	-51	-56	0	0	-5			53	45	35	54		43	35	25	44	
NSR05	Fa Yuen Mansion	19	97	243							-34	-48	-56	0	-5	-5			61	44	36	61		51	34	26	51	
NSR06	Oscar Court	13	66	212							-30	-44	-55	0	0	-5			64	52	37	65		54	42	27	55	
NSR07	Circle Garden	12	46	189							-30	-41	-54	0	0	-5			65	55	38	65		55	45	28	55	
NSR08	Heung To College of Professional Studies	59	17	159							-43	-33	-52	0	0	-5			51	64	39	64		41	54	29	54	
NSR09	Jenny's Court	111	25	148							-49	-36	-51	0	0	-5			46	61	40	61		36	51	30	51	
NSR10	Chan's Creative School	294	118	68							-57	-49	-45	0	0	0			37	47	52	53		27	37	42	43	
NSR11	Tower 2 of Site B	181	N/A	15							-53	N/A	-32	0	0	0			41	N/A	65	65		31	N/A	55	55	
NSR12	Tower 3 of Site B	196	15	N/A							-54	-32	N/A	0	0	0			41	65	N/A	65		31	55	N/A	55	

Note:

[1] The nearest Representative Noise Sensitive Receivers for each corresponding source are **bold underlined**.

[2] Restricted locations has been provided in Site A1.

[3] For assessment purpose, a 6 dB of tonality, intermittency & impulsiveness correction has been adopted.

[4] The Maximum Allowable Sound Power Level at Source should be corrected by the tonality, intermittency, & impulsiveness correction of the selected equipment, according to Section 3.3 of the IND-TM.

[5] 5 dB(A) of noise reduce has been adopted for noise source without direct view.

**APPENDIX 4-2
PREDICTED TRAFFIC FLOW AT PEAK
HOUR IN YEAR 2051**

Predicted Traffic Flow at Peak Hours of Year 2051

Road ID	Road	Direction	At grade / Flyover	Speed Limit (km/hr)	AM Peak		PM Peak	
					Traffic	% Heavy	Traffic	% Heavy
1	Boundary St (FO)	EB	Flyover	50	835	10%	920	5%
2	Boundary St	EB	At grade	50	685	15%	860	10%
3	Boundary St	EB	At grade	50	2,115	10%	2,555	5%
4	Tai Hang Tung Rd	NB	At grade	50	830	10%	820	5%
5	Tai Hang Tung Rd	SB	At grade	50	770	10%	655	10%
6	Boundary St	EB	At grade	50	2,575	10%	2,880	5%
7	Boundary St	WB	At grade	50	580	10%	590	10%
8	Prince Edward Rd W (FO)	WB	Flyover	50	1,125	10%	1,115	5%
9	Prince Edward Rd W	WB	At grade	50	1,585	25%	1,870	15%
10	Prince Edward Rd W	WB	At grade	50	30	0%	75	5%
11	Prince Edward Rd W	WB	At grade	50	1,720	20%	2,010	15%
12	Prince Edward Rd W	EB	At grade	50	85	5%	145	5%
13	Prince Edward Rd W	WB	At grade	50	3,915	15%	4,020	10%
14	Playing Field Rd	EB	At grade	50	40	0%	50	0%
15	Playing Field Rd	WB	At grade	50	205	10%	260	5%
16	Playing Field Rd	EB	At grade	50	55	10%	10	0%
17	Playing Field Rd	WB	At grade	50	90	0%	80	0%
18	Flower Market Rd	EB	At grade	50	185	10%	200	0%
19	Nullah Rd	EB	At grade	50	45	0%	70	0%
20	Nullah Rd	WB	At grade	30	70	0%	140	0%
21	Bute St	WB	At grade	30	110	15%	95	10%
22	Nathan Rd	NB	At grade	50	785	30%	1,080	30%
23	Nathan Rd	SB	At grade	50	1,220	30%	1,445	20%
24	Nathan Rd	SB	At grade	50	1,545	30%	1,475	20%
25	Sai Yeung Choi St N	SB	At grade	50	100	5%	180	0%
26	Sai Yeung Choi St S	SB	At grade	50	680	10%	670	10%
27	Tung Choi St	SB	At grade	50	475	15%	590	10%
28	Tung Choi St	NB	At grade	30	105	0%	140	0%
29	Fa Yuen St	SB	At grade	50	580	10%	535	5%
30	Fa Yuen St	NB	At grade	30	30	0%	20	0%
31	Sai Yee St	NB	At grade	50	400	5%	725	5%
32	Sai Yee St	NB	At grade	50	440	25%	730	15%
33	Sai Yee St	SB	At grade	50	400	30%	460	30%
34	Yuen Ngai St	SB	At grade	50	135	15%	90	0%
35	Embankment Rd	NB	At grade	50	995	10%	895	5%
36	Sai Yeung Choi St N	SB	At grade	50	440	5%	280	0%
37	Sai Yeung Choi St N	NB	At grade	50	40	0%	60	0%
38	Cheung Sha Wan Rd	SB	At grade	50	1,135	25%	1,340	20%
39	Cheung Sha Wan Rd	NB	At grade	50	485	40%	740	45%
40	Boundary St	EB	At grade	50	915	10%	1,170	5%
41	Yu Chau St	NB	At grade	50	530	10%	505	5%
42	Ki Lung St	NB	At grade	50	50	0%	60	0%
43	Portland St	NB	At grade	50	660	10%	600	5%
44	Tai Nan St	NB	At grade	50	255	10%	285	10%
45	Prince Edward Rd W	EB	At grade	50	340	10%	365	5%
46	Lai Chi Kok Rd	SB	At grade	50	735	15%	610	10%
47	Lai Chi Kok Rd	NB	At grade	50	330	25%	440	20%
48	Arran St	EB	At grade	50	100	15%	190	45%
49	Fa Yuen St	SB	At grade	30	25	0%	50	0%
50	Sai Yee St	NB	At grade	50	400	20%	635	15%
51	Sai Yee St	SB	At grade	50	600	35%	635	30%
52	Tat Chee Ave	NB	At grade	50	345	15%	355	5%
53	Tat Chee Ave	SB	At grade	50	290	5%	290	5%
54	Boundary St	EB	At grade	50	2,940	10%	3,150	5%
55	Duke St	EB	At grade	50	90	65%	65	0%
56	Nullah Rd	EB	At grade	50	135	5%	190	5%
57	Playing Field Rd	EB	At grade	50	285	10%	360	5%
58	Nathan Rd	NB	At grade	50	770	20%	1,075	35%
59	Prince Edward Rd W	WB	At grade	50	1,315	15%	1,535	5%
60	Bute St	WB	At grade	50	370	30%	385	20%
103	Kadoorie Ave	NB	At grade	50	315	10%	380	5%
104	Kadoorie Ave	SB	At grade	50	100	5%	60	0%
105	Prince Edward Rd W	WB	At grade	50	3,700	15%	4,065	10%
118	Marigold Rd & Magnolia Rd	NB	At grade	50	45	10%	40	0%
129	Prince Edward Rd W	EB	At grade	50	70	10%	115	5%
130	Prince Edward Rd W	WB	At grade	50	25	0%	85	15%
131	Prince Edward Rd W	EB	At grade	50	85	15%	105	10%
132	Portland St	SB	At grade	50	225	15%	390	15%
133	Portland St	SB	At grade	50	85	10%	60	10%
134	Cheung Sha Wan Rd	NB	At grade	50	345	20%	405	10%
138	Boundary St	EB	At grade	50	425	10%	500	5%

**APPENDIX 4-3
TRAFFIC NOISE ASSESSMENT RESULTS
(BASE SCENARIO)**

Base Scenario, Tower 1 at Site A1 (by Noise Assessment Points)

Site A1 - Tower 1 (High Zone)																							
Floor	Height (mPD)	AT1-HZ-F01-O01	AT1-HZ-F01-O02	AT1-HZ-F01-O03	AT1-HZ-F01-O04	AT1-HZ-F02-O05	AT1-HZ-F02-O06	AT1-HZ-F02-O07	AT1-HZ-F03-O08	AT1-HZ-F03-O09	AT1-HZ-F03-O10	AT1-HZ-F04-O11	AT1-HZ-F04-O12	AT1-HZ-F04-O13	AT1-HZ-F05-O14	AT1-HZ-F05-O15	AT1-HZ-F06-O16	AT1-HZ-F06-O17	AT1-HZ-F07-O18	AT1-HZ-F07-O19	AT1-HZ-F07-O20	AT1-HZ-F07-O21	AT1-HZ-F07-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
38/F	147.3	65.6	63.1	63.0	63.2	63.6	64.0	63.9	63.8	63.7	61.1	57.5	63.2	61.5	62.3	59.1	65.8	67.7	68.8	69.5	67.2	67.8	67.5
37/F	144.1	65.5	63.0	62.9	63.1	63.5	63.9	63.8	63.7	63.6	60.9	57.3	63.2	61.4	62.2	59.0	65.8	67.7	68.9	69.6	67.3	67.8	67.5
36/F	141.0	65.4	62.9	62.8	63.1	63.4	63.7	63.7	63.6	63.5	60.8	57.3	63.1	61.4	62.2	59.0	65.8	67.8	69.0	69.7	67.3	67.9	67.6
35/F	137.8	65.2	62.8	62.7	63.0	63.3	63.6	63.6	63.5	63.4	60.7	57.3	63.0	61.3	62.1	59.0	65.7	67.8	69.1	69.8	67.4	68.0	67.6
34/F	134.7	65.1	62.8	62.7	62.9	63.2	63.5	63.5	63.4	63.3	60.6	57.3	62.9	61.3	62.0	59.0	65.7	67.9	69.2	69.9	67.4	68.0	67.6
33/F	131.5	65.0	62.6	62.6	62.8	63.1	63.4	63.3	63.3	63.1	60.5	57.3	62.8	61.2	61.8	59.1	65.7	67.9	69.2	70.0	67.5	68.1	67.6
32/F	128.4	64.8	62.5	62.6	62.8	63.0	63.3	63.2	63.0	62.9	60.3	57.4	62.7	61.1	61.7	59.1	65.7	68.0	69.3	70.1	67.5	68.1	67.6
31/F	125.2	64.6	62.3	62.6	62.8	63.0	63.3	63.2	62.8	62.7	60.2	57.4	62.6	61.1	61.6	59.1	65.6	68.0	69.4	70.1	67.5	68.1	67.6
30/F	122.1	64.4	62.1	62.6	62.7	62.9	63.1	62.9	62.7	62.5	60.1	57.4	62.4	61.0	61.5	59.1	65.6	68.0	69.4	70.2	67.4	68.1	67.5
29/F	118.9	64.2	62.0	62.6	62.7	62.9	63.0	62.7	62.5	62.2	59.9	57.4	62.2	60.9	61.4	59.1	65.5	68.0	69.5	70.3	67.4	68.0	67.4
28/F	115.8	64.0	61.7	62.6	62.7	62.8	63.0	62.6	62.2	61.9	59.7	57.4	62.0	60.8	61.3	59.2	65.4	68.1	69.6	70.4	67.3	67.9	67.3
27/F	112.6	63.8	61.5	62.6	62.7	62.8	62.9	62.5	62.1	61.6	59.5	57.4	61.7	60.7	61.2	59.2	65.3	68.1	69.6	70.4	67.3	67.8	67.2
26/F	109.5	63.5	61.2	62.6	62.7	62.7	62.8	62.4	61.9	61.3	59.3	57.4	61.5	60.6	61.0	59.2	65.2	68.1	69.6	70.5	67.1	67.8	67.1
25/F	106.3	63.3	60.9	62.7	62.7	62.7	62.8	62.3	61.7	61.1	59.1	57.4	61.1	60.5	60.9	59.2	65.0	68.1	69.7	70.5	66.9	67.7	67.0
24/F	103.2	63.0	60.7	62.7	62.7	62.7	62.8	62.2	61.6	60.8	58.9	57.3	60.9	60.3	60.8	59.2	64.9	68.1	69.7	70.6	66.8	67.6	66.9
23/F	100.0	62.7	60.5	62.8	62.7	62.7	62.7	62.1	61.5	60.6	58.6	57.3	60.6	60.2	60.6	59.2	64.7	68.1	69.7	70.5	66.6	67.5	66.8
22/F	96.9	62.6	60.4	62.8	62.8	62.7	62.8	62.1	61.4	60.3	58.4	57.3	60.3	60.0	60.4	59.2	64.6	68.1	69.7	70.6	66.4	67.5	66.6

Site A1 - Tower 1 (Low Zone)																							
Floor	Height (mPD)	AT1-LZ-F01-O01	AT1-LZ-F01-O02	AT1-LZ-F01-O03	AT1-LZ-F01-O04	AT1-LZ-F02-O05	AT1-LZ-F02-O06	AT1-LZ-F02-O07	AT1-LZ-F03-O08	AT1-LZ-F03-O09	AT1-LZ-F03-O10	AT1-LZ-F04-O11	AT1-LZ-F04-O12	AT1-LZ-F04-O13	AT1-LZ-F05-O14	AT1-LZ-F05-O15	AT1-LZ-F06-O16	AT1-LZ-F06-O17	AT1-LZ-F07-O18	AT1-LZ-F07-O19	AT1-LZ-F07-O20	AT1-LZ-F07-O21	AT1-LZ-F07-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
19/F	87.4	62.4	60.1	63.1	63.0	62.9	62.9	62.1	61.2	59.8	57.7	57.3	59.7	59.5	59.9	59.2	64.5	68.3	70.0	<u>70.8</u>	65.9	67.2	66.1
18/F	84.3	62.4	60.1	63.2	63.1	62.9	62.9	62.2	61.2	59.8	57.6	57.2	59.6	59.4	59.8	59.2	64.5	68.5	70.2	<u>70.9</u>	65.7	67.1	66.0
17/F	81.1	62.4	60.1	63.4	63.2	63.0	63.0	62.2	61.2	59.7	57.5	57.2	59.5	59.3	59.7	59.2	64.5	68.6	70.3	<u>70.9</u>	65.5	67.0	66.0
16/F	78.0	62.3	60.1	63.5	63.4	63.1	63.1	62.3	61.3	59.6	57.5	57.2	59.5	59.3	59.7	59.3	64.6	68.7	<u>70.5</u>	<u>71.0</u>	65.3	67.1	66.0
15/F	74.8	62.3	60.1	63.6	63.5	63.2	63.2	62.3	61.3	59.6	57.4	57.2	59.4	59.3	59.7	59.3	64.7	68.9	<u>70.8</u>	<u>71.2</u>	65.2	67.1	66.1
14/F	71.7	62.3	60.2	63.8	63.6	63.3	63.3	62.4	61.4	59.6	57.4	57.2	59.4	59.3	59.7	59.4	64.9	69.0	<u>71.0</u>	<u>71.3</u>	65.1	67.2	66.2
13/F	68.5	62.3	60.2	63.9	63.7	63.4	63.4	62.5	61.4	59.7	57.4	57.2	59.5	59.3	59.8	59.4	65.0	69.2	<u>71.2</u>	<u>71.5</u>	65.1	67.4	66.3
12/F	65.4	62.3	60.5	64.0	63.9	63.6	63.5	62.6	61.5	59.8	57.4	57.3	59.6	59.3	59.9	59.5	65.1	69.4	<u>71.5</u>	<u>71.7</u>	65.2	67.6	66.5
11/F	62.2	62.3	60.5	64.1	64.0	63.7	63.6	62.7	61.5	59.9	57.4	57.3	59.7	59.4	60.0	59.5	65.3	69.6	<u>71.8</u>	<u>71.9</u>	65.2	67.7	66.6
10/F	59.1	62.1	60.2	64.3	64.1	63.8	63.7	62.7	61.6	60.0	57.4	57.3	59.8	59.5	60.1	59.6	65.4	69.8	<u>72.0</u>	<u>72.1</u>	65.2	67.9	66.6
9/F	55.9	61.9	59.8	64.4	64.2	63.9	63.8	62.8	61.7	60.0	57.4	57.3	59.9	59.5	60.2	59.7	65.6	70.0	<u>72.3</u>	<u>72.4</u>	65.3	68.1	66.9
8/F	52.8	62.0	59.5	64.5	64.3	64.0	63.9	62.9	61.8	60.1	57.4	57.2	59.9	59.6	60.3	59.8	65.8	70.2	<u>72.6</u>	<u>72.7</u>	65.5	68.4	67.1
7/F	49.6	62.3	59.6	64.6	64.4	64.1	63.9	63.0	61.8	60.1	57.4	57.0	60.0	59.6	60.4	59.9	66.0	<u>70.5</u>	<u>72.9</u>	<u>73.0</u>	65.9	68.7	67.4
6/F	46.5	62.6	59.9	64.6	64.5	64.0	63.9	62.9	61.7	60.0	57.2	56.6	59.9	59.6	60.5	60.0	66.2	<u>70.7</u>	<u>73.1</u>	<u>73.2</u>	66.2	69.0	67.8
5/F	43.3	63.1	60.3	64.6	64.5	64.0	63.9	62.9	61.6	59.7	57.0	56.2	59.6	59.3	60.5	60.0	66.4	<u>71.0</u>	<u>73.4</u>	<u>73.5</u>	66.6	69.4	68.1
4/F	40.2	63.6	60.7	64.6	64.5	64.0	63.8	62.8	61.5	59.3	56.7	55.7	59.2	58.8	60.3	59.9	66.6	<u>71.2</u>	<u>73.7</u>	<u>73.8</u>	67.0	69.7	68.5
3/F	37.0	64.1	60.9	64.6	64.5	63.9	63.7	62.7	61.3	58.8	56.2	55.0	58.7	58.4	59.7	59.3	66.7	<u>71.4</u>	<u>74.0</u>	<u>74.1</u>	67.3	70.1	68.9
2/F	33.9	64.6	60.7	64.5	64.4	63.8	63.6	62.5	60.9	58.0	55.2	53.8	57.9	57.6	59.0	58.4	66.8	<u>71.6</u>	<u>74.3</u>	<u>74.4</u>	67.7	<u>70.5</u>	69.3
1/F	30.7	64.8	58.2	64.1	64.0	63.6	63.3	62.1	60.3	56.7	54.1	52.7	56.6	56.4	58.3	57.6	66.7	<u>71.8</u>	<u>74.5</u>	<u>74.7</u>	68.1	<u>70.8</u>	69.6

Base Scenario, Tower 1 at Site A1 (by Flats)

Site A1 - Tower 1 (High Zone)								
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07
Predicted Noise Level, L10 (1-hr), dB(A)								
38/F	147.3	65.6	64.0	63.8	63.2	62.3	67.7	69.5
37/F	144.1	65.5	63.9	63.7	63.2	62.2	67.7	69.6
36/F	141.0	65.4	63.7	63.6	63.1	62.2	67.8	69.7
35/F	137.8	65.2	63.6	63.5	63.0	62.1	67.8	69.8
34/F	134.7	65.1	63.5	63.4	62.9	62.0	67.9	69.9
33/F	131.5	65.0	63.4	63.3	62.8	61.8	67.9	70.0
32/F	128.4	64.8	63.3	63.0	62.7	61.7	68.0	70.1
31/F	125.2	64.6	63.2	62.8	62.6	61.6	68.0	70.1
30/F	122.1	64.4	63.1	62.7	62.4	61.5	68.0	70.2
29/F	118.9	64.2	63.0	62.5	62.2	61.4	68.0	70.3
28/F	115.8	64.0	63.0	62.2	62.0	61.3	68.1	70.4
27/F	112.6	63.8	62.9	62.1	61.7	61.2	68.1	70.4
26/F	109.5	63.5	62.8	61.9	61.5	61.0	68.1	<u>70.5</u>
25/F	106.3	63.3	62.8	61.7	61.1	60.9	68.1	<u>70.5</u>
24/F	103.2	63.0	62.8	61.6	60.9	60.8	68.1	<u>70.6</u>
23/F	100.0	62.8	62.7	61.5	60.6	60.6	68.1	<u>70.5</u>
22/F	96.9	62.8	62.8	61.4	60.3	60.4	68.1	<u>70.6</u>

Site A1 - Tower 1 (Low Zone)								
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07
Predicted Noise Level, L10 (1-hr), dB(A)								
19/F	87.4	63.1	62.9	61.2	59.7	59.9	68.3	<u>70.8</u>
18/F	84.3	63.2	62.9	61.2	59.6	59.8	68.5	<u>70.9</u>
17/F	81.1	63.4	63.0	61.2	59.5	59.7	68.6	<u>70.9</u>
16/F	78.0	63.5	63.1	61.3	59.5	59.7	68.7	<u>71.0</u>
15/F	74.8	63.6	63.2	61.3	59.4	59.7	68.9	<u>71.2</u>
14/F	71.7	63.8	63.3	61.4	59.4	59.7	69.0	<u>71.3</u>
13/F	68.5	63.9	63.4	61.4	59.5	59.8	69.2	<u>71.5</u>
12/F	65.4	64.0	63.6	61.5	59.6	59.9	69.4	<u>71.7</u>
11/F	62.2	64.1	63.7	61.5	59.7	60.0	69.6	<u>71.9</u>
10/F	59.1	64.3	63.8	61.6	59.8	60.1	69.8	<u>72.1</u>
9/F	55.9	64.4	63.9	61.7	59.9	60.2	70.0	<u>72.4</u>
8/F	52.8	64.5	64.0	61.8	59.9	60.3	70.2	<u>72.7</u>
7/F	49.6	64.6	64.1	61.8	60.0	60.4	<u>70.5</u>	<u>73.0</u>
6/F	46.5	64.6	64.0	61.7	59.9	60.5	<u>70.7</u>	<u>73.2</u>
5/F	43.3	64.6	64.0	61.6	59.6	60.5	<u>71.0</u>	<u>73.5</u>
4/F	40.2	64.6	64.0	61.5	59.2	60.3	<u>71.2</u>	<u>73.8</u>
3/F	37.0	64.6	63.9	61.3	58.7	59.7	<u>71.4</u>	<u>74.1</u>
2/F	33.9	64.6	63.8	60.9	57.9	59.0	<u>71.6</u>	<u>74.4</u>
1/F	30.7	64.8	63.6	60.3	56.6	58.3	<u>71.8</u>	<u>74.7</u>

Base Scenario, Tower 2 at Site A1 (by Noise Assessment Points)

Site A1 - Tower 2 (High Zone)																							
Floor	Height (mPD)	AT2-HZ-F01-O01	AT2-HZ-F01-O02	AT2-HZ-F01-O03	AT2-HZ-F01-O04	AT2-HZ-F01-O05	AT2-HZ-F02-O06	AT2-HZ-F02-O07	AT2-HZ-F02-O08	AT2-HZ-F03-O09	AT2-HZ-F03-O10	AT2-HZ-F03-O11	AT2-HZ-F04-O12	AT2-HZ-F04-O13	AT2-HZ-F04-O14	AT2-HZ-F05-O15	AT2-HZ-F05-O16	AT2-HZ-F05-O17	AT2-HZ-F05-O18	AT2-HZ-F05-O19	AT2-HZ-F06-O20	AT2-HZ-F06-O21	AT2-HZ-F06-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
38/F	147.3	63.2	63.5	63.1	64.4	63.6	66.1	66.1	65.0	63.4	64.3	63.5	61.2	62.5	62.5	64.1	65.3	65.3	65.4	60.1	64.1	63.3	59.7
37/F	144.1	63.2	63.5	63.1	64.4	63.5	66.1	66.1	65.1	63.4	64.3	63.5	61.2	62.4	62.4	64.0	65.3	65.2	65.4	60.1	64.1	63.3	59.6
36/F	141.0	63.2	63.5	63.0	64.4	63.5	66.1	66.1	65.1	63.4	64.3	63.5	61.2	62.4	62.4	63.9	65.2	65.1	65.3	60.1	64.1	63.3	59.6
35/F	137.8	63.1	63.4	63.0	64.3	63.5	66.2	66.1	65.1	63.5	64.3	63.5	61.3	62.4	62.4	63.9	65.1	65.1	65.3	60.1	64.0	63.2	59.6
34/F	134.7	63.1	63.4	62.9	64.3	63.5	66.2	66.2	65.2	63.6	64.4	63.5	61.3	62.4	62.3	63.7	65.0	65.0	65.2	60.1	63.9	63.2	59.5
33/F	131.5	63.1	63.3	62.8	64.3	63.5	66.2	66.2	65.2	63.7	64.4	63.5	61.4	62.4	62.3	63.6	65.0	65.0	65.2	60.0	63.9	63.2	59.5
32/F	128.4	63.0	63.2	62.8	64.3	63.4	66.3	66.3	65.3	63.7	64.4	63.5	61.5	62.4	62.3	63.5	64.9	64.9	65.1	60.0	63.8	63.2	59.5
31/F	125.2	63.0	63.2	62.7	64.3	63.4	66.3	66.3	65.4	63.8	64.5	63.6	61.6	62.4	62.3	63.3	64.7	64.7	65.0	59.9	63.7	63.1	59.4
30/F	122.1	62.9	63.1	62.6	64.3	63.4	66.4	66.4	65.4	63.9	64.5	63.6	61.8	62.4	62.3	63.1	64.5	64.6	64.8	59.9	63.6	63.1	59.4
29/F	118.9	62.9	63.0	62.5	64.2	63.4	66.5	66.5	65.5	64.0	64.6	63.7	61.9	62.5	62.3	62.9	64.4	64.5	64.7	59.8	63.5	63.0	59.3
28/F	115.8	62.9	62.9	62.4	64.2	63.5	66.5	66.5	65.6	64.2	64.6	63.7	62.0	62.5	62.4	62.7	64.3	64.3	64.6	59.7	63.4	63.0	59.2
27/F	112.6	62.8	62.8	62.3	64.2	63.5	66.6	66.6	65.6	64.3	64.7	63.8	62.1	62.5	62.4	62.4	64.1	64.2	64.5	59.6	63.3	62.9	59.1
26/F	109.5	62.7	62.7	62.2	64.2	63.5	66.7	66.7	65.7	64.4	64.7	63.9	62.3	62.6	62.4	62.0	63.9	64.0	64.3	59.4	63.2	62.8	59.0
25/F	106.3	62.6	62.6	62.1	64.2	63.5	66.8	66.7	65.8	64.5	64.8	63.9	62.4	62.7	62.5	61.6	63.8	63.9	64.2	59.3	63.1	62.8	58.9
24/F	103.2	62.5	62.5	61.9	64.2	63.6	66.8	66.8	65.9	64.7	64.9	64.0	62.6	62.7	62.5	61.3	63.7	63.8	64.1	59.2	63.0	62.7	58.8
23/F	100.0	62.5	62.4	61.9	64.1	63.6	66.9	66.9	66.0	64.8	65.0	64.1	62.7	62.8	62.6	61.0	63.5	63.7	64.1	59.0	62.9	62.6	58.8
22/F	96.9	62.4	62.3	61.8	64.1	63.6	67.0	67.0	66.1	64.9	65.1	64.2	62.9	62.9	62.7	60.8	63.5	63.7	64.0	58.8	62.8	62.5	58.7
21/F	93.7	62.3	62.3	61.7	64.2	63.7	67.1	67.1	66.2	65.0	65.2	64.3	63.1	63.0	62.8	60.7	63.5	63.7	64.1	58.6	62.8	62.4	58.6

Site A1 - Tower 2 (Low Zone)																							
Floor	Height (mPD)	AT2-LZ-F01-O01	AT2-LZ-F01-O02	AT2-LZ-F01-O03	AT2-LZ-F01-O04	AT2-LZ-F01-O05	AT2-LZ-F02-O06	AT2-LZ-F02-O07	AT2-LZ-F02-O08	AT2-LZ-F03-O09	AT2-LZ-F03-O10	AT2-LZ-F03-O11	AT2-LZ-F04-O12	AT2-LZ-F04-O13	AT2-LZ-F04-O14	AT2-LZ-F05-O15	AT2-LZ-F05-O16	AT2-LZ-F05-O17	AT2-LZ-F05-O18	AT2-LZ-F05-O19	AT2-LZ-F06-O20	AT2-LZ-F06-O21	AT2-LZ-F06-O22
		Predicted Noise Level, L10 dB(A)																					
19/F	87.4	62.1	62.1	61.6	64.3	63.9	67.4	67.3	66.5	65.3	65.4	64.6	63.4	63.2	63.0	60.5	63.5	63.8	64.1	58.2	62.6	62.3	58.3
18/F	84.3	62.1	62.1	61.5	64.3	64.0	67.5	67.4	66.6	65.5	65.5	64.7	63.5	63.4	63.1	60.4	63.6	63.8	64.2	57.8	62.5	62.2	58.2
17/F	81.1	62.0	62.0	61.5	64.4	64.1	67.6	67.5	66.7	65.6	65.6	64.8	63.7	63.5	63.3	60.4	63.6	63.8	64.1	57.5	62.3	62.1	58.1
16/F	78.0	61.9	62.0	61.5	64.5	64.2	67.7	67.6	66.8	65.7	65.7	65.0	63.9	63.7	63.4	60.4	63.6	63.8	64.2	57.0	62.2	62.0	58.0
15/F	74.8	61.9	61.9	61.5	64.7	64.3	67.9	67.8	67.0	65.9	65.9	65.2	64.0	63.8	63.6	60.3	63.6	63.9	64.2	56.5	62.1	61.9	57.9
14/F	71.7	61.8	61.8	61.6	64.8	64.4	68.0	67.9	67.1	66.0	66.0	65.3	64.2	64.0	63.7	60.4	63.6	63.9	64.2	55.9	61.8	61.8	57.8
13/F	68.5	61.5	61.6	61.6	65.0	64.5	68.1	68.0	67.2	66.1	66.2	65.5	64.4	64.1	63.8	60.4	63.7	64.0	64.3	55.3	61.5	61.4	57.7
12/F	65.4	61.2	61.4	61.6	65.1	64.7	68.3	68.2	67.4	66.3	66.3	65.6	64.5	64.3	64.0	60.5	63.9	64.0	64.3	54.6	61.0	60.8	57.4
11/F	62.2	60.9	61.2	61.6	65.2	64.8	68.4	68.3	67.5	66.4	66.5	65.8	64.7	64.4	64.1	60.5	63.9	64.0	64.2	53.9	60.5	60.2	57.0
10/F	59.1	60.6	61.0	61.6	65.3	65.0	68.5	68.4	67.7	66.5	66.6	66.0	64.8	64.6	64.3	60.3	63.9	64.0	64.1	53.1	60.0	59.7	56.7
9/F	55.9	60.5	60.9	61.7	65.5	65.2	68.7	68.6	67.8	66.7	66.8	66.1	65.0	64.7	64.4	59.9	63.9	64.0	64.1	51.7	59.6	59.3	56.6
8/F	52.8	60.4	61.0	61.9	65.7	65.4	68.8	68.7	68.0	66.8	66.9	66.3	65.1	64.9	64.5	59.6	63.9	64.1	64.1	50.7	59.0	58.8	56.8
7/F	49.6	60.5	61.2	62.1	65.9	65.6	69.0	68.9	68.1	67.0	67.1	66.4	65.2	65.0	64.7	59.7	64.1	64.2	64.2	50.3	58.5	58.3	57.0
6/F	46.5	60.7	61.4	62.3	66.1	65.9	69.1	69.0	68.3	67.1	67.3	66.6	65.4	65.0	64.7	59.9	64.3	64.4	64.4	50.2	58.4	58.3	57.2
5/F	43.3	60.9	61.7	62.5	66.4	66.1	69.3	69.2	68.4	67.3	67.4	66.7	65.5	65.1	64.7	60.2	64.6	64.7	64.7	50.2	58.5	58.4	57.5
4/F	40.2	61.2	61.9	62.7	66.6	66.4	69.4	69.3	68.6	67.4	67.5	66.8	65.5	65.1	64.7	60.6	65.0	65.1	65.1	50.3	58.7	58.6	57.8
3/F	37.0	61.4	62.2	62.9	66.9	66.6	69.6	69.5	68.7	67.5	67.6	66.8	65.5	65.0	64.7	60.8	65.4	65.5	65.5	50.4	58.8	58.8	58.1
2/F	33.9	61.7	62.5	63.2	67.2	66.9	69.8	69.6	68.8	67.6	67.6	66.7	65.4	64.9	64.6	60.6	65.8	65.9	65.8	50.5	58.7	58.8	58.4
1/F	30.7	61.9	62.8	63.5	67.5	67.2	69.8	69.6	68.8	67.2	67.2	66.3	64.8	64.3	64.0	58.1	66.0	66.1	66.1	50.3	58.7	58.7	58.7

Base Scenario, Tower 2 at Site A1 (by Flats)

Site A1 - Tower 2 (High Zone)							
Floor	Height (mPD)	F01	F02		F04	F05	F06
		Predicted Noise Level, L10 (1-hr), dB(A)					
38/F	147.3	64.4	66.1	64.3	62.5	65.4	64.1
37/F	144.1	64.4	66.1	64.3	62.4	65.4	64.1
36/F	141	64.4	66.1	64.3	62.4	65.3	64.1
35/F	137.8	64.3	66.2	64.3	62.4	65.3	64.0
34/F	134.7	64.3	66.2	64.4	62.4	65.2	63.9
33/F	131.5	64.3	66.2	64.4	62.4	65.2	63.9
32/F	128.4	64.3	66.3	64.4	62.4	65.1	63.8
31/F	125.2	64.3	66.3	64.5	62.4	65.0	63.7
30/F	122.1	64.3	66.4	64.5	62.4	64.8	63.6
29/F	118.9	64.2	66.5	64.6	62.5	64.7	63.5
28/F	115.8	64.2	66.5	64.6	62.5	64.6	63.4
27/F	112.6	64.2	66.6	64.7	62.5	64.5	63.3
26/F	109.5	64.2	66.7	64.7	62.6	64.3	63.2
25/F	106.3	64.2	66.8	64.8	62.7	64.2	63.1
24/F	103.2	64.2	66.8	64.9	62.7	64.1	63.0
23/F	100	64.1	66.9	65.0	62.8	64.1	62.9
22/F	96.9	64.1	67.0	65.1	62.9	64.0	62.8
21/F	93.7	64.2	67.1	65.2	63.1	64.1	62.8

Site A1 - Tower 2 (Low Zone)							
Floor	Height (mPD)	F01	F02		F04	F05	F06
		Predicted Noise Level, L10 dB(A)					
19/F	87.4	64.3	67.4	65.4	63.4	64.1	62.6
18/F	84.3	64.3	67.5	65.5	63.5	64.2	62.5
17/F	81.1	64.4	67.6	65.6	63.7	64.1	62.3
16/F	78	64.5	67.7	65.7	63.9	64.2	62.2
15/F	74.8	64.7	67.9	65.9	64.0	64.2	62.1
14/F	71.7	64.8	68.0	66.0	64.2	64.2	61.8
13/F	68.5	65.0	68.1	66.2	64.4	64.3	61.5
12/F	65.4	65.1	68.3	66.3	64.5	64.3	61.0
11/F	62.2	65.2	68.4	66.5	64.7	64.2	60.5
10/F	59.1	65.3	68.5	66.6	64.8	64.1	60.0
9/F	55.9	65.5	68.7	66.8	65.0	64.1	59.6
8/F	52.8	65.7	68.8	66.9	65.1	64.1	59.0
7/F	49.6	65.9	69.0	67.1	65.2	64.2	58.5
6/F	46.5	66.1	69.1	67.3	65.4	64.4	58.4
5/F	43.3	66.4	69.3	67.4	65.5	64.7	58.5
4/F	40.2	66.6	69.4	67.5	65.5	65.1	58.7
3/F	37	66.9	69.6	67.6	65.5	65.5	58.8
2/F	33.9	67.2	69.8	67.6	65.4	65.9	58.8
1/F	30.7	67.5	69.8	67.2	64.8	66.1	58.7

Base Scenario, Tower 1 at Site B (by Noise Assessment Points)

Site B - Tower 1																					
Floor	Height (mPD)	BT1-F01-O01	BT1-F01-O02	BT1-F01-O03	BT1-F02-O04	BT1-F02-O05	BT1-F03-O06	BT1-F03-O07	BT1-F03-O08	BT1-F04-O09	BT1-F04-O10	BT1-F04-O11	BT1-F05-O12	BT1-F05-O13	BT1-F06-O14	BT1-F06-O15	BT1-F07-O16	BT1-F07-O17	BT1-F08-O18	BT1-F08-O19	BT1-F08-O20
		Predicted Noise Level, L10 (1-hr), dB(A)																			
35/F	147.7	63.3	63.9	62.5	62.0	62.0	62.1	62.2	62.2	62.2	62.2	62.3	62.3	62.3	62.4	62.4	62.5	64.3	65.7	65.7	65.7
34/F	144.6	63.3	63.9	62.6	61.9	61.9	62.0	62.1	62.1	62.2	62.2	62.3	62.3	62.3	62.4	62.4	62.5	64.3	65.7	65.7	65.7
33/F	141.4	63.3	63.8	62.5	61.9	61.9	62.0	62.0	62.1	62.2	62.2	62.3	62.3	62.3	62.4	62.4	62.6	64.4	65.7	65.7	65.7
32/F	138.3	63.3	63.8	62.5	61.9	61.9	62.0	62.0	62.1	62.2	62.2	62.3	62.3	62.3	62.4	62.5	62.6	64.4	65.7	65.7	65.7
31/F	135.1	63.3	63.8	62.5	61.9	61.9	62.0	62.0	62.0	62.1	62.2	62.3	62.3	62.3	62.4	62.5	62.7	64.5	65.7	65.7	65.7
30/F	132.0	63.3	63.8	62.5	61.9	61.9	62.0	62.0	62.0	62.1	62.1	62.2	62.3	62.3	62.4	62.5	62.7	64.5	65.7	65.7	65.7
29/F	128.8	63.3	63.8	62.5	61.8	61.9	61.9	61.9	61.9	62.0	62.1	62.2	62.3	62.3	62.4	62.6	62.7	64.6	65.7	65.7	65.7
28/F	125.7	63.3	63.8	62.5	61.8	61.8	61.9	61.9	61.9	62.0	62.0	62.2	62.3	62.3	62.4	62.6	62.8	64.6	65.7	65.7	65.7
27/F	122.5	63.2	63.8	62.5	61.8	61.8	61.8	61.8	61.9	61.9	62.0	62.1	62.2	62.3	62.4	62.6	62.8	64.7	65.7	65.7	65.7
26/F	119.4	63.2	63.8	62.5	61.7	61.7	61.8	61.8	61.8	62.0	61.9	62.0	62.1	62.2	62.4	62.6	62.8	64.7	65.8	65.7	65.7
25/F	116.2	63.2	63.8	62.4	61.7	61.7	61.7	61.7	61.7	61.8	61.9	62.0	62.1	62.2	62.3	62.5	62.8	64.7	65.8	65.7	65.7
24/F	113.1	63.1	63.7	62.4	61.6	61.6	61.7	61.7	61.7	61.8	61.8	62.0	62.0	62.1	62.3	62.5	62.7	64.7	65.8	65.8	65.7
23/F	109.9	63.1	63.7	62.3	61.6	61.6	61.6	61.6	61.6	61.7	61.7	61.9	62.0	62.0	62.2	62.4	62.7	64.6	65.8	65.8	65.7
22/F	106.8	63.0	63.6	62.3	61.5	61.5	61.5	61.5	61.5	61.6	61.6	61.7	61.9	62.0	62.1	62.3	62.6	64.5	65.8	65.8	65.7
21/F	103.6	62.9	63.5	62.2	61.4	61.4	61.5	61.4	61.4	61.5	61.5	61.6	61.7	61.9	62.1	62.3	62.5	64.4	65.8	65.8	65.7
20/F	100.5	62.8	63.4	62.0	61.2	61.2	61.3	61.3	61.3	61.4	61.4	61.5	61.6	61.8	61.9	62.2	62.5	64.3	65.8	65.8	65.7
19/F	97.3	62.7	63.2	61.9	61.0	61.0	61.2	61.2	61.2	61.3	61.3	61.4	61.5	61.7	61.9	62.1	62.4	64.3	65.9	65.8	65.7
18/F	94.2	62.6	63.1	61.8	60.7	60.8	60.9	61.0	61.0	61.2	61.2	61.3	61.4	61.5	61.7	62.0	62.3	64.3	65.9	65.8	65.7
17/F	91.0	62.5	63.0	61.6	60.5	60.5	60.7	60.8	60.8	61.0	61.0	61.1	61.3	61.4	61.6	61.8	62.2	64.2	65.9	65.9	65.8
16/F	87.9	62.5	62.8	61.5	60.4	60.3	60.5	60.6	60.7	60.8	60.8	60.9	61.1	61.3	61.5	61.7	62.1	64.2	65.9	65.9	65.8
15/F	84.7	62.4	62.7	61.4	60.2	60.2	60.4	60.4	60.4	60.6	60.5	60.7	60.9	61.1	61.3	61.6	62.0	64.1	66.0	65.9	65.8
14/F	81.6	62.3	62.5	61.2	60.0	60.0	60.2	60.2	60.1	60.2	60.3	60.5	60.7	60.9	61.2	61.5	61.9	64.1	66.0	65.9	65.9
13/F	78.4	62.2	62.4	61.0	59.8	59.8	60.0	59.8	59.8	59.9	60.0	60.3	60.5	60.8	61.0	61.3	61.8	64.1	66.0	66.0	65.9
12/F	75.3	62.0	62.2	60.8	59.5	59.5	59.8	59.5	59.5	59.7	59.9	60.1	60.3	60.6	60.8	61.2	61.7	64.0	66.1	66.0	65.9
11/F	72.1	61.8	62.0	60.5	59.2	59.3	59.6	59.2	59.2	59.5	59.7	59.9	60.2	60.4	60.7	61.0	61.5	64.0	66.1	66.0	66.0
10/F	69.0	61.7	61.8	60.3	58.8	58.9	59.3	58.9	59.0	59.3	59.5	59.7	60.0	60.3	60.6	60.9	61.4	63.9	66.1	66.0	66.0
9/F	65.8	61.6	61.7	60.1	58.4	58.5	58.9	58.5	58.6	59.0	59.3	59.6	59.9	60.1	60.4	60.8	61.3	63.9	66.1	66.1	66.0
8/F	62.7	61.5	61.6	59.8	58.1	58.2	58.5	58.0	58.2	58.6	59.0	59.3	59.7	59.9	60.3	60.6	61.2	63.8	66.2	66.1	66.0
7/F	59.5	61.4	61.5	59.7	57.8	57.8	58.1	57.6	57.7	58.1	58.4	58.9	59.3	59.7	60.1	60.4	61.0	63.8	66.2	66.1	66.0
6/F	56.4	61.3	61.4	59.5	57.3	57.2	57.5	57.1	57.1	57.6	57.9	58.2	58.7	59.2	59.7	60.2	60.8	63.7	66.1	66.1	66.0
5/F	53.2	61.2	61.2	59.1	56.7	56.5	56.9	56.5	56.6	56.8	57.1	57.5	58.0	58.5	59.0	59.6	60.5	63.6	66.1	66.0	65.9
4/F	50.1	61.1	61.1	58.8	56.0	55.9	56.1	55.9	55.9	56.1	56.3	56.6	56.8	57.2	58.0	59.0	60.0	63.3	66.1	66.0	65.9
3/F	46.9	60.9	60.9	58.5	55.2	54.9	55.1	54.9	54.8	55.0	55.2	55.5	55.5	55.7	56.1	57.2	59.0	63.0	66.0	65.9	65.8
2/F	43.8	60.7	60.6	58.0	54.1	53.8	54.0	53.6	53.5	53.5	53.7	53.9	54.0	54.1	54.2	54.9	56.4	62.3	65.9	65.8	65.7
1/F	40.6	60.5	60.3	57.5	52.7	52.3	52.5	51.8	51.6	51.6	51.7	51.9	52.0	52.2	52.3	52.5	53.4	60.9	65.9	65.7	65.6

Base Scenario, Tower 1 at Site B (by Noise Assessment Points)

Site B - Tower 1																				
Floor	Height (mPD)	BT1-F09-021	BT1-F09-022	BT1-F09-023	BT1-F10-024	BT1-F10-025	BT1-F10-026	BT1-F11-027	BT1-F11-028	BT1-F12-029	BT1-F12-030	BT1-F13-031	BT1-F13-032	BT1-F13-033	BT1-F14-034	BT1-F14-035	BT1-F14-036	BT1-F15-037	BT1-F15-038	BT1-F15-039
		Predicted Noise Level, L10 (1-hr), dB(A)																		
35/F	147.7	65.6	65.6	65.6	65.5	65.5	65.5	65.5	65.5	65.4	65.4	65.5	65.5	65.5	65.5	65.5	65.5	65.6	65.6	65.7
34/F	144.6	65.6	65.6	65.6	65.5	65.5	65.5	65.4	65.4	65.4	65.4	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.6	65.6
33/F	141.4	65.6	65.6	65.6	65.5	65.5	65.5	65.4	65.4	65.4	65.3	65.4	65.4	65.5	65.5	65.5	65.5	65.5	65.5	65.6
32/F	138.3	65.6	65.6	65.6	65.5	65.5	65.4	65.4	65.3	65.3	65.3	65.4	65.4	65.4	65.4	65.5	65.5	65.5	65.5	65.6
31/F	135.1	65.6	65.6	65.6	65.5	65.5	65.4	65.3	65.3	65.3	65.2	65.3	65.4	65.4	65.4	65.4	65.4	65.5	65.5	65.6
30/F	132.0	65.6	65.6	65.5	65.5	65.4	65.4	65.3	65.3	65.2	65.2	65.3	65.3	65.3	65.3	65.4	65.4	65.4	65.4	65.6
29/F	128.8	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.3	65.2	65.2	65.2	65.3	65.3	65.3	65.3	65.3	65.4	65.4	65.5
28/F	125.7	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.3	65.2	65.2	65.2	65.3	65.3	65.3	65.3	65.3	65.3	65.4	65.5
27/F	122.5	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.2	65.2	65.1	65.2	65.2	65.2	65.2	65.2	65.2	65.3	65.3	65.4
26/F	119.4	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.2	65.2	65.1	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.3	65.4
25/F	116.2	65.6	65.6	65.5	65.4	65.4	65.4	65.3	65.2	65.2	65.1	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.3	65.3
24/F	113.1	65.6	65.6	65.5	65.4	65.4	65.3	65.3	65.2	65.2	65.1	65.1	65.2	65.1	65.1	65.1	65.1	65.2	65.2	65.3
23/F	109.9	65.6	65.5	65.5	65.4	65.3	65.3	65.2	65.2	65.2	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.2	65.2	65.3
22/F	106.8	65.6	65.5	65.5	65.4	65.3	65.3	65.2	65.2	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.2	65.2	65.3
21/F	103.6	65.6	65.5	65.4	65.4	65.3	65.2	65.2	65.1	65.1	65.0	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.2	65.3
20/F	100.5	65.6	65.5	65.4	65.3	65.3	65.2	65.1	65.1	65.1	65.0	65.0	65.1	65.0	65.0	65.0	65.1	65.1	65.1	65.2
19/F	97.3	65.6	65.5	65.5	65.3	65.3	65.2	65.1	65.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.1	65.1	65.1	65.2
18/F	94.2	65.7	65.6	65.5	65.3	65.3	65.2	65.1	65.1	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.1	65.2
17/F	91.0	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	64.9	65.0	65.0	64.9	64.9	64.9	64.9	65.0	65.0	65.1
16/F	87.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	65.1
15/F	84.7	65.7	65.6	65.5	65.4	65.3	65.2	65.2	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	65.0
14/F	81.6	65.8	65.7	65.6	65.4	65.3	65.3	65.2	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	65.0
13/F	78.4	65.8	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.0	65.0	65.0	64.9	64.9	64.9	64.9	64.9	64.9	64.9	65.0
12/F	75.3	65.8	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.8	64.9	64.9	65.0
11/F	72.1	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.8	64.9	64.9	64.9
10/F	69.0	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	65.0	64.9	64.9	64.9	64.9	64.8	64.8	64.9	64.9
9/F	65.8	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	65.0	64.9	64.9	64.9	64.8	64.8	64.8	64.8	64.9
8/F	62.7	65.9	65.8	65.6	65.5	65.4	65.3	65.2	65.1	65.1	65.0	64.9	64.9	64.9	64.8	64.8	64.8	64.8	64.8	64.9
7/F	59.5	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.0	65.0	64.9	64.9	64.8	64.8	64.8	64.8	64.8	64.8	64.9
6/F	56.4	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	65.0	64.9	64.9	64.8	64.8	64.8	64.8	64.8	64.7	64.7	64.8
5/F	53.2	65.8	65.7	65.6	65.4	65.3	65.2	65.1	65.0	64.9	64.9	64.8	64.8	64.7	64.7	64.7	64.7	64.7	64.7	64.8
4/F	50.1	65.8	65.6	65.5	65.4	65.3	65.2	65.1	64.9	64.9	64.8	64.8	64.7	64.7	64.7	64.6	64.6	64.6	64.6	64.7
3/F	46.9	65.7	65.5	65.4	65.3	65.2	65.1	65.0	64.8	64.7	64.7	64.7	64.6	64.6	64.6	64.6	64.5	64.6	64.6	64.7
2/F	43.8	65.6	65.4	65.3	65.2	65.1	65.0	64.8	64.6	64.6	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.7
1/F	40.6	65.5	65.3	65.1	65.0	64.8	64.8	64.4	64.4	64.4	64.3	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.5	64.6

Base Scenario, Tower 1 at Site B (by Flats)

Site B - Tower 1									
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07	F08
Predicted Noise Level, L10 (1-hr), dB(A)									
35/F	147.7	63.9	62.0	62.2	62.3	62.3	62.4	64.3	65.7
34/F	144.6	63.9	61.9	62.1	62.3	62.3	62.4	64.3	65.7
33/F	141.4	63.8	61.9	62.1	62.3	62.3	62.4	64.4	65.7
32/F	138.3	63.8	61.9	62.1	62.3	62.3	62.5	64.4	65.7
31/F	135.1	63.8	61.9	62.0	62.3	62.3	62.5	64.5	65.7
30/F	132.0	63.8	61.9	62.0	62.2	62.3	62.5	64.5	65.7
29/F	128.8	63.8	61.9	61.9	62.2	62.3	62.6	64.6	65.7
28/F	125.7	63.8	61.8	61.9	62.2	62.3	62.6	64.6	65.7
27/F	122.5	63.8	61.8	61.9	62.1	62.3	62.6	64.7	65.7
26/F	119.4	63.8	61.7	61.8	62.0	62.2	62.6	64.7	65.8
25/F	116.2	63.8	61.7	61.7	62.0	62.2	62.5	64.7	65.8
24/F	113.1	63.7	61.6	61.7	62.0	62.1	62.5	64.7	65.8
23/F	109.9	63.7	61.6	61.6	61.9	62.0	62.4	64.6	65.8
22/F	106.8	63.6	61.5	61.5	61.7	62.0	62.3	64.5	65.8
21/F	103.6	63.5	61.4	61.5	61.6	61.9	62.3	64.4	65.8
20/F	100.5	63.4	61.2	61.3	61.5	61.8	62.2	64.3	65.8
19/F	97.3	63.2	61.0	61.2	61.4	61.7	62.1	64.3	65.9
18/F	94.2	63.1	60.8	61.0	61.3	61.5	62.0	64.3	65.9
17/F	91.0	63.0	60.5	60.8	61.1	61.4	61.8	64.2	65.9
16/F	87.9	62.8	60.4	60.7	60.9	61.3	61.7	64.2	65.9
15/F	84.7	62.7	60.2	60.4	60.7	61.1	61.6	64.1	66.0
14/F	81.6	62.5	60.0	60.2	60.5	60.9	61.5	64.1	66.0
13/F	78.4	62.4	59.8	60.0	60.3	60.8	61.3	64.1	66.0
12/F	75.3	62.2	59.5	59.8	60.1	60.6	61.2	64.0	66.1
11/F	72.1	62.0	59.3	59.6	59.9	60.4	61.0	64.0	66.1
10/F	69.0	61.8	58.9	59.3	59.7	60.3	60.9	63.9	66.1
9/F	65.8	61.7	58.5	58.9	59.6	60.1	60.8	63.9	66.1
8/F	62.7	61.6	58.2	58.5	59.3	59.9	60.6	63.8	66.2
7/F	59.5	61.5	57.8	58.1	58.9	59.7	60.4	63.8	66.2
6/F	56.4	61.4	57.3	57.5	58.2	59.2	60.2	63.7	66.1
5/F	53.2	61.2	56.7	56.9	57.5	58.5	59.6	63.6	66.1
4/F	50.1	61.1	56.0	56.1	56.6	57.2	59.0	63.3	66.1
3/F	46.9	60.9	55.2	55.1	55.5	55.7	57.2	63.0	66.0
2/F	43.8	60.7	54.1	54.0	53.9	54.1	54.9	62.3	65.9
1/F	40.6	60.5	52.7	52.5	51.9	52.2	52.5	60.9	65.9

Base Scenario, Tower 1 at Site B (by Flats)

Site B - Tower 1								
Floor	Height (mPD)	F09	F10	F11	F12	F13	F14	F15
		Predicted Noise Level, L10 (1-hr), dB(A)						
35/F	147.7	65.6	65.5	65.5	65.4	65.5	65.5	65.7
34/F	144.6	65.6	65.5	65.4	65.4	65.5	65.5	65.6
33/F	141.4	65.6	65.5	65.4	65.4	65.5	65.5	65.6
32/F	138.3	65.6	65.5	65.4	65.3	65.4	65.5	65.6
31/F	135.1	65.6	65.5	65.3	65.3	65.4	65.4	65.6
30/F	132.0	65.6	65.5	65.3	65.2	65.3	65.4	65.6
29/F	128.8	65.6	65.4	65.3	65.2	65.3	65.4	65.5
28/F	125.7	65.6	65.4	65.3	65.2	65.3	65.3	65.5
27/F	122.5	65.6	65.4	65.3	65.2	65.2	65.3	65.4
26/F	119.4	65.6	65.4	65.3	65.2	65.2	65.2	65.4
25/F	116.2	65.6	65.4	65.3	65.2	65.2	65.2	65.3
24/F	113.1	65.6	65.4	65.3	65.2	65.2	65.2	65.3
23/F	109.9	65.6	65.4	65.2	65.2	65.1	65.2	65.3
22/F	106.8	65.6	65.4	65.2	65.1	65.1	65.1	65.3
21/F	103.6	65.6	65.4	65.2	65.1	65.1	65.1	65.3
20/F	100.5	65.6	65.3	65.1	65.1	65.1	65.1	65.2
19/F	97.3	65.6	65.3	65.1	65.0	65.0	65.1	65.2
18/F	94.2	65.7	65.3	65.1	65.0	65.0	65.0	65.2
17/F	91.0	65.7	65.4	65.1	65.0	65.0	65.0	65.1
16/F	87.9	65.7	65.4	65.1	65.0	64.9	64.9	65.1
15/F	84.7	65.7	65.4	65.2	65.0	64.9	64.9	65.0
14/F	81.6	65.8	65.4	65.2	65.0	64.9	64.9	65.0
13/F	78.4	65.8	65.5	65.2	65.0	65.0	64.9	65.0
12/F	75.3	65.8	65.5	65.2	65.1	65.0	64.9	65.0
11/F	72.1	65.9	65.5	65.2	65.1	65.0	64.9	64.9
10/F	69.0	65.9	65.5	65.2	65.1	65.0	64.9	64.9
9/F	65.8	65.9	65.5	65.2	65.1	65.0	64.9	64.9
8/F	62.7	65.9	65.5	65.2	65.1	64.9	64.8	64.9
7/F	59.5	65.9	65.5	65.2	65.0	64.9	64.8	64.9
6/F	56.4	65.9	65.5	65.2	65.0	64.9	64.8	64.8
5/F	53.2	65.8	65.4	65.1	64.9	64.8	64.7	64.8
4/F	50.1	65.8	65.4	65.1	64.9	64.8	64.7	64.7
3/F	46.9	65.7	65.3	65.0	64.7	64.7	64.6	64.7
2/F	43.8	65.6	65.2	64.8	64.6	64.5	64.5	64.7
1/F	40.6	65.5	65.0	64.4	64.4	64.4	64.4	64.6

Base Scenario, Tower 2 at Site B (by Noise Assessment Points)

Site B - Tower 2																				
Floor	Height (mPD)	BT2-F01- O01	BT2-F01- O02	BT2-F02- O03	BT2-F02- O04	BT2-F03- O05	BT2-F03- O06	BT2-F03- O07	BT2-F04- O08	BT2-F04- O09	BT2-F04- O10	BT2-F05- O11	BT2-F05- O12	BT2-F06- O13	BT2-F06- O14	BT2-F06- O15	BT2-F07- O16	BT2-F07- O17	BT2-F08- O18	BT2-F08- O19
		Predicted Noise Level, L10 (1-hr), dB(A)																		
35/F	147.7	67.5	66.0	65.9	65.8	65.6	65.5	65.4	65.2	65.2	65.1	64.8	64.7	64.6	64.5	64.5	63.1	63.2	63.3	63.1
34/F	144.6	67.6	66.1	65.9	65.9	65.7	65.6	65.4	65.3	65.2	65.1	65.0	64.7	64.5	64.3	64.2	63.1	63.2	63.3	63.1
33/F	141.4	67.7	66.2	66.0	66.0	65.7	65.6	65.4	65.4	65.3	65.2	65.1	65.0	64.5	64.3	64.0	63.1	63.2	63.3	63.2
32/F	138.3	67.8	66.3	66.1	66.0	65.8	65.6	65.5	65.4	65.3	65.3	65.2	65.0	64.5	64.3	64.0	63.1	63.2	63.3	63.2
31/F	135.1	67.9	66.4	66.2	66.1	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	64.5	64.4	63.9	63.1	63.3	63.4	63.2
30/F	132.0	68.1	66.5	66.3	66.2	66.0	65.8	65.7	65.6	65.5	65.4	65.3	65.2	64.6	64.4	63.9	63.1	63.3	63.4	63.3
29/F	128.8	68.2	66.6	66.4	66.3	66.1	65.9	65.8	65.7	65.6	65.5	65.4	65.3	64.6	64.5	64.0	63.1	63.3	63.4	63.3
28/F	125.7	68.3	66.7	66.5	66.4	66.1	66.0	65.9	65.8	65.7	65.6	65.5	65.4	64.7	64.5	64.0	63.1	63.3	63.4	63.4
27/F	122.5	68.4	66.8	66.6	66.6	66.2	66.1	66.0	65.9	65.9	65.8	65.7	65.5	64.8	64.6	64.1	63.1	63.3	63.4	63.4
26/F	119.4	68.5	66.9	66.8	66.7	66.4	66.3	66.1	66.1	66.0	65.9	65.8	65.6	64.9	64.7	64.2	63.1	63.3	63.4	63.5
25/F	116.2	68.7	67.0	66.9	66.8	66.5	66.4	66.3	66.2	66.1	66.0	65.9	65.8	65.0	64.8	64.3	63.1	63.3	63.5	63.5
24/F	113.1	68.8	67.2	67.0	66.9	66.6	66.5	66.4	66.3	66.3	66.2	66.1	65.9	65.1	64.9	64.4	63.1	63.3	63.5	63.6
23/F	109.9	68.9	67.3	67.2	67.1	66.8	66.7	66.5	66.5	66.4	66.3	66.2	66.0	65.2	65.1	64.5	63.1	63.4	63.5	63.6
22/F	106.8	69.1	67.4	67.3	67.2	66.9	66.8	66.7	66.6	66.6	66.5	66.4	66.2	65.3	65.2	64.6	63.2	63.4	63.6	63.7
21/F	103.6	69.2	67.6	67.4	67.3	67.0	67.0	66.8	66.8	66.7	66.6	66.5	66.3	65.4	65.3	64.7	63.2	63.4	63.6	63.7
20/F	100.5	69.3	67.7	67.6	67.4	67.2	67.1	67.0	67.0	66.9	66.8	66.7	66.5	65.5	65.4	64.7	63.1	63.4	63.6	63.8
19/F	97.3	69.4	67.8	67.7	67.5	67.3	67.3	67.2	67.1	67.1	67.0	66.8	66.6	65.7	65.3	64.8	63.1	63.4	63.6	63.8
18/F	94.2	69.6	67.9	67.8	67.6	67.5	67.4	67.3	67.3	67.2	67.1	67.0	66.8	65.8	65.4	64.9	63.1	63.4	63.6	63.8
17/F	91.0	69.7	68.1	68.0	67.8	67.6	67.6	67.5	67.4	67.4	67.3	67.1	66.9	66.0	65.5	65.0	63.0	63.3	63.6	63.8
16/F	87.9	69.8	68.2	68.1	67.9	67.7	67.7	67.6	67.6	67.5	67.4	67.3	67.1	66.1	65.6	65.0	62.9	63.3	63.6	63.8
15/F	84.7	70.0	68.3	68.2	68.0	67.9	67.8	67.8	67.7	67.7	67.6	67.4	67.2	66.3	65.7	65.0	62.8	63.2	63.5	63.8
14/F	81.6	70.2	68.5	68.4	68.2	68.0	68.0	67.9	67.9	67.8	67.7	67.6	67.4	66.4	65.8	65.1	62.7	63.1	63.5	63.8
13/F	78.4	70.4	68.6	68.6	68.4	68.2	68.2	68.1	68.0	68.0	67.9	67.7	67.5	66.5	65.9	65.3	62.6	63.0	63.3	63.7
12/F	75.3	70.6	68.8	68.8	68.6	68.4	68.3	68.3	68.2	68.1	68.0	67.9	67.6	66.6	66.1	65.4	62.5	62.9	63.2	63.6
11/F	72.1	70.8	69.0	69.0	68.8	68.6	68.5	68.4	68.4	68.3	68.1	67.9	67.7	66.8	66.2	65.6	62.3	62.8	63.2	63.5
10/F	69.0	71.0	69.2	69.2	69.0	68.9	68.7	68.6	68.6	68.5	68.3	68.0	67.8	67.0	66.3	65.7	62.2	62.6	63.0	63.5
9/F	65.8	71.2	69.5	69.4	69.2	69.1	68.9	68.8	68.7	68.6	68.4	68.1	68.0	67.1	66.5	65.9	62.0	62.5	62.8	63.2
8/F	62.7	71.4	69.7	69.5	69.4	69.3	69.1	69.0	68.9	68.8	68.5	68.3	68.2	67.3	66.7	66.1	61.8	62.3	62.7	63.1
7/F	59.5	71.7	69.9	69.8	69.7	69.5	69.3	69.2	69.1	68.9	68.7	68.5	68.3	67.5	66.9	66.3	61.6	62.1	62.5	63.0
6/F	56.4	71.9	70.2	70.0	69.9	69.7	69.5	69.4	69.2	69.0	68.9	68.7	68.6	67.7	67.1	66.5	61.2	61.8	62.3	62.8
5/F	53.2	72.2	70.4	70.3	70.1	69.8	69.6	69.5	69.3	69.2	69.0	68.9	68.8	68.0	67.4	66.8	60.8	61.4	62.0	62.5
4/F	50.1	72.5	70.7	70.5	70.2	69.9	69.7	69.5	69.4	69.4	69.2	69.1	69.0	68.2	67.7	67.0	60.1	60.8	61.6	62.1
3/F	46.9	72.8	70.9	70.6	70.3	69.9	69.6	69.6	69.5	69.5	69.4	69.3	69.3	68.5	68.0	67.3	59.1	60.0	60.8	61.5
2/F	43.8	73.1	70.9	70.6	70.3	69.8	69.6	69.5	69.6	69.6	69.6	69.5	69.5	68.8	68.3	67.6	57.4	58.4	59.4	60.2
1/F	40.6	73.5	70.3	70.2	70.0	69.4	69.3	69.4	69.6	69.7	69.7	69.6	69.6	69.0	68.6	67.9	54.4	55.5	56.5	57.4

Base Scenario, Tower 2 at Site B (by Noise Assessment Points)

Site B - Tower 2												
Floor	Height (mPD)	BT2-F09- O20	BT2-F09- O21	BT2-F09- O22	BT2-F10- O23	BT2-F10- O24	BT2-F10- O25	BT2-F11- O26	BT2-F11- O27	BT2-F12- O28	BT2-F12- O29	BT2-F12- O30
		Predicted Noise Level, L10 (1-hr), dB(A)										
35/F	147.7	63.0	63.1	63.2	63.2	63.4	63.6	63.8	63.9	64.2	64.6	64.7
34/F	144.6	63.0	63.1	63.2	63.3	63.5	63.6	63.8	64.0	64.3	64.7	64.7
33/F	141.4	63.1	63.2	63.3	63.4	63.5	63.7	63.9	64.0	64.3	64.7	64.8
32/F	138.3	63.2	63.3	63.3	63.4	63.6	63.7	64.0	64.1	64.4	64.8	64.9
31/F	135.1	63.2	63.3	63.4	63.5	63.7	63.8	64.1	64.2	64.5	64.9	65.0
30/F	132.0	63.3	63.4	63.5	63.6	63.8	63.9	64.1	64.3	64.6	65.0	65.1
29/F	128.8	63.4	63.5	63.6	63.7	63.8	64.0	64.2	64.4	64.6	65.1	65.1
28/F	125.7	63.5	63.5	63.6	63.7	63.9	64.0	64.3	64.4	64.7	65.1	65.2
27/F	122.5	63.5	63.6	63.7	63.8	64.0	64.1	64.3	64.5	64.8	65.2	65.3
26/F	119.4	63.6	63.7	63.8	63.9	64.1	64.2	64.4	64.6	64.9	65.3	65.4
25/F	116.2	63.6	63.8	63.9	64.0	64.1	64.3	64.5	64.7	64.9	65.4	65.4
24/F	113.1	63.7	63.8	64.0	64.1	64.2	64.3	64.5	64.8	65.0	65.4	65.5
23/F	109.9	63.8	63.9	64.0	64.1	64.3	64.4	64.6	64.8	65.1	65.5	65.6
22/F	106.8	63.8	63.9	64.1	64.2	64.4	64.5	64.7	64.9	65.1	65.6	65.7
21/F	103.6	63.9	64.0	64.1	64.3	64.5	64.6	64.8	65.0	65.2	65.7	65.8
20/F	100.5	63.9	64.0	64.2	64.4	64.5	64.7	64.9	65.1	65.3	65.8	65.9
19/F	97.3	64.0	64.1	64.3	64.4	64.6	64.8	64.9	65.1	65.4	66.0	66.0
18/F	94.2	64.0	64.2	64.3	64.5	64.7	64.9	65.0	65.2	65.5	66.1	66.1
17/F	91.0	64.0	64.2	64.4	64.5	64.7	65.0	65.1	65.3	65.6	66.2	66.2
16/F	87.9	64.1	64.3	64.4	64.6	64.8	65.0	65.2	65.4	65.8	66.3	66.3
15/F	84.7	64.1	64.3	64.5	64.7	64.9	65.1	65.4	65.6	65.9	66.5	66.5
14/F	81.6	64.1	64.3	64.5	64.7	65.0	65.2	65.4	65.7	66.0	66.6	66.6
13/F	78.4	64.0	64.3	64.6	64.8	65.0	65.3	65.5	65.8	66.2	66.8	66.8
12/F	75.3	64.0	64.3	64.6	64.8	65.1	65.3	65.6	65.9	66.2	66.9	66.9
11/F	72.1	63.8	64.2	64.5	64.8	65.1	65.4	65.7	66.0	66.3	67.1	67.1
10/F	69.0	63.7	64.0	64.4	64.8	65.2	65.4	65.8	66.1	66.5	67.2	67.3
9/F	65.8	63.7	63.9	64.3	64.7	65.1	65.5	65.8	66.2	66.6	67.4	67.5
8/F	62.7	63.4	63.8	64.1	64.5	65.0	65.4	65.9	66.2	66.7	67.5	67.7
7/F	59.5	63.3	63.6	64.0	64.3	64.7	65.3	65.8	66.2	66.8	67.7	67.8
6/F	56.4	63.1	63.4	63.7	64.1	64.6	64.9	65.6	66.2	66.8	67.7	68.0
5/F	53.2	62.9	63.2	63.5	63.9	64.3	64.8	65.3	66.0	66.8	67.8	68.2
4/F	50.1	62.6	62.9	63.3	63.7	64.0	64.4	65.1	65.6	66.5	67.8	68.3
3/F	46.9	62.1	62.4	62.8	63.3	63.7	64.1	64.6	65.3	66.0	67.5	68.5
2/F	43.8	60.9	61.5	62.1	62.6	63.1	63.7	64.3	64.7	65.7	66.8	68.5
1/F	40.6	58.5	59.2	60.0	60.9	61.8	62.6	63.5	64.2	65.0	66.0	68.1

Base Scenario, Tower 2 at Site B (by Flats)

Site B - Tower 2									
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07	F08
Predicted Noise Level, L10 (1-hr), dB(A)									
35/F	147.7	67.5	65.9	65.6	65.2	64.8	64.6	63.2	63.3
34/F	144.6	67.6	65.9	65.7	65.3	65.0	64.5	63.2	63.3
33/F	141.4	67.7	66.0	65.7	65.4	65.1	64.5	63.2	63.3
32/F	138.3	67.8	66.1	65.8	65.4	65.2	64.5	63.2	63.3
31/F	135.1	67.9	66.2	65.9	65.5	65.2	64.5	63.3	63.4
30/F	132	68.1	66.3	66.0	65.6	65.3	64.6	63.3	63.4
29/F	128.8	68.2	66.4	66.1	65.7	65.4	64.6	63.3	63.4
28/F	125.7	68.3	66.5	66.1	65.8	65.5	64.7	63.3	63.4
27/F	122.5	68.4	66.6	66.2	65.9	65.7	64.8	63.3	63.4
26/F	119.4	68.5	66.8	66.4	66.1	65.8	64.9	63.3	63.5
25/F	116.2	68.7	66.9	66.5	66.2	65.9	65.0	63.3	63.5
24/F	113.1	68.8	67.0	66.6	66.3	66.1	65.1	63.3	63.6
23/F	109.9	68.9	67.2	66.8	66.5	66.2	65.2	63.4	63.6
22/F	106.8	69.1	67.3	66.9	66.6	66.4	65.3	63.4	63.7
21/F	103.6	69.2	67.4	67.0	66.8	66.5	65.4	63.4	63.7
20/F	100.5	69.3	67.6	67.2	67.0	66.7	65.5	63.4	63.8
19/F	97.3	69.4	67.7	67.3	67.1	66.8	65.7	63.4	63.8
18/F	94.2	69.6	67.8	67.5	67.3	67.0	65.8	63.4	63.8
17/F	91	69.7	68.0	67.6	67.4	67.1	66.0	63.3	63.8
16/F	87.9	69.8	68.1	67.7	67.6	67.3	66.1	63.3	63.8
15/F	84.7	70.0	68.2	67.9	67.7	67.4	66.3	63.2	63.8
14/F	81.6	70.2	68.4	68.0	67.9	67.6	66.4	63.1	63.8
13/F	78.4	70.4	68.6	68.2	68.0	67.7	66.5	63.0	63.7
12/F	75.3	70.6	68.8	68.4	68.2	67.9	66.6	62.9	63.6
11/F	72.1	70.8	69.0	68.6	68.4	67.9	66.8	62.8	63.5
10/F	69	71.0	69.2	68.9	68.6	68.0	67.0	62.6	63.5
9/F	65.8	71.2	69.4	69.1	68.7	68.1	67.1	62.5	63.2
8/F	62.7	71.4	69.5	69.3	68.9	68.3	67.3	62.3	63.1
7/F	59.5	71.7	69.8	69.5	69.1	68.5	67.5	62.1	63.0
6/F	56.4	71.9	70.0	69.7	69.2	68.7	67.7	61.8	62.8
5/F	53.2	72.2	70.3	69.8	69.3	68.9	68.0	61.4	62.5
4/F	50.1	72.5	70.5	69.9	69.4	69.1	68.2	60.8	62.1
3/F	46.9	72.8	70.6	69.9	69.5	69.3	68.5	60.0	61.5
2/F	43.8	73.1	70.6	69.8	69.6	69.5	68.8	58.4	60.2
1/F	40.6	73.5	70.2	69.4	69.7	69.6	69.0	55.5	57.4

Base Scenario, Tower 2 at Site B (by Flats)

Site B - Tower 2					
Floor	Height (mPD)	F09	F10	F11	F12
		Predicted Noise Level, L10 (1-hr), dB(A)			
35/F	147.7	63.2	63.6	63.9	64.7
34/F	144.6	63.2	63.6	64.0	64.7
33/F	141.4	63.3	63.7	64.0	64.8
32/F	138.3	63.3	63.7	64.1	64.9
31/F	135.1	63.4	63.8	64.2	65.0
30/F	132	63.5	63.9	64.3	65.1
29/F	128.8	63.6	64.0	64.4	65.1
28/F	125.7	63.6	64.0	64.4	65.2
27/F	122.5	63.7	64.1	64.5	65.3
26/F	119.4	63.8	64.2	64.6	65.4
25/F	116.2	63.9	64.3	64.7	65.4
24/F	113.1	64.0	64.3	64.8	65.5
23/F	109.9	64.0	64.4	64.8	65.6
22/F	106.8	64.1	64.5	64.9	65.7
21/F	103.6	64.1	64.6	65.0	65.8
20/F	100.5	64.2	64.7	65.1	65.9
19/F	97.3	64.3	64.8	65.1	66.0
18/F	94.2	64.3	64.9	65.2	66.1
17/F	91	64.4	65.0	65.3	66.2
16/F	87.9	64.4	65.0	65.4	66.3
15/F	84.7	64.5	65.1	65.6	66.5
14/F	81.6	64.5	65.2	65.7	66.6
13/F	78.4	64.6	65.3	65.8	66.8
12/F	75.3	64.6	65.3	65.9	66.9
11/F	72.1	64.5	65.4	66.0	67.1
10/F	69	64.4	65.4	66.1	67.3
9/F	65.8	64.3	65.5	66.2	67.5
8/F	62.7	64.1	65.4	66.2	67.7
7/F	59.5	64.0	65.3	66.2	67.8
6/F	56.4	63.7	64.9	66.2	68.0
5/F	53.2	63.5	64.8	66.0	68.2
4/F	50.1	63.3	64.4	65.6	68.3
3/F	46.9	62.8	64.1	65.3	68.5
2/F	43.8	62.1	63.7	64.7	68.5
1/F	40.6	60.0	62.6	64.2	68.1

Base Scenario, Tower 3 at Site B (by Noise Assessment Points)

Site B - Tower 3													
Floor	Height (mPD)	BT3-F01-O01	BT3-F01-O02	BT3-F01-O03	BT3-F02-O04	BT3-F02-O05	BT3-F03-O06	BT3-F03-O07	BT3-F04-O08	BT3-F04-O09	BT3-F05-O10	BT3-F05-O11	BT3-F05-O12
Predicted Noise Level, L10 (1-hr), dB(A)													
15/F	127.7	65.5	65.7	65.9	66.2	66.4	66.7	66.8	67.0	67.2	67.5	68.1	69.0
14/F	124.6	65.7	65.8	66.1	66.3	66.6	66.8	66.9	67.1	67.3	67.6	68.2	69.2
13/F	121.4	65.8	66.0	66.2	66.4	66.7	66.9	67.0	67.2	67.4	67.8	68.4	69.3
12/F	118.3	65.9	66.1	66.3	66.6	66.8	67.1	67.2	67.4	67.6	67.9	68.5	69.4
11/F	115.1	66.1	66.2	66.4	66.7	67.0	67.2	67.3	67.5	67.7	68.0	68.6	69.6
10/F	112.0	66.2	66.4	66.5	66.8	67.1	67.3	67.4	67.6	67.9	68.2	68.8	69.7
9/F	108.8	66.4	66.5	66.7	66.9	67.2	67.4	67.5	67.8	68.0	68.3	68.9	69.9
8/F	105.7	66.5	66.7	66.8	67.0	67.3	67.5	67.7	67.9	68.2	68.5	69.1	70.1
7/F	102.5	66.6	66.8	67.0	67.2	67.4	67.6	67.8	68.0	68.3	68.6	69.2	70.3
6/F	99.4	66.8	66.9	67.1	67.3	67.5	67.7	67.9	68.1	68.4	68.8	69.4	70.4
5/F	96.2	66.9	67.1	67.2	67.4	67.6	67.8	67.9	68.2	68.5	68.9	69.6	70.6
4/F	93.1	67.0	67.1	67.4	67.5	67.7	67.9	68.0	68.2	68.5	69.1	69.7	70.8
3/F	89.9	67.1	67.2	67.4	67.5	67.8	67.9	68.0	68.2	68.6	69.1	69.9	70.9
2/F	86.8	67.1	67.2	67.4	67.5	67.7	67.7	67.9	68.0	68.5	69.0	70.1	71.1
1/F	83.6	67.0	67.1	67.3	67.4	67.6	67.7	67.7	67.9	68.1	68.6	69.9	71.3

Site B - Tower 3													
Floor	Height (mPD)	BT3-F06-O13	BT3-F06-O14	BT3-F06-O15	BT3-F06-O16	BT3-F07-O17	BT3-F07-O18	BT3-F07-O19	BT3-F08-O20	BT3-F08-O21	BT3-F08-O22	BT3-F09-O23	BT3-F09-O24
Predicted Noise Level, L10 (1-hr), dB(A)													
15/F	127.7	67.9	67.9	67.9	68.0	65.9	64.6	64.3	63.4	63.1	60.2	58.8	60.5
14/F	124.6	68.0	68.0	68.0	68.1	65.9	64.6	64.2	63.3	63.0	60.3	58.8	60.6
13/F	121.4	68.1	68.1	68.1	68.2	65.9	64.6	64.2	63.3	63.0	60.3	58.9	60.7
12/F	118.3	68.2	68.2	68.2	68.3	66.0	64.5	64.2	63.2	62.9	60.4	58.9	60.8
11/F	115.1	68.4	68.3	68.3	68.4	66.0	64.5	64.1	63.2	62.8	60.5	59.0	60.9
10/F	112.0	68.5	68.4	68.4	68.5	66.0	64.5	64.1	63.1	62.8	60.6	59.0	61.0
9/F	108.8	68.6	68.6	68.6	68.7	66.0	64.5	64.1	63.1	62.7	60.7	59.1	61.1
8/F	105.7	68.8	68.7	68.7	68.8	66.1	64.5	64.1	63.0	62.7	60.7	59.2	61.2
7/F	102.5	68.9	68.8	68.8	68.9	66.1	64.5	64.1	63.0	62.6	60.8	59.2	61.4
6/F	99.4	69.0	69.0	69.0	69.1	66.1	64.4	64.0	62.9	62.6	60.9	59.4	61.5
5/F	96.2	69.2	69.1	69.1	69.2	66.1	64.4	64.0	62.9	62.5	61.0	59.5	61.6
4/F	93.1	69.3	69.3	69.2	69.3	66.1	64.4	64.0	62.8	62.4	61.0	59.5	61.8
3/F	89.9	69.5	69.4	69.4	69.5	66.1	64.4	63.9	62.8	62.4	61.1	59.5	62.0
2/F	86.8	69.6	69.6	69.5	69.6	65.9	64.3	63.8	62.7	62.2	61.1	59.5	62.1
1/F	83.6	69.8	69.7	69.7	69.8	65.5	64.1	63.5	62.4	61.9	61.2	59.5	62.2

Base Scenario, Tower 3 at Site B (by Flats)

Site B - Tower 3						
Floor	Height (mPD)	F01	F02	F03	F04	F05
		Predicted Noise Level, L10 (1-hr), dB(A)				
15/F	127.7	65.9	66.4	66.8	67.2	69.0
14/F	124.6	66.1	66.6	66.9	67.3	69.2
13/F	121.4	66.2	66.7	67.0	67.4	69.3
12/F	118.3	66.3	66.8	67.2	67.6	69.4
11/F	115.1	66.4	67.0	67.3	67.7	69.6
10/F	112.0	66.5	67.1	67.4	67.9	69.7
9/F	108.8	66.7	67.2	67.5	68.0	69.9
8/F	105.7	66.8	67.3	67.7	68.2	70.1
7/F	102.5	67.0	67.4	67.8	68.3	70.3
6/F	99.4	67.1	67.5	67.9	68.4	70.4
5/F	96.2	67.2	67.6	67.9	68.5	<u>70.6</u>
4/F	93.1	67.4	67.7	68.0	68.5	<u>70.8</u>
3/F	89.9	67.4	67.8	68.0	68.6	<u>70.9</u>
2/F	86.8	67.4	67.7	67.9	68.5	<u>71.1</u>
1/F	83.6	67.3	67.6	67.7	68.1	<u>71.3</u>

Site B - Tower 3					
Floor	Height (mPD)	F06	F07	F08	F09
		Predicted Noise Level, L10 (1-hr), dB(A)			
15/F	127.7	68.0	65.9	63.4	60.5
14/F	124.6	68.1	65.9	63.3	60.6
13/F	121.4	68.2	65.9	63.3	60.7
12/F	118.3	68.3	66.0	63.2	60.8
11/F	115.1	68.4	66.0	63.2	60.9
10/F	112.0	68.5	66.0	63.1	61.0
9/F	108.8	68.7	66.0	63.1	61.1
8/F	105.7	68.8	66.1	63.0	61.2
7/F	102.5	68.9	66.1	63.0	61.4
6/F	99.4	69.1	66.1	62.9	61.5
5/F	96.2	69.2	66.1	62.9	61.6
4/F	93.1	69.3	66.1	62.8	61.8
3/F	89.9	69.5	66.1	62.8	62.0
2/F	86.8	69.6	65.9	62.7	62.1
1/F	83.6	69.8	65.5	62.4	62.2

**APPENDIX 4-4
PROPOSED MITIGATION MEASURES &
TRAFFIC NOISE ASSESSMENT RESULTS
(MITIGATED SCENARIO)**

Mitigated Scenario, Tower 1 at Site A1 (by Noise Assessment Points)

Site A1 - Tower 1 (High Zone)																							
Floor	Height (mPD)	AT1-HZ-F01-O01	AT1-HZ-F01-O02	AT1-HZ-F01-O03	AT1-HZ-F01-O04	AT1-HZ-F02-O05	AT1-HZ-F02-O06	AT1-HZ-F02-O07	AT1-HZ-F03-O08	AT1-HZ-F03-O09	AT1-HZ-F03-O10	AT1-HZ-F04-O11	AT1-HZ-F04-O12	AT1-HZ-F04-O13	AT1-HZ-F05-O14	AT1-HZ-F05-O15	AT1-HZ-F06-O16	AT1-HZ-F06-O17	AT1-HZ-F07-O18	AT1-HZ-F07-O19	AT1-HZ-F07-O20	AT1-HZ-F07-O21	AT1-HZ-F07-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
38/F	147.3	65.6	63.1	63.0	63.2	63.6	64.0	63.9	63.8	63.7	61.1	57.5	63.2	61.5	62.3	59.1	65.8	67.7	68.8	69.5	67.2	67.8	67.5
37/F	144.1	65.5	63.0	62.9	63.1	63.5	63.9	63.8	63.7	63.6	60.9	57.3	63.2	61.4	62.2	59.0	65.8	67.7	68.9	69.6	67.3	67.8	67.5
36/F	141.0	65.4	62.9	62.8	63.1	63.4	63.7	63.7	63.6	63.5	60.8	57.3	63.1	61.4	62.2	59.0	65.8	67.8	69.0	69.7	67.3	67.9	67.6
35/F	137.8	65.2	62.8	62.7	63.0	63.3	63.6	63.6	63.5	63.4	60.7	57.3	63.0	61.3	62.1	59.0	65.7	67.8	69.1	69.8	67.4	68.0	67.6
34/F	134.7	65.1	62.8	62.7	62.9	63.2	63.5	63.5	63.4	63.3	60.6	57.3	62.9	61.3	62.0	59.0	65.7	67.9	69.2	69.9	67.4	68.0	67.6
33/F	131.5	65.0	62.6	62.6	62.8	63.1	63.4	63.3	63.3	63.1	60.5	57.3	62.8	61.2	61.8	59.1	65.7	67.9	69.2	70.0	67.5	68.1	67.6
32/F	128.4	64.8	62.5	62.6	62.8	63.0	63.3	63.2	63.0	62.9	60.3	57.4	62.7	61.1	61.7	59.1	65.7	68.0	69.3	70.1	67.5	68.1	67.6
31/F	125.2	64.6	62.3	62.6	62.8	63.0	63.2	63.0	62.8	62.7	60.2	57.4	62.6	61.1	61.6	59.1	65.6	68.0	69.4	70.1	67.5	68.1	67.6
30/F	122.1	64.4	62.1	62.6	62.7	62.9	63.1	62.9	62.7	62.5	60.1	57.4	62.4	61.0	61.5	59.1	65.6	68.0	69.4	70.2	67.4	68.1	67.5
29/F	118.9	64.2	62.0	62.6	62.7	62.9	63.0	62.7	62.5	62.2	59.9	57.4	62.2	60.9	61.4	59.1	65.5	68.0	69.5	70.3	67.4	68.0	67.4
28/F	115.8	64.0	61.7	62.6	62.7	62.8	63.0	62.6	62.2	61.9	59.7	57.4	62.0	60.8	61.3	59.2	65.4	68.1	69.6	70.4	67.3	67.9	67.3
27/F	112.6	63.8	61.5	62.6	62.7	62.8	62.9	62.5	62.1	61.6	59.5	57.4	61.7	60.7	61.2	59.2	65.3	68.1	69.6	70.4	67.3	67.8	67.2
26/F	109.5	63.5	61.2	62.6	62.7	62.7	62.8	62.4	61.9	61.3	59.3	57.4	61.5	60.6	61.0	59.2	65.2	68.1	69.6	70.5	67.1	67.8	67.1
25/F	106.3	63.3	60.9	62.7	62.7	62.7	62.8	62.3	61.7	61.1	59.1	57.4	61.1	60.5	60.9	59.2	65.0	68.1	69.7	70.5	66.9	67.7	67.0
24/F	103.2	63.0	60.7	62.7	62.7	62.7	62.8	62.2	61.6	60.8	58.9	57.3	60.9	60.3	60.8	59.2	64.9	68.1	69.7	70.6	66.8	67.6	66.9
23/F	100.0	62.7	60.5	62.8	62.7	62.7	62.7	62.1	61.5	60.6	58.6	57.3	60.6	60.2	60.6	59.2	64.7	68.1	69.7	70.5	66.6	67.5	66.8
22/F	96.9	62.6	60.4	62.8	62.8	62.7	62.8	62.1	61.4	60.3	58.4	57.3	60.3	60.0	60.4	59.2	64.6	68.1	69.7	70.6	66.4	67.5	66.6

Site A1 - Tower 1 (Low Zone)																							
Floor	Height (mPD)	AT1-LZ-F01-O01	AT1-LZ-F01-O02	AT1-LZ-F01-O03	AT1-LZ-F01-O04	AT1-LZ-F02-O05	AT1-LZ-F02-O06	AT1-LZ-F02-O07	AT1-LZ-F03-O08	AT1-LZ-F03-O09	AT1-LZ-F03-O10	AT1-LZ-F04-O11	AT1-LZ-F04-O12	AT1-LZ-F04-O13	AT1-LZ-F05-O14	AT1-LZ-F05-O15	AT1-LZ-F06-O16	AT1-LZ-F06-O17	AT1-LZ-F07-O18	AT1-LZ-F07-O19	AT1-LZ-F07-O20	AT1-LZ-F07-O21	AT1-LZ-F07-O22
		Predicted Noise Level, L10 (1-hr), dB(A)																					
19/F	87.4	62.4	60.1	63.1	63.0	62.9	62.9	62.1	61.2	59.8	57.7	57.3	59.7	59.5	59.9	59.2	64.5	68.3	70.0	70.8	65.9	67.2	66.1
18/F	84.3	62.4	60.1	63.2	63.1	62.9	62.9	62.2	61.2	59.8	57.6	57.2	59.6	59.4	59.8	59.2	64.5	68.5	70.2	70.9	65.7	67.1	66.0
17/F	81.1	62.4	60.1	63.4	63.2	63.0	63.0	62.2	61.2	59.7	57.5	57.2	59.5	59.3	59.7	59.2	64.5	68.6	70.3	70.9	65.5	67.0	66.0
16/F	78.0	62.3	60.1	63.5	63.4	63.1	63.1	62.3	61.3	59.6	57.5	57.2	59.5	59.3	59.7	59.3	64.6	68.7	70.5	71.0	65.3	67.1	66.0
15/F	74.8	62.3	60.1	63.6	63.5	63.2	63.2	62.3	61.3	59.6	57.4	57.2	59.4	59.3	59.7	59.3	64.7	68.9	70.8	71.2	65.2	67.1	66.1
14/F	71.7	62.3	60.2	63.8	63.6	63.3	63.3	62.4	61.4	59.6	57.4	57.2	59.4	59.3	59.7	59.4	64.9	69.0	71.0	71.3	65.1	67.2	66.2
13/F	68.5	62.3	60.2	63.9	63.7	63.4	63.4	62.5	61.4	59.7	57.4	57.2	59.5	59.3	59.8	59.4	65.0	69.2	FG	67.5	65.1	67.4	66.3
12/F	65.4	62.3	60.5	64.0	63.9	63.6	63.5	62.6	61.5	59.8	57.4	57.3	59.6	59.3	59.9	59.5	65.1	69.4	FG	67.7	65.2	67.6	66.5
11/F	62.2	62.3	60.5	64.1	64.0	63.7	63.6	62.7	61.5	59.9	57.4	57.3	59.7	59.4	60.0	59.5	65.3	69.6	FG	67.9	65.2	67.7	66.6
10/F	59.1	62.1	60.2	64.3	64.1	63.8	63.7	62.7	61.6	60.0	57.4	57.3	59.8	59.5	60.1	59.6	65.4	69.8	FG	68.1	65.2	67.9	66.6
9/F	55.9	61.9	59.8	64.4	64.2	63.9	63.8	62.8	61.7	60.0	57.4	57.3	59.9	59.5	60.2	59.7	65.6	70.0	FG	68.4	65.3	68.1	66.9
8/F	52.8	62.0	59.5	64.5	64.3	64.0	63.9	62.9	61.8	60.1	57.4	57.2	59.9	59.6	60.3	59.8	65.8	70.2	FG	68.7	65.5	68.4	67.1
7/F	49.6	62.3	59.6	64.6	64.4	64.1	63.9	63.0	61.8	60.1	57.4	57.0	60.0	59.6	60.4	59.9	66.0	70.5	FG	69.0	65.9	68.7	67.4
6/F	46.5	62.6	59.9	64.6	64.5	64.0	63.9	62.9	61.7	60.0	57.2	56.6	59.9	59.6	60.5	60.0	66.2	70.7	FG	69.2	66.2	69.0	67.8
5/F	43.3	63.1	60.3	64.6	64.5	64.0	63.9	62.9	61.6	59.7	57.0	56.2	59.6	59.3	60.5	60.0	66.4	71.0	FG	69.5	66.6	69.4	68.1
4/F	40.2	63.6	60.7	64.6	64.5	64.0	63.8	62.8	61.5	59.3	56.7	55.7	59.2	58.8	60.3	59.9	66.6	71.2	FG	69.8	67.0	69.7	68.5
3/F	37.0	64.1	60.9	64.6	64.5	63.9	63.7	62.7	61.3	58.8	56.2	55.0	58.7	58.4	59.7	59.3	66.7	71.4	FG	70.1	67.3	70.1	68.9
2/F	33.9	64.6	60.7	64.5	64.4	63.8	63.6	62.5	60.9	58.0	55.2	53.8	57.9	57.6	59.0	58.4	66.8	69.6	FG	70.4	67.7	70.5	69.3
1/F	30.7	64.8	58.2	64.1	64.0	63.6	63.3	62.1	60.3	56.7	54.1	52.7	56.6	56.4	58.3	57.6	66.7	69.8	FG	70.7	68.1	70.8	69.6

ID	Mitigation Measure	Correction
	Acoustic Window	-4.0 dB(A)
	Acoustic Balcony	-2.0 dB(A)
FG	Fixed Glazing	--

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 1 at Site A1 (by Flats)

Site A1 - Tower 1 (High Zone)								
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07
Predicted Noise Level, L10 (1-hr), dB(A)								
38/F	147.3	65.6	64.0	63.8	63.2	62.3	67.7	69.5
37/F	144.1	65.5	63.9	63.7	63.2	62.2	67.7	69.6
36/F	141.0	65.4	63.7	63.6	63.1	62.2	67.8	69.7
35/F	137.8	65.2	63.6	63.5	63.0	62.1	67.8	69.8
34/F	134.7	65.1	63.5	63.4	62.9	62.0	67.9	69.9
33/F	131.5	65.0	63.4	63.3	62.8	61.8	67.9	70.0
32/F	128.4	64.8	63.3	63.0	62.7	61.7	68.0	70.1
31/F	125.2	64.6	63.2	62.8	62.6	61.6	68.0	70.1
30/F	122.1	64.4	63.1	62.7	62.4	61.5	68.0	70.2
29/F	118.9	64.2	63.0	62.5	62.2	61.4	68.0	70.3
28/F	115.8	64.0	63.0	62.2	62.0	61.3	68.1	70.4
27/F	112.6	63.8	62.9	62.1	61.7	61.2	68.1	70.4
26/F	109.5	63.5	62.8	61.9	61.5	61.0	68.1	<u>70.5</u>
25/F	106.3	63.3	62.8	61.7	61.1	60.9	68.1	<u>70.5</u>
24/F	103.2	63.0	62.8	61.6	60.9	60.8	68.1	<u>70.6</u>
23/F	100.0	62.8	62.7	61.5	60.6	60.6	68.1	<u>70.5</u>
22/F	96.9	62.8	62.8	61.4	60.3	60.4	68.1	<u>70.6</u>

Site A1 - Tower 1 (Low Zone)								
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07
Predicted Noise Level, L10 (1-hr), dB(A)								
19/F	87.4	63.1	62.9	61.2	59.7	59.9	68.3	<u>70.8</u>
18/F	84.3	63.2	62.9	61.2	59.6	59.8	68.5	<u>70.9</u>
17/F	81.1	63.4	63.0	61.2	59.5	59.7	68.6	<u>70.9</u>
16/F	78.0	63.5	63.1	61.3	59.5	59.7	68.7	<u>71.0</u>
15/F	74.8	63.6	63.2	61.3	59.4	59.7	68.9	<u>71.2</u>
14/F	71.7	63.8	63.3	61.4	59.4	59.7	69.0	<u>71.3</u>
13/F	68.5	63.9	63.4	61.4	59.5	59.8	69.2	67.5
12/F	65.4	64.0	63.6	61.5	59.6	59.9	69.4	67.7
11/F	62.2	64.1	63.7	61.5	59.7	60.0	69.6	67.9
10/F	59.1	64.3	63.8	61.6	59.8	60.1	69.8	68.1
9/F	55.9	64.4	63.9	61.7	59.9	60.2	70.0	68.4
8/F	52.8	64.5	64.0	61.8	59.9	60.3	70.2	68.7
7/F	49.6	64.6	64.1	61.8	60.0	60.4	<u>70.5</u>	69.0
6/F	46.5	64.6	64.0	61.7	59.9	60.5	<u>70.7</u>	69.2
5/F	43.3	64.6	64.0	61.6	59.6	60.5	<u>71.0</u>	69.5
4/F	40.2	64.6	64.0	61.5	59.2	60.3	<u>71.2</u>	69.8
3/F	37.0	64.6	63.9	61.3	58.7	59.7	<u>71.4</u>	70.1
2/F	33.9	64.6	63.8	60.9	57.9	59.0	69.6	<u>70.5</u>
1/F	30.7	64.8	63.6	60.3	56.6	58.3	69.8	<u>70.8</u>

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 2 at Site B (by Noise Assessment Points)

Site B - Tower 2																				
Floor	Height (mPD)	BT2-F01-O01	BT2-F01-O02	BT2-F02-O03	BT2-F02-O04	BT2-F03-O05	BT2-F03-O06	BT2-F03-O07	BT2-F04-O08	BT2-F04-O09	BT2-F04-O10	BT2-F05-O11	BT2-F05-O12	BT2-F06-O13	BT2-F06-O14	BT2-F06-O15	BT2-F07-O16	BT2-F07-O17	BT2-F08-O18	BT2-F08-O19
		Predicted Noise Level, L10 (1-hr), dB(A)																		
35/F	147.7	67.5	66.0	65.9	65.8	65.6	65.5	65.4	65.2	65.2	65.1	64.8	64.7	64.6	64.5	64.5	63.1	63.2	63.3	63.1
34/F	144.6	67.6	66.1	65.9	65.9	65.7	65.6	65.4	65.3	65.2	65.1	65.0	64.7	64.5	64.3	64.2	63.1	63.2	63.3	63.1
33/F	141.4	67.7	66.2	66.0	66.0	65.7	65.6	65.4	65.4	65.3	65.2	65.1	65.0	64.5	64.3	64.0	63.1	63.2	63.3	63.2
32/F	138.3	67.8	66.3	66.1	66.0	65.8	65.6	65.5	65.4	65.3	65.3	65.2	65.0	64.5	64.3	64.0	63.1	63.2	63.3	63.2
31/F	135.1	67.9	66.4	66.2	66.1	65.9	65.7	65.6	65.5	65.4	65.3	65.2	65.1	64.5	64.4	63.9	63.1	63.3	63.4	63.2
30/F	132.0	68.1	66.5	66.3	66.2	66.0	65.8	65.7	65.6	65.5	65.4	65.3	65.2	64.6	64.4	63.9	63.1	63.3	63.4	63.3
29/F	128.8	68.2	66.6	66.4	66.3	66.1	65.9	65.8	65.7	65.6	65.5	65.4	65.3	64.6	64.5	64.0	63.1	63.3	63.4	63.3
28/F	125.7	68.3	66.7	66.5	66.4	66.1	66.0	65.9	65.8	65.7	65.6	65.5	65.4	64.7	64.5	64.0	63.1	63.3	63.4	63.4
27/F	122.5	68.4	66.8	66.6	66.6	66.2	66.1	66.0	65.9	65.9	65.8	65.7	65.5	64.8	64.6	64.1	63.1	63.3	63.4	63.4
26/F	119.4	68.5	66.9	66.8	66.7	66.4	66.3	66.1	66.1	66.0	65.9	65.8	65.6	64.9	64.7	64.2	63.1	63.3	63.4	63.5
25/F	116.2	68.7	67.0	66.9	66.8	66.5	66.4	66.3	66.2	66.1	66.0	65.9	65.8	65.0	64.8	64.3	63.1	63.3	63.5	63.5
24/F	113.1	68.8	67.2	67.0	66.9	66.6	66.5	66.4	66.3	66.3	66.2	66.1	65.9	65.1	64.9	64.4	63.1	63.3	63.5	63.6
23/F	109.9	68.9	67.3	67.2	67.1	66.8	66.7	66.5	66.5	66.4	66.3	66.2	66.0	65.2	65.1	64.5	63.1	63.4	63.5	63.6
22/F	106.8	69.1	67.4	67.3	67.2	66.9	66.8	66.7	66.6	66.6	66.5	66.4	66.2	65.3	65.2	64.6	63.2	63.4	63.6	63.7
21/F	103.6	69.2	67.6	67.4	67.3	67.0	67.0	66.8	66.8	66.7	66.6	66.5	66.3	65.4	65.3	64.7	63.2	63.4	63.6	63.7
20/F	100.5	69.3	67.7	67.6	67.4	67.2	67.1	67.0	67.0	66.9	66.8	66.7	66.5	65.5	65.4	64.7	63.1	63.4	63.6	63.8
19/F	97.3	69.4	67.8	67.7	67.5	67.3	67.3	67.2	67.1	67.1	67.0	66.8	66.6	65.7	65.3	64.8	63.1	63.4	63.6	63.8
18/F	94.2	69.6	67.9	67.8	67.6	67.5	67.4	67.3	67.3	67.2	67.1	67.0	66.8	65.8	65.4	64.9	63.1	63.4	63.6	63.8
17/F	91.0	69.7	68.1	68.0	67.8	67.6	67.6	67.5	67.4	67.4	67.3	67.1	66.9	66.0	65.5	65.0	63.0	63.3	63.6	63.8
16/F	87.9	69.8	68.2	68.1	67.9	67.7	67.7	67.6	67.6	67.5	67.4	67.3	67.1	66.1	65.6	65.0	62.9	63.3	63.6	63.8
15/F	84.7	70.0	68.3	68.2	68.0	67.9	67.8	67.8	67.7	67.7	67.6	67.4	67.2	66.3	65.7	65.0	62.8	63.2	63.5	63.8
14/F	81.6	70.2	68.5	68.4	68.2	68.0	68.0	67.9	67.9	67.8	67.7	67.6	67.4	66.4	65.8	65.1	62.7	63.1	63.5	63.8
13/F	78.4	70.4	68.6	68.6	68.4	68.2	68.2	68.1	68.0	68.0	67.9	67.7	67.5	66.5	65.9	65.3	62.6	63.0	63.3	63.7
12/F	75.3	<u>70.6</u>	68.8	68.8	68.6	68.4	68.3	68.3	68.2	68.1	68.0	67.9	67.6	66.6	66.1	65.4	62.5	62.9	63.2	63.6
11/F	72.1	<u>70.8</u>	69.0	69.0	68.8	68.6	68.5	68.4	68.4	68.3	68.1	67.9	67.7	66.8	66.2	65.6	62.3	62.8	63.2	63.5
10/F	69.0	<u>71.0</u>	69.2	69.2	69.0	68.9	68.7	68.6	68.6	68.5	68.3	68.0	67.8	67.0	66.3	65.7	62.2	62.6	63.0	63.5
9/F	65.8	<u>71.2</u>	69.5	69.4	69.2	69.1	68.9	68.8	68.7	68.6	68.4	68.1	68.0	67.1	66.5	65.9	62.0	62.5	62.8	63.2
8/F	62.7	<u>71.4</u>	69.7	69.5	69.4	69.3	69.1	69.0	68.9	68.8	68.5	68.3	68.2	67.3	66.7	66.1	61.8	62.3	62.7	63.1
7/F	59.5	67.7	69.9	69.8	69.7	69.5	69.3	69.2	69.1	68.9	68.7	68.5	68.3	67.5	66.9	66.3	61.6	62.1	62.5	63.0
6/F	56.4	67.9	70.2	70.0	69.9	69.7	69.5	69.4	69.2	69.0	68.9	68.7	68.6	67.7	67.1	66.5	61.2	61.8	62.3	62.8
5/F	53.2	68.2	70.4	70.3	70.1	69.8	69.6	69.5	69.3	69.2	69.0	68.9	68.8	68.0	67.4	66.8	60.8	61.4	62.0	62.5
4/F	50.1	68.5	<u>70.7</u>	<u>70.5</u>	70.2	69.9	69.7	69.5	69.4	69.4	69.2	69.1	69.0	68.2	67.7	67.0	60.1	60.8	61.6	62.1
3/F	46.9	68.8	<u>70.9</u>	<u>70.6</u>	70.3	69.9	69.6	69.6	69.5	69.5	69.4	69.3	69.3	68.5	68.0	67.3	59.1	60.0	60.8	61.5
2/F	43.8	69.1	<u>70.9</u>	<u>70.6</u>	70.3	69.8	69.6	69.5	69.6	69.6	69.6	69.5	69.5	68.8	68.3	67.6	57.4	58.4	59.4	60.2
1/F	40.6	69.5	70.3	70.2	70.0	69.4	69.3	69.4	69.6	69.7	69.7	69.6	69.6	69.0	68.6	67.9	54.4	55.5	56.5	57.4

ID	Mitigation Measure	Correction
	Acoustic Window	-4.0 dB(A)
	Acoustic Balcony	-2.0 dB(A)
FG	Fixed Glazing	--

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 2 at Site B (by Noise Assessment Points)

Site B - Tower 2												
Floor	Height (mPD)	BT2-F09- O20	BT2-F09- O21	BT2-F09- O22	BT2-F10- O23	BT2-F10- O24	BT2-F10- O25	BT2-F11- O26	BT2-F11- O27	BT2-F12- O28	BT2-F12- O29	BT2-F12- O30
Predicted Noise Level, L10 (1-hr), dB(A)												
35/F	147.7	63.0	63.1	63.2	63.2	63.4	63.6	63.8	63.9	64.2	64.6	64.7
34/F	144.6	63.0	63.1	63.2	63.3	63.5	63.6	63.8	64.0	64.3	64.7	64.7
33/F	141.4	63.1	63.2	63.3	63.4	63.5	63.7	63.9	64.0	64.3	64.7	64.8
32/F	138.3	63.2	63.3	63.3	63.4	63.6	63.7	64.0	64.1	64.4	64.8	64.9
31/F	135.1	63.2	63.3	63.4	63.5	63.7	63.8	64.1	64.2	64.5	64.9	65.0
30/F	132.0	63.3	63.4	63.5	63.6	63.8	63.9	64.1	64.3	64.6	65.0	65.1
29/F	128.8	63.4	63.5	63.6	63.7	63.8	64.0	64.2	64.4	64.6	65.1	65.1
28/F	125.7	63.5	63.5	63.6	63.7	63.9	64.0	64.3	64.4	64.7	65.1	65.2
27/F	122.5	63.5	63.6	63.7	63.8	64.0	64.1	64.3	64.5	64.8	65.2	65.3
26/F	119.4	63.6	63.7	63.8	63.9	64.1	64.2	64.4	64.6	64.9	65.3	65.4
25/F	116.2	63.6	63.8	63.9	64.0	64.1	64.3	64.5	64.7	64.9	65.4	65.4
24/F	113.1	63.7	63.8	64.0	64.1	64.2	64.3	64.5	64.8	65.0	65.4	65.5
23/F	109.9	63.8	63.9	64.0	64.1	64.3	64.4	64.6	64.8	65.1	65.5	65.6
22/F	106.8	63.8	63.9	64.1	64.2	64.4	64.5	64.7	64.9	65.1	65.6	65.7
21/F	103.6	63.9	64.0	64.1	64.3	64.5	64.6	64.8	65.0	65.2	65.7	65.8
20/F	100.5	63.9	64.0	64.2	64.4	64.5	64.7	64.9	65.1	65.3	65.8	65.9
19/F	97.3	64.0	64.1	64.3	64.4	64.6	64.8	64.9	65.1	65.4	66.0	66.0
18/F	94.2	64.0	64.2	64.3	64.5	64.7	64.9	65.0	65.2	65.5	66.1	66.1
17/F	91.0	64.0	64.2	64.4	64.5	64.7	65.0	65.1	65.3	65.6	66.2	66.2
16/F	87.9	64.1	64.3	64.4	64.6	64.8	65.0	65.2	65.4	65.8	66.3	66.3
15/F	84.7	64.1	64.3	64.5	64.7	64.9	65.1	65.4	65.6	65.9	66.5	66.5
14/F	81.6	64.1	64.3	64.5	64.7	65.0	65.2	65.4	65.7	66.0	66.6	66.6
13/F	78.4	64.0	64.3	64.6	64.8	65.0	65.3	65.5	65.8	66.2	66.8	66.8
12/F	75.3	64.0	64.3	64.6	64.8	65.1	65.3	65.6	65.9	66.2	66.9	66.9
11/F	72.1	63.8	64.2	64.5	64.8	65.1	65.4	65.7	66.0	66.3	67.1	67.1
10/F	69.0	63.7	64.0	64.4	64.8	65.2	65.4	65.8	66.1	66.5	67.2	67.3
9/F	65.8	63.7	63.9	64.3	64.7	65.1	65.5	65.8	66.2	66.6	67.4	67.5
8/F	62.7	63.4	63.8	64.1	64.5	65.0	65.4	65.9	66.2	66.7	67.5	67.7
7/F	59.5	63.3	63.6	64.0	64.3	64.7	65.3	65.8	66.2	66.8	67.7	67.8
6/F	56.4	63.1	63.4	63.7	64.1	64.6	64.9	65.6	66.2	66.8	67.7	68.0
5/F	53.2	62.9	63.2	63.5	63.9	64.3	64.8	65.3	66.0	66.8	67.8	68.2
4/F	50.1	62.6	62.9	63.3	63.7	64.0	64.4	65.1	65.6	66.5	67.8	68.3
3/F	46.9	62.1	62.4	62.8	63.3	63.7	64.1	64.6	65.3	66.0	67.5	68.5
2/F	43.8	60.9	61.5	62.1	62.6	63.1	63.7	64.3	64.7	65.7	66.8	68.5
1/F	40.6	58.5	59.2	60.0	60.9	61.8	62.6	63.5	64.2	65.0	66.0	68.1

ID	Mitigation Measure	Correction
	Acoustic Window	-4.0 dB(A)
	Acoustic Balcony	-2.0 dB(A)
FG	Fixed Glazing	--

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 2 at Site B (by Flats)

Site B - Tower 2									
Floor	Height (mPD)	F01	F02	F03	F04	F05	F06	F07	F08
		Predicted Noise Level, L10 (1-hr), dB(A)							
35/F	147.7	67.5	65.9	65.6	65.2	64.8	64.6	63.2	63.3
34/F	144.6	67.6	65.9	65.7	65.3	65.0	64.5	63.2	63.3
33/F	141.4	67.7	66.0	65.7	65.4	65.1	64.5	63.2	63.3
32/F	138.3	67.8	66.1	65.8	65.4	65.2	64.5	63.2	63.3
31/F	135.1	67.9	66.2	65.9	65.5	65.2	64.5	63.3	63.4
30/F	132.0	68.1	66.3	66.0	65.6	65.3	64.6	63.3	63.4
29/F	128.8	68.2	66.4	66.1	65.7	65.4	64.6	63.3	63.4
28/F	125.7	68.3	66.5	66.1	65.8	65.5	64.7	63.3	63.4
27/F	122.5	68.4	66.6	66.2	65.9	65.7	64.8	63.3	63.4
26/F	119.4	68.5	66.8	66.4	66.1	65.8	64.9	63.3	63.5
25/F	116.2	68.7	66.9	66.5	66.2	65.9	65.0	63.3	63.5
24/F	113.1	68.8	67.0	66.6	66.3	66.1	65.1	63.3	63.6
23/F	109.9	68.9	67.2	66.8	66.5	66.2	65.2	63.4	63.6
22/F	106.8	69.1	67.3	66.9	66.6	66.4	65.3	63.4	63.7
21/F	103.6	69.2	67.4	67.0	66.8	66.5	65.4	63.4	63.7
20/F	100.5	69.3	67.6	67.2	67.0	66.7	65.5	63.4	63.8
19/F	97.3	69.4	67.7	67.3	67.1	66.8	65.7	63.4	63.8
18/F	94.2	69.6	67.8	67.5	67.3	67.0	65.8	63.4	63.8
17/F	91.0	69.7	68.0	67.6	67.4	67.1	66.0	63.3	63.8
16/F	87.9	69.8	68.1	67.7	67.6	67.3	66.1	63.3	63.8
15/F	84.7	70.0	68.2	67.9	67.7	67.4	66.3	63.2	63.8
14/F	81.6	70.2	68.4	68.0	67.9	67.6	66.4	63.1	63.8
13/F	78.4	70.4	68.6	68.2	68.0	67.7	66.5	63.0	63.7
12/F	75.3	<u>70.6</u>	68.8	68.4	68.2	67.9	66.6	62.9	63.6
11/F	72.1	<u>70.8</u>	69.0	68.6	68.4	67.9	66.8	62.8	63.5
10/F	69.0	<u>71.0</u>	69.2	68.9	68.6	68.0	67.0	62.6	63.5
9/F	65.8	<u>71.2</u>	69.4	69.1	68.7	68.1	67.1	62.5	63.2
8/F	62.7	<u>71.4</u>	69.5	69.3	68.9	68.3	67.3	62.3	63.1
7/F	59.5	69.9	69.8	69.5	69.1	68.5	67.5	62.1	63.0
6/F	56.4	70.2	70.0	69.7	69.2	68.7	67.7	61.8	62.8
5/F	53.2	70.4	70.3	69.8	69.3	68.9	68.0	61.4	62.5
4/F	50.1	<u>70.7</u>	<u>70.5</u>	69.9	69.4	69.1	68.2	60.8	62.1
3/F	46.9	<u>70.9</u>	<u>70.6</u>	69.9	69.5	69.3	68.5	60.0	61.5
2/F	43.8	<u>70.9</u>	<u>70.6</u>	69.8	69.6	69.5	68.8	58.4	60.2
1/F	40.6	70.3	70.2	69.4	69.7	69.6	69.0	55.5	57.4

Bold underlined: Noise exceedance

Mitigated Scenario, Tower 2 at Site B (by Flats)

Site B - Tower 2					
Floor	Height (mPD)	F09	F10	F11	F12
		Predicted Noise Level, L10 (1-hr), dB(A)			
35/F	147.7	63.2	63.6	63.9	64.7
34/F	144.6	63.2	63.6	64.0	64.7
33/F	141.4	63.3	63.7	64.0	64.8
32/F	138.3	63.3	63.7	64.1	64.9
31/F	135.1	63.4	63.8	64.2	65.0
30/F	132.0	63.5	63.9	64.3	65.1
29/F	128.8	63.6	64.0	64.4	65.1
28/F	125.7	63.6	64.0	64.4	65.2
27/F	122.5	63.7	64.1	64.5	65.3
26/F	119.4	63.8	64.2	64.6	65.4
25/F	116.2	63.9	64.3	64.7	65.4
24/F	113.1	64.0	64.3	64.8	65.5
23/F	109.9	64.0	64.4	64.8	65.6
22/F	106.8	64.1	64.5	64.9	65.7
21/F	103.6	64.1	64.6	65.0	65.8
20/F	100.5	64.2	64.7	65.1	65.9
19/F	97.3	64.3	64.8	65.1	66.0
18/F	94.2	64.3	64.9	65.2	66.1
17/F	91.0	64.4	65.0	65.3	66.2
16/F	87.9	64.4	65.0	65.4	66.3
15/F	84.7	64.5	65.1	65.6	66.5
14/F	81.6	64.5	65.2	65.7	66.6
13/F	78.4	64.6	65.3	65.8	66.8
12/F	75.3	64.6	65.3	65.9	66.9
11/F	72.1	64.5	65.4	66.0	67.1
10/F	69.0	64.4	65.4	66.1	67.3
9/F	65.8	64.3	65.5	66.2	67.5
8/F	62.7	64.1	65.4	66.2	67.7
7/F	59.5	64.0	65.3	66.2	67.8
6/F	56.4	63.7	64.9	66.2	68.0
5/F	53.2	63.5	64.8	66.0	68.2
4/F	50.1	63.3	64.4	65.6	68.3
3/F	46.9	62.8	64.1	65.3	68.5
2/F	43.8	62.1	63.7	64.7	68.5
1/F	40.6	60.0	62.6	64.2	68.1

Bold underlined: Noise exceedance

APPENDIX 4-5
RAILWAY NOISE CALCULATION

Railway Noise Calculation

	Northbound (ERL)	Southbound (ERL)		Combined	Criteria
Horizontal Separation (m)	200	204			
Speed (kph) [1]	80	80			
Peak Train Frequency per 30 min (7:00-23:00) [2]	15	15			
Peak Train Frequency per 30 min (23:00-7:00) [2]	12	12			
Peak Train Frequency per day [2][3]	425	425			
Reference Lmax, (dB(A)) [4]	75.3	75.3			
Reference SEL, (dB(A)) [4]	82.8	82.8			
Speed Correction, (dB(A))	-4.2	-4.2			
Distance Correction, (dB(A))	-9.0	-9.1			
Façade correction, (dB(A))	2.5	2.5			
Track Wear Correction, (dB(A))	3.0	3.0			
Reflection Correction, (dB(A))	1.5	1.5			
Slab Track Correction, (dB(A))	0.0	0.0			
SEL of a single passby, (dB(A))	76.6	76.5			
Train frequency correction, 30min (7:00-23:00), (dB(A))	11.8	11.8			
Train frequency correction, 30min (23:00-7:00), (dB(A))	10.8	10.8			
Train frequency correction, daily, (dB(A))	26.3	26.3			
Leq 30min (7:00-23:00), (dB(A))	55.8	55.7		58.7	70
Leq 30min (23:00-7:00), (dB(A))	54.8	54.7		57.8	60
Lmax (23:00-7:00), (dB(A))	69.1	69.0		72.0	85
Leq 24 hour, (dB(A))	53.5	53.4		56.4	65

Note:

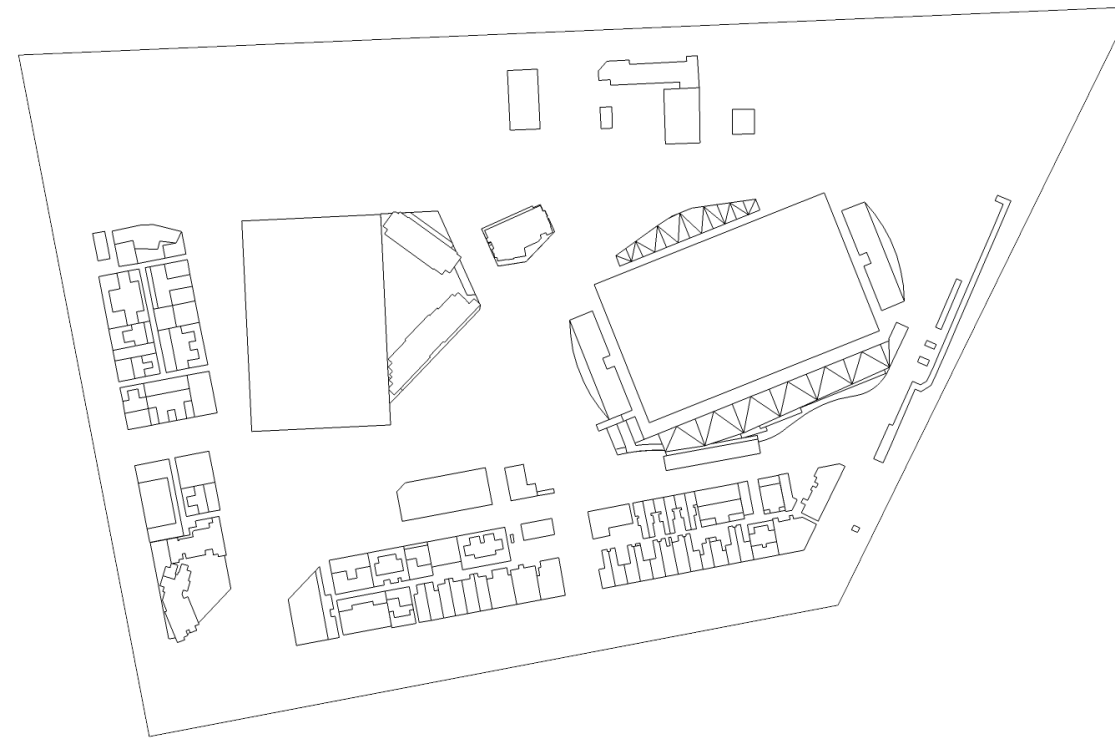
[1] Based on site-observation in March 2026, the average velocity of ERL trains within the 300m assessment area are approximately 60 - 80 kph, due to the vicinity to station. The average train speed for ERL is assumed to be 80 kph in the calculation for conservative assessment.

[2] Ultimate frequency limit from Environmental Permit EP-437/2012/A & Approved EIA report AEIAR-165/2012 for Shatin to Central Link is adopted.

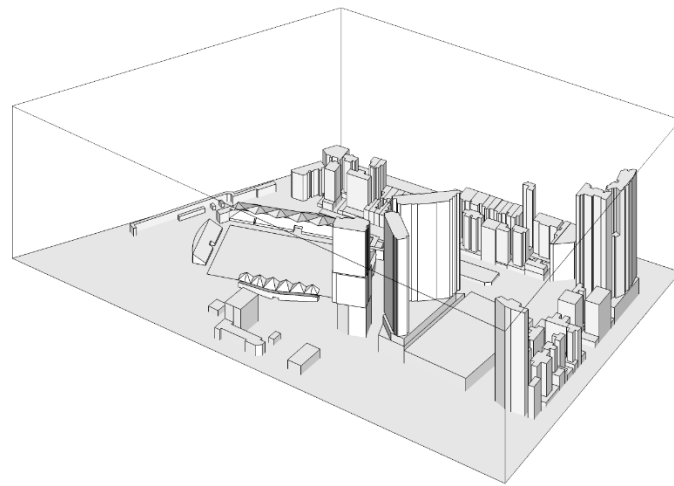
[3] The ultimate daily frequency is 850 train per day including both northbound and southbound. The train frequency with ratio of 1:1 is assumed for northbound and southbound trains.

[4] The Reference Lmax, Reference SEL, and the calculation methodology is referred to Approved EIA report AEIAR-165/2012

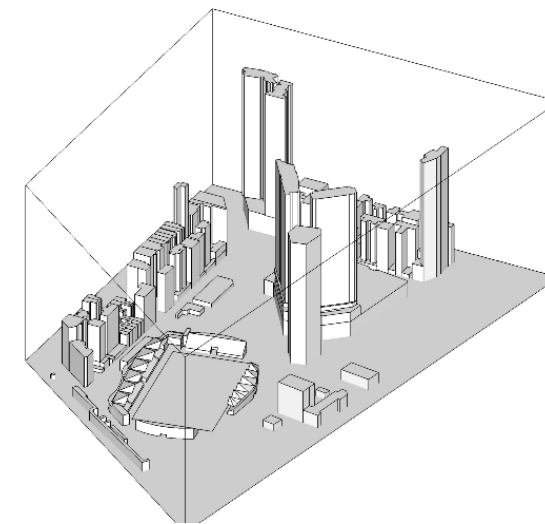
**APPENDIX 4-6
SCREEN CAPTURE OF THE NOISE
SIMULATION MODEL**



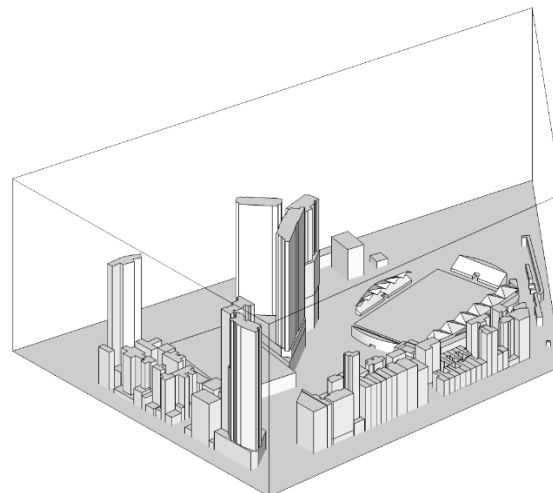
(a) Top view



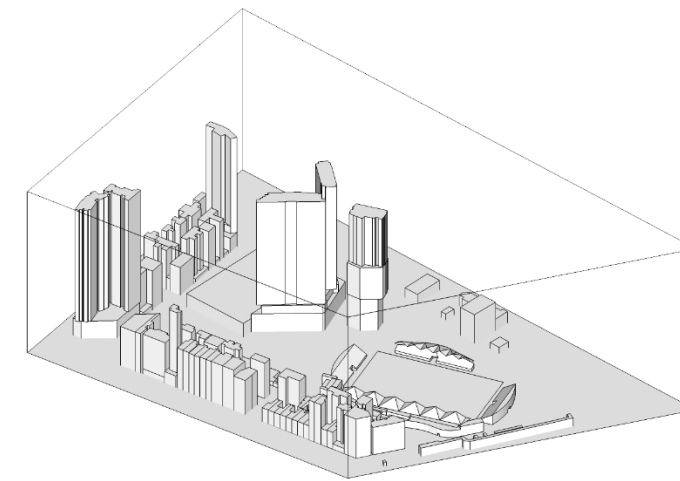
(b) Viewed from North-West



(c) Viewed from North-East



(c) Viewed from South-West



(b) Viewed from South-East

Drawing 1 - 3D Model of the Assessment Area



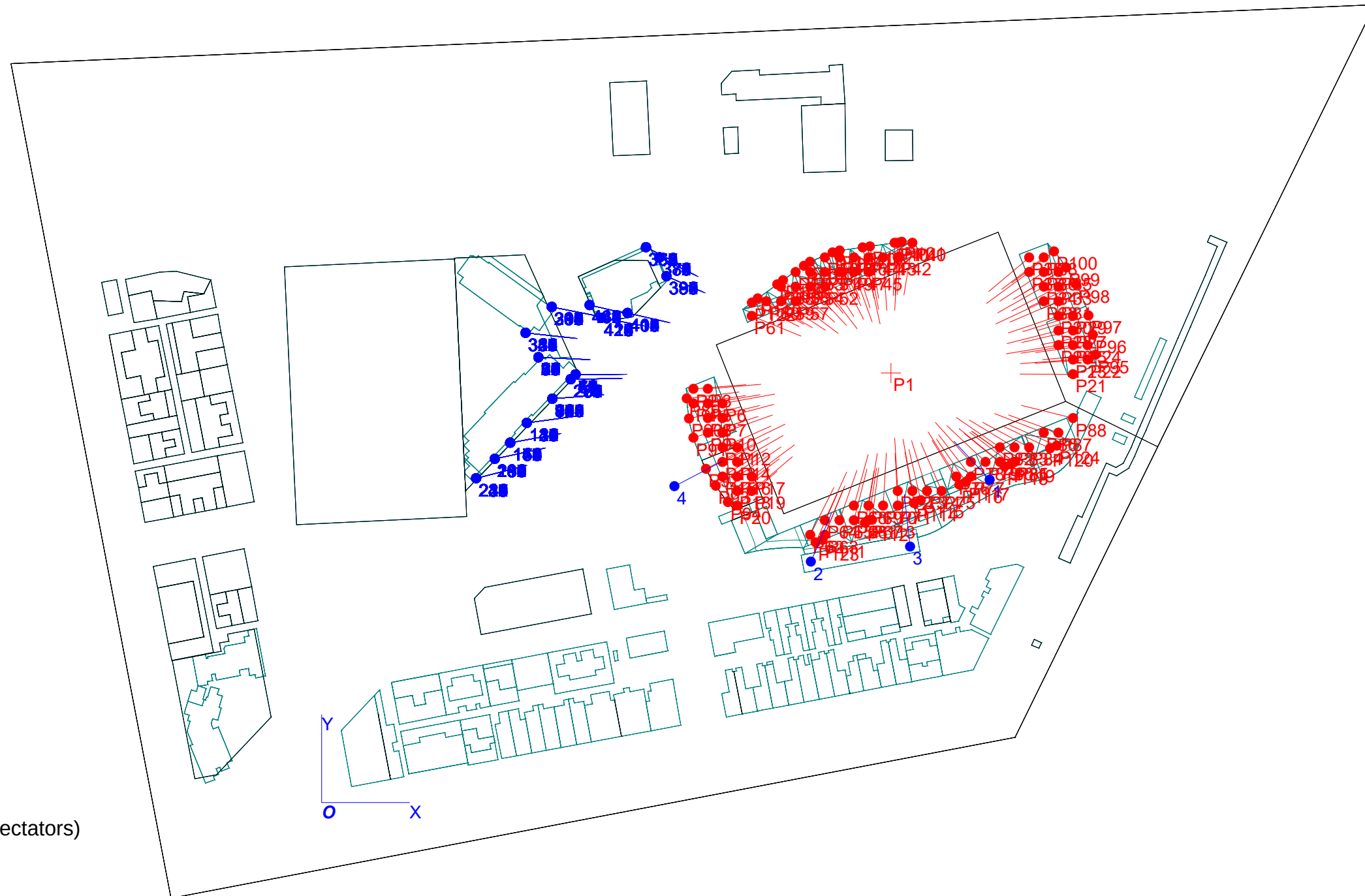
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400

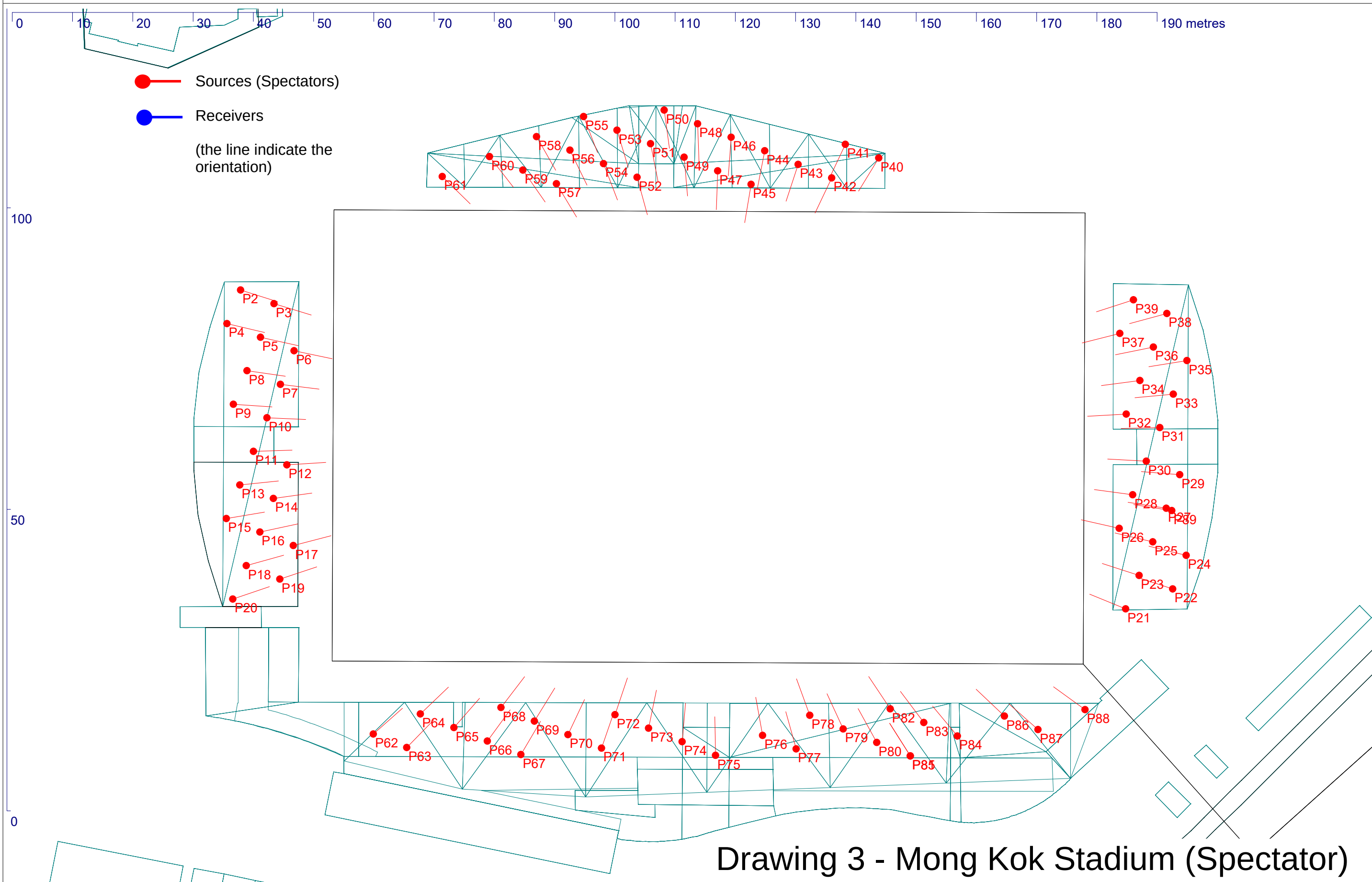
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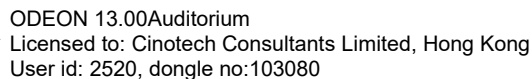
0

- Sources (Spectators)
- Receivers
- (the line indicate the orientation)



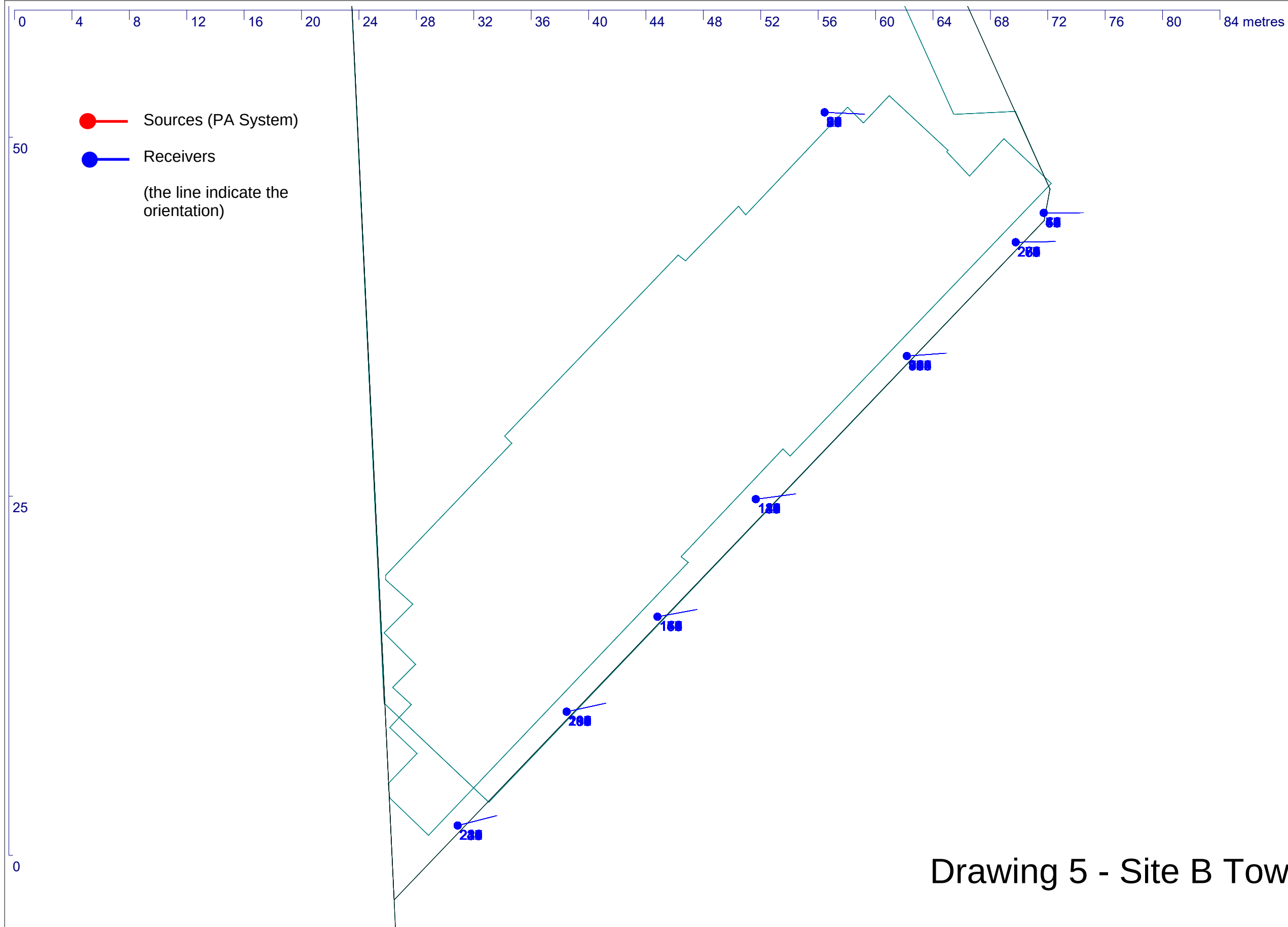
Drawing 2 - Computational Domain





Room: C:\... Kok Stadium Calibration
Geometry/Material/Source version: 11/14/626
Job number: 4 No description





Drawing 5 - Site B Tower 1



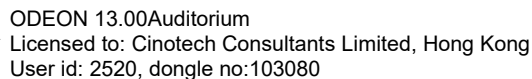
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- Sources (PA System)
- Receivers
- (the line indicate the orientation)

20

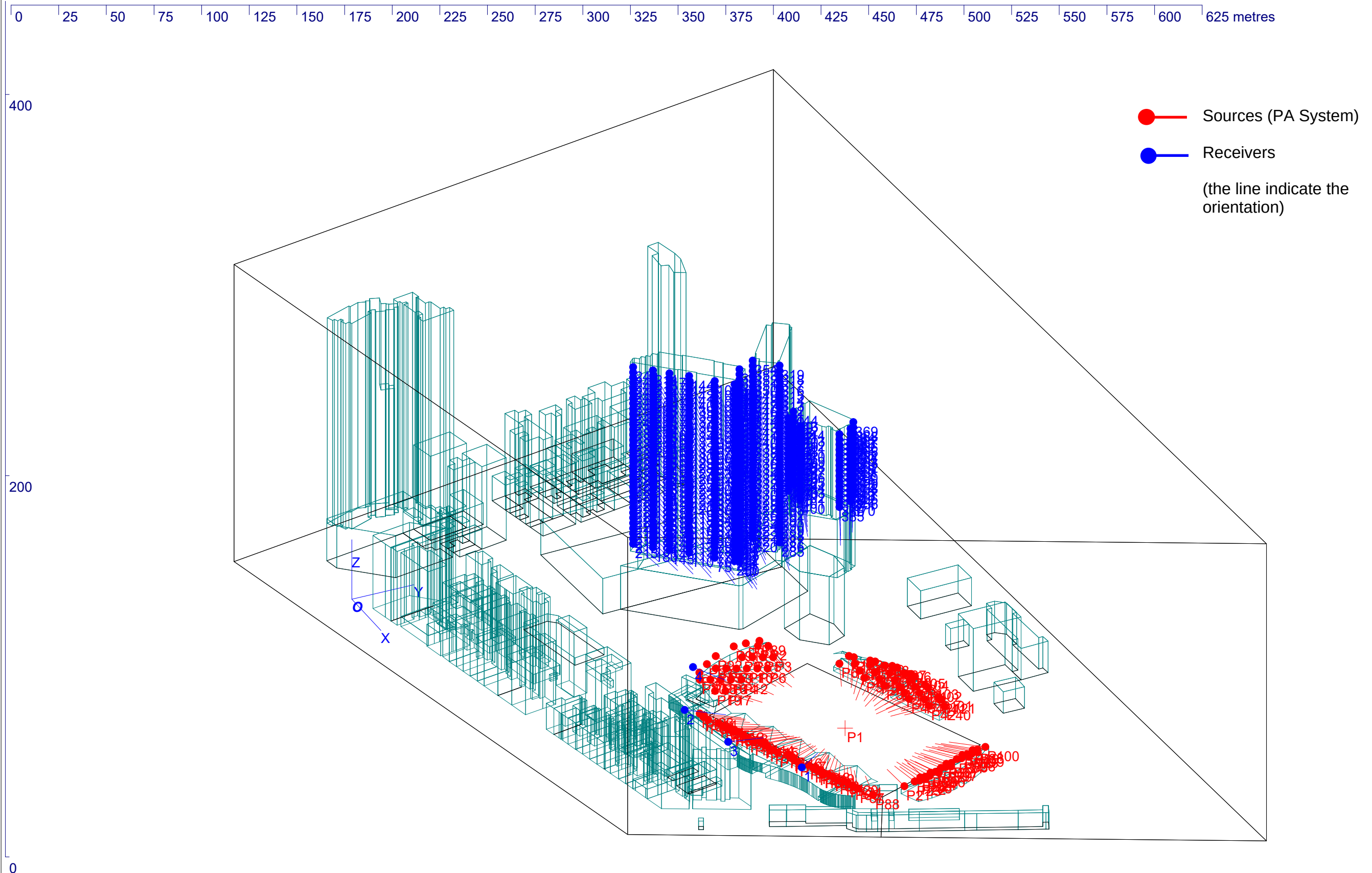
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Drawing 6 - Site B Tower 2



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Geometry/Material/Source version: 11/14/626
Job number: 4 No description





Drawing 8 - Computational Domain (3D view)

APPENDIX 4-7
PREDICTED SOUND PRESSURE LEVEL
FOR STADIUM NOISE

Predicted Sound Power Level for Stadium Noise

Tower		Towre 1 at Site B								Tower 2 at Site B	
NAP ID		BT1-F07-O17	BT1-F08-O18	BT1-F08-O19	BT1-F09-O23	BT1-F11-O28	BT1-F13-O32	BT1-F14-O35	BT1-F15-O39	BT2-F06-O15	BT2-F07-O16
Floor	mPD	Sound Pressure Level (SPL), dB(A)									
35	147.70	61	68	68	68	68	67	67	67	64	62
34	144.55	61	68	68	68	68	68	67	67	64	63
33	141.40	62	68	68	68	68	68	68	67	64	63
32	138.25	62	68	69	69	68	68	68	67	64	63
31	135.10	62	68	69	69	69	68	68	67	64	63
30	131.95	62	69	69	69	69	68	68	68	64	63
29	128.80	62	69	69	69	69	68	68	68	65	63
28	125.65	63	69	69	69	69	69	68	68	65	63
27	122.50	63	69	69	70	69	69	68	68	65	64
26	119.35	63	69	70	70	69	69	68	68	66	64
25	116.20	63	69	70	70	69	69	69	68	66	64
24	113.05	63	70	70	70	70	69	69	68	66	64
23	109.90	63	70	70	70	70	69	69	68	66	64
22	106.75	64	70	70	70	70	69	69	68	66	64
21	103.60	64	70	70	71	70	70	69	69	66	64
20	100.45	64	70	71	71	70	70	69	69	66	64
19	97.30	64	70	71	71	70	70	69	69	66	64
18	94.15	64	71	71	71	70	70	69	69	67	65
17	91.00	64	71	71	71	71	70	70	69	67	65
16	87.85	64	71	71	71	71	70	70	69	67	65
15	84.70	64	71	71	71	71	70	70	69	67	65
14	81.55	64	71	72	71	71	70	70	69	67	65
13	78.40	64	71	72	72	71	70	70	69	67	65
12	75.25	65	72	72	72	71	71	70	70	67	65
11	72.10	64	72	72	72	71	71	70	70	67	65
10	68.95	65	72	72	72	71	71	70	70	67	65
9	65.80	64	72	72	72	71	71	70	70	67	65
8	62.65	64	72	72	72	72	71	70	69	67	65
7	59.50	64	72	72	72	71	71	70	69	68	66
6	56.35	65	72	72	72	71	71	70	69	68	65
5	53.20	65	72	72	72	71	70	70	70	68	66
4	50.05	65	72	72	72	71	70	70	69	68	65
3	46.90	64	72	72	72	71	70	69	69	68	65
2	43.75	64	72	72	71	70	70	69	69	68	65
1	40.60	64	72	72	71	70	70	69	69	68	64

Note:

Red highlighted cell indicate the noise exceedance.

Predicted Sound Power Level for Stadium Noise

Tower		Towre 3 at Site B					
NAP ID		BT3-F05-O12	BT3-F06-O13	BT3-F06-O16	BT3-F07-O17	BT3-F08-O21	BT3-F08-O22
Floor	mPD						
15	127.70	60	69	69	69	69	62
14	124.55	60	69	69	69	69	62
13	121.40	60	70	70	69	69	63
12	118.25	60	70	70	69	69	62
11	115.10	60	70	70	70	70	63
10	111.95	60	70	70	70	70	63
9	108.80	61	70	70	70	70	63
8	105.65	61	70	70	70	70	63
7	102.50	61	70	70	70	70	64
6	99.35	61	71	71	71	70	63
5	96.20	61	71	71	71	71	64
4	93.05	61	71	71	71	71	64
3	89.90	61	71	71	71	71	64
2	86.75	62	71	71	71	71	64
1	83.60	62	71	71	71	71	64

Note:

Red highlighted cell indicate the noise exceedance.

**Section 16 Planning Application for Proposed Minor Relaxation of the
Maximum Domestic GFA of Site B for the Urban Renewal Authority
Sai Yee Street/ Flower Market Road Development Scheme
("YTM-013"), Mong Kok, Kowloon**

Sewerage Impact Assessment
(V1.0)

June 2026

Approved By


(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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1 INTRODUCTION

1.1 Background

- 1.1.1 The Urban Renewal Authority (URA) has proposed the Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under Section 25 of the Urban Renewal Authority Ordinance (URAO). The Chief Executive in Council (CE in C) approved the draft Development Scheme Plan (DSP) on April 8, 2025, and published this decision in the Government Gazette on 17th April 2025. The approved DSP No. S/K3/URA5/2 was exhibited for public inspection on the same day.
- 1.1.2 To optimize the utilization of the Scheme area and in view to the current unoptimistic office market sentiment with a high office vacancy rate and the Government’s directive of suspending the sales of commercial sites, the URA proposes to increase the maximum domestic Gross Floor Area (GFA) to allow flexibility for future development to meet the market needs and enhance market attractiveness of the Scheme. A Section 16 planning application (S.16 Application) is proposed to seek for minor relaxation of domestic GFA in Sub-area (1) of Site B (the whole Site B as the Application Site), zoned as “OU(MU)2” from 46,605 m² (equivalent to a Domestic Plot Ratio (DPR) 6.5) to 53,775 m² (equivalent to a DPR 7.5), while keeping the total maximum GFA of Site B unchanged. The Application Site of the current S.16 Application will only cover Site B of the approved DSP. **Figure 1-1** shows the Application Site of the current S.16 Application.
- 1.1.3 This S.16 Application is a non-scheme-based submission. The notional design is prepared based on the proposed minor relaxation of the Approved DSP parameters. Under the non-scheme-based approach, the notional design and indicative development parameters provided are only for illustrative purposes and for conducting necessary technical assessments to demonstrate the impacts of the proposed minor relaxation. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S.16 Application.
- 1.1.4 Cinotech Consultants Limited has been commissioned by the URA to conduct a Sewerage Impact Assessment (SIA) to support the submission of the S.16 Application to the Town Planning Board (TPB) for consideration.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Existing Environment

- 2.1.1 To demonstrate the complete picture of the future development in the urban context, the assessment will describe the Proposed Development of the whole DSP (i.e. both Site A and Site B) (the Scheme). The Scheme is located in the northeastern part of Mong Kok. With a total gross site area of 29,315m², the Scheme is divided into Site A (about 4,445m²) and Site B (about 24,870m²). The location of the Scheme is shown on **Figure 1-1**.
- 2.1.2 Site B of the Scheme (the Application Site) is currently occupied by various leisure, recreation and GIC facilities, including Boundary Sports Centre No.1 and No.2, Boundary Street Recreation Ground, Sai Yee Street Children’s Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department (“LCSD”) Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath. There is no private lot within Site B.
- 2.1.3 Site A of the Scheme (not forming the Application Site) comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.

2.2 The Proposed Development

Approved DSP and S.16 Application

- 2.2.1 According to the approved DSP of the Scheme, Site B, the Application Site, is zoned “Other Specified Uses (Mixed Uses) 2” (“OU(MU)2”), and is further divided into Sub-area (1) and Sub area (2). Sub-area (1) of Site B will be for a high-rise development with a maximum domestic gross floor area (“GFA”) of 46,605m² and a total GFA of 64,530 m², as well as a building height restriction (“BHR”) of 150mPD adopting a stepped height profile. Sub-area (2) of “OU(MU)2” zone comprises the Waterway Park and ancillary retail/ commercial uses and LCDS’s sports/ GIC facilities with a BHR of 30mPD. It has a maximum non-domestic GFA of 8,955 m²
- 2.2.2 Site A (not forming the Application Site) is zoned “Other Specified Uses (Mixed Use) 1” (“OU(MU)1”) and it consists of 5 Sub-areas – Sub-areas (1) to (5) (i.e. Sites A1 – A5). Site A1 will be developed for residential development cum commercial podium, with a BHR of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5.
- 2.2.3 Under this minor relaxation application, the maximum domestic GFA of Sub-area (1) in Site B is proposed to increase from 46,605m² to approximately 53,775m², equivalent to an increase in DPR from 6.5 to 7.5 (see **Table 2-1**). The total GFA for Sub-area (1) remains at 64,530m² (PR = 9.0). The development parameters of Sub-area (2) of Site B remain the same as the under the previously endorsed DSP.

Comparison between the Approved DSP and Current S.16 Application Proposal (Site B)

- 2.2.4 A comparison between the development parameters of the approved DSP and that of the S.16 Application is provided in **Table 2-1** below.

Table 2-1 Comparison between the Approved DSP and the Current S.16 Application Proposal (Site B)

Development Parameters of Site B	Approved DSP [A]			Current S.16 Application [B]			Difference [B] – [A] (% change)
Zoning	OU(MU)2			OU(MU)2			N/A
Gross Site Area (m ²)	About 24,870			About 24,870			N/A
	Sub-area (1)	Sub-area (2)	Total [A]	Sub-area (1)	Sub-area (2)	Total [B]	
Net Site Area (m²) (for PR Calculation) [1]	About 7,170	About 17,700	About 24,870	About 7,170	About 17,700	About 24,870	N/A
Maximum GFA							
-Total GFA (m ²)	64,530	8,955	73,485	64,530	8,955	73,485	N/A
-Domestic GFA (m ²)	46,605	N/A	46,605	53,775	N/A	53,775	+15.4%
Maximum Building Height (mPD)	150	30	N/A	150	30	N/A	N/A

Remark:

[1] Subject to site survey

Notional Design

- 2.2.5 A notional design, which is illustrated in **Appendix 2-1**, is prepared based on the development parameters to demonstrate the proposed planning intention and development concepts of the Scheme. Compared to the notional design for the approved DSP, the current notional design for S.16 Application has only revised the design of Site B, while keeping the notional design of other parts in the DSP unchanged from the approved DSP.
- 2.2.6 Regarding the Application Site, under the current notional design for Sub-area (1) of Site B (the north-east corner of Site B), a development featuring 3 high-rise developments, including 2 residential towers and 1 mixed-use composite tower with residential/ hotel uses, along with retail/ recreation and GIC facilities at the podium level, is proposed. Ancillary parking and a public vehicle park (PVP) are proposed in the basement levels of Site B. An at-grade open space, named "Waterway Park," is proposed in the Sub-area (2) of Site B. Ancillary retail facilities are planned at the ground level and the Waterway Park to enhance retail activities and vibrancy adjoining the existing Flower Market.
- 2.2.7 Compared to the approved Scheme for approved DSP, the major change is at Sub-area (1) of Site B, where the hotel/ office tower in the approved Scheme is changed to a composite tower of residential/ hotel tower, with the same height (130 mPD) in the current S.16 Application.
- 2.2.8 The notional design for Site A is the same as the approved DSP at planning stage and will be referenced for the purpose of technical assessments to support the S.16 Application. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2-A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.
- 2.2.9 The Proposed Development of the Scheme will be redeveloped in phases. Phased development and completion may be adopted by further sub-division of Site B, subject to

liaison and agreement with relevant government departments at the implementation stage. The tentative completion year of the whole Scheme is in 2036.

Development Parameters of the Notional Design

2.2.10 The development parameters of the notional design of Site A shown in **Table 2-2** remains the same as those under the approved DSP. This assessment is prepared based on the development parameters in **Table 2-2 & Table 2-3** of the notional design, which are subject to changes at detailed design stage.

Table 2-2 Development Parameters of the Notion Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m ²	About 268m ²	About 123m ²	About 233m ²	About 251m ²
	About 4,445m ²				
Net Site Area (subject to survey)	About 2,640m ²	About 239m ²	About 109m ²	About 202m ²	About 198m ²
	About 3,388m ²				
Zoning	OU(MU)1				
Domestic GFA [1]	23,716m ²	-	-	-	-
Non-Domestic GFA [1]	6,576m ²	-	-	100m ²	100m ²
No. of Building Blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m ²	-	-	-	-
At-grade Open Space	About 800m ²				

Note

- [1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
- [2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-3 Development Parameters of the Notion Design (Site B – Application Site)

Site B			
Gross Site Area	About 24,870m ²		
Zoning	OU(MU)2		
	Sub-area (1)	Sub-area (2)	Total
Net Site Area (subject to survey)	7,170m ²	17,700m ²	24,870m ²
Domestic GFA [1]	53,775m ²	-	53,775m ²
Non-Domestic GFA [1]	10,755m ²	8,955m ²	19,710m ²
- Retail	(5,755m ²)	(8,955m ²)	(14,710m ²)
- Hotel	(5,000m ²)	-	(5,000m ²)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m ²		
No. of Building Blocks [2]	2 residential towers and 1 composite tower with residential and hotel uses on top of GIC/ recreation/ retail podia + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (composite tower) 1 storey (retail block)		
No. of Flats [2]	About 1,080	-	About 1,080
Average Flat Size [2]	50m ²	-	50m ²
At-grade Open Space	About 8,800m ²		
Public Vehicle Park [4]	About 220 private car parking spaces + About 10 loading/unloading bays		

Note

- [1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
- [2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
- [3] The actual GIC GFA is subject to liaison with Government departments. As a conservative approach, 30,000m² GIC GFA is assumed in this assessment.
- [4] Subject to liaison with Transport Department.

2.2.11 It should be noted that sections of an existing decked nullah and its branch lies within Sites A1 & B (**Figure 2-1**). The Scheme is not expected to modify the existing decked nullah. Instead, a buffer region of 3m will be provided for its future maintenance.

2.2.12 Furthermore, as part of the redevelopment, the existing back alleys within Site A1 (see **Figure 1-1**) will be permanently closed, necessitating the re-diversion of sewers.

2.2.13 Sites A2, A3, A4, and A5 are currently occupied by four-storey tenement buildings with shops/retails on the ground floor. Upon redevelopment, these sites will either become open spaces or one-storey retail blocks. Based on the notional design, the estimated sewage generated from Sites A2, A3, A4, and A5 is expected to significantly decrease (as listed in **Table 3-5**), thereby eliminating any anticipated adverse sewerage impact for these sites.

2.3 Upgrading of West Kowloon and Tsuen Wan Sewerage – Phase 2

- 2.3.1 It should be noted that there is an ongoing project by the Drainage Services Department (DSD) called the Upgrading of West Kowloon and Tsuen Wan Sewerage – Phase 2 (PWP No. 4389DS)¹, which covers a large area of Kowloon.
- 2.3.2 Considering that the planned completion date of the DSD's project is in mid-2026, according to the implementation programme provided by the URA, the construction works of the Proposed Development will commence after the completion of the DSD's Project PWP No. 4389DS. As a result, the sewer works of the URA's Scheme will not interface with the DSD's project.
- 2.3.3 During the detailed design stage, DSD will be consulted and the proposed sewerage system of the Proposed Development will be reviewed based on the latest drainage layout.

¹ PWP No. 4389DS - Upgrading of West Kowloon and Tsuen Wan Sewerage – Phase 2
https://www.dsd.gov.hk/EN/Our_Projects/All_Projects/4389DS.html

3 SEWERAGE IMPACT ASSESSMENT

3.1 Sewage Discharge from the Scheme

- 3.1.1 As mentioned in **Section 2.1.1**, the assessment will take into account of the Proposed Development for both Site A and Site B under the notional design for a complete picture and its accumulated impacts to the existing sewerage system.
- 3.1.2 According to the Population Census 2021, the average domestic household size is 2.3 for the Mong Kok East District Council Constituency Area and Tertiary Planning Unit 222, and 2.5 for Yau Tsim Mong District. For the purpose of conservative assessment, a household size of 2.5 has been adopted in the current assessment.
- 3.1.3 The population of non-residential area such as restaurant, retail, club house & lobby G/IC and hotel are estimated according to the usable floor area (UFA) per person and the worker density from Figure 9 of Commercial and Industrial Floor Space Utilization, published by Planning Department. **Table 3-1** indicates the population calculation of the Scheme.

Table 3-1 Estimation of Population

Section	No. of Flat	Non-residential GFA (m ²)	Population Factor		Population	
			No. of person per flat ^[1]	Residential Population	Worker Density (worker/100 m ²) ^[3]	No. of Employee
Site A1						
Residential	474	-	2.5	1,185	-	-
Club House & Lobby ^[2]	-	1,186	-	-	3.3	40
Retail	-	3,946	-	-	3.5	139
Restaurant	-	2,630	-	-	5.1	135
Site A2						
Retail	-	0	-	-	3.5	0
Restaurant	-	0	-	-	5.1	0
Site A3						
Retail	-	0	-	-	3.5	0
Restaurant	-	0	-	-	5.1	0
Site A4						
Retail	-	60	-	-	3.5	3
Restaurant	-	40	-	-	5.1	3
Site A5						
Retail	-	60	-	-	3.5	3
Restaurant	-	40	-	-	5.1	3
Site B						
Residential	1,080	-	2.5	2,700	-	-
Club House & Lobby ^[2]	-	2,250	-	-	3.3	75
G/IC	-	30,000	-	-	3.3	990
Hotel	-	5,000	-	-	3.2	160

Section	No. of Flat	Non-residential GFA (m ²)	Population Factor		Population	
			No. of person per flat ^[1]	Residential Population	Worker Density (worker/100 m ²) ^[3]	No. of Employee
Retail	-	8,826	-	-	3.5	309
Restaurant	-	5,884	-	-	5.1	301

Note:

- [1] According to the Population Census 2021, the average domestic household size is 2.3 for Mong Kok East District Council Constituency Area and Tertiary Planning Unit 222; and 2.5 for Yau Tsim Mong District. For conservative assessment household size of 2.5 has been adopted.
- [2] Area of club house and lobby are estimated as per the GFA concession for recreational facilities stipulated in PNAP APP-104.
- [3] According to figure of Commercial and Industrial Floor Space Utilization Survey by Planning Department, the staff densities are: -
 -- 3.3 staff per 100m² GFA for G/IC, Club House (Community, Social & Personal Services)
 -- 3.5 staff per 100m² GFA for Retails and Shops
 -- 5.1 staff per 100m² GFA for Restaurants
 -- 3.2 staff per 100m² GFA for Hotel
- [4] No swimming pool is provided in the current notional design.

3.1.4 As the Design Parameters of the Scheme is subject to detailed design, a 5% design allowance have been adopted in the sewage discharge from the Scheme. The estimated sewage flow rates from Scheme are summarised in **Table 3-2**. The average daily dry weather flow (ADWF) with additional 5% for conservative assessment are 612.5 m³/day, 5.9 m³/day, 5.9 m³/day & 1,934.2 m³/day for Sites A1, A4, A5 & B, respectively, while no sewage discharge is anticipated at Sites A2 and A3.

Table 3-2 Calculation of Sewage Discharge

Occupant Type	Unit Flow Factors (m ³ /day/person) ^[1]	No. of Occupants / Employee	Flow Rate (m ³ /day) ^[2]
Site A1			
Residential	0.27	1185	320.0
Club House & Lobby	0.28	40	11.2
Retail	0.28	139	38.9
Restaurant	1.58	135	213.3
Total (+5%)^[3]			<u>612.5</u>
Site A2			
Retail	0.28	0	0
Restaurant	1.58	0	0
Total (+5%)^[3]			<u>0</u>
Site A3			
Retail	0.28	0	0
Restaurant	1.58	0	0
Total (+5%)^[3]			<u>0</u>
Site A4			
Retail	0.28	3	0.8
Restaurant	1.58	3	4.7
Total (+5%)^[3]			<u>5.9</u>
Site A5			
Retail	0.28	3	0.8

Occupant Type	Unit Flow Factors (m ³ /day/person) ^[1]	No. of Occupants / Employee	Flow Rate (m ³ /day) ^[2]
Restaurant	1.58	3	4.7
<u>Total (+5%)^[3]</u>			<u>5.9</u>
Site B			
Residential	0.27	2700	729.0
Club House & Lobby	0.28	75	21.0
G/IC	0.28	990	277.2
Hotel	1.58	160	252.8
Retail	0.28	309	86.5
Restaurant	1.58	301	475.6
<u>Total (+5%)^[3]</u>			<u>1934.2</u>

Noted

[1] According to EPD's Guidelines for Estimating Sewage Flows for Infrastructure Planning, the Unit Flow Factor are: -

- 0.27 m³/day/person for Residential flat (R2);
- 0.28 m³/day/staff for Clubhouse & Lobby, Retail as well as G/IC;
- 1.58 m³/day/staff for Restaurant & Hotel; and

[2] Average Dry Weather Flow (ADWF).

[3] Additional of 5% ADWF has been adopted for conservative assessment.

3.2 Comparison with the Existing Condition of Sites

3.2.1 The existing sewage discharge of the Site A1 to A5 and B are estimated in **Table 3-4**, based on the existing number of flats and population estimated by URA (**Table 3-3**). Upon redevelopment, Sites A2 to A5 will either become open spaces or one-storey retail blocks. Based on the notional design, the estimated sewage generated from Sites A2, A3, A4, and A5 (**Table 3-2**) is expected to significantly decrease as shown in **Table 3-5**, thereby eliminating any anticipated adverse sewerage impact for these sites. For Sites A1 and B, since the expected sewage generated is higher than existing scenario, detailed hydraulic calculation is conducted and detailed in **Section 3.4**.

Table 3-3 Existing Population

Residential Section	Number of Units ^[1]		Population (Residential) ^[1]
Total			600
Site A1 – Residential Flat	112		510
Site A2 -- Residential Flat	6		25
Site A3 -- Residential Flat	3		15
Site A4 -- Residential Flat	6		25
Site A5 -- Residential Flat	6		25
Non-Residential Section	GFA (m ²) ^[2]	Staff Density (per 100m ²) ^[3]	No. of Employees
Total			254
Site A1 -- Retail	1,480	3.5	52
Site A2 -- Retail	200	3.5	7
Site A3 -- Retail	70	3.5	3
Site A4 -- Retail	130	3.5	5
Site A5 -- Retail	130	3.5	5
Site B – G/IC	5,500	3.3	182

[1] The number of units are based on the approved General Building Plans. The population is estimated based the number of units and URA's previous experience in handling similar redevelopment projects.

[2] Estimated values.

[3] According to figure of Commercial and Industrial Floor Space Utilization Survey by Planning Department, the staff density are: -
 -- 3.5 staff per 100m² GFA for Retails and Shops
 -- 3.3 staff per 100m² GFA for Community, Social & Personal Services

Table 3-4 Calculation of Existing Sewage Discharge

Occupant Type	Unit Flow Factors (m ³ /day/person)	No. of Occupants / Employees	ADWF (m ³ /day)
Site A1 -- Residential Flat	0.27	510	137.7
Site A2 -- Residential Flat	0.27	25	6.8
Site A3 -- Residential Flat	0.27	15	4.1
Site A4 -- Residential Flat	0.27	25	6.8
Site A5 -- Residential Flat	0.27	25	6.8
Site A1 -- Retail	0.28	52	14.6
Site A2 -- Retail	0.28	7	2.0
Site A3 -- Retail	0.28	3	0.8
Site A4 -- Retail	0.28	5	1.4
Site A5 -- Retail	0.28	5	1.4
Site B -- G/IC	0.28	182	51.0
Site B -- Public Toilet	--	--	10.6
Site A1 Total			152.3
Site A2 Total			8.7
Site A3 Total			4.9
Site A4 Total			8.2
Site A5 Total			8.2
Site B Total			61.6
Total	-	-	243.7

- [1] According to EPD's Guidelines for Estimating Sewage Flows for Infrastructure Planning, the Unit Flow Factor are: -
 -- 0.27 m³/day/person for Residential flat (R2);
 -- 0.28 m³/day/staff for Clubhouse, Lobby & Retail;
- [2] Average Dry Weather Flow (ADWF).
- [3] Detailed calculation of ADWF from the existing public toilet in Site B is presented in **Appendix 3-1**.

Table 3-5 Comparison of Sewage Discharge

Occupant Type	Existing ADWF (m ³ /day)	Proposed Scheme ADWF (m ³ /day)
Site A1 Total	152.3	612.5
Site A2 Total	8.7	0
Site A3 Total	4.9	0
Site A4 Total	8.2	5.9
Site A5 Total	8.2	5.9
Site B Total	61.6	1934.2

- [1] The ADWF of the Existing case and Proposed Scheme are presented in **Table 3-4** & **Table 3-2** respectively.

3.3 Sewage Discharge from the Vicinity

3.3.1 The surrounding developments near the Scheme is sectioned into different catchments based on the existing sewerage system. The sewage catchment areas in the vicinity are shown in

Figure 3-1 and the estimated sewage discharges from each catchment are summarised in **Table 3-6**. It should be noted that average domestic household size of 2.5, instead of 2.3, as stated in **Section 3.1.1**, has been adopted for conservative assessment. Catchments C and E are referenced from Sewerage Impact Assessment of "OZP Amendments in Yau Ma Tei and Mong Kok Districts" and the extracted pages are presented in **Appendix 3-2**. The population and detailed calculation of flow rate is presented in **Appendix 3-3**.

Table 3-6 Sewage Discharge from Surrounding Catchments

Catchment ID	Development	Total Flowrate / catchment ^[1]
A	Oscar Court	122.2 m ³ /day
	Kam Ming Court	
	Circle Garden	
B	Mongkok City Building	64.9 m ³ /day
	Hentiff (Ho Tat) Building	
C	144-152 Prince Edward Road West	376.6 m ³ /day
	207-221 Fa Yuen Street	
	210-238 Tung Choi Street	
	6-10 Playing Field Road	
D	Mong Kok Police Station	119.3 m ³ /day
E	304-328 Sai Yeung Choi Street North	992.0 m ³ /day
	7-29 Playing Field Road	
	40-46, 52-56, 68 Boundary Street	
	209-229, 240-254 Tung Choi Street	
	225-239, 244-266 Fa Yuen Street	
F	233-251 Sai Yee Street	676.6 m ³ /day
	Bijou Apartments	
	Bijou Court	
	Cheung Ling Mansion	
US01 ^[2]	Cosmopolitan Centre	497.2 L/s
	Upstream Area served by Sewer US01 (FWD4018096)	
US02 ^[2]	Upstream Area served by Sewer US02 (FWD4052975)	1285.7 L/s

[1] ADWF has been presented unless specified.

[2] The full capacity of the corresponding pipe has been adopted.

[3] The calculation is detailed in **Appendix 3-3**.

3.4 Assessment of Sewerage System

Downstream of Sites A1 & B

3.4.1 The sewage discharge from Sites A1 & B is expected to increase after the redevelopment, the downstream sewers shall be checked for sufficient capacities to cater sewerage discharge. Besides, some existing sewers are planned to be demolished or reconstructed either due to the need of the Scheme or for other practical reasons, which will be described in the following

paragraphs. The existing sewers to be demolished or reconstructed are illustrated in **Figure 3-2** and the proposed new sewers or upgrading are illustrated in **Figures 3-3a to 3-3e**.

- 3.4.2 Firstly, the existing 900 mm sewer between public sewer manholes FMH4017916 and FMH4017917 across Sai Yee Street shall be removed to facilitate the basement development at Site B (**Figure 3-2**). Consequently, the remaining sewers running from public sewer manhole FMH4017916 to FMH4017920 along Playing Field Road and Fa Yuen Street are proposed to be demolished (see **Figure 3-2**) and replaced by a more direct, shortened route connecting the same two public sewer manholes, as depicted in **Figure 3-3c**.
- 3.4.3 Secondly, the existing developments to the north of Site A1 will no longer be able to discharge through the current southward route (**Figure 3-2**; sewers PS15 to PS17). Instead, the sewage from those developments will be redirected to the north and connected to the main sewer through the newly proposed 300mm sewers, as illustrated in **Figure 3-3c**. It is important to note that the existing 900mm sewer along Fa Yuen Street from public sewer manholes FMH4017918 to FMH4017920 cannot be reused. This is because the invert levels of the sewers near the decked nullah need to be raised to accommodate the proposed upgrades for the drainage pipes SMD4004100 and SMD4004101 that run beneath the existing sewers. The details of the proposed stormwater pipes should be referred to the Drainage Impact Assessment Report prepared for the Project separately.
- 3.4.4 Thirdly, as mentioned previously, the sewers in the vicinity of the decked nullah will be elevated to create additional space for the proposed upgrades to the drainage pipes. Therefore, the invert level of the existing sewer that crosses the decked nullah near Sai Yee Street (**Figure 3-2**; sewer PS05) will be raised. Moreover, the upgrading of current PS05 sewer will likely reduce potential disruptions to the flow of the decked nullah due to its current low invert level (downstream invert level of 3.75mPD). To comply with current standards, the diameter of PS05 will increase from 150mm to 225mm.
- 3.4.5 Lastly, it has been identified that sewer FWD4018104, located between public sewer manholes FMH4017920 and FMH4017921 across Prince Edward Road West (**Figure 3-2**), is at risk of surcharging due to its very shallow gradient ($0.04 \text{ m} / 44 \text{ m} = 0.00091$). To improve sewer capacity, the proposed upgrades will shorten the sewer route and provide new public manholes FMH-02 and FMH-03 outside the garden area, as shown in **Figure 3-3d**. With these proposed changes, the flow is expected to achieve the self-cleansing velocity of 1.0 m/s under full-pipe conditions (see **Table A in Appendix 3-5** for Sewer PP04 and PP05).
- 3.4.6 It is important to note that there are two 300mm sewers connected to the public sewer manholes FMH4017921 in the southeast. A preliminary desktop assessment indicates that these two 300mm sewers are likely not in use. However, the condition of these sewers will be further assessed in a later stage. If it is determined that the two 300mm sewers are indeed in use, it would be more practical to divert the sewage to nearby sewers in the southwest, rather than allowing it to cross the decked nullah at its current invert level (current invert levels: 3.25-3.32mPD).

Downstream of Sites A2 - A5

- 3.4.7 As stated in **Section 3.2**, the sewage flow from each of the Sites A2 – A5 is expected to decrease. Therefore, no adverse sewerage impact is anticipated from the discharge of those sites thus the assessment of their downstream sewers is not necessary.

Summary of Sewers to be Demolished

3.4.8 The sewers to be demolished are illustrate **Figure 3-2** and summarised in **Table 3-7**.

Table 3-7 Summary of Sewers to be Demolished

Location	From Manhole	To Manhole	Sewer Diameter	Remarks
South-west of Site B; Playing Field Road; & Fa Yuen Street.	FMH4017916	FMH4017920	900mm	To be diverted to a shorter route.
Along the nullah within Site A1 and its downstream	FMH4018197	FMH4017922	450-900mm	To be upgraded/modified.
Within Site A1	FMH4079142	FMH4018197	225mm	
Within Site A1	FMH4018192	FMH4018189	100-300mm	
Flower Market Road	FMH4073742	FMH4018199	225mm	No longer required.

Capacity of Existing Downstream Sewers

3.4.9 The capacities of the existing downstream foul sewer pipe sections (PS 01 - PS 17, **Figure 3-2**), based on the planned flow configuration as illustrated in **Figures 3-3a to 3-3e**, have been calculated by Colebrook-White Equation. The calculated capacities are listed in **Table 3-8** and the detailed calculation can be found in **Table A of Appendix 3-4**.

Table 3-8 Capacity of Downstream Foul Sewers

Pipe Section	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)
PS01	FMH4017914	FMH4017915	1000.3
PS02	FMH4017915	FMH4017916	1000.3
PS03	FMH4018199	FMH4018200	160.6
PS04	FMH4018200	FMH4018197	124.9
PS05	FMH4018202	FMH4018200	41.5
PS06	FMH4017922	FMH4017923	686.3
PS07	FMH4017923	FMH4017924	1596.9
PS08	FMH4017924	FMH4018185	2320.4
PS09	FMH4018185	FMH4018251	2814.3
PS10	FMH4018251	FMH4018252	836.2
PS11	FMH4018252	FMH4018253	989.3
PS12	FMH4018253	FMH4018254	1626.0
PS13	FMH4018254	FSH4000280	3172.9
PS14	FSH4000280	FMH4018257	3402.6
PS15 ^[1]	FMH4079142	FMH4079141	-
PS16 ^[1]	FMH4079141	FMH4079140	-
PS17 ^[1]	FMH4079140	FMH4018194	-
US01 ^[2]	FMH4017912	FMH4017913	492.7
US02 ^[2]	FMH4046195	FMH4046196	1285.7

Note:

- [1] Sewage flow direction between PS15 to PS17 is reserved based on planned flow configuration.
 [2] The full capacity of the US01 has been adopted as upstream flow volume.
 [3] The calculation is detailed in **Table A of Appendix 3-4**.

3.4.10 A summary of the utilization of the sewers is shown in **Table 3-9**. Detailed calculation is shown in **Tables B of Appendix 3-4**. The results indicate that the existing sewers PS03, PS04 & PS06 are unable to cater the expected sewer flow. In addition, the flow direction of sewers PS15, PS16 & PS17 will need to be reversed due to the redevelopment of Site A1.

Table 3-9 Proportion of Peak Flow to Full Capacity (Existing Pipes)

Pipe Section	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PS01	1000.3	497.2	50%
PS02	1000.3	642.8	64%
<u>PS03</u>	<u>160.6</u>	<u>642.8</u>	<u>400%</u>
<u>PS04</u>	<u>124.9</u>	<u>647.6</u>	<u>519%</u>
PS05	41.5	7.8	19%
<u>PS06</u>	<u>686.3</u>	<u>661.8</u>	<u>96%</u>
PS07	1596.9	661.8	41%
PS08	2320.4	661.8	29%
PS09	2814.3	751.3	27%
PS10	836.2	751.3	90%
PS11	989.3	751.3	76%
PS12	1626.0	751.3	46%
PS13	3172.9	792.1	25%
PS14	3402.6	2077.7	61%
<u>PS15</u>	-	<u>14.7</u>	-
<u>PS16</u>	-	<u>14.7</u>	-
<u>PS17</u>	-	<u>14.7</u>	-

Note:

- [1] Surcharged sewers are **Bold Underlined**.
 [2] The calculation is detailed in **Table B of Appendix 3-4**.
 [3] Utilization of $\geq 92.5\%$ is considered surcharged.

Terminal Manholes and Discharge Sewers of the Sites

- 3.4.11 The sewage discharge from the Site A1 is proposed to be collected by terminal manhole FTMH-A01 and discharged via a proposed PE sewer PP-A01, with diameter of 300mm and slope of 1:100, connected to new manhole FMH-01 (**Figure 3-3c**).
- 3.4.12 The sewage discharge from the Site A4 is proposed to be collected by terminal manhole FTMH-A04 and discharged via a proposed PE sewer PP-A04, with diameter of 225mm and slope of 1:100, connected to existing manhole FMH4084221 (**Figure 3-3e**).
- 3.4.13 The sewage discharge from the Site A5 is proposed to be collected by terminal manhole FTMH-A05 and discharged via a proposed PE sewer PP-A05, with diameter of 225mm and slope of 1:100, connected to existing manhole FMH4018214 (**Figure 3-3e**).

3.4.14 The sewage discharge from the Site B is proposed to be collected by terminal manhole FTMH-B01 and discharged via a proposed PE sewer PP-B01, with diameter of 400mm and slope of 1:100, connected to existing manhole FMH4017915 (**Figure 3-3b**).

3.4.15 No terminal manhole and discharge sewers will be provided for Sites A2 & A3.

Proposed New Sewers and Upgrading in the Surrounding

3.4.16 In addition to the sewers connected to the terminal manholes of the Sites, 11 new sewers (PP01 to PP11) are proposed. PP01 to PP06 are proposed as precast concrete pipes with PVC (or equivalent) lining to handle increased sewage flows and to facilitate shortening of the existing 900 mm sewers. PP07 to PP11 are proposed as PE pipes intended for diverting sewage from existing developments (see **Figures 3-3c and 3-3d**).

3.4.17 Nine (9) sewers (PS01 to PS06 and PS15 to PS17) are proposed to be upgraded and/or modified. The invert levels of PS01 and PS02 are proposed to be adjusted to align with the invert level of the proposed new sewers; PS03 and PS04 are proposed to be upgraded from 450 mm to 900 mm to cater for the upstream flow; PS05 is proposed to be upgraded from 150 mm to 225 mm with an increased invert level to align with the invert level of the proposed sewers; the slope of PS06 is proposed to be increased to cater for the upstream flow; the slopes of PS15 to PS17 are proposed to be reversed to change the flow direction. The proposed pipes will be either PE pipes or precast concrete pipes with PVC or equivalent lining.

3.4.18 The proposed new pipes and upgrades are presented in **Table 3-10 & Table 3-11** below. For upgrading works regarding adjustment of invert level, concerned pipe sections shall be replaced by new pipes. The exact location of the new manholes and invert levels will be subject to detailed design. All proposed sewerage works are illustrated **Figure 3-4**. With the proposed new sewers and upgrades, the downstream sewer will be able to cater the expected peak sewage flow, thus no adverse sewerage impact arising from the Proposed Development is anticipated.

Table 3-10 Proportion of Peak Flow to Full Capacity (Proposed New Sewers)

Pipe Section	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PP-A01	FTMH-A01	FMH-01	120.4	55.3	46%
PP-A04	FTMH-A04	FMH4084221	56.4	0.7	1%
PP-A05	FTMH-A05	FMH4018214	56.4	0.7	1%
PP-B01	FTMH-B01	FMH4017915	256.4	145.5	57%
PP01	FMH4017916	FMH4018199	1137.9	642.8	56%
PP02	FMH4018197	FMH-01	1146.3	647.6	56%
PP03	FMH-01	FMH4017920	1146.7	661.8	58%
PP04	FMH4017920	FMH-02	1151.2	661.8	57%
PP05	FMH-02	FMH-03	1421.8	661.8	47%
PP06	FMH-03	FMH4017922	1461.3	661.8	45%
PP07	FMH4018194	FMH-04	42.3	14.7	35%
PP08	FMH-04	FMH-05	26.7	14.7	55%
PP09	FMH-05	FMH-06	23.6	14.7	62%
PP10	FMH-06	FMH-07	23.6	14.7	62%
PP11	FMH-07	FMH-01	92.3	14.7	16%

[1] The proposed new pipes will be either PE pipes or precast concrete pipes with PVC or equivalent lining.

Table 3-11 Proportion of Peak Flow to Full Capacity (Proposed Upgrading)

Pipe Section	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PS01	FMH4017914	FMH4017915	877.7	497.2	57%
PS02	FMH4017915	FMH4017916	1065.3	642.8	60%
PS03	FMH4018199	FMH4018200	1234.9	642.8	52%
PS04	FMH4018200	FMH4018197	1153.7	647.6	56%
PS05	FMH4018202	FMH4018200	89.5	7.8	9%
PS06	FMH4017922	FMH4017923	1414.5	661.8	47%
PS15	FMH4079142	FMH4079141	19.2	14.7	77%
PS16	FMH4079141	FMH4079140	17.6	14.7	83%
PS17	FMH4079140	FMH4018194	18.9	14.7	78%

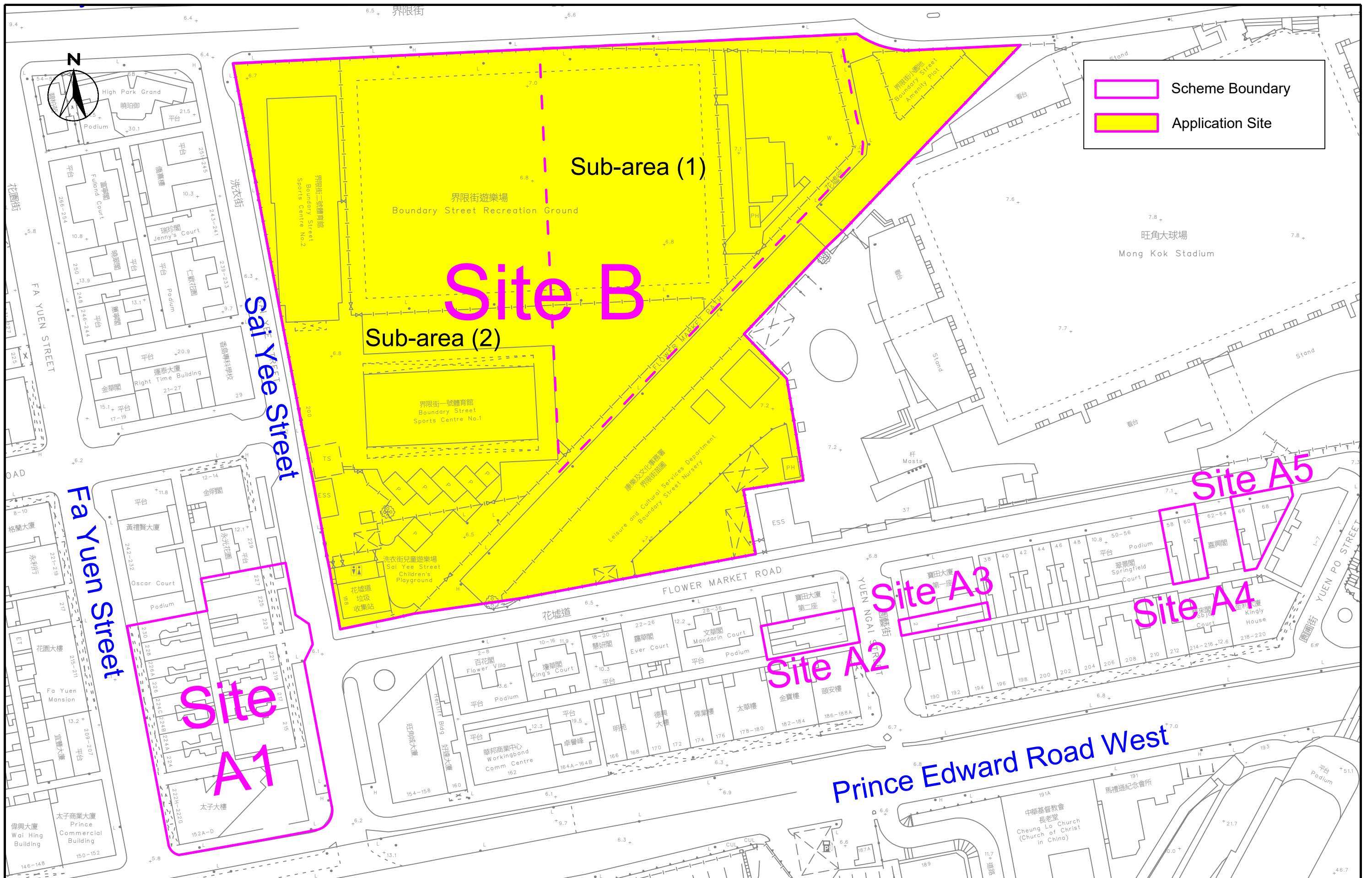
[1] The proposed upgrades pipes will be either PE pipes or precast concrete pipes with PVC or equivalent lining.

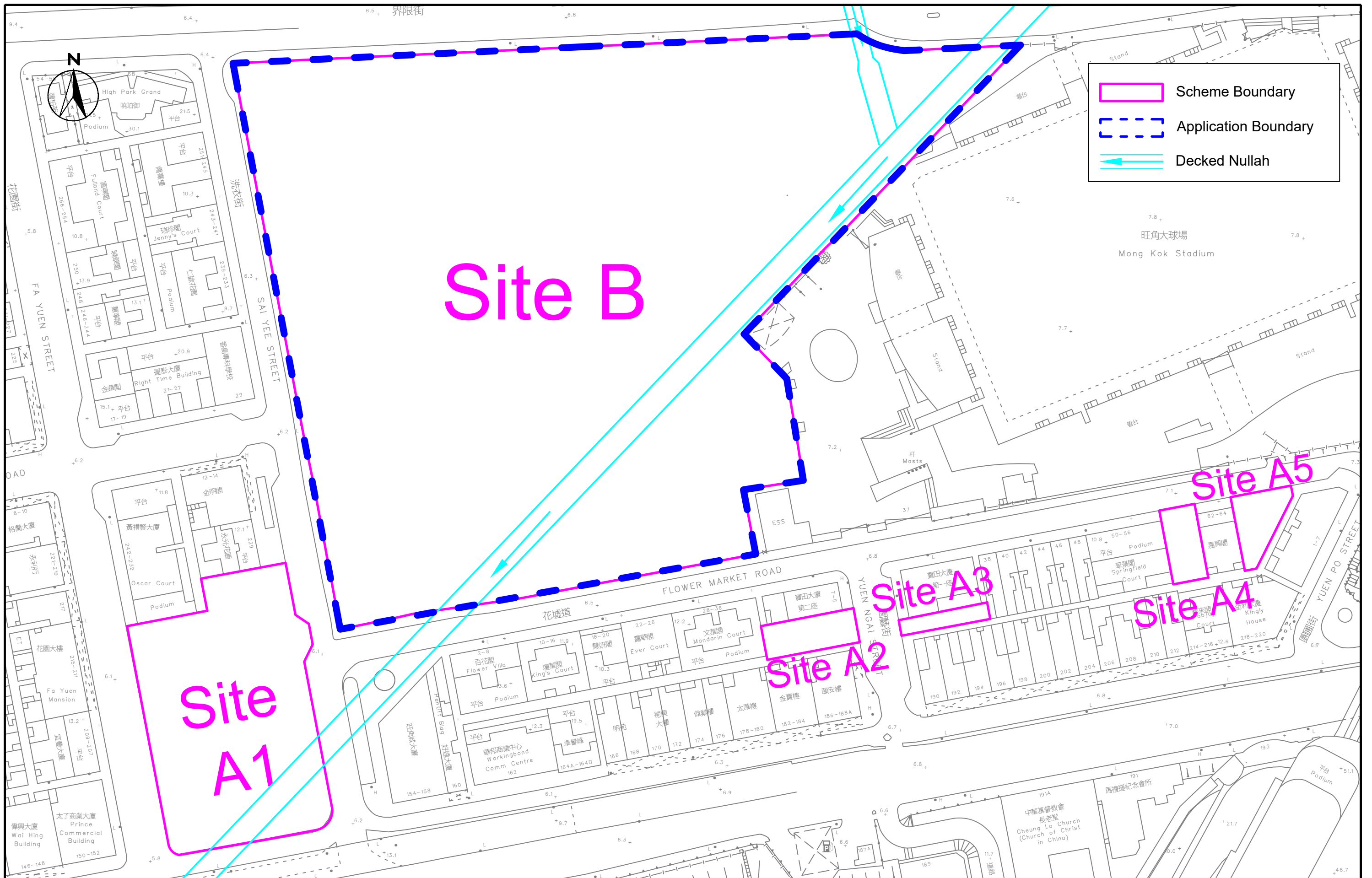
3.4.19 The necessity and arrangement of temporary sewer diversion will be subject to detailed design. By implementing appropriate works sequencing and temporary sewer diversion measures in the implementation stage, it is anticipated that any potential sewerage impact during the sewerage works can be effectively mitigated.

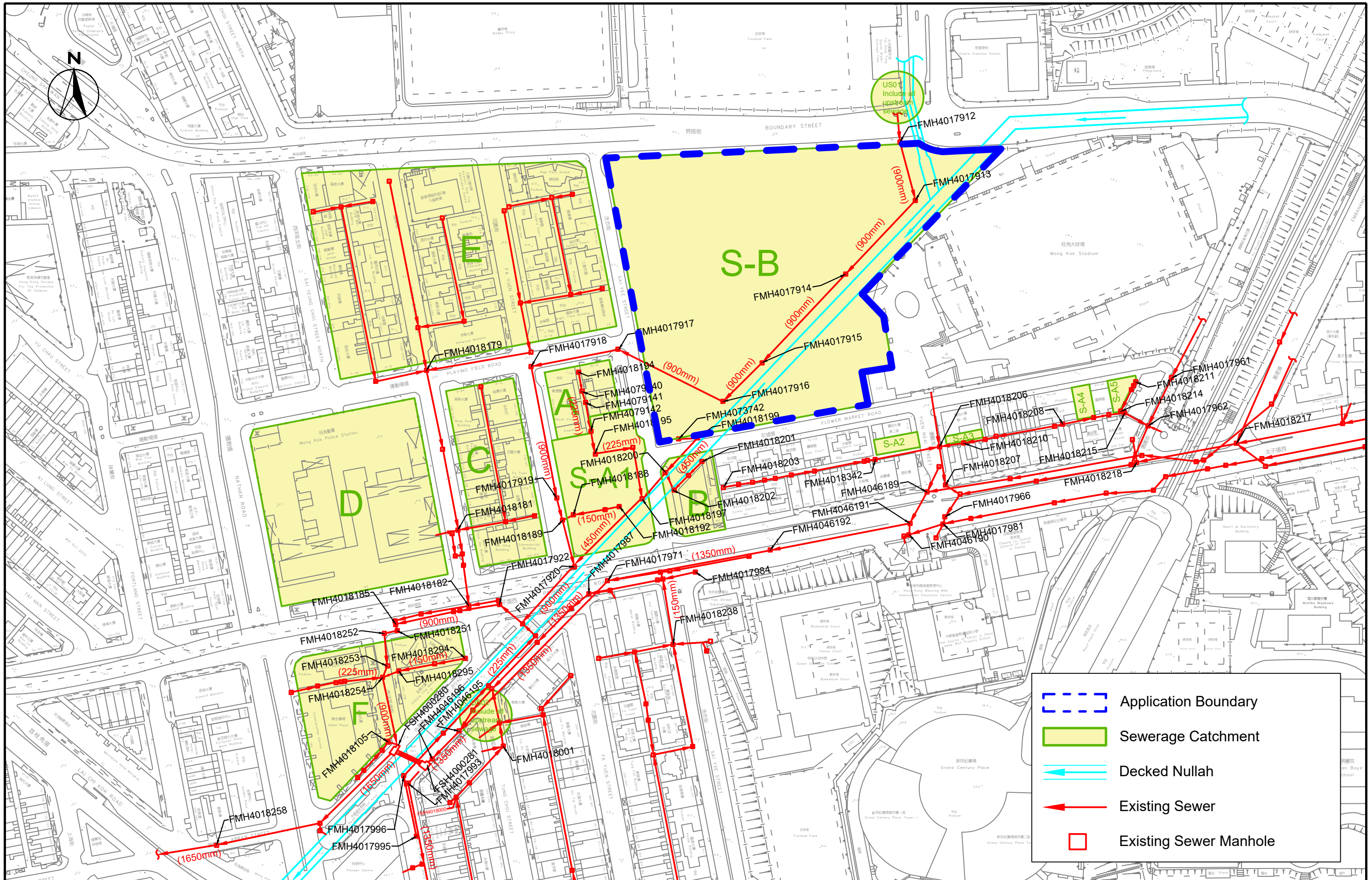
4 CONCLUSION

- 4.1.1 This Sewerage Impact Assessment has been undertaken to assess the potential sewerage impact of the Proposed Development and to serve as a supporting document for the S.16 Application to the TPB for consideration.
- 4.1.2 The sewage discharge from Sites A1 & B are expected to be increased while the sewage discharge from Sites A2 to A5 are expected to be reduced.
- 4.1.3 The sewage discharge from the Site A1 is proposed to be collected by terminal manhole FTMH-A01 and discharged via proposed 300mm sewer PP-A01 to new manhole FMH-01; The sewage discharge from the Site A4 is proposed to be collected by terminal manhole FTMH-A04 and discharged via proposed 225mm sewer PP-A04 to existing manhole FMH4084221; The sewage discharge from the Site A5 is proposed to be collected by terminal manhole FTMH-A05 and discharged via proposed 225mm sewer PP-A05 to existing manhole FMH4018214; The sewage discharge from the Site B is proposed to be collected by terminal manhole FTMH-B01 and discharged via proposed 400mm sewer PP-B01 to existing manhole FMH4017915. No terminal manhole and discharge sewers will be provided for Sites A2 & A3.
- 4.1.4 There are 11 proposed new sewers (PP01 to PP11). PP01 to PP06 are proposed to handle the increased sewage flow and facilitate the shortening of the 900mm sewers, while PP07 to PP11 are intended for diverting sewage from existing developments.
- 4.1.5 There are 9 sewers (PS01 to PS06, and PS15 to PS17) proposed to be upgraded and/or modified. The invert levels of PS01 & PS02 are proposed to be adjusted to align with the invert level of the proposed new sewers; PS03 & PS04 are proposed to be upgraded from 450mm to 900mm to cater the upstream flow; PS05 is proposed to be upgraded from 150mm to 225mm with increased invert level to align with the invert level of the proposed sewers; the slope of PS06 is proposed to be increased to cater the upstream flow; the slope of the PS15 to PS17 are proposed to be reversed to change the flow direction.
- 4.1.6 The proposed sewers will be either PE pipes or precast concrete pipes with PVC or equivalent lining.
- 4.1.7 With the proposed new sewers and upgrades, the downstream sewer will be able to cater the expected peak sewage flow, thus no adverse sewerage impact arising from the Proposed Development with the minor relaxation of domestic GFA in Site B under the S.16 Application is anticipated.
- 4.1.8 The necessity and arrangement of temporary sewer diversion will be subject to detailed design. By implementing appropriate works sequencing and temporary sewer diversion measures in the implementation stage, it is anticipated that any potential sewerage impact during the sewerage works can be effectively mitigated.

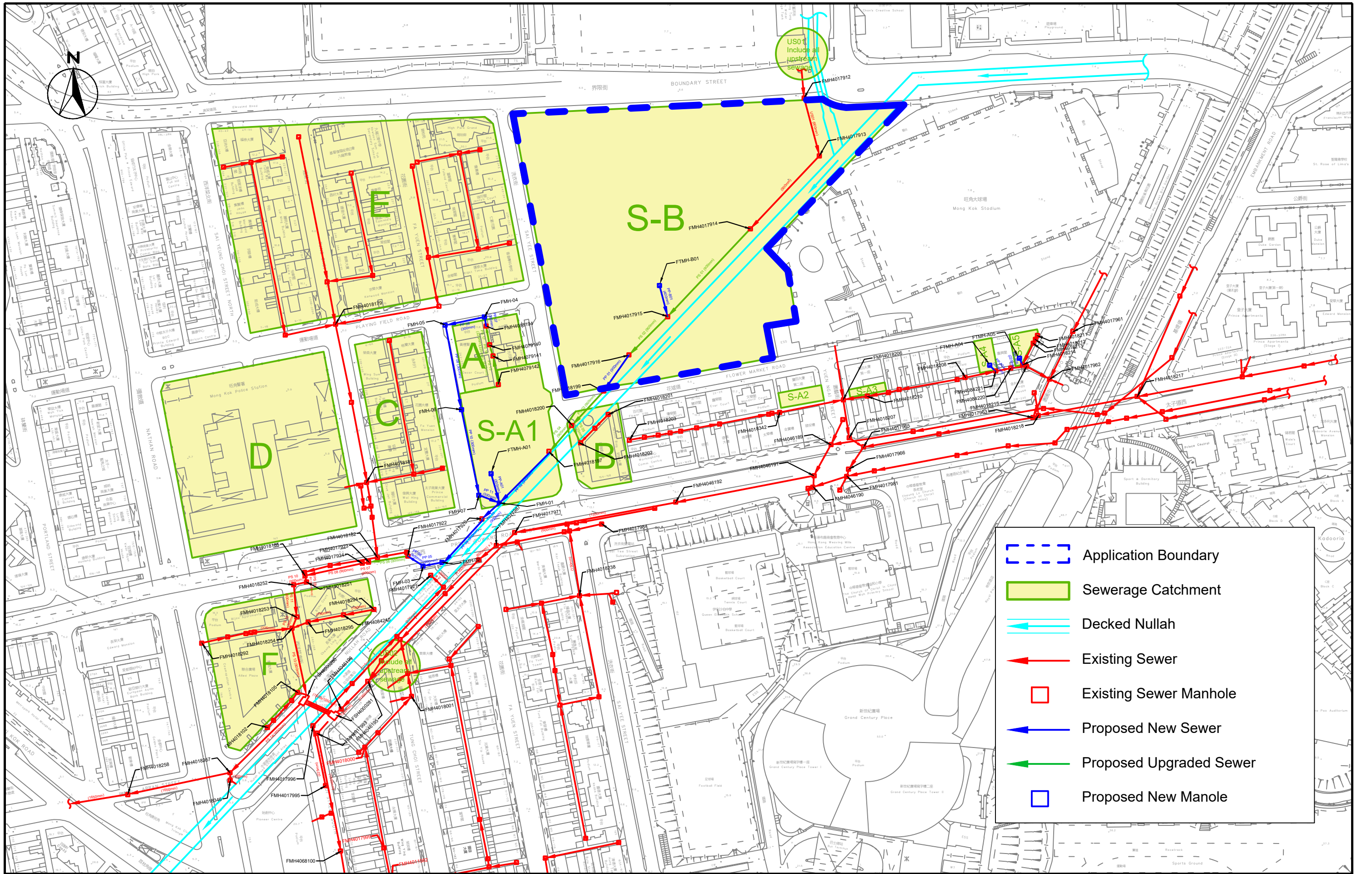
FIGURES







SCALE	1:2000 @ A3	DATE	May 2026
CHECK	KS	DRAWN	CC
JOB No.	IA25056-S16	DRAWING No.	Fig. 3-1
		REV	-



Application Boundary

Sewerage Catchment

Decked Nullah

Existing Sewer

Existing Sewer Manhole

Proposed New Sewer

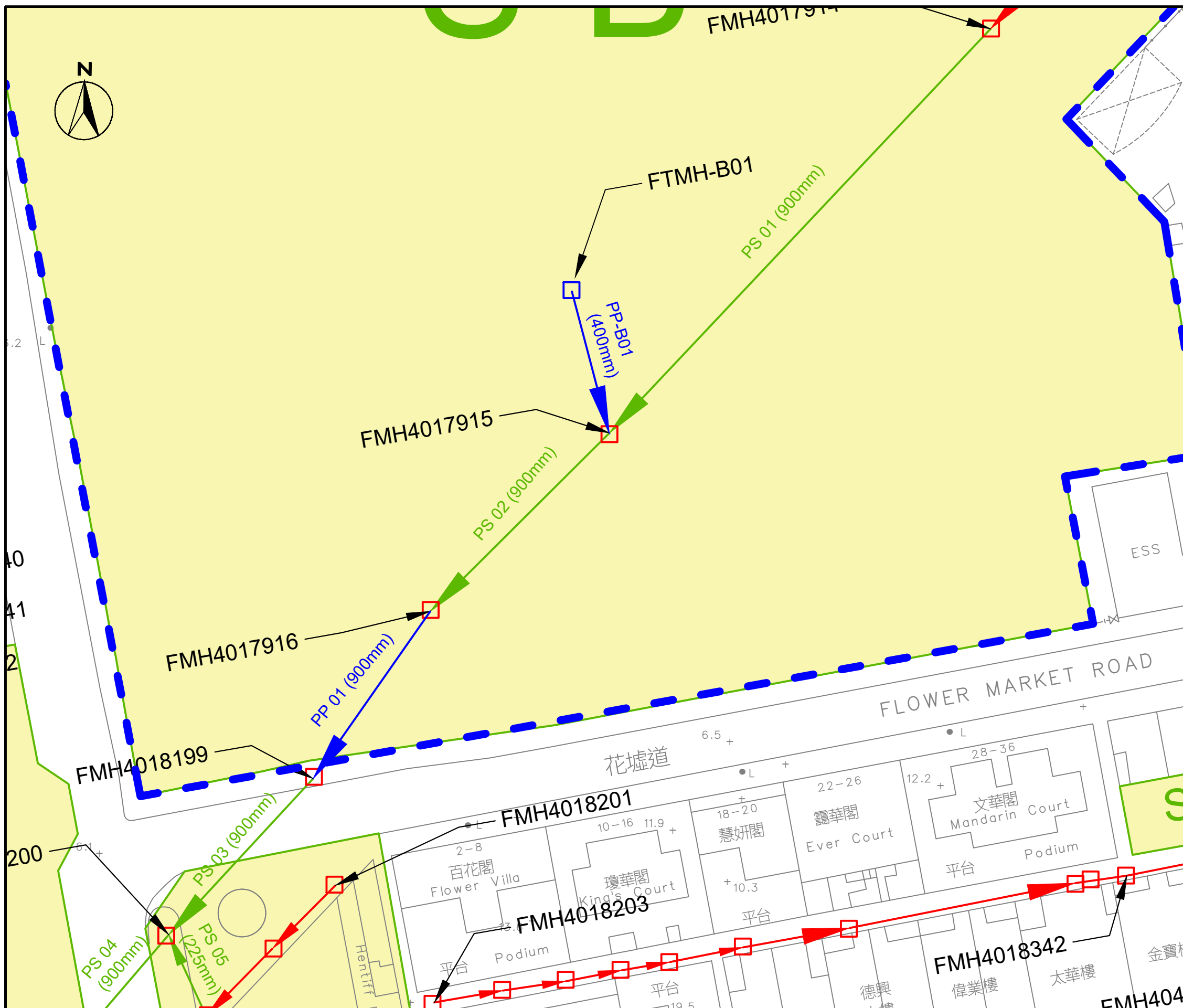
Proposed Upgraded Sewer

Proposed New Manhole



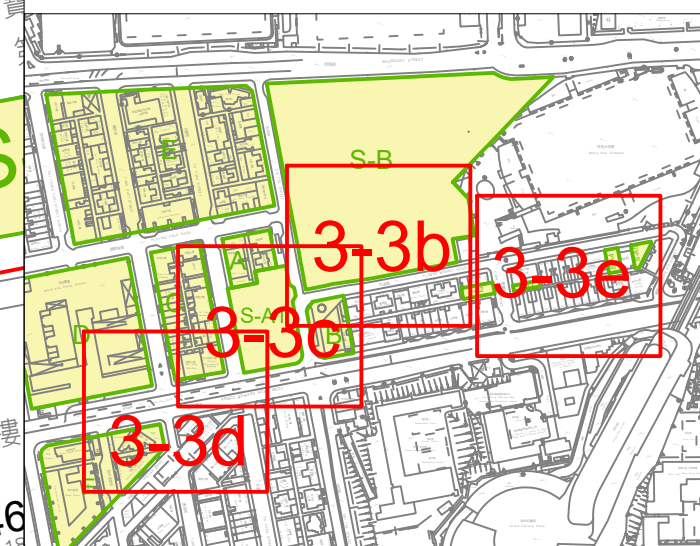
Section 16 Planning Application for Proposed Minor Relaxation of the Maximum Domestic GFA of Site B for the Urban Renewal Authority
 Sai Yee Street/ Flower Market Road Development Scheme
Proposed New Sewer and Sewer Manhole (Overview)

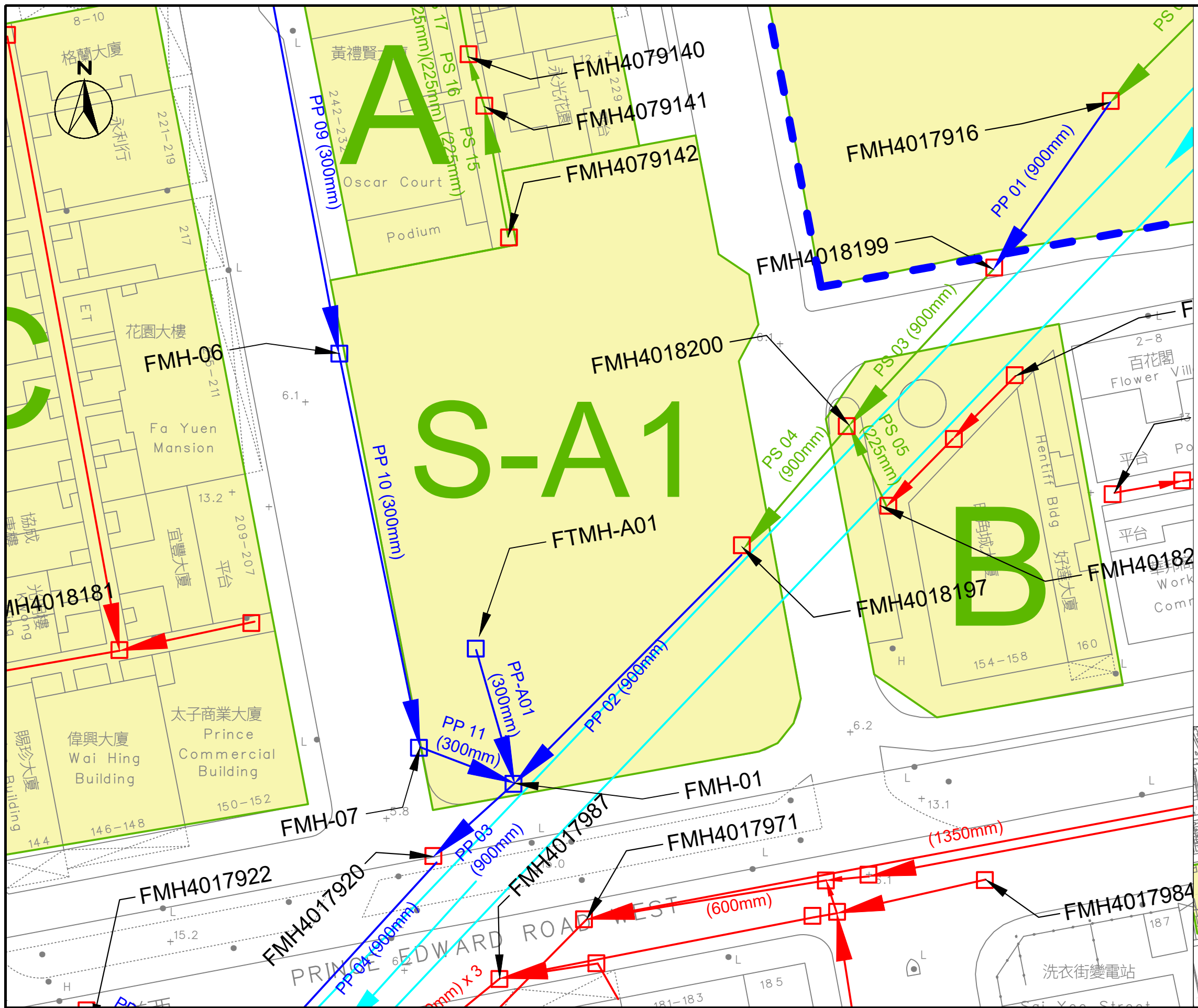
SCALE	1:2000 @ A3	DATE	May 2026
CHECK	KS	DRAWN	CC
JOB No.	IA25056-S16	DRAWING No.	Fig. 3-3a
		REV	-



- [---] Application Boundary
- Sewerage Catchment
- [<---] Decked Nullah
- [<---] Existing Sewer
- Existing Sewer Manhole
- [<---] Proposed New Sewer
- [<---] Proposed Upgraded Sewer
- Proposed New Manhole

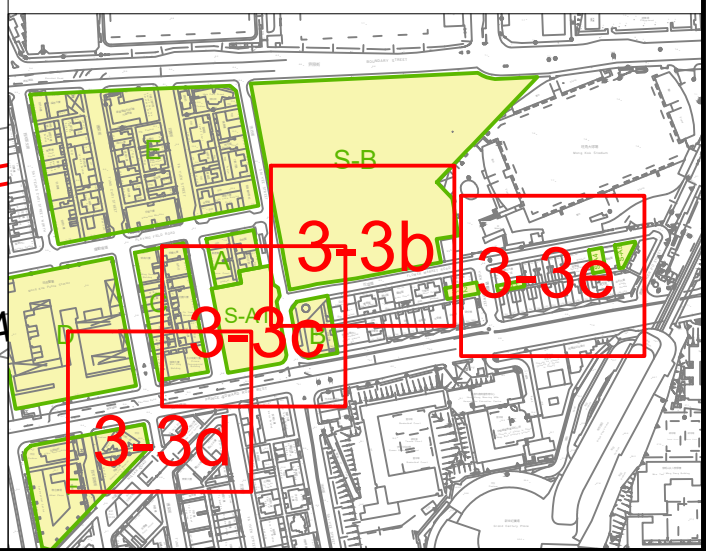
Key Plan
1:6000 @ A3





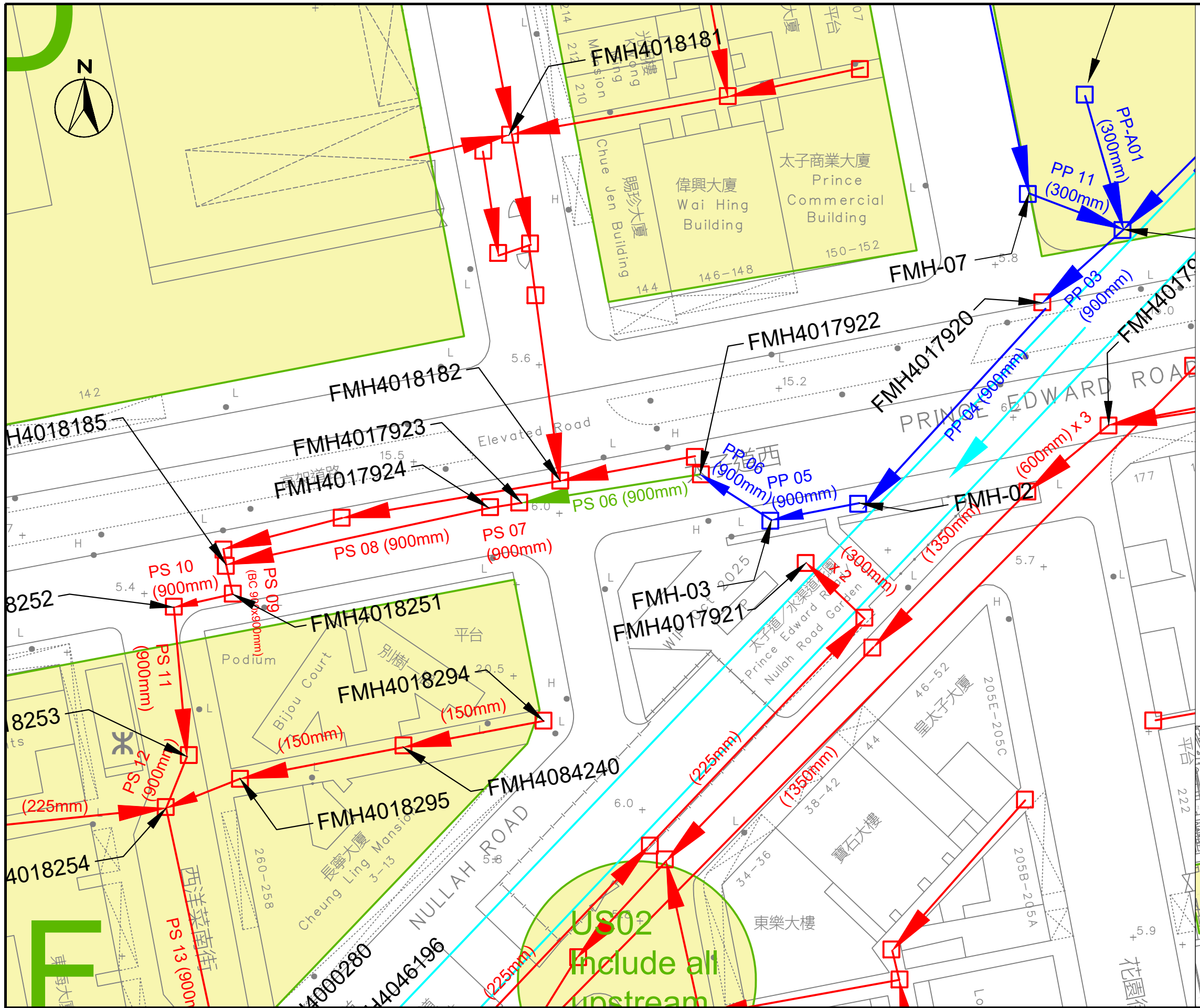
- Application Boundary
- Sewerage Catchment
- Decked Nullah
- ← Existing Sewer
- Existing Sewer Manhole
- ← Proposed New Sewer
- ← Proposed Upgraded Sewer
- Proposed New Manhole

Key Plan
1:6000 @ A3



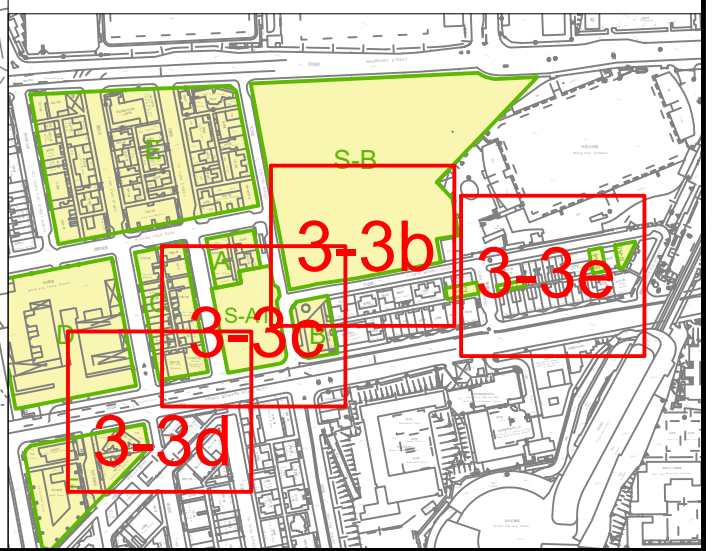
Section 16 Planning Application for Proposed Minor Relaxation of the Maximum Domestic GFA of Site B for the Urban Renewal Authority
Sai Yee Street/ Flower Market Road Development Scheme
Proposed New Sewer and Sewer Manhole - 2

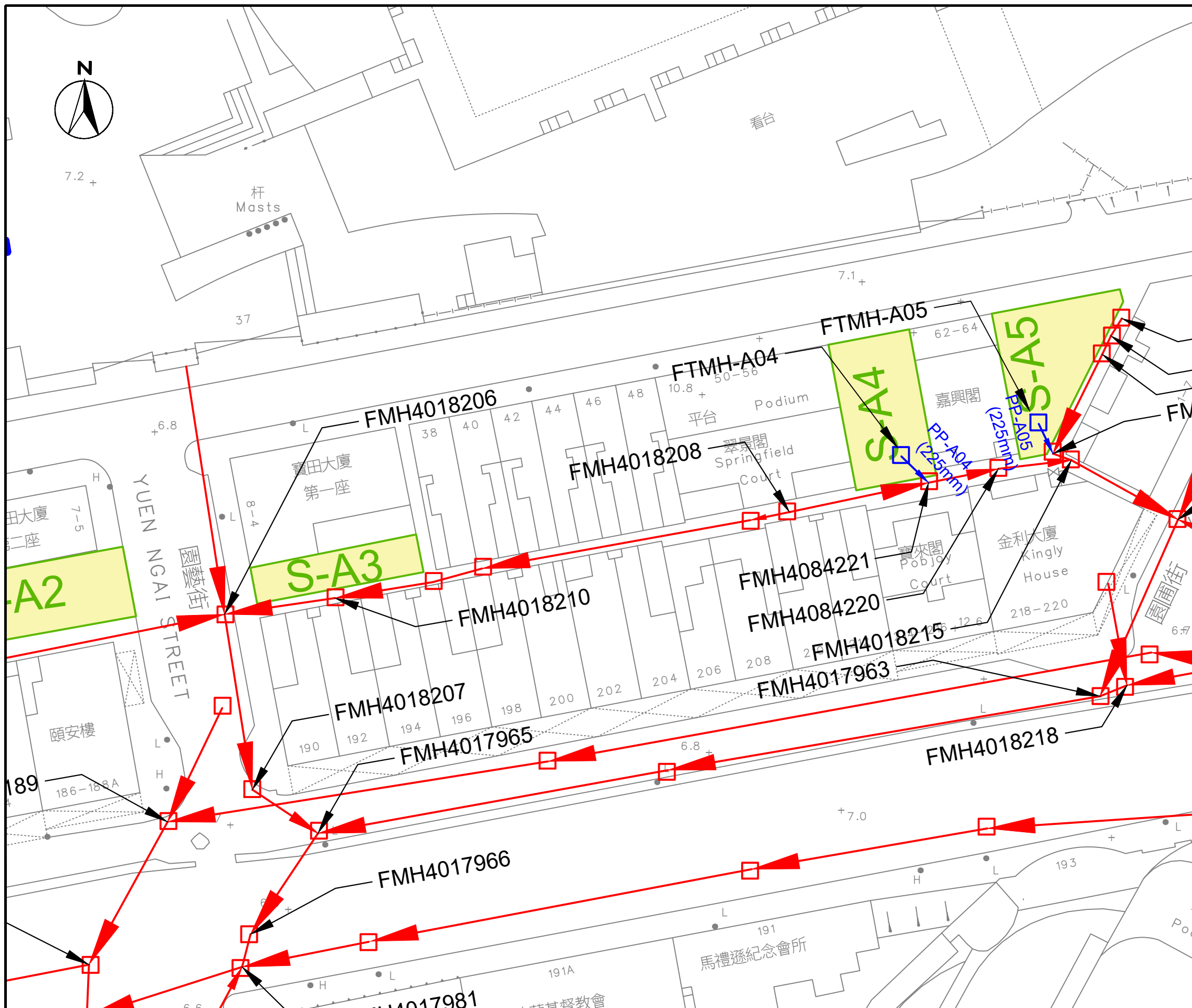
SCALE	1:500 @ A3	DATE	May 2026
CHECK	KS	DRAWN	CC
JOB No.	IA25056-S16	DRAWING No.	Fig. 3-3c
		REV	-



- Application Boundary
- Sewerage Catchment
- ← Decked Nullah
- ← Existing Sewer
- Existing Sewer Manhole
- ← Proposed New Sewer
- ← Proposed Upgraded Sewer
- Proposed New Manhole

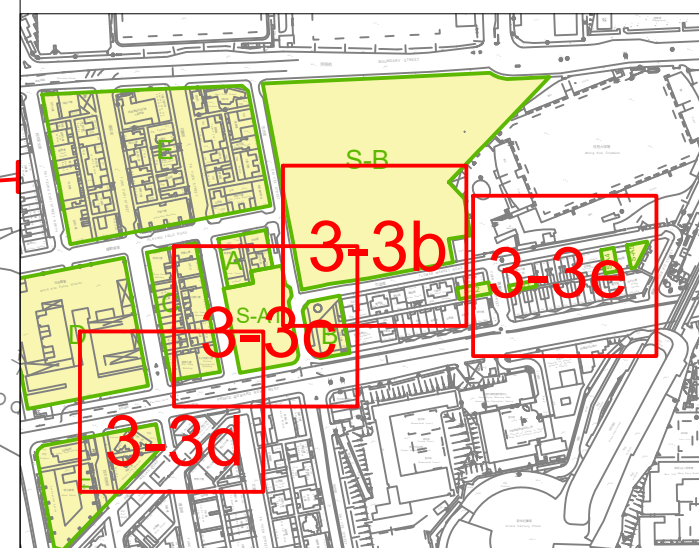
Key Plan
1:6000 @ A3



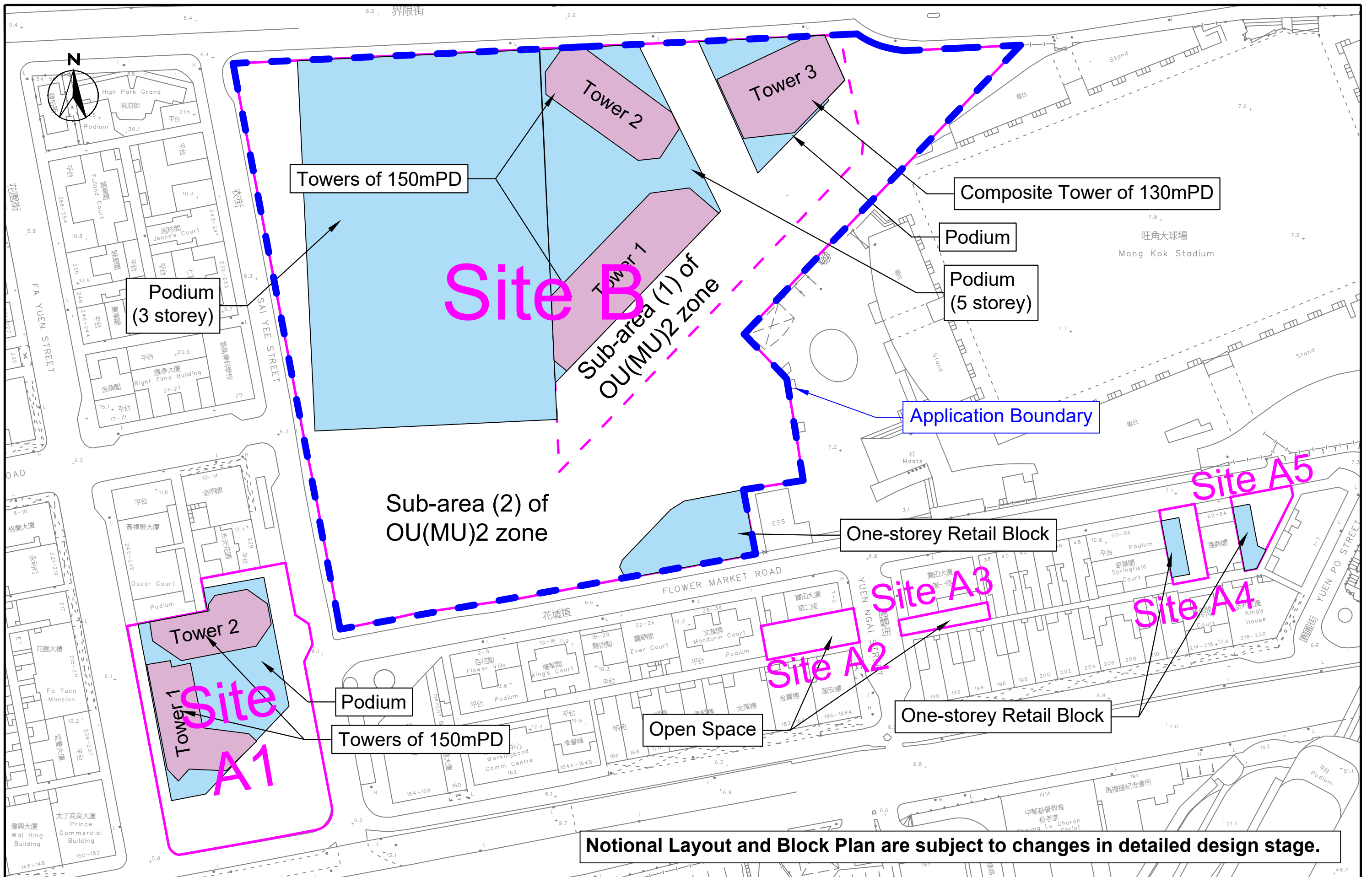


- Application Boundary
- Sewerage Catchment
- Decked Nullah
- Existing Sewer
- Existing Sewer Manhole
- Proposed New Sewer
- Proposed Upgraded Sewer
- Proposed New Manhole

Key Plan
1:6000 @ A3



**APPENDIX 2-1
NOTIONAL PLAN OF THE PROPOSED
DEVELOPMENT**



**APPENDIX 3-1
CALCULATION OF SEWAGE FLOW
FROM THE EXISTING PUBLIC TOILET IN
SITE B**

Appendix 3-1: Calculation of Sewage Flow from the Existing Public Toilet in Site B

	Unit	Female W. C.	Male W. C.	Male Urinal	Accessible W.C
Number of W.C./Urinal [4]	nos	12	8	15	1
Volume of flushing water per use [5]	Litre	6.5	6.5	2.5	6.5
Volume of washing water used per minute [5]	Litre/Minute	4	4	4	4
Operation time for washing [6]	Second	20	20	20	20
Volume of washing water per use	Litre/Use	1.4	1.4	1.4	1.4
Number of daily user [1,2,3]	nos	1650			
		758	152	606	134
Total volume of sewage generated	Litre/day	5988.2	1200.8	2363.4	1058.6
	Litre/day	10611			
	m ³ /Day	10.6			

Notes:

[1] Ratio of users with disability (8.1%) has made reference to the Hong Kong Monthly Digest of Statistics (January 2015) Feature Article – Persons with Disabilities and Chronic Diseases in Hong Kong.

Available at: <http://www.statistics.gov.hk/pub/B71501FB2015XXXXB0100.pdf>. [Accessed June 2024].

[2] With reference to “Chapter 1 of Planning, provision and management of public toilets by the Food and Environmental Hygiene Department”, the public toilet shall be considered as high utilization rate(“300 to 3,000 daily users”) and average daily users between 300 and 3,000 (~1,650) has been assumed in the calculation.

Available at: <https://www.legco.gov.hk/yr19-20/english/counmtg/papers/cm20191127-sp058-e.pdf> [Assessed June 2024]

[3] For users without disability, ratio of male to female has been assumed to be 1:1, and the ratio of Male W.C. & Male Urinal has been assumed as 1:4 in accordance with the Credit WU 7 in BEAM Plus New Building (v2.0).

[4] The number of WC/Urinal is based on site visit dated 16 May 2024.

[5] According to the "Particular guidelines and examples of recommended applications of water-saving/water-efficient devices to be used in government projects" published by WSD, it is recommended to use water-efficient devices with water efficiency grade 1 for government projects. For a conservative approach, water efficiency grade 2 have adopted in the assessment.

-- Water closet (6.5L/use)

-- Urinal (2.5L/use)

-- Non-mixing water tap (4L/min)

[6] The operation time per use (20 sec) has made reference to the Credit WU P1 in BEAM Plus New Building (v2.0).

**APPENDIX 3-2
EXTRACTED PAGES FROM SEWERAGE
IMPACT ASSESSMENT OF OZP
AMENDMENTS IN YAU MA TEI AND
MONG KOK DISTRICTS**

Prepared for

Urban Renewal Authority

Prepared by

Ramboll Hong Kong Limited

OUTLINE ZONING PLAN AMENDMENTS IN YAU MA TEI AND MONG KOK DISTRICTS

SEWERAGE IMPACT ASSESSMENT

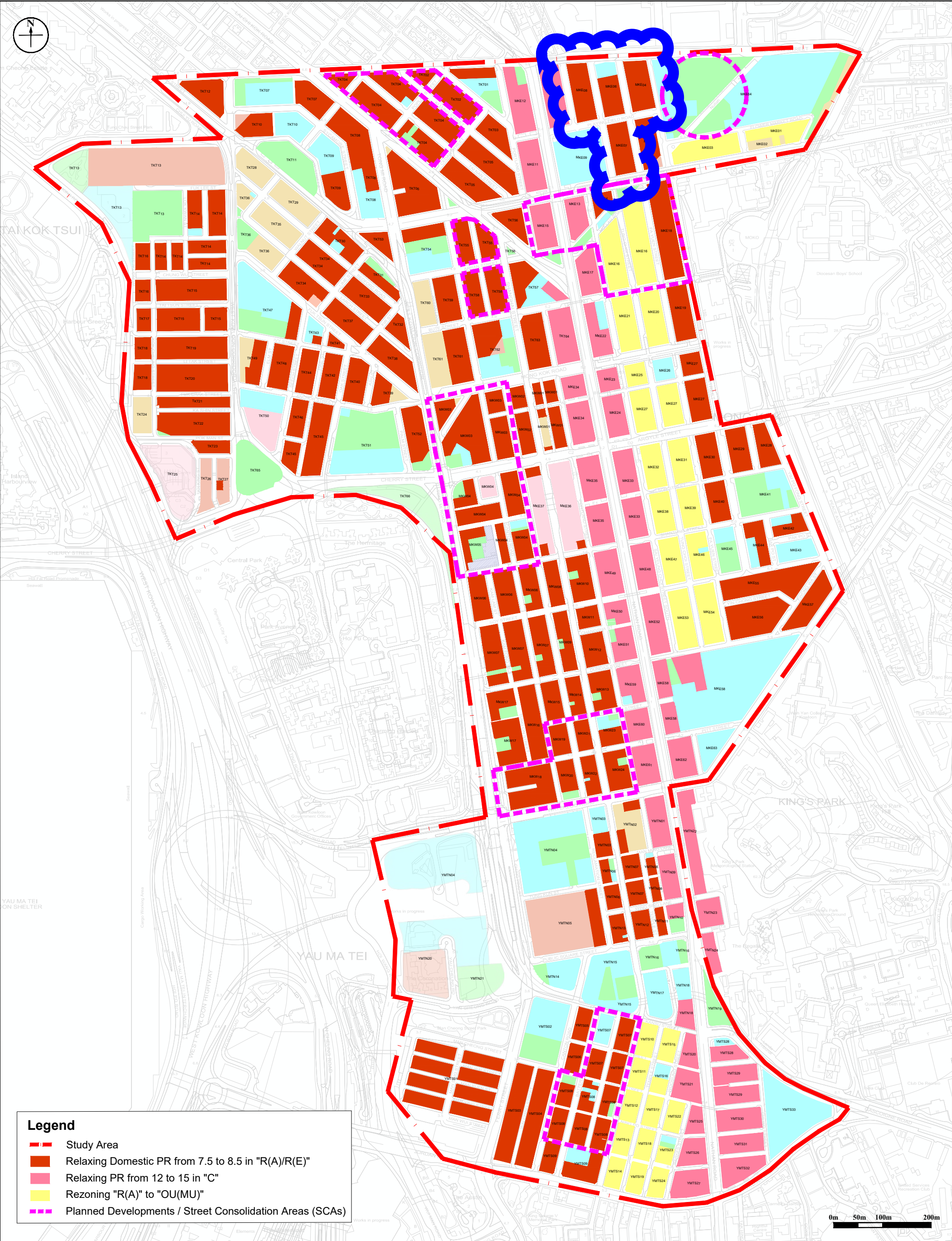


Figure: 1.2

Title: Location of Street Blocks

Project: Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts

RAMBOLL

Drawn by: KL

Checked by: KY

Rev.: 2.0

Date: May 2022

Street Block	Population ¹	Private	Total Residential ADWF	Number of Students	School	Employment Population ²	Employment	Total ADWF m ³ /day
		0.27			0.04		0.28	
		ADWF			Total ADWF of Student		ADWF for Employment	
MKE01	329	88.8	88.8		0.0	49	13.7	102.5
MKE02	366	98.8	98.8		0.0	314	87.9	186.7
MKE03	1,164	314.2	314.2		0.0	701	196.3	510.5
MKE04	848	228.9	228.9		0.0	467	130.8	359.6
MKE05	673	181.8	181.8		0.0	123	34.4	216.2
MKE06	736	198.8	198.8	720	28.8	196	54.9	282.5
MKE07	955	257.8	257.8		0.0	424	118.7	376.6
MKE08	912	246.3	246.3		0.0	370	103.6	349.9
MKE09	0	0.0	0.0		0.0	0	0.0	0.0
MKE10	935	252.4	252.4		0.0	1,280	358.4	610.8
MKE11	761	205.3	205.3		0.0	868	243.0	448.4
MKE12	729	196.8	196.8		0.0	974	272.7	469.6
MKE13	252	67.9	67.9		0.0	59	16.5	84.5
MKE14	217	58.7	58.7		0.0	53	14.8	73.5
MKE15	665	179.5	179.5		0.0	974	272.7	452.2
MKE16	3,620	977.3	977.3		0.0	1,460	408.8	1386.1
MKE17	0	0.0	0.0		0.0	2,275	637.0	637.0
MKE18	1,577	425.7	425.7		0.0	575	161.0	586.7
MKE19	1,800	485.9	485.9		0.0	392	109.8	595.7
MKE20	1,630	440.0	440.0		0.0	343	96.0	536.1
MKE21	1,308	353.2	353.2		0.0	394	110.3	463.5
MKE22	981	264.8	264.8		0.0	1,048	293.4	558.2
MKE23	0	0.0	0.0		0.0	1,689	472.9	472.9
MKE24	0	0.0	0.0		0.0	3,038	850.6	850.6
MKE25	226	61.0	61.0		0.0	842	235.8	296.7
MKE26	0	0.0	0.0		0.0	0	0.0	0.0
MKE27	4,906	1324.7	1324.7		0.0	1,668	467.0	1791.7
MKE28	995	268.6	268.6		0.0	269	75.3	344.0
MKE29	871	235.1	235.1		0.0	576	161.3	396.3
MKE30	1,187	320.4	320.4		0.0	388	108.6	429.0
MKE31	996	269.0	269.0		0.0	345	96.6	365.6
MKE32	748	201.9	201.9		0.0	579	162.1	364.0
MKE33	553	149.4	149.4		0.0	4,239	1186.9	1336.3
MKE34	1,167	315.0	315.0		0.0	2,440	683.2	998.2
MKE35	317	85.7	85.7		0.0	5,295	1482.6	1568.3
MKE36	0	0.0	0.0		0.0	7,010	1962.8	1962.8
MKE37	339	91.5	91.5		0.0	2,882	807.0	898.4
MKE38	655	176.8	176.8		0.0	443	124.0	300.8
MKE39	889	240.1	240.1		0.0	262	73.4	313.4
MKE40	586	158.3	158.3		0.0	1,011	283.1	441.3
MKE41	722	194.9	194.9		0.0	467	130.8	325.7
MKE42	932	251.7	251.7	950	38.0	147	41.2	330.8
MKE43	0	0.0	0.0	1480	59.2	0	0.0	59.2
MKE44	522	140.9	140.9		0.0	120	33.6	174.5
MKE45	0	0.0	0.0	332	13.3	0	0.0	13.3

**APPENDIX 3-3
SEWAGE DISCHARGE FROM
SURROUNDING CATCHMENTS**

Appendix 3-3: Sewage Discharge from Surrounding Catchments

Catchment ID	Building	No. of Flats	Total Area (m ²) [2]			Population [1]				ADWF (m ³ /day)				ADWF / Building (m ³ /day)	Total ADWF / catchment (m ³ /day)	Reference
			Community, Social & Personal Services	Retails	Restaurants	Staff (by worker density - Community, Social & Personal Services)	Staff (by worker density - Retails)	Staff (by worker density - Restaurants)	Residential	Residential UFF = 0.27	Community, Social & Personal Services UFF = 0.28	Wholesale & Retail UFF = 0.28	Restaurants UFF = 1.58			
A	Oscar Court	69	--	400	200	--	14	11	173	46.7	--	3.9	17.4	68.0	122.2	Estimation & Centaline Property
	Kam Ming Court	45	--	260	--	--	10	--	113	30.5	--	2.8	--	33.3		Estimation & Centaline Property
	Circle Garden	28	--	200	--	--	7	--	70	18.9	--	2.0	--	20.9		Estimation & Centaline Property
B	Mongkok City Building	45	1440	--	--	48	--	--	113	30.5	13.4	--	--	44.0	64.9	Centaline Property
	Hentiff (Ho Tat) Building	24	--	480	--	--	17	--	60	16.2	--	4.8	--	21.0		Centaline Property
C	144-152 Prince Edward Road West	--	--	--	--	--	--	--	-	--	--	--	--	--	376.6	Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts - SIA Report Block MKE07
	207-221 Fa Yuen Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	210-238 Tung Choi Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	6-10 Playing Field Road	--	--	--	--	--	--	--	-	--	--	--	--	--		
D	Mong Kok Police Station	--	12900	--	--	426	--	--	-	--	119.3	--	--	119.3	119.3	Estimation
E	304-328 Sai Yeung Choi Street North	--	--	--	--	--	--	--	-	--	--	--	--	--	992.0	Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts - SIA Report Blocks MKE04, MKE06, & MKE08
	7-29 Playing Field Road	--	--	--	--	--	--	--	-	--	--	--	--	--		
	40-46, 52-56, 68 Boundary Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	209-229, 240-254 Tung Choi Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	225-239, 244-266 Fa Yuen Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
	233-251 Sai Yee Street	--	--	--	--	--	--	--	-	--	--	--	--	--		
F	Bijou Apartments	171	--	935	--	--	33	--	428	115.6	--	9.2	--	124.8	676.6	Centaline Property
	Bijou Court	84	--	928	--	--	33	--	210	56.7	--	9.2	--	65.9		Centaline Property
	Cheung Ling Mansion	92	--	300	50	--	11	3	230	62.1	--	3.1	4.7	69.9		Centaline Property
	Cosmopolitan Centre	330		2130	2130	0	75	109	825	222.8	0.0	21.0	172.2	416.0		Centaline Property
US01	Upstream Area served by Sewer US01 (FWD4018096)	The full capacity of Pipe US01 has been adopted. The peaking factor and catchment inflow factors are not applicable for this catchment.													Peak flow: 497.2L/s	Appendix 3-4
US02	Upstream Area served by Sewer US02 (FWD4052975)	The full capacity of Pipe US02 has been adopted. The peaking factor and catchment inflow factors are not applicable for this catchment.													Peak flow: 1285.7L/s	Appendix 3-4

Notes:

[1] According to the Population Census 2021, the average domestic household size is 2.3 for Mong Kok East District Council Constituency Area and Tertiary Planning Unit 222; and 2.5 for Yau Tsim Mong District. For conservative assessment household size of 2.5 has been adopted.

According to figure of Commercial and Industrial Floor Space Utilization Survey by Planning Department, the staff density is: -

- 3.3 staff per 100m² GFA for Community, Social & Personal Services
- 3.5 staff per 100m² GFA for Retails and Shops
- 5.1 staff per 100m² GFA for Restaurants

[2] Estimated according to available information.

[3] According to EPD's Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Version 1.0), the Unit Flow Factors are: -

- 0.27 m³/person/day for Residential flat (R2)
- 0.28 m³/staff/day (0.08 + 0.20) for Community, Social & Personal Services
- 0.28 m³/staff/day (0.08 + 0.20) for Wholesale & Retail
- 1.58 m³/staff/day (0.08 + 1.50) for Restaurants & Hotels

[4] Number of flats are reference to Centaline Property (<https://hk.centanet.com/estate/index>).

[5] Discharge from Catchment C and E are referenced to attachment VIh of MPC Paper No. 10/22, Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts - SIA Report. Extracted pages from the "Outline Zoning Plan Amendments in Yau Ma Tei and Mong Kok Districts - SIA Report" is presented in **Appendix 3-2**.

**APPENDIX 3-4
DETAILED CALCULATION OF EXISTING
SEWERS**

Appendix 3-4: Detailed Calculation of Existing Sewers

Table A: Calculation of Existing Sewers Capacity

Sewer	Upstream Manhole	Downstream Manhole	Upstream Invert Level (mPD)	Downstream Invert Level (mPD)	Length (m)	Diameter (mm)	Diameter (m)	Area (m²)	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m²/s)	Pipe Material	Hydraulic Pipeline Roughness (m) ^[1]	Velocity (m/s)	Full Capacity (l/s)
Existing Downstream Sewer															
PS01	FMH4017914	FMH4017915	4.46	4.19	70.0	900	0.9	0.636	0.225	0.0038	0.00000114	Concrete	0.003	1.57	1000.3
PS02	FMH4017915	FMH4017916	4.19	4.07	31.9	900	0.9	0.636	0.225	0.0038	0.00000114	Concrete	0.003	1.57	1000.3
PS03	FMH4018199	FMH4018200	3.67	3.54	26.8	450	0.45	0.159	0.1125	0.0048	0.00000114	Concrete	0.006	1.01	160.6
PS04	FMH4018200	FMH4018197	3.54	3.48	20.4	450	0.45	0.159	0.1125	0.0029	0.00000114	Concrete	0.006	0.79	124.9
PS05	FMH4018202	FMH4018200	4.78	3.75	11.3	150	0.15	0.018	0.0375	0.0913	0.00000114	Concrete	0.003	2.35	41.5
PS06	FMH4017922	FMH4017923	3.15	3.10	22.8	900	0.9	0.636	0.225	0.0022	0.00000114	Concrete	0.006	1.08	686.3
PS07	FMH4017923	FMH4017924	3.10	3.06	4.1	900	0.9	0.636	0.225	0.0096	0.00000114	Concrete	0.003	2.51	1596.9
PS08	FMH4017924	FMH4018185	3.06	2.37	33.9	900	0.9	0.636	0.225	0.0203	0.00000114	Concrete	0.003	3.65	2320.4
PS09	FMH4018185	FMH4018251	2.37	2.30	3.8	BC 900x900		0.810	0.225	0.0185	0.00000114	Concrete	0.003	3.47	2814.3
PS10	FMH4018251	FMH4018252	2.30	2.28	7.5	900	0.9	0.636	0.225	0.0026	0.00000114	Concrete	0.003	1.31	836.2
PS11	FMH4018252	FMH4018253	2.27	2.20	18.9	900	0.9	0.636	0.225	0.0037	0.00000114	Concrete	0.003	1.56	989.3
PS12	FMH4018253	FMH4018254	1.19	1.12	7.0	900	0.9	0.636	0.225	0.0100	0.00000114	Concrete	0.003	2.56	1626.0
PS13	FMH4018254	FSH4000280	1.10	-0.40	39.5	900	0.9	0.636	0.225	0.0380	0.00000114	Concrete	0.003	4.99	3172.9
PS14	FSH4000280	FMH4018257	-0.62	-0.72	55.8	1650	1.65	2.138	0.4125	0.0018	0.00000114	Concrete	0.003	1.59	3402.6
PS15	FMH4079142	FMH4079141	--	--	16.7	225	0.225	0.040	0.05625	N/A	0.00000114	Concrete	0.003	-	-
PS16	FMH4079141	FMH4079140	--	--	6.6	225	0.225	0.040	0.05625	N/A	0.00000114	Concrete	0.003	-	-
PS17	FMH4079140	FMH4018194	--	4.62	11.5	225	0.225	0.040	0.05625	N/A	0.00000114	Concrete	0.003	-	-
Existing Upstream Sewer															
US01	FMH4017912	FMH4017913	4.69	4.65	34.7	900	0.9	0.636	0.225	0.0012	0.00000114	Concrete	0.006	0.78	497.2
US02	FMH4046195	FMH4046196	-0.22	-0.24	22.3	1350	1.35	1.431	0.3375	0.0009	0.00000114	Concrete	0.006	0.90	1285.7

Note:

[1] The roughness coefficient for slimed concrete sewer under poor condition has been adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.

[2] The estimated inverted levels are highlighted. The invert levels were estimated by interpolation of the invert levels at FMH4017914 (4.46mPD) and FMH4017917 (3.82mPD).

[3] The invert levels of PS15 to PS17 are not available

[4] Sewage flow direction between PS15 to PS17 is reserved based on the with Project configuration.

Appendix 3-4: Detailed Calculation of Existing Sewers

Table B: Calculation of Existing Sewers Utilization

Sewer	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Catchment	Total catchment discharge - ADWF (Exclude Upstream Sewers) (m³/day)	Contributing Population ^[1]	Peaking Factor ^[2]	Catchment Inflow Factors, P _{CIF} ^[3]	Peak Flow (Exclude Upstream Sewers) ^[4] (L/s)	Total Peak Flow ^[5] (L/s)	% of full capacity
Existing Downstream Sewer											
PS01	FMH4017914	FMH4017915	1000.3	US01	0.0	0	8	1.3	0.0	497.2	50%
PS02	FMH4017915	FMH4017916	1000.3	S-B, US01	1934.2	7164	5	1.3	145.5	642.8	64%
PS03	FMH4018199	FMH4018200	160.6	S-B, US01	1934.2	7164	5	1.3	145.5	642.8	400%
PS04	FMH4018200	FMH4018197	124.9	S-B, B, US01	1999.1	7404	5	1.3	150.4	647.6	519%
PS05	FMH4018202	FMH4018200	41.5	B	64.9	240	8	1.3	7.8	7.8	19%
PS06	FMH4017922	FMH4017923	686.3	S-A1, S-B, A, B, US01	2733.8	10125	4	1.3	164.5	661.8	96%
PS07	FMH4017923	FMH4017924	1596.9	S-A1, S-B, A, B, US01	2733.8	10125	4	1.3	164.5	661.8	41%
PS08	FMH4017924	FMH4018185	2320.4	S-A1, S-B, A, B, US01	2733.8	10125	4	1.3	164.5	661.8	29%
PS09	FMH4018185	FMH4018251	2814.3	S-A1, S-B, A, B, C, D, E, US01	4221.7	15636	4	1.3	254.1	751.3	27%
PS10	FMH4018251	FMH4018252	836.2	S-A1, S-B, A, B, C, D, E, US01	4221.7	15636	4	1.3	254.1	751.3	90%
PS11	FMH4018252	FMH4018253	989.3	S-A1, S-B, A, B, C, D, E, US01	4221.7	15636	4	1.3	254.1	751.3	76%
PS12	FMH4018253	FMH4018254	1626.0	S-A1, S-B, A, B, C, D, E, US01	4221.7	15636	4	1.3	254.1	751.3	46%
PS13	FMH4018254	FSH4000280	3172.9	S-A1, S-B, A, B, C, D, E, F, US01	4898.3	18142	4	1.3	294.8	792.1	25%
PS14	FSH4000280	FMH4018257	3402.6	S-A1, S-B, A, B, C, D, E, F, US01, US02	4898.3	18142	4	1.3	294.8	2077.7	61%
PS15	FMH4079142	FMH4079141	-	A	122.2	453	8	1.3	14.7	14.7	-
PS16	FMH4079141	FMH4079140	-	A	122.2	453	8	1.3	14.7	14.7	-
PS17	FMH4079140	FMH4018194	-	A	122.2	453	8	1.3	14.7	14.7	-

Note:

[1] The contributing population = total catchment discharge (m³/day) / 0.27(m³/day/person)

[2] Peaking Factor of 8 for contribution population <1,000, 6 for contribution population of 1000 - 5000, 5 for contribution population of 5000 - 10000, 4 for contribution population of 10000 - 50000.

[3] For conservative Assessment, Catchment Inflow Factor for North-west Kowloon (1.3) has been adopted.

[4] Peak Flow = Daily average dry weather flow × Peaking Factor (including stormwater allowance) × Catchment Inflow Factor / 24 / 3600, the operation hour is assumed to be 24 hours.

[5] Total Peak Flow = Peak Flow (Exclude Upstream Sewers) + discharge of Upstream Sewers.

[6] The invert levels of PS15 to PS17 are not available

**APPENDIX 3-5
DETAILED CALCULATION OF
PROPOSED SEWERS**

Appendix 3-5: Detailed Calculation of Proposed Sewers

Table A: Calculation of Proposed Sewers Capacity

Sewer	Upstream Manhole	Downstream Manhole	Upstream Invert Level (mPD)	Downstream Invert Level (mPD)	Length (m)	Diameter (mm)	Diameter (m)	Area (m ²)	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m ² /s)	Pipe Material ^[1]	Hydraulic Pipeline Roughness (m) ^[1]	Velocity (m/s)	Full Capacity (l/s)
Proposed New Sewer															
PP-A01	FTMH-A01	FMH-01	--	--	--	300	0.3	0.071	0.075	0.0100	0.00000114	PE	0.0003	1.70	120.4
PP-A04	FTMH-A04	FMH4084221	--	--	--	225	0.225	0.040	0.05625	0.0100	0.00000114	PE	0.0003	1.42	56.4
PP-A05	FTMH-A05	FMH4018214	--	--	--	225	0.225	0.040	0.05625	0.0100	0.00000114	PE	0.0003	1.42	56.4
PP-B01	FTMH-B01	FMH4017915	--	--	--	400	0.4	0.126	0.1	0.0100	0.00000114	PE	0.0003	2.04	256.4
PP01	FMH4017916	FMH4018199	4.26	4.06	70.0	900	0.9	0.636	0.225	0.0029	0.00000114	PE	0.0003	1.79	1137.9
PP02	FMH4018197	FMH-01	3.91	3.79	41.4	900	0.9	0.636	0.225	0.0029	0.00000114	PE	0.0003	1.80	1146.3
PP03	FMH-01	FMH4017920	3.79	3.75	13.8	900	0.9	0.636	0.225	0.0029	0.00000114	PE	0.0003	1.80	1146.7
PP04	FMH4017920	FMH-02	3.75	3.65	34.2	900	0.9	0.636	0.225	0.0029	0.00000114	PE	0.0003	1.81	1151.2
PP05	FMH-02	FMH-03	3.65	3.60	11.3	900	0.9	0.636	0.225	0.0044	0.00000114	PE	0.0003	2.23	1421.8
PP06	FMH-03	FMH4017922	3.60	3.55	10.7	900	0.9	0.636	0.225	0.0047	0.00000114	PE	0.0003	2.30	1461.3
PP07	FMH4018194	FMH-04	3.97	3.96	5.3	300	0.3	0.071	0.075	0.0019	0.00000114	PE	0.0015	0.60	42.3
PP08	FMH-04	FMH-05	3.96	3.94	26.3	300	0.3	0.071	0.075	0.0008	0.00000114	PE	0.0015	0.38	26.7
PP09	FMH-05	FMH-06	3.94	3.91	50.3	300	0.3	0.071	0.075	0.0006	0.00000114	PE	0.0015	0.33	23.6
PP10	FMH-06	FMH-07	3.91	3.88	50.6	300	0.3	0.071	0.075	0.0006	0.00000114	PE	0.0015	0.33	23.6
PP11	FMH-07	FMH-01	3.88	3.79	15.2	300	0.3	0.071	0.075	0.0059	0.00000114	PE	0.0003	1.31	92.3

Appendix 3-5: Detailed Calculation of Proposed Sewers

Table A: Calculation of Proposed Sewers Capacity

Sewer	Upstream Manhole	Downstream Manhole	Upstream Invert Level (mPD)	Downstream Invert Level (mPD)	Length (m)	Diameter (mm)	Diameter (m)	Area (m ²)	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m ² /s)	Pipe Material ^[1]	Hydraulic Pipeline Roughness (m) ^[1]	Velocity (m/s)	Full Capacity (l/s)
Proposed Upgrade Sewer															
PS01	FMH4017914	FMH4017915	4.46	<u>4.34</u>	70.0	900	0.9	0.636	0.225	0.0017	0.00000114	PE	0.000	1.38	877.7
PS02	FMH4017915	FMH4017916	<u>4.34</u>	<u>4.26</u>	31.9	900	0.9	0.636	0.225	0.0025	0.00000114	PE	0.000	1.67	1065.3
PS03	FMH4018199	FMH4018200	<u>4.06</u>	<u>3.97</u>	26.8	<u>900</u>	0.9	0.636	0.225	0.0034	0.00000114	PE	0.000	1.94	1234.9
PS04	FMH4018200	FMH4018197	<u>3.97</u>	<u>3.91</u>	20.4	<u>900</u>	0.9	0.636	0.225	0.0029	0.00000114	PE	0.000	1.81	1153.7
PS05	FMH4018202	FMH4018200	4.78	<u>4.50</u>	11.3	<u>225</u>	0.225	0.040	0.05625	0.0248	0.00000114	PE	0.000	2.25	89.5
PS06	FMH4017922	FMH4017923	<u>3.55</u>	<u>3.45</u>	22.8	900	0.9	0.636	0.225	0.0044	0.00000114	PE	0.000	2.22	1414.5
PS15	FMH4079142	FMH4079141	<u>4.03</u>	<u>4.00</u>	16.7	225	0.225	0.040	0.05625	0.0018	0.00000114	PE	0.0015	0.48	19.2
PS16	FMH4079141	FMH4079140	<u>4.00</u>	<u>3.99</u>	6.6	225	0.225	0.040	0.05625	0.0015	0.00000114	PE	0.0015	0.44	17.6
PS17	FMH4079140	FMH4018194	<u>3.99</u>	<u>3.97</u>	11.5	225	0.225	0.040	0.05625	0.0017	0.00000114	PE	0.0015	0.48	18.9

Note:

[1]

The proposed pipes will be either PE pipes or precast concrete pipes with PVC or equivalent lining.

The roughness coefficient for Slimed uPVC sewer under poor condition has been adopted for PE sewer; the ks values are 0.3mm for velocities greater than 1.2m/s, otherwise 1.5mm.

[2]

The proposed modifications to existing sewers are **bolded & underlined**.

[3]

All proposed new/upgrade sewer manhole and pipes are subject to change during detail design stage.

[4]

Sewage flow direction between PS14 to PS16 is reserved based on planned flow configuration.

Appendix 3-5: Detailed Calculation of Proposed Sewers

Table B: Calculation of Propsoed Sewers Utilization

Sewer	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Catchment	Total catchment discharge - ADWF (Exclude Upstream Sewers) (m³/day)	Contributing Population ^[1]	Peaking Factor ^[2]	Catchment Inflow Factors, P _{CIF} ^[3]	Peak Flow (Exclude Upstream Sewers) ^[4] (L/s)	Total Peak Flow ^[5] (L/s)	% of full capacity
Proposed New Sewer											
PP-A01	FTMH-A01	FMH-01	120.4	S-A1	612.5	2269	6	1.3	55.3	55.3	46%
PP-A04	FTMH-A04	FMH4084221	56.4	S-A4	5.9	22	8	1.3	0.7	0.7	1%
PP-A05	FTMH-A05	FMH4018214	56.4	S-A5	5.9	22	8	1.3	0.7	0.7	1%
PP-B01	FTMH-B01	FMH4017915	256.4	S-B	1934.2	7164	5	1.3	145.5	145.5	57%
PP01	FMH4017916	FMH4018199	1137.9	S-B, US01	1934.2	7164	5	1.3	145.5	642.8	56%
PP02	FMH4018197	FMH-01	1146.3	S-B, B, US01	1999.1	7404	5	1.3	150.4	647.6	56%
PP03	FMH-01	FMH4017920	1146.7	S-A1, S-B, A, B, US01	2733.8	10125	4	1.3	164.5	661.8	58%
PP04	FMH4017920	FMH-02	1151.2	S-A1, S-B, A, B, US01	2733.8	10125	4	1.3	164.5	661.8	57%
PP05	FMH-02	FMH-03	1421.8	S-A1, S-B, A, B, US01	2733.8	10125	4	1.3	164.5	661.8	47%
PP06	FMH-03	FMH4017922	1461.3	S-A1, S-B, A, B, US01	2733.8	10125	4	1.3	164.5	661.8	45%
PP07	FMH4018194	FMH-04	42.3	A	122.2	453	8	1.3	14.7	14.7	35%
PP08	FMH-04	FMH-05	26.7	A	122.2	453	8	1.3	14.7	14.7	55%
PP09	FMH-05	FMH-06	23.6	A	122.2	453	8	1.3	14.7	14.7	62%
PP10	FMH-06	FMH-07	23.6	A	122.2	453	8	1.3	14.7	14.7	62%
PP11	FMH-07	FMH-01	92.3	A	122.2	453	8	1.3	14.7	14.7	16%

Appendix 3-5: Detailed Calculation of Proposed Sewers

Table B: Calculation of Proposed Sewers Utilization

Sewer	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)	Catchment	Total catchment discharge - ADWF (Exclude Upstream Sewers) (m³/day)	Contributing Population ^[1]	Peaking Factor ^[2]	Catchment Inflow Factors, P _{CIF} ^[3]	Peak Flow (Exclude Upstream Sewers) ^[4] (L/s)	Total Peak Flow ^[5] (L/s)	% of full capacity
Proposed Upgrade/Modify											
PS01	FMH4017914	FMH4017915	877.7	US01	0.0	0	8	1.3	0.0	497.2	57%
PS02	FMH4017915	FMH4017916	1065.3	S-B, US01	1934.2	7164	5	1.3	145.5	642.8	60%
PS03	FMH4018199	FMH4018200	1234.9	S-B, US01	1934.2	7164	5	1.3	145.5	642.8	52%
PS04	FMH4018200	FMH4018197	1153.7	S-B, B, US01	1999.1	7404	5	1.3	150.4	647.6	56%
PS05	FMH4018202	FMH4018200	89.5	B	64.9	240	8	1.3	7.8	7.8	9%
PS06	FMH4017922	FMH4017923	1414.5	S-A1, S-B, A, B, US01	2733.8	10125	4	1.3	164.5	661.8	47%
PS15	FMH4079142	FMH4079141	19.2	A	122.2	453	8	1.3	14.7	14.7	77%
PS16	FMH4079141	FMH4079140	17.6	A	122.2	453	8	1.3	14.7	14.7	83%
PS17	FMH4079140	FMH4018194	18.9	A	122.2	453	8	1.3	14.7	14.7	78%

Note:

- [1] The contributing population = total catchment discharge (m³/day) / 0.27(m³/day/person)
- [2] Peaking Factor of 8 for contribution population <1,000, 6 for contribution population of 1000 - 5000, 5 for contribution population of 5000 - 10000, 4 for contribution population of 10000 - 50000.
- [3] For conservative Assessment, Catchment Inflow Factor for North-west Kowloon (1.3) has been adopted.
- [4] Peak Flow = Daily average dry weather flow × Peaking Factor (including stormwater allowance) × Catchment Inflow Factor / 24 / 3600, the operation hour is assumed to be 24 hours.
- [5] Total Peak Flow = Peak Flow (Exclude Upstream Sewers) + discharge of Upstream Sewers.

**Section 16 Planning Application for Proposed Minor Relaxation of the
Maximum Domestic GFA of Site B for the Urban Renewal Authority
Sai Yee Street/ Flower Market Road Development Scheme
("YTM-013"), Mong Kok, Kowloon**

**Drainage Impact Assessment
(V1.0)**

June 2026

Approved By



(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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1 INTRODUCTION

1.1 Background

- 1.1.1 The Urban Renewal Authority (URA) has proposed the Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under Section 25 of the Urban Renewal Authority Ordinance (URAO). The Chief Executive in Council (CE in C) approved the draft Development Scheme Plan (DSP) on April 8, 2025, and published this decision in the Government Gazette on 17th April 2025. The approved DSP No. S/K3/URA5/2 was exhibited for public inspection on the same day.
- 1.1.2 To optimize the utilization of the Scheme area and in view to the current unoptimistic office market sentiment with a high office vacancy rate and the Government’s directive of suspending the sales of commercial sites, the URA proposes to increase the maximum domestic Gross Floor Area (GFA) to allow flexibility for future development to meet the market needs and enhance market attractiveness of the Scheme. A Section 16 planning application (S.16 Application) is proposed to seek for minor relaxation of domestic GFA in Sub-area (1) of Site B (the whole Site B as the Application Site), zoned as “OU(MU)2” from 46,605 m² (equivalent to a Domestic Plot Ratio (DPR) 6.5) to 53,775 m² (equivalent to a DPR 7.5), while keeping the total maximum GFA of Site B unchanged. The Application Site of the current S.16 Application will only cover Site B of the approved DSP. **Figure 1-1** shows the Application Site of the current S.16 Application.
- 1.1.3 This S.16 Application is a non-scheme-based submission. The notional design is prepared based on the proposed minor relaxation of the Approved DSP parameters. Under the non-scheme-based approach, the notional design and indicative development parameters provided are only for illustrative purposes and for conducting necessary technical assessments to demonstrate the impacts of the proposed minor relaxation. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S.16 Application.
- 1.1.4 Cinotech Consultants Limited has been commissioned by the URA to conduct a Drainage Impact Assessment (DIA) to support the submission of the S.16 Application to the Town Planning Board (TPB) for consideration.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Existing Environment

- 2.1.1 To demonstrate the complete picture of the future development in the urban context, the assessment will describe the Proposed Development of the whole DSP (i.e. both Site A and Site B) (the Scheme). The Scheme is located in the northeastern part of Mong Kok. With a total gross site area of 29,315m², the Scheme is divided into Site A (about 4,445m²) and Site B (about 24,870m²). The location of the Scheme is shown on **Figure 1-1**.
- 2.1.2 Site B of the Scheme (the Application Site) is currently occupied by various leisure, recreation and GIC facilities, including Boundary Sports Centre No.1 and No.2, Boundary Street Recreation Ground, Sai Yee Street Children’s Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department (“LCSD”) Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath. There is no private lot within Site B.
- 2.1.3 Site A of the Scheme (not forming the Application Site) comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.

2.2 The Proposed Development

Approved DSP and S.16 Application

- 2.2.1 According to the approved DSP of the Scheme, Site B, the Application Site, is zoned “Other Specified Uses (Mixed Uses) 2” (“OU(MU)2”), and is further divided into Sub-area (1) and Sub area (2). Sub-area (1) of Site B will be for a high-rise development with a maximum domestic gross floor area (“GFA”) of 46,605m² and a total GFA of 64,530 m², as well as a building height restriction (“BHR”) of 150mPD adopting a stepped height profile. Sub-area (2) of “OU(MU)2” zone comprises the Waterway Park and ancillary retail/ commercial uses and LCDS’s sports/ GIC facilities with a BHR of 30mPD. It has a maximum non-domestic GFA of 8,955 m².
- 2.2.2 Site A (not forming the Application Site) is zoned “Other Specified Uses (Mixed Use) 1” (“OU(MU)1”) and it consists of 5 Sub-areas – Sub-areas (1) to (5) (i.e. Sites A1 – A5). Site A1 will be developed for residential development cum commercial podium, with a BHR of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5.
- 2.2.3 Under this minor relaxation application, the maximum domestic GFA of Sub-area (1) in Site B is proposed to increase from 46,605m² to approximately 53,775m², equivalent to an increase in DPR from 6.5 to 7.5 (see **Table 2-1**). The total GFA for Sub-area (1) remains at 64,530m² (PR = 9.0). The development parameters of Sub-area (2) of Site B remain the same as the under the previously endorsed DSP.

Comparison between the Approved DSP and Current S.16 Application Proposal (Site B)

- 2.2.4 A comparison between the development parameters of the approved DSP and that of the S.16 Application is provided in **Table 2-1** below.

Table 2-1 Comparison between the Approved DSP and the Current S.16 Application Proposal (Site B)

Development Parameters of Site B	Approved DSP [A]			Current S.16 Application [B]			Difference [B] – [A] (% change)
Zoning	OU(MU)2			OU(MU)2			N/A
Gross Site Area (m ²)	About 24,870			About 24,870			N/A
	Sub-area (1)	Sub-area (2)	Total [A]	Sub-area (1)	Sub-area (2)	Total [B]	
Net Site Area (m²) (for PR Calculation) [1]	About 7,170	About 17,700	About 24,870	About 7,170	About 17,700	About 24,870	N/A
Maximum GFA							
-Total GFA (m ²)	64,530	8,955	73,485	64,530	8,955	73,485	N/A
-Domestic GFA (m ²)	46,605	N/A	46,605	53,775	N/A	53,775	+15.4%
Maximum Building Height (mPD)	150	30	N/A	150	30	N/A	N/A

Remark:

[1] Subject to site survey

Notional Design

- 2.2.5 A notional design, which is illustrated in **Appendix 2-1**, is prepared based on the development parameters to demonstrate the proposed planning intention and development concepts of the Scheme. Compared to the notional design for the approved DSP, the current notional design for S.16 Application has only revised the design of Site B, while keeping the notional design of other parts in the DSP unchanged from the approved DSP.
- 2.2.6 Regarding the Application Site, under the current notional design for Sub-area (1) of Site B (the north-east corner of Site B), a development featuring 3 high-rise developments, including 2 residential towers and 1 mixed-use composite tower with residential/ hotel uses, along with retail/ recreation and GIC facilities at the podium level, is proposed. Ancillary parking and a public vehicle park (PVP) are proposed in the basement levels of Site B. An at-grade open space, named "Waterway Park," is proposed in the Sub-area (2) of Site B. Ancillary retail facilities are planned at the ground level and the Waterway Park to enhance retail activities and vibrancy adjoining the existing Flower Market.
- 2.2.7 Compared to the approved Scheme for approved DSP, the major change is at Sub-area (1) of Site B, where the hotel/ office tower in the approved Scheme is changed to a composite tower of residential/ hotel tower, with the same height (130 mPD) in the current S.16 Application.
- 2.2.8 The notional design for Site A is the same as the approved DSP at planning stage and will be referenced for the purpose of technical assessments to support the S.16 Application. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2-A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.
- 2.2.9 The Proposed Development of the Scheme will be redeveloped in phases. Phased development and completion may be adopted by further sub-division of Site B, subject to liaison and agreement with relevant government departments at the implementation stage. The tentative completion year of the whole Scheme is in 2036.

Development Parameters of the Notional Design

2.2.10 The development parameters of the notional design of Site A shown in **Table 2-2** remains the same as those under the approved DSP. This assessment is prepared based on the development parameters in **Table 2-2 & Table 2-3** of the notional design, which are subject to changes at detailed design stage.

Table 2-2 Development Parameters of the Notion Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m ²	About 268m ²	About 123m ²	About 233m ²	About 251m ²
	About 4,445m ²				
Net Site Area (subject to survey)	About 2,640m ²	About 239m ²	About 109m ²	About 202m ²	About 198m ²
	About 3,388m ²				
Zoning	OU(MU)1				
Domestic GFA [1]	23,716m ²	-	-	-	-
Non-Domestic GFA [1]	6,576m ²	-	-	100m ²	100m ²
No. of Building Blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m ²	-	-	-	-
At-grade Open Space	About 800m ²				

Note

- [1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
- [2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-3 Development Parameters of the Notion Design (Site B – Application Site)

Site B			
Gross Site Area	About 24,870m ²		
Zoning	OU(MU)2		
	Sub-area (1)	Sub-area (2)	Total
Net Site Area (subject to survey)	7,170m ²	17,700m ²	24,870m ²
Domestic GFA [1]	53,775m ²	-	53,775m ²
Non-Domestic GFA [1]	10,755m ²	8,955m ²	19,710m ²
- Retail	(5,755m ²)	(8,955m ²)	(14,710m ²)
- Hotel	(5,000m ²)	-	(5,000m ²)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m ²		
No. of Building Blocks [2]	2 residential towers and 1 composite tower with residential and hotel uses on top of GIC/ recreation/ retail podia + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (composite tower) 1 storey (retail block)		
No. of Flats [2]	About 1,080	-	About 1,080
Average Flat Size [2]	50m ²	-	50m ²
At-grade Open Space	About 8,800m ²		
Public Vehicle Park [4]	About 220 private car parking spaces + About 10 loading/unloading bays		

Note

- [1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
- [2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
- [3] The actual GIC GFA is subject to liaison with Government departments. As a conservative approach, 30,000m² GIC GFA is assumed in this assessment.
- [4] Subject to liaison with Transport Department.

2.2.10 Since there are no change to the catchment area and discharge locations compared to the approved DSP, the general approach in the approved DSP will be applicable to the current design, with minor adjustments to account for the increased rainfall intensity based on the updated maximum rainfall figures since the previous DIA report. Therefore, similar to the approved DSP, the existing stormwater discharge system for Sites A1 and B, including the discharge points, will be completely revamped. Additionally, certain existing stormwater pipes will be removed to accommodate development requirements. Consequently, provisions for diversion will be made, and a comprehensive assessment of the potential drainage impact resulting from the development of Sites A1 and B will be conducted, with appropriate measures implemented as necessary.

2.2.11 The peak stormwater discharge of Sites A2 (catchment S-A2), A3 (catchment S-A3), A4 (catchment S-A4) & A5 (catchment S-A5) are 25.5 L/s, 11.8 L/s, 22.0 L/s & 23.7 L/s respectively according to the calculation (**Appendix 3-1**). Since these sites are served by the major stormwater pipes of 1275mm to 1500mm along Prince Edward Road West, which having capacity of ~2100 L/s and ~3250 L/s respectively when the slope is 1:300, the discharge from Sites A2 to A5 are small in comparison to the scale of the major stormwater pipes in their downstream vicinity.

3 DRAINAGE IMPACT ASSESSMENT

3.1 Methodology

- 3.1.1 As mentioned in **Section 2.1.1**, the assessment will take into account of the Proposed Development for both Site A and Site B under the notional design for a complete picture and its accumulated impacts to the existing drainage system.
- 3.1.2 Stormwater Drainage Manual – Planning, Design and Management”, fifth edition, January 2018, (hereafter called “the SDM”) prepared by Drainage Services Department (DSD) provides guidelines for the design of the drainage system. “Corrigendum No. 1/2022 of the Stormwater Drainage Manual” (hereafter called “SDM Corrigendum 1/2022”), has been made by the DSD in 2022 for updating the design requirement of rainfall increase and extreme sea level rise in 21st century. “Corrigendum No. 1/2024 of the Stormwater Drainage Manual” (hereafter called “SDM Corrigendum 1/2024”), has been made by the DSD in 2024 for updating the maximum rainfall intensity.
- 3.1.3 This report adopts the rational method for the assessment, where the peak runoff is estimated by runoff coefficient, rainfall intensity and catchment area as stated in Section 7.5.2 of the DSD Manual.
- 3.1.4 The adopted runoff coefficients are referred to Section 7.5.2(b) of the DSD Manual and summarized in **Table 3-1**.

Table 3-1 Runoff Coefficients

Type of Area	Run-off Coefficient ^[1]
Grass	0.19
Paved/Concrete	0.90

Note:

[1] The runoff coefficients are extracted from Section 7.5.2(b) of “Stormwater Drainage Manual – Planning, Design and Management”, fifth edition, January 2018.

- 3.1.5 According to Table 10 of the SDM, the recommended design return period based on flood levels is 50 years (“Urban Drainage Branch Systems¹”) for conservative purpose. The rainfall intensities are calculated by Intensity-Duration-Frequency (IDF) Relationship (Section 4.3.3 of SDM Corrigendum 1/2024) with storm constants of HKO Headquarters’s rainfall zone (Figure 4a & Table 3a of the SDM Corrigendum 1/2024).
- 3.1.6 As stated in Section 6.8 of the SDM Corrigendum 1/2022, drainage provision in new development areas should consider the climate change effects up to end of 21st century. Therefore, the increase of 16.0% in rainfall and 12.1% design allowance for end of 21st century (Tables 28 & 31 of SDM Corrigendum 1/2022) is incorporated into the calculation.
- 3.1.7 The capacities of the public stormwater pipes are calculated by Colebrook-White Equation. All existing public stormwater pipes in the assessment are assumed to be slimed concrete pipes under poor condition for conservative assessment.

¹ This Scheme do not intend altern or upgrade any trunk drains, which are equal to or larger than 1.8 m in diameter according to Section 6.6.2 of the SDM. Therefore, return period of “Urban Drainage Branch Systems” has been adopted.

3.2 Stormwater Discharge from the Scheme

- 3.2.1 The existing stormwater system and the stormwater catchments in the vicinity are illustrated in **Figures 3-1a to 3-1g**.
- 3.2.2 Under the existing condition, the stormwater from Sites A1 and B is discharged to the decked nullah within the sites via the local stormwater drainage system and/or short sections of public drainage pipes. As for Sites A2 to A5, the stormwater discharged from these sites is collected by local 300mm public drainage pipes that are connected to nearby 1200mm/1500mm public drainage pipes along the main street, which also connected to the decked nullah.
- 3.2.3 After the redevelopment, the stormwater from Sites A1 and B will be directly discharged to the decked nullah. For Sites A2 to A5, the stormwater will be discharged to the nearest public stormwater manholes, which will remain the same as in the existing condition.
- 3.2.4 Currently, there are some existing unpaved areas within Site B. Although the Scheme is not expected to reduce the total unpaved area of Site B, a fully paved scenario for all the Sites of the Scheme has been adopted for a conservative assessment.
- 3.2.5 The peak stormwater discharge from the Site, calculated as per **Section 3.1**, is summarised in **Table 3-2**. The detailed calculations are shown in **Appendix 3-1**.

Table 3-2 Peak Stormwater Discharge from the Site

Catchments	Description	Total Drainage Discharge (L/s)
S-A1	Site A1	290.0
S-A2	Site A2	25.5
S-A3	Site A3	11.8
S-A4	Site A4	22.0
S-A5	Site A5	23.7
S-B	Site B	1901.7

Note:

[1] Detailed calculations are shown in **Appendix 3-1**.

[2] Assume a fully paved scenario

3.3 Stormwater Discharge from Surrounding Catchments

- 3.3.1 The surrounding developments and roads near the Scheme are divided into different catchments (B1 to B4 for developments; R1 to R6 for road surfaces) based on the existing public stormwater drainage system. The stormwater catchment areas in the vicinity of the Site are illustrated in **Figures 3-1a to 3-1g**. The stormwater discharge from surrounding developments and roads are summarised in **Table 3-3 & Table 3-4**. The detailed calculations are shown in **Appendix 3-1**.

Table 3-3 Stormwater Discharge from Surrounding Buildings

Catchments	Description	Total Drainage Discharge (L/s)
B1	Existing Development	1766.5
B2	Existing Development	390.7
B3	Existing Development	124.9
B4	Existing Development	68.9

Note:

[1] Detailed calculations are shown in **Appendix 3-1**.**Table 3-4 Stormwater Discharge from Surrounding Roads**

Catchments	Description	Total Drainage Discharge (L/s)
R1	Paved Road	312.3
R2	Paved Road	108.0
R3	Paved Road	106.8
R4	Paved Road	61.9
R5	Paved Road	182.6
R6	Paved Road	185.1

Note:

[1] Detailed calculations are shown in **Appendix 3-1**.

3.4 Assessment of Existing Stormwater System, Proposed New Stormwater Pipes and Proposed Upgrades

Planned Demolition, Diversion, and Upgrades

3.4.1 The stormwater pipes affected by the Proposed Development need to be evaluated to determine if they can accommodate the stormwater discharge. Additionally, certain existing stormwater pipes are planned for demolition or reconstruction due to scheme requirements or practical considerations. The existing stormwater pipes to be demolished and upgraded are illustrated in **Figure 3-2**, while the proposed new pipes and upgrades are shown in **Figures 3-3a to 3-3f**. Unless specified, the proposed upgrades and new pipes will be either PE pipes or precast concrete pipes with PVC or equivalent lining.

Near Sites A1 & B

3.4.2 Firstly, to facilitate the potential underground pedestrian connection between Site A1 and Site B, as shown in **Figure 3-2**, the existing 975mm stormwater pipes along Sai Yee Street, between the public existing stormwater manholes SMH4020120 to SMH4020145, are tentatively planned for removal. The elevation and extent of the pedestrian connection are subject to detailed design.

3.4.3 In order to redirect the upstream stormwater flow at existing stormwater manhole SMH4020120, proposed new stormwater pipes along Playing Field Road have been planned. These pipes will direct the upstream flow from Sai Yee Street towards another existing stormwater manhole SMH4020576 located at the junction of Fa Yuen Street, as illustrated in **Figure 3-3b**.

3.4.4 Secondly, to facilitate the construction of the basement at Site A1, all existing public stormwater pipes within Site A1 will be demolished, as depicted in **Figure 3-2**. Consequently,

the current stormwater discharge route from the developments north of Site A1 (Catchment B3) will no longer be available once the excavation works at Site A1 commence. To address this, the stormwater from Catchment B3 will be redirected to the existing stormwater pipes along Fa Yuen Street, as shown in **Figure 3-3b**. As a result, the flow direction of the existing public stormwater pipes PS01 & PS02 will be reversed.

- 3.4.5 It is important to note that the existing downstream stormwater pipes along Fa Yuen Street are not designed to handle the diverted stormwater flow as per the planned configuration shown in **Figure 3-3b**. Therefore, it will be necessary to upgrade the downstream stormwater pipes (PS03 to PS09; **Figures 3-3b & 3-3c**) to ensure they can effectively handle the increased flow.

Near Sites A2 - A5

- 3.4.6 As indicated in **Sections 2.2.11**, the stormwater discharge from Sites A2-A5 is relatively small in comparison to the capacity of the larger-scale stormwater pipes in their downstream vicinity (1275mm & 1500mm), as depicted in **Figures 3-3e** and **3-3f**. Consequently, it is anticipated that there will be no adverse drainage impact arising from Sites A2, A3, A4, and A5. Therefore, a detailed assessment of their downstream stormwater pipes is not deemed necessary at this stage.

Capacity of Existing Downstream Stormwater Pipes

- 3.4.7 The capacities of the affected downstream stormwater pipe sections (PS01 - PS09), based on the planned flow configuration as illustrated in **Figures 3-3b & 3-3c**, have been calculated using Colebrook-White Equation. The calculated capacities are listed in **Table 3-5** and the detailed calculation can be found in **Table A of Appendix 3-2**.

Table 3-5 Capacity of Existing Stormwater Pipes

Pipe Section	Upstream Manhole	Downstream Manhole	Full Capacity (L/s)
PS01 [1]	SMH4020140	SMH4093500	-
PS02 [1]	SMH4093500	SMH4020139	-
PS03	SMH4020576	SMH4059700	531.1
PS04	SMH4059700	SMH4020571	858.4
PS05	SMH4020571	SMH4020572	393.8
PS06	SMH4020572	SMH4020585	802.5
PS07	SMH4020585	SMH4059701	612.8
PS08 [2]	SMH4059701	SMH4059702	727.0
PS09 [2]	SMH4059702	to Nullah	473.8

Note:

- [1] The flow direction of PS01 to PS02 shall be reversed thus the existing pipes need to be reconstructed.
 [2] PS08 & PS09 consist of 2 pipes
 [3] The calculation is detailed in **Appendix 3-2**.

- 3.4.8 A summary of the utilization of the existing downstream stormwater pipe are shown in **Table 3-6**. Detailed calculation can be found in **Table A of Appendix 3-2**. The results indicate that the existing stormwater pipes PS03 to PS09 are unable to cater the expected stormwater flow, while the flow direction of PS01 to PS02 shall be reversed.

Table 3-6 Proportion of Peak Flow to Full Capacity (Existing Pipes)

Pipe Section	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PS01 [1]	-	124.9	-
PS02 [1]	-	124.9	-
PS03	531.1	3307.6	623%
PS04	858.4	3307.6	385%
PS05	393.8	3307.6	840%
PS06	802.5	3307.6	412%
PS07	612.8	3307.6	540%
PS08 [2]	727.0	3307.6	455%
PS09 [2]	473.8	3307.6	698%

Note:

[1] The flow direction of PS01 to PS02 shall be reversed thus the existing pipes need to be reconstructed.

[2] PS08 & PS09 consist of 2 pipes

[3] The calculation is detailed in **Appendix 3-2**.**Terminal Manholes and Discharge Pipes of the Sites**

- 3.4.9 The stormwater discharge from the Site A1 is proposed to be collected by terminal manhole STMH-A01 and discharged via the proposed pipe PP-A01, which has a diameter of 500mm and slope of 1:50. The pipe will be connected to the decked nullah as shown in **Figure 3-3c**.
- 3.4.10 The stormwater discharge from the Site A2 is proposed to be collected by terminal manhole STMH-A02 and discharged via the proposed pipe PP-A02, which has a diameter of 225mm and slope of 1:50. The pipe will be connected to the existing public stormwater manhole SMH4020522 as shown in **Figure 3-3e**.
- 3.4.11 The stormwater discharge from the Site A3 is proposed to be collected by terminal manhole STMH-A03 and discharged via the proposed pipe PP-A03, which has a diameter of 225mm and slope of 1:50. The pipe will be connected to the existing public stormwater manhole SMH4020520 as shown in **Figure 3-3e**.
- 3.4.12 The stormwater discharge from the Site A4 is proposed to be collected by terminal manhole STMH-A04 and discharged via the proposed pipe PP-A04, which has a diameter of 225mm and slope of 1:50. The pipe will be connected to the existing public stormwater manhole SMH4098783 as shown in **Figure 3-3f**.
- 3.4.13 The stormwater discharge from the Site A5 is proposed to be collected by terminal manhole STMH-A05 and discharged via the proposed pipe PP-A05, which has a diameter of 225mm and slope of 1:50. The pipe will be connected to the existing public stormwater manhole SMH4020531 as shown in **Figure 3-3f**.
- 3.4.14 The stormwater discharge from the Site B is proposed to be collected by terminal manhole STMH-B01 and discharged via the proposed pipe PP-B01, which has a diameter of 900mm and slope of 1:50. The pipe will be connected to the decked nullah as shown in **Figure 3-3d**.

Proposed New Pipes and Upgrades in the Surrounding

- 3.4.15 Apart from the stormwater pipes connected to the terminal manholes of the Sites, there are three proposed new stormwater pipes (PP-D01 to PP-D03) for the purpose of stormwater diversion, as depicted in **Figure 3-3b**. PP-D01 and PP-D02 are 1700mm pipes designed to redirect stormwater from Sai Yee Street to Fa Yuen Street. PP-D03 is a 400mm pipe intended to divert stormwater from the existing developments to the north of Site A1 (Catchment B3).

- 3.4.16 There are nine pipes (PS01 to PS09) proposed for upgrading and/or modification, as shown in **Figures 3-3b and 3-3c**. The slope of PS01 and PS02 is planned to be reversed to change the flow direction. PS03 to PS07 are scheduled for upgrading from 900mm pipes to 1700mm pipes with revised invert levels to accommodate the increased stormwater flow.
- 3.4.17 It is important to note that PS08 and PS09 (refer to **Figure 3-3c**) are currently located beneath the existing sewers FWD4099180 and FWD4018380, respectively. Based on the separately conducted Sewerage Impact Assessment (SIA) for this S.16 application. FWD4099180 is proposed to be demolished during redevelopment. FWD4018380 will be divided into two sections of sewers, and PS09 will intersect the middle of a proposed sewer. The new sewer to be constructed above PS09 will be a 900mm sewer with an invert level of 3.79 - 3.75 mPD. Considering the typical thickness of a 900mm sewer (0.11m), the bottom of the sewer at the crossing location will be approximately $((3.79+3.75)/2 - 0.11) = 3.66$ mPD. To maintain a 300mm vertical clearance between the proposed drainage pipe and the proposed sewer, the top of the drain pipe should not exceed 3.36 mPD at the crossing location.
- 3.4.18 The lowest allowable invert level at the connection point of PS09 to the nullah is estimated based on available information. According to the drainage record plans, the invert level of the nullah 110m upstream of the connection point is 2.74 mPD (SGJ4012541), and the invert level of the nullah 23m downstream of the connection point is 2.43 mPD (SGJ4002734). By interpolation, the lowest feasible invert level for the connection point is determined to be 2.484 mPD. Therefore, an invert level of 2.485mPD has been proposed in the assessment. The details of the connection to the nullah will be subject to detail design after the planning stage.
- 3.4.19 Due to the aforementioned restriction, it will be necessary to utilize multiple 750mm pipes for PS09. On the other hand, since there is no height limitation for PS08, it is preferable to use a single large-diameter pipe. Therefore, the proposal includes upgrading PS08 from twin 700mm pipes to a single 1700mm pipe and upgrading PS09 from twin 700mm pipes to four 750mm pipes to accommodate the increased stormwater flow.
- 3.4.20 The details of connections to box culverts for Proposed Pipes PS09, PP-A01 & PP-B01 are subject to detailed design after the planning stage.
- 3.4.21 The proposed new pipes and upgrades are presented in **Table 3-7 & Table 3-8** below. The exact location of the new manholes and invert levels will be subject to detailed design. With the proposed new pipes and upgrades, the downstream pipes will be able to cater the expected peak stormwater flow, thus no adverse drainage impact arising from the Proposed Development is anticipated.

Table 3-7 Proportion of Peak Flow to Full Capacity (Proposed New Pipes)

Pipe Section	Upstream Manhole	Downstream Manhole	Diameter (m)	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PP-A01	STMH-A01	to Nullah	0.500	588.1	290.0	49%
PP-A02	STMH-A02	SMH4020522	0.225	72.2	25.5	35%
PP-A03	STMH-A03	SMH4020520	0.225	72.2	11.8	16%
PP-A04	STMH-A04	SMH4098783	0.225	72.2	22.0	30%
PP-A05	STMH-A05	SMH4020531	0.225	72.2	23.7	33%
PP-B01	STMH-B01	to Nullah	0.900	2735.8	1901.7	70%
PP-D01	SMH4020120	SMH-D01	1.700	3998.0	2684.3	67%
PP-D02 [2]	SMH-D01	SMH4020576	1.700	4192.4	2871.1	68%
PP-D03	SMH4020139	SMH-D01	0.400	275.2	124.9	45%

Note:

[1] The calculation is detailed in **Appendix 3-2**.[2] New pipe PP-D02 is not required under Alternative Scenario as illustrated in **Section 3.5**.

[3] Unless specified, the proposed pipes will be either PE pipes or precast concrete pipes with PVC or equivalent lining.

Table 3-8 Proportion of Peak Flow to Full Capacity (Proposed Upgrades)

Pipe Section	Upstream Manhole	Downstream Manhole	Diameter (m)	Full Capacity (L/s)	Peak Flow (L/s)	Utilization (%)
PS01	SMH4020140	SMH4093500	0.300	269.8	124.9	46%
PS02	SMH4093500	SMH4020139	0.300	212.2	124.9	59%
PS03 [3]	SMH4020576	SMH4059700	1.700	4522.0	3307.6	73%
PS04 [3]	SMH4059700	SMH4020571	1.700	4522.0	3307.6	73%
PS05 [3]	SMH4020571	SMH4020572	1.700	4522.0	3307.6	73%
PS06 [3]	SMH4020572	SMH4020585	1.700	4522.0	3307.6	73%
PS07 [3]	SMH4020585	SMH4059701	1.700	4522.0	3307.6	73%
PS08 [3]	SMH4059701	SMH4059702	1.700	4522.0	3307.6	73%
PS09 [1]	SMH4059702	to Nullah	0.750	4605.4	3307.6	72%

Note:

[1] PS09 consist of 4 pipes

[2] The calculation is detailed in **Appendix 3-2**.[3] Upgrade is not required for PS03 – PS08 under Alternative Scenario as illustrated in **Section 3.5**.

[4] Unless specified, the proposed upgrades pipes will be either PE pipes or precast concrete pipes with PVC or equivalent lining.

3.5 Potential Alternative Scenario

3.5.1 As stated in **Section 3.4.2**, the existing 975mm stormwater pipes along Sai Yee Street between the public existing stormwater manholes SMH4020120 to SMH4020145 along Sai Yee Street (**Figure 3-2**) are planned for removal due to the potential underground pedestrian connection between Site A1 and Site B.

3.5.2 As the alignment and design of the potential underground pedestrian connection is subject to detailed design, if the affected area of the underground pedestrian connection is limited to a certain elevation, e.g.: 1mPD or lower, it is possible that the existing 975mm stormwater pipes along Sai Yee Street (between SMH4020120 to SMH4020145) can be kept and the

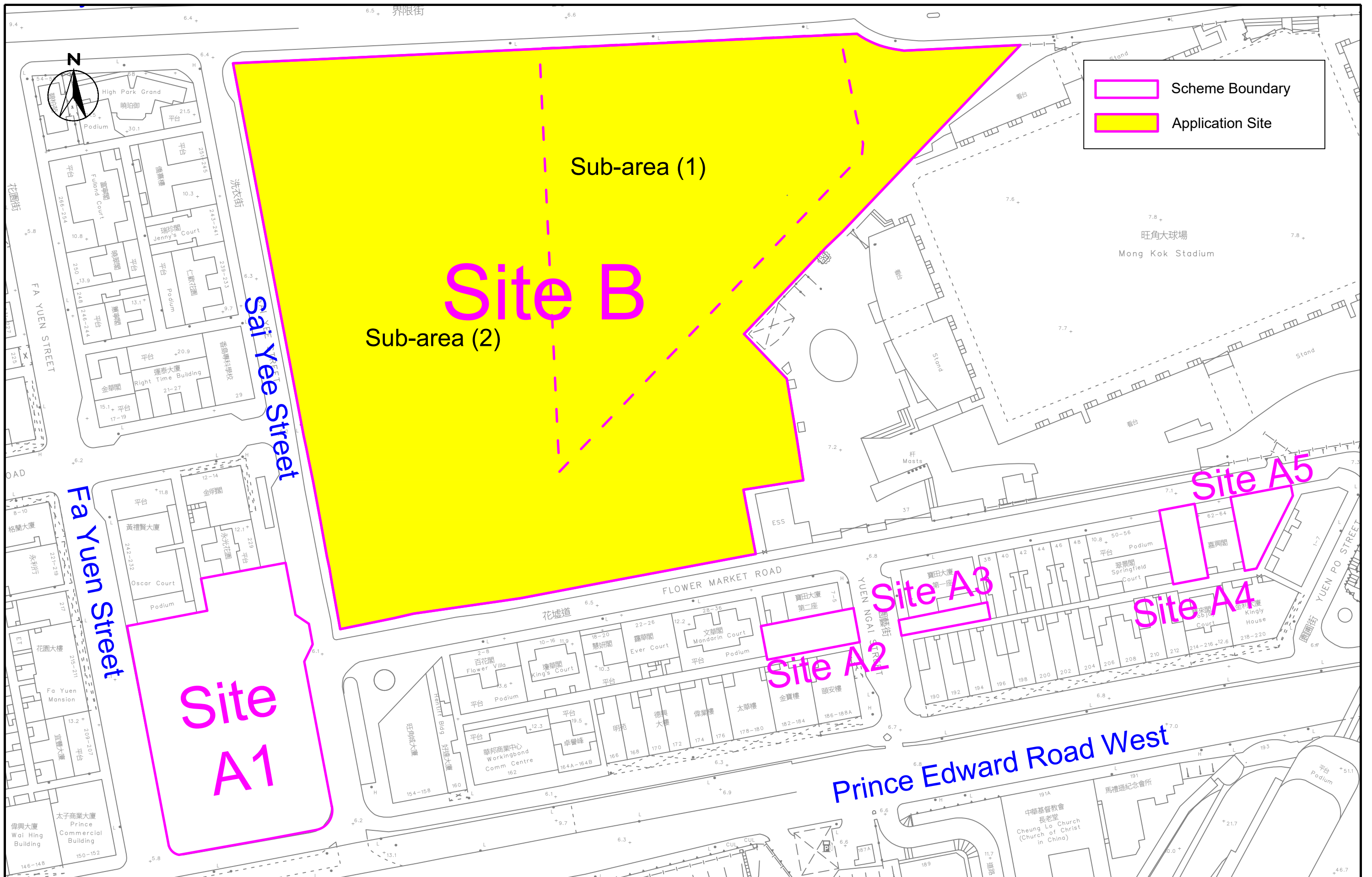
diversion of the stormwater pipe along Playing Field Road (between SMH4020120 & SMH4020576) is no longer required.

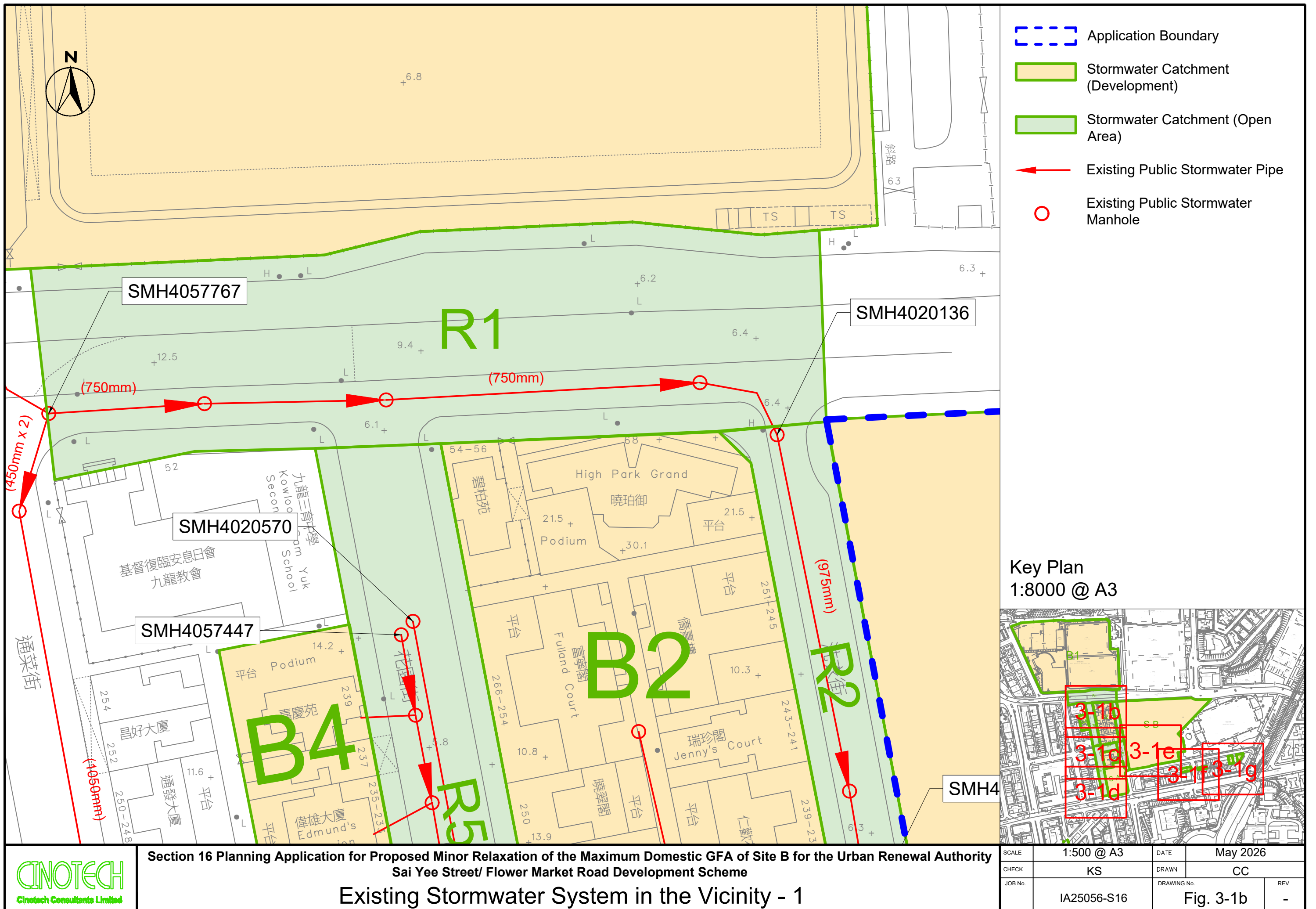
- 3.5.3 In this case, the stormwater of the Catchment B3 can be diverted to SMH4020120 as illustrated in **Figure 3-4**. The proposed new pipe PP-D02 and the upgrade of PS03 - PS08 (in **Figures 3-3b & 3-3c**) are no longer required as those pipes are not affected by the Scheme. However, the modification of PS09 shall still be required to leave a sufficient room for the potential sewer above PS09 as stated in **Section 3.4.17**. The potential diversion route of the potential alternative scenario is illustrated in **Figure 3-4**.

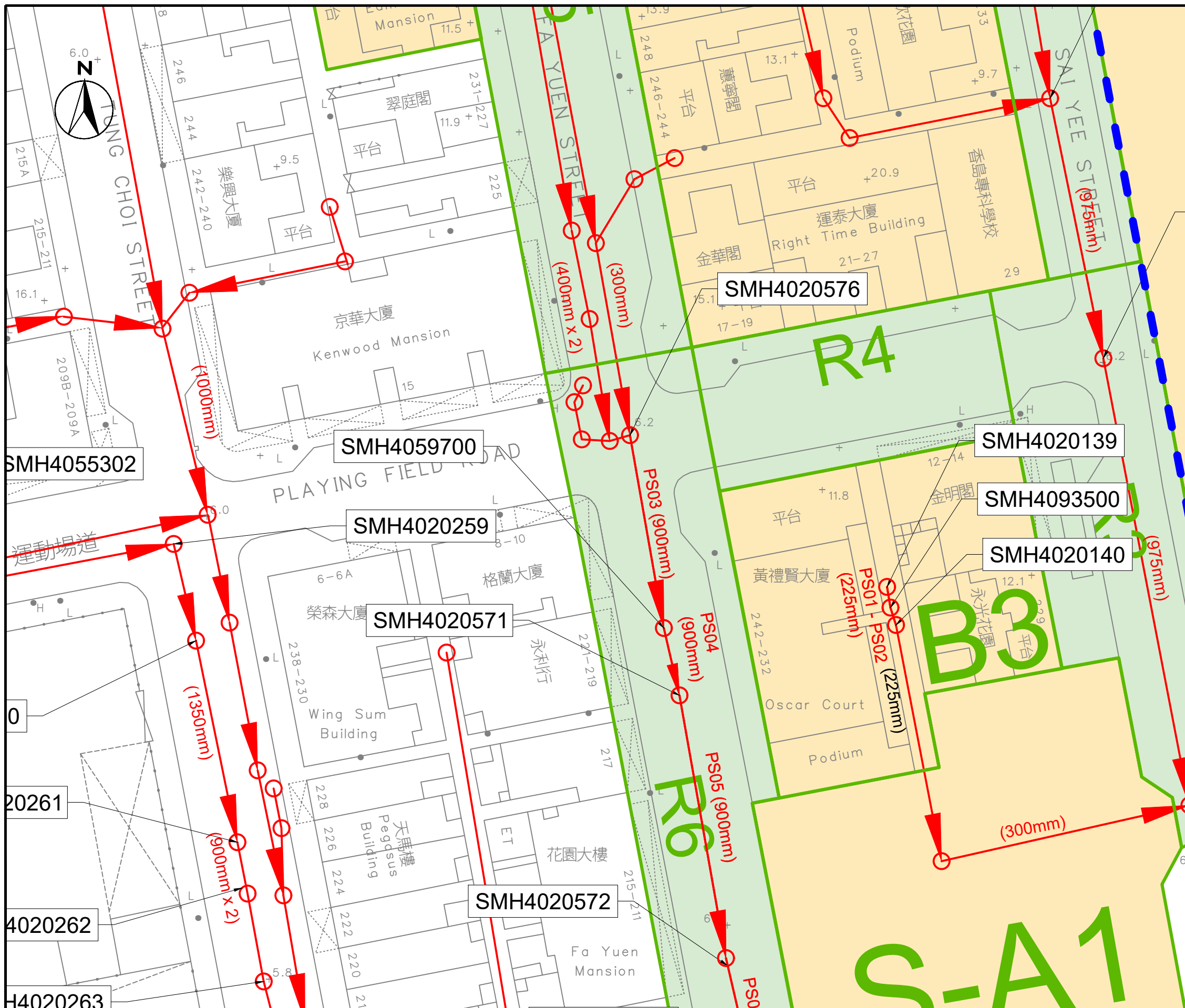
4 CONCLUSION

- 4.1.1 This Drainage Impact Assessment has been undertaken to assess the potential drainage impact of the Proposed Development and to serve as a supporting document for the S.16 Application to the TPB for consideration.
- 4.1.2 The stormwater discharge from Site A1 is proposed to be connected to the decked nullah through the proposed pipe PP-A01, which has a diameter of 500mm and a slope of 1:50.
- 4.1.3 The stormwater discharge from Sites A2, A3, A4, and A5 is proposed to be connected to nearby public stormwater manholes through the proposed pipes PP-A02, PP-A03, PP-A04, and PP-A05, respectively. These pipes have a diameter of 225mm and a slope of 1:50.
- 4.1.4 The stormwater discharge from Site B is proposed to be connected to the decked nullah through the proposed pipes PP-B01, which has a diameter of 900mm and a slope of 1:50.
- 4.1.5 There are three proposed new stormwater pipes (PP-D01 to PP-D03) for the purpose of stormwater diversion. PP-D01 and PP-D02 are 1700mm pipes designed to divert stormwater from Sai Yee Street to Fa Yuen Street. PP-D03 is a 400mm pipe intended to divert stormwater from the existing developments to the north of Site A1.
- 4.1.6 There are nine pipes (PS01 to PS09) proposed to be upgraded and/or modified. The slope of PS01 and PS02 is proposed to be reversed to change the flow direction. PS03 to PS07 are planned for upgrading from 900mm pipes to 1700mm pipes with revised invert levels to accommodate the increased stormwater flow. PS08 is proposed to upgrade from twin 700mm pipes to a single 1700mm pipe; while PS09 is proposed to upgrade from twin 700mm pipes to four 750mm pipes with revised invert levels to cater for the increased stormwater flow.
- 4.1.7 With the proposed new pipes and upgrades, the downstream pipes will be able to cater for the expected peak stormwater flow, thus no adverse drainage impact arising from the Proposed Development with the minor relaxation of domestic GFA in Site B under the S.16 Application is anticipated.
- 4.1.8 It should be noted that the designs of the potential underground pedestrian connection is subject to detailed design. If the affected area of the underground pedestrian connection is limited to a certain elevation, it is possible that the existing 975mm stormwater pipes along Sai Yee Street can be kept and the diversion of the stormwater pipe at manhole SMH4020120 is no longer required. In this case, the stormwater of the Catchment B3 can be diverted to SMH4020120 with a much smaller pipe. The proposed new pipe PP-D-02 and the upgrade of PS03 - PS08 (**Figures 3-3b & 3-3c**) are also no longer required as they are not affected by the Scheme. However, the modification of PS09 shall still be required to leave a sufficient room for the potential sewer above PS09. Under this alternative scenario, there is also no adverse impact arising from the Proposed Development anticipated.
- 4.1.9 During the detailed design stage, a comprehensive site survey will be conducted to ascertain the site conditions and layout. An appropriate drainage proposal will be developed, subject to further liaison with the relevant government departments.

FIGURES

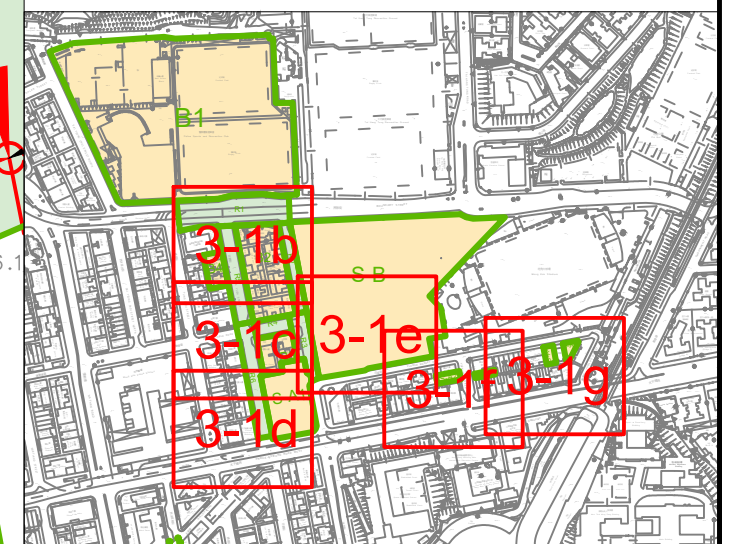




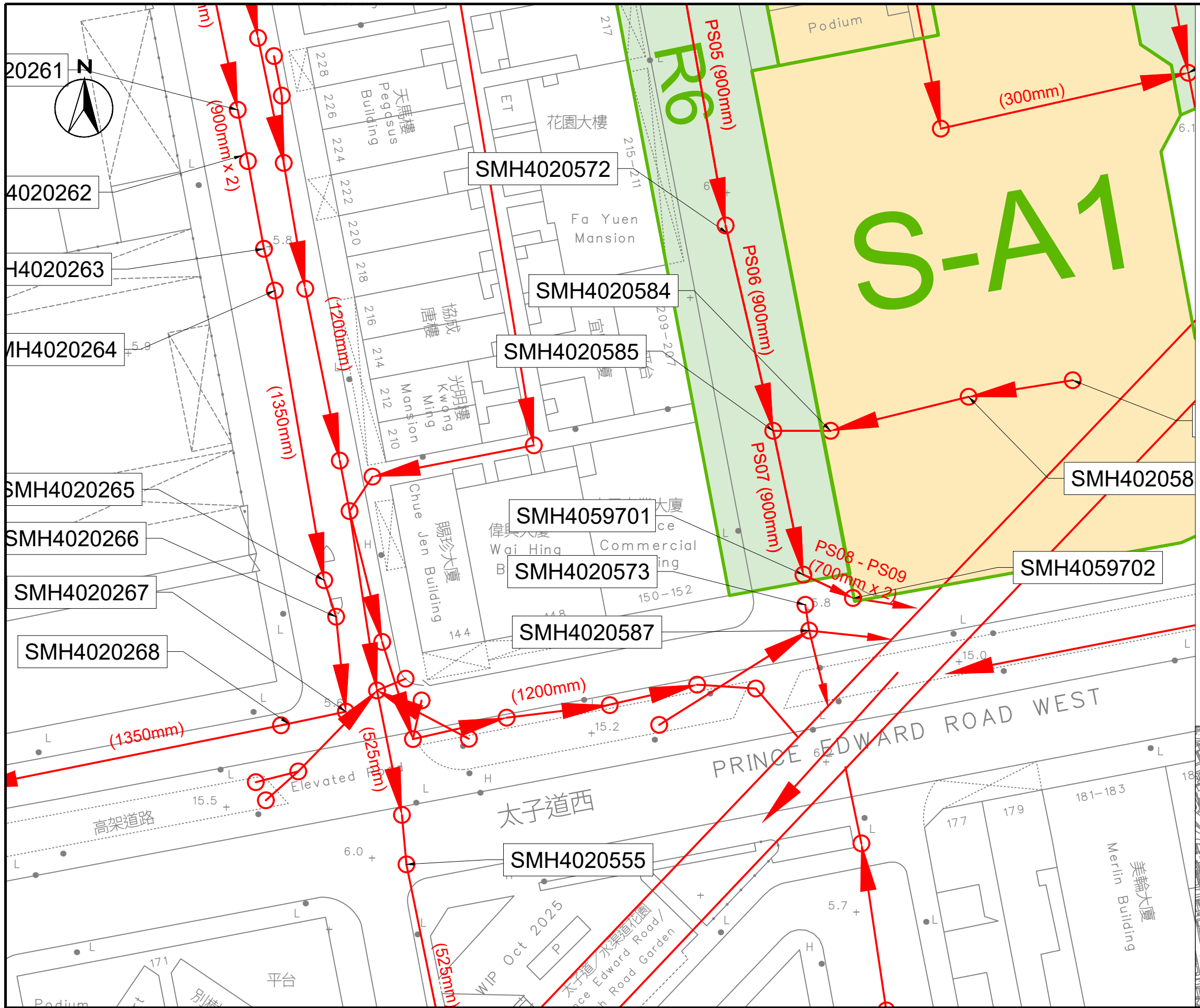


- Application Boundary
- Stormwater Catchment (Development)
- Stormwater Catchment (Open Area)
- Existing Public Stormwater Pipe
- Existing Public Stormwater Manhole

Key Plan
1:8000 @ A3

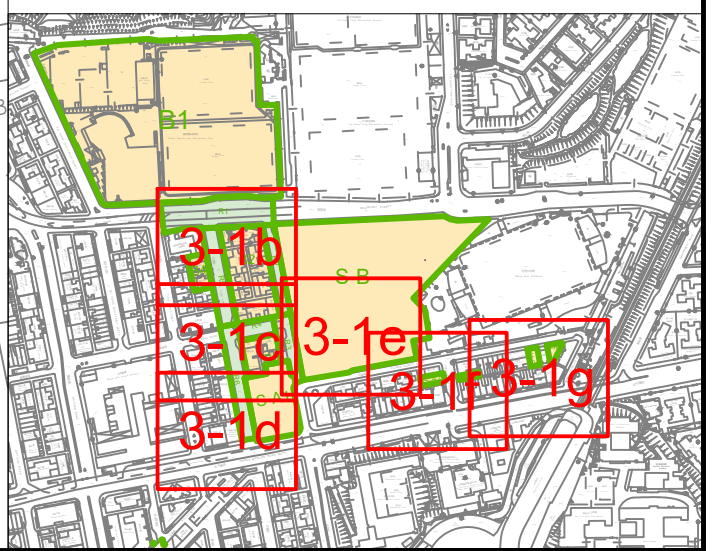


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		REV	-



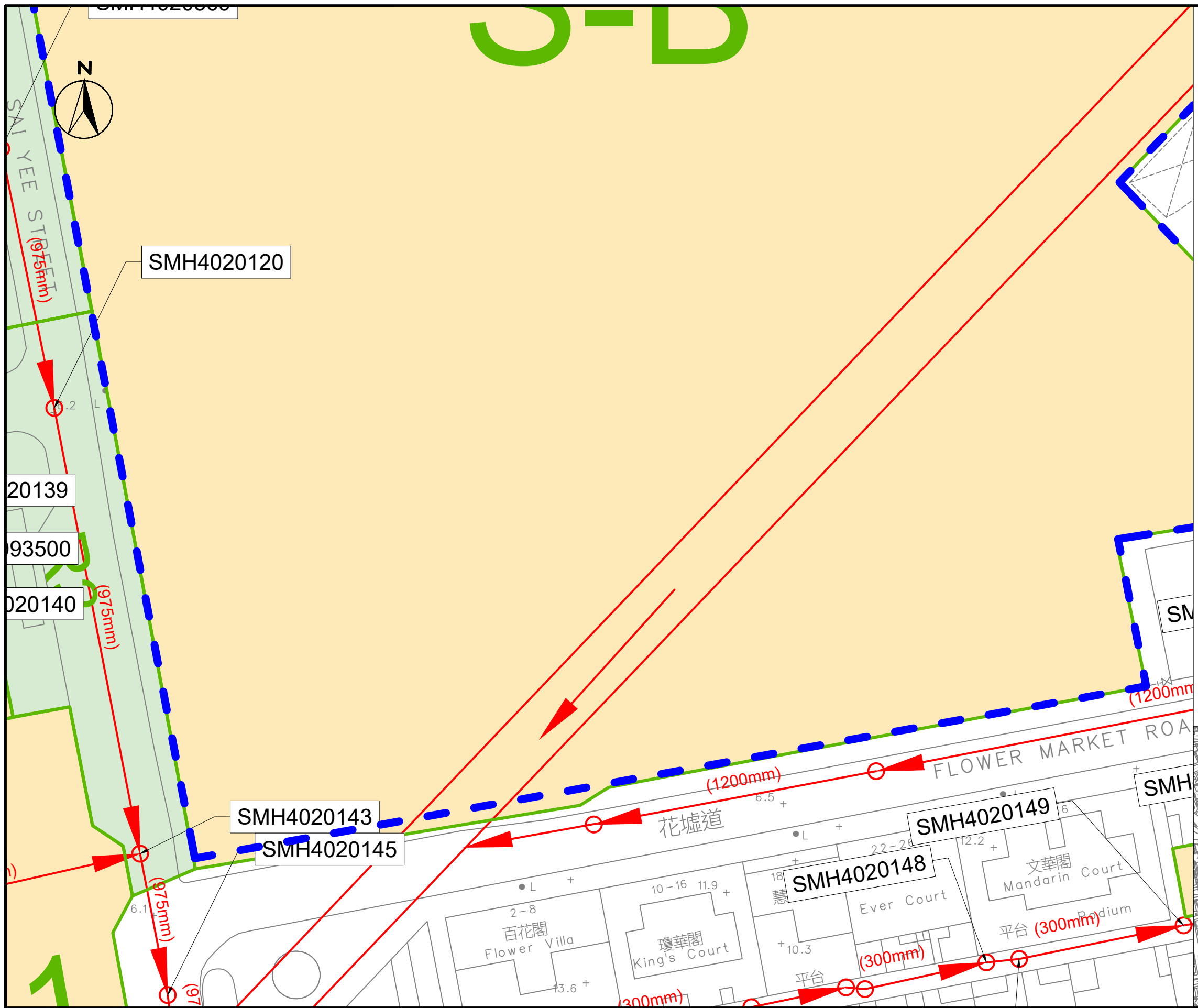
- Application Boundary
- Stormwater Catchment (Development)
- Stormwater Catchment (Open Area)
- Existing Public Stormwater Pipe
- Existing Public Stormwater Manhole

Key Plan
1:8000 @ A3



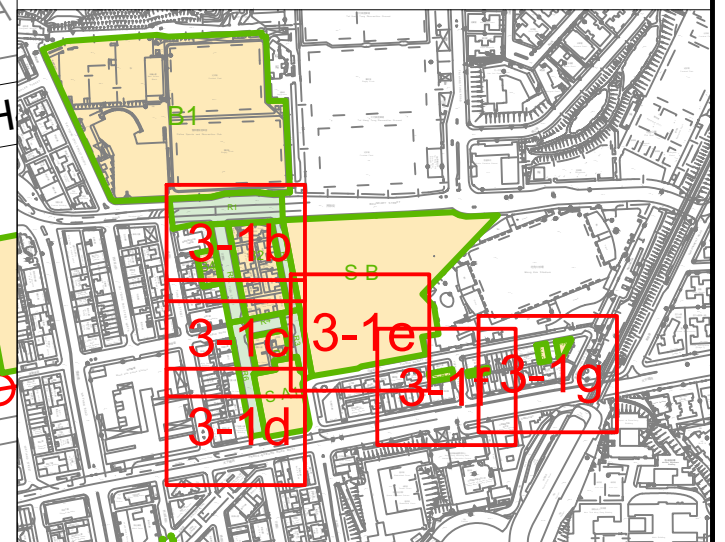
Section 16 Planning Application for Proposed Minor Relaxation of the Maximum Domestic GFA of Site B for the Urban Renewal Authority
Sai Yee Street/ Flower Market Road Development Scheme
Existing Stormwater System in the Vicinity - 3

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		REV	-

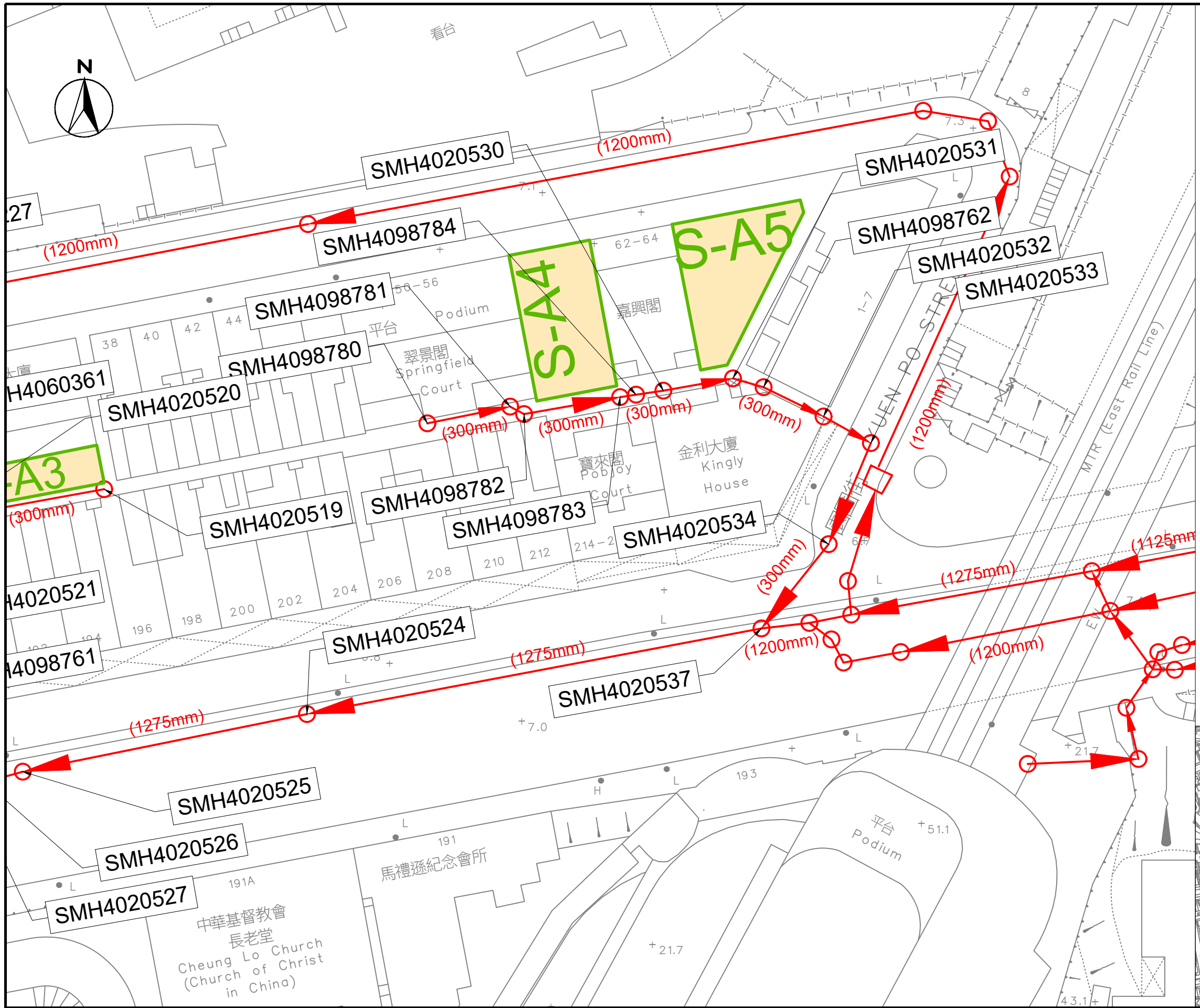


- Application Boundary
- Stormwater Catchment (Development)
- Stormwater Catchment (Open Area)
- Existing Public Stormwater Pipe
- Existing Public Stormwater Manhole

Key Plan
1:8000 @ A3

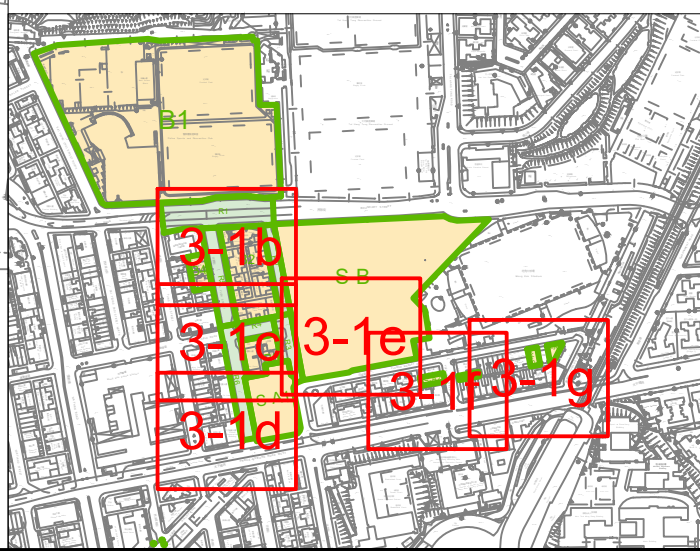


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		REV	-



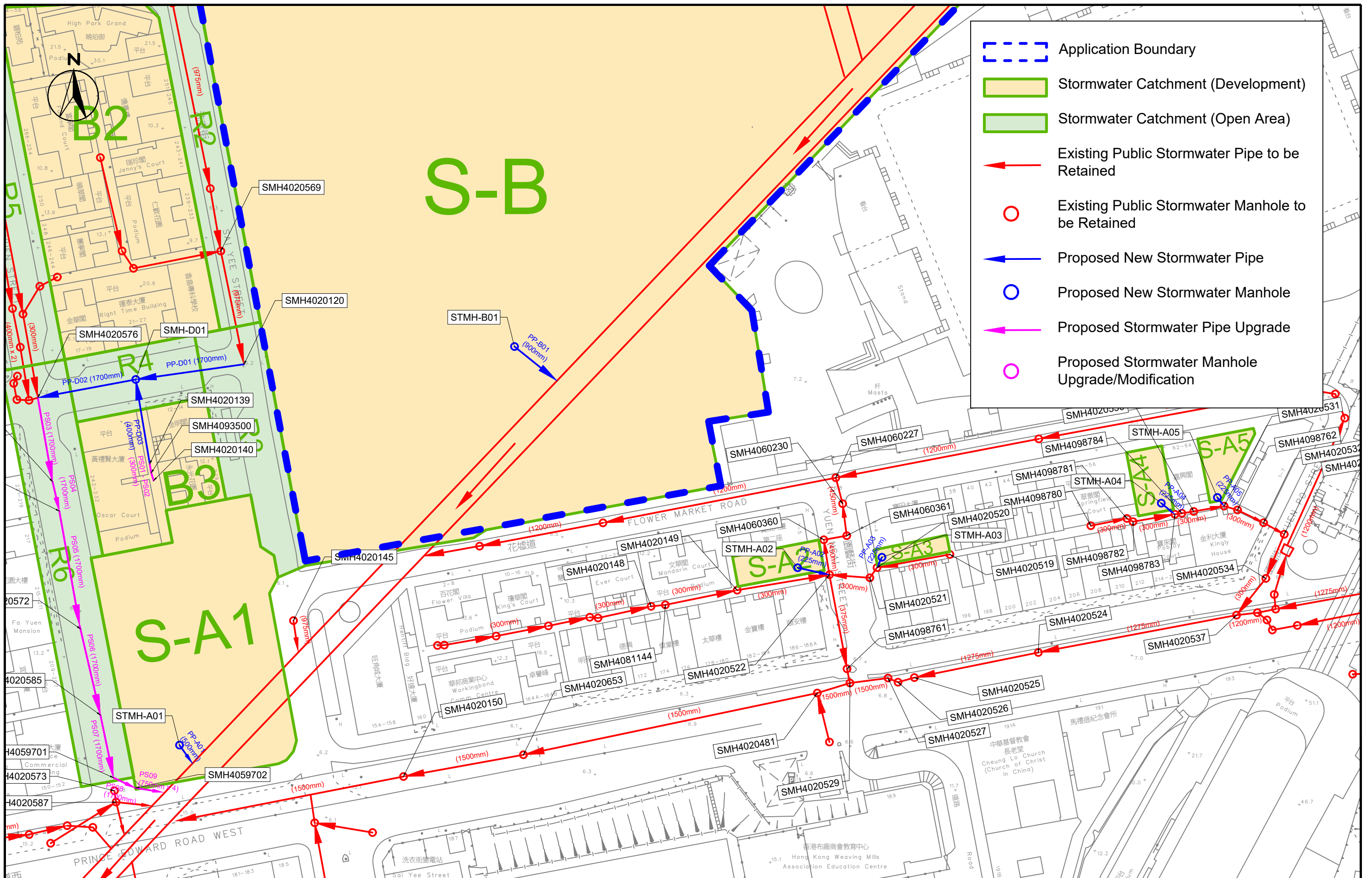
- Application Boundary
- Stormwater Catchment (Development)
- Stormwater Catchment (Open Area)
- Existing Public Stormwater Pipe
- Existing Public Stormwater Manhole

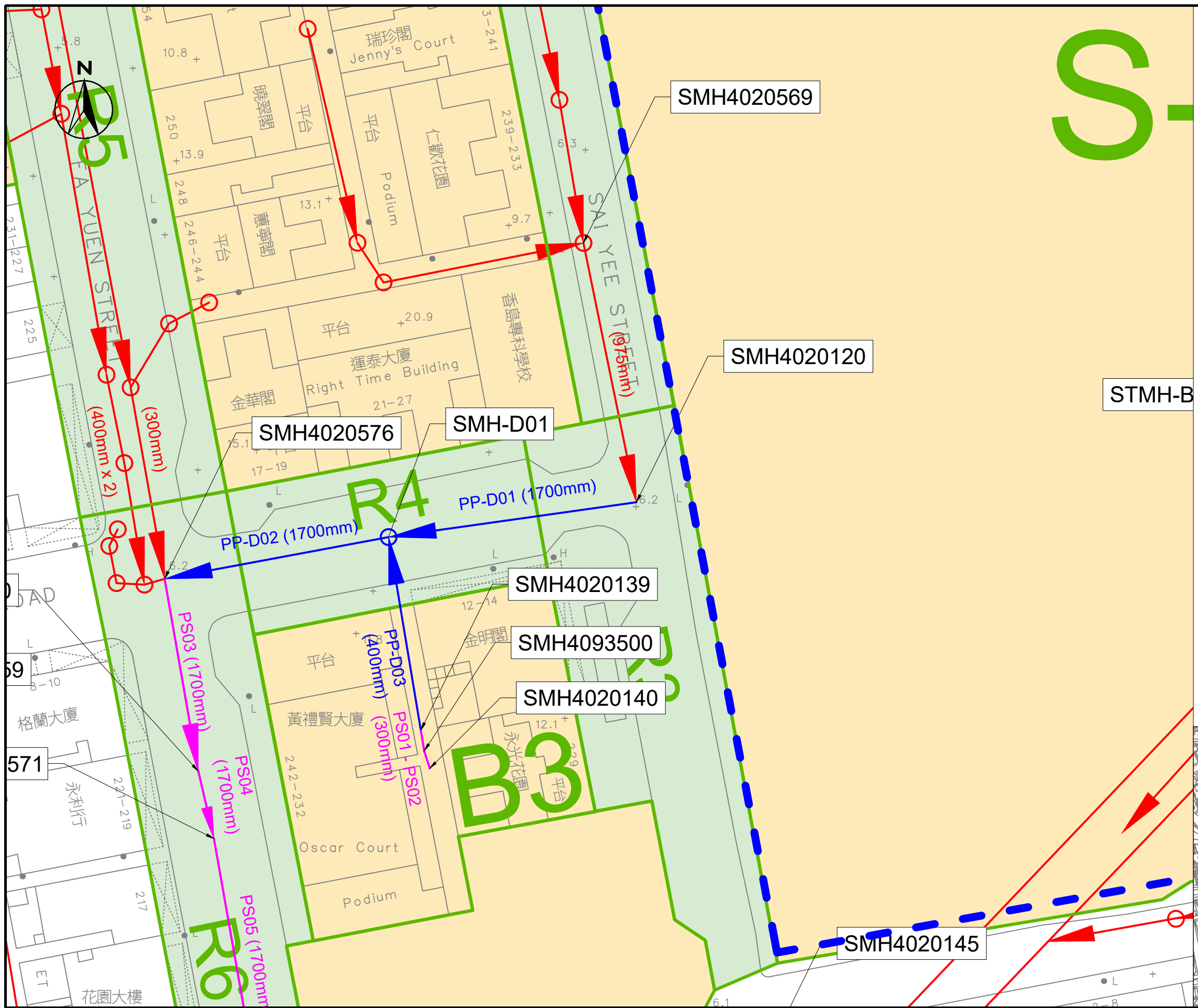
Key Plan
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Section 16 Planning Application for Proposed Minor Relaxation of the Maximum Domestic GFA of Site B for the Urban Renewal Authority
Sai Yee Street/ Flower Market Road Development Scheme
Existing Stormwater System in the Vicinity - 6

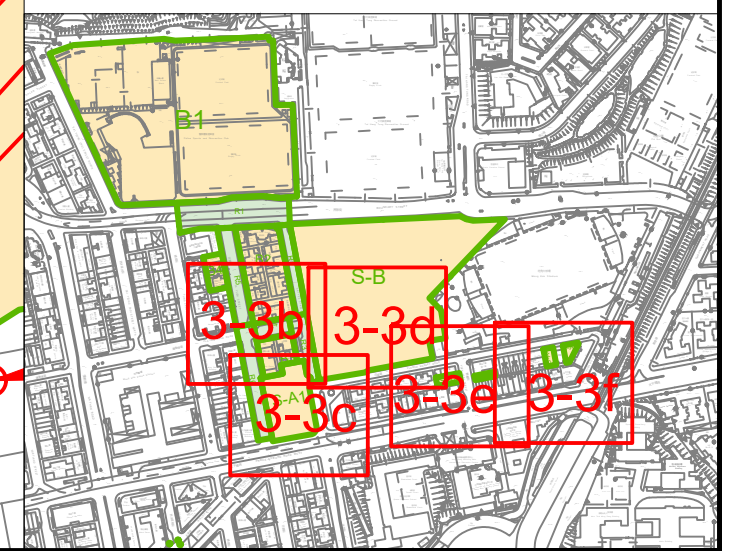
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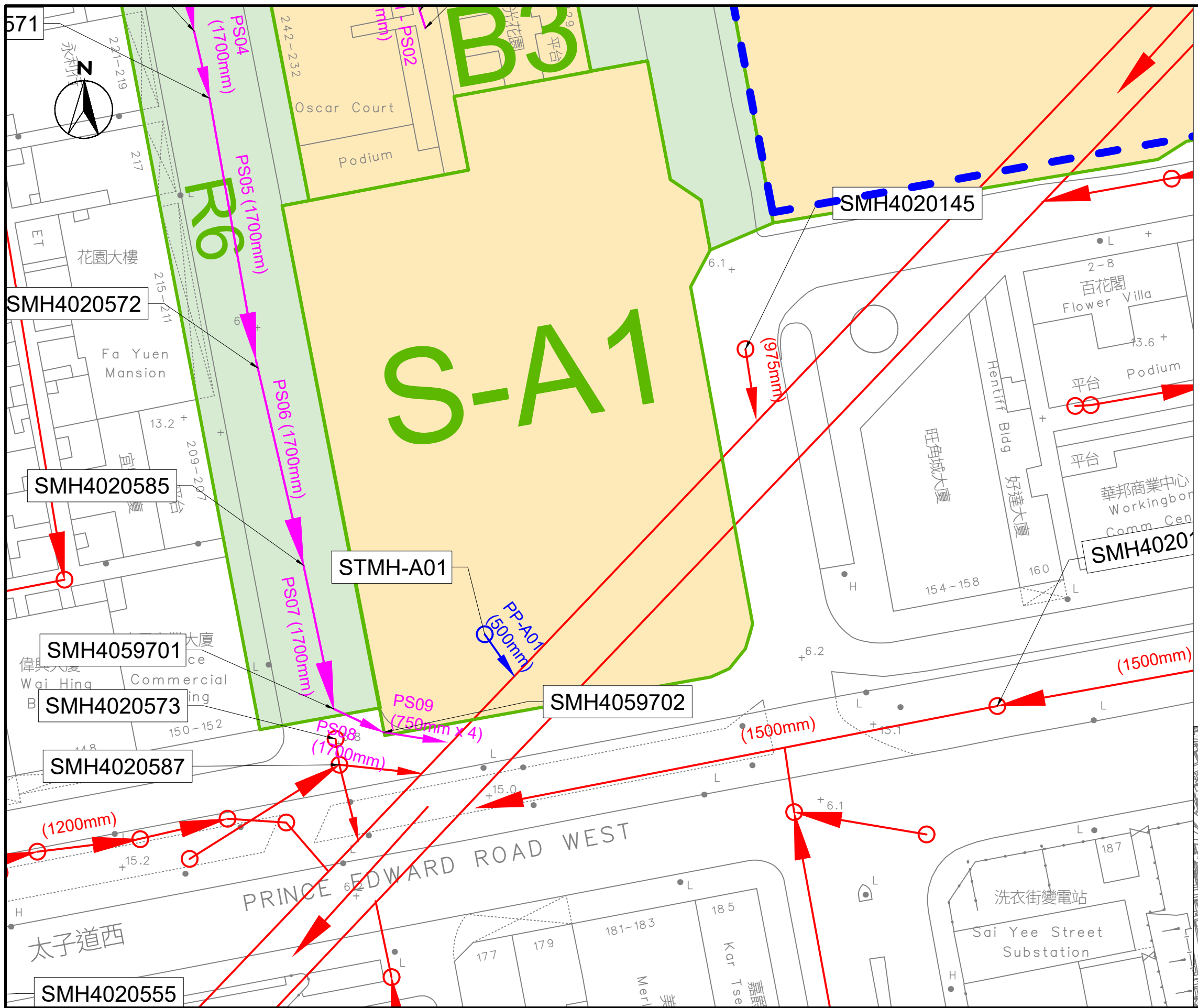


- Application Boundary
- Stormwater Catchment (Development)
- Stormwater Catchment (Open Area)
- Existing Public Stormwater Pipe to be Retained
- Existing Public Stormwater Manhole to be Retained
- Proposed New Stormwater Pipe
- Proposed New Stormwater Manhole
- Proposed Stormwater Pipe Upgrade
- Proposed Stormwater Manhole Upgrade/Modification

Key Plan
1:8000 @ A3

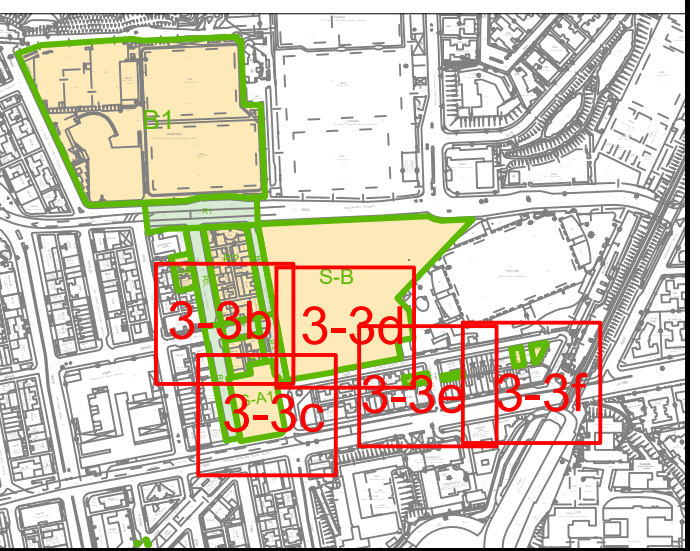


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		REV	-

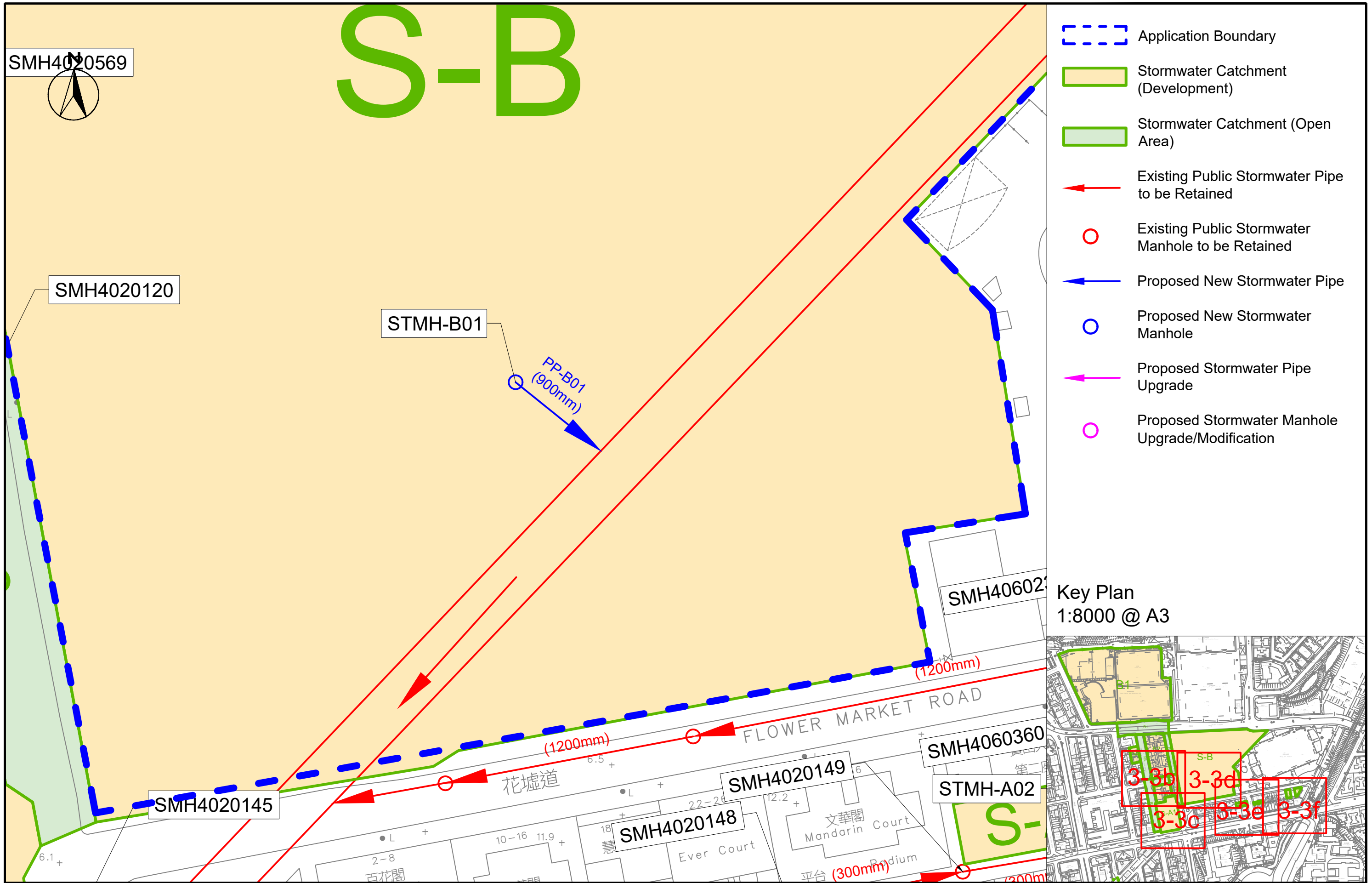


- Application Boundary
- Stormwater Catchment (Development)
- Stormwater Catchment (Open Area)
- Existing Public Stormwater Pipe to be Retained
- Existing Public Stormwater Manhole to be Retained
- Proposed New Stormwater Pipe
- Proposed New Stormwater Manhole
- Proposed Stormwater Pipe Upgrade
- Proposed Stormwater Manhole Upgrade/Modification

Key Plan
1:8000 @ A3

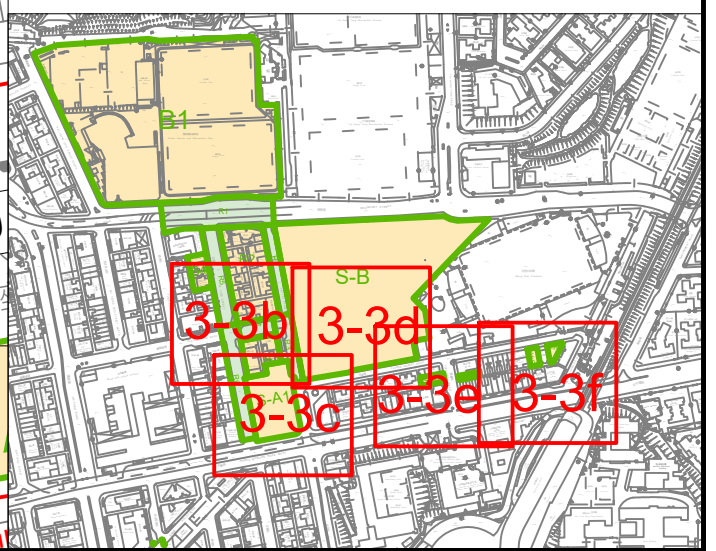


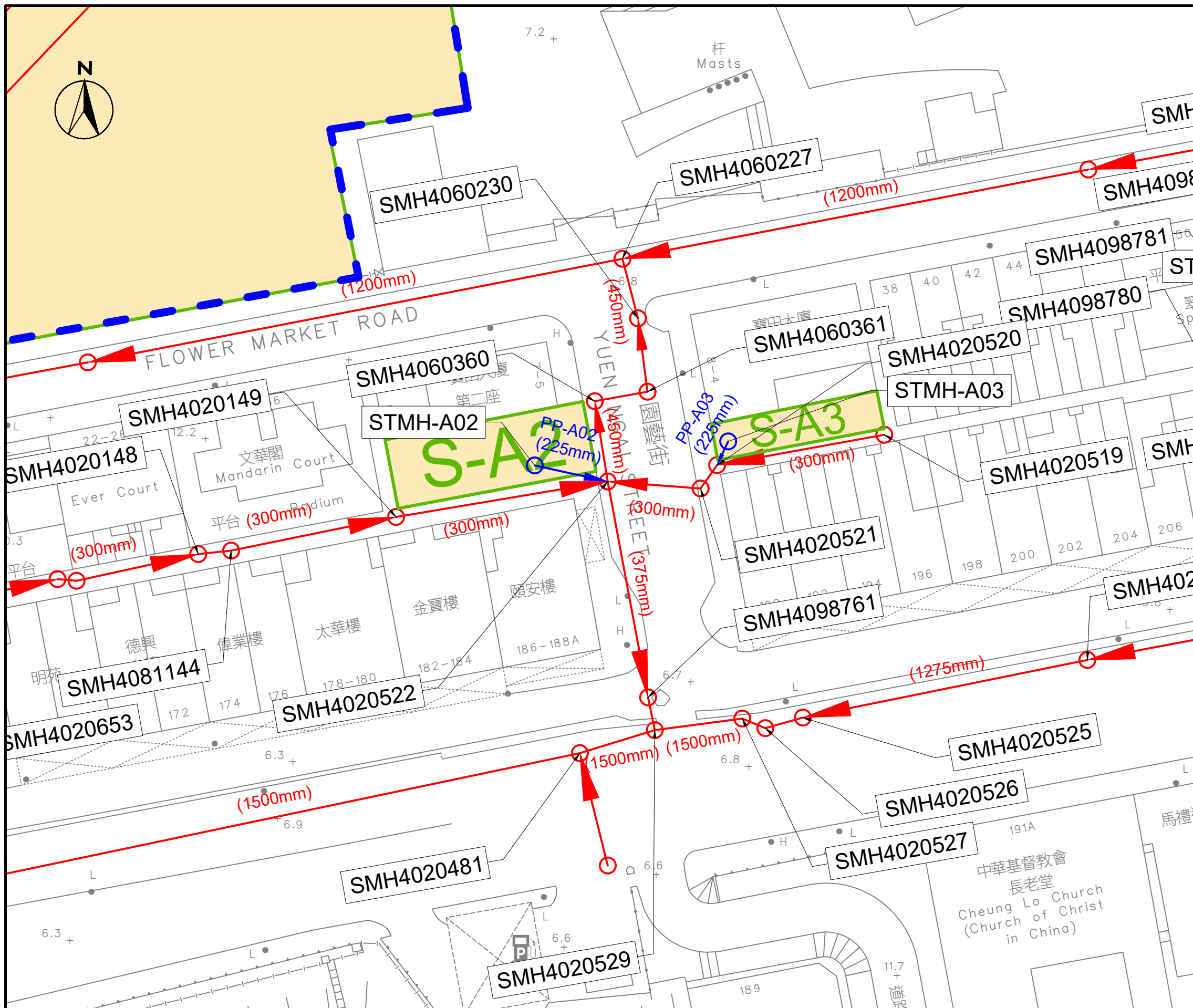
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		REV	-



- Application Boundary
- Stormwater Catchment (Development)
- Stormwater Catchment (Open Area)
- Existing Public Stormwater Pipe to be Retained
- Existing Public Stormwater Manhole to be Retained
- Proposed New Stormwater Pipe
- Proposed New Stormwater Manhole
- Proposed Stormwater Pipe Upgrade
- Proposed Stormwater Manhole Upgrade/Modification

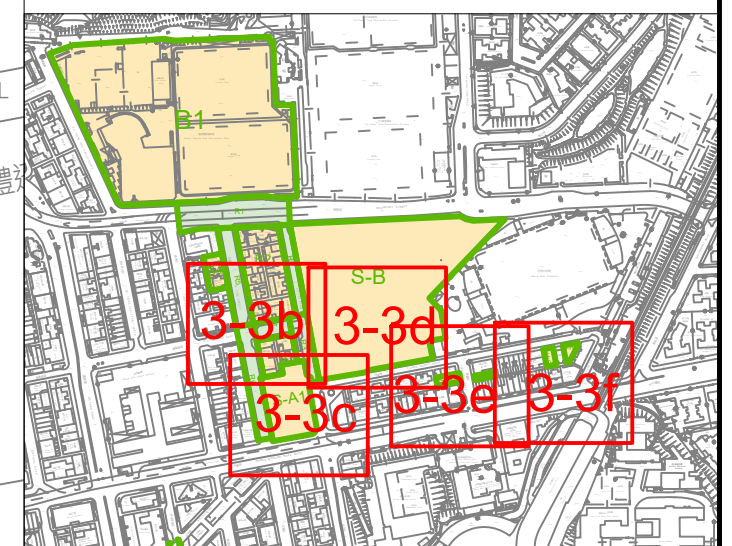
Key Plan
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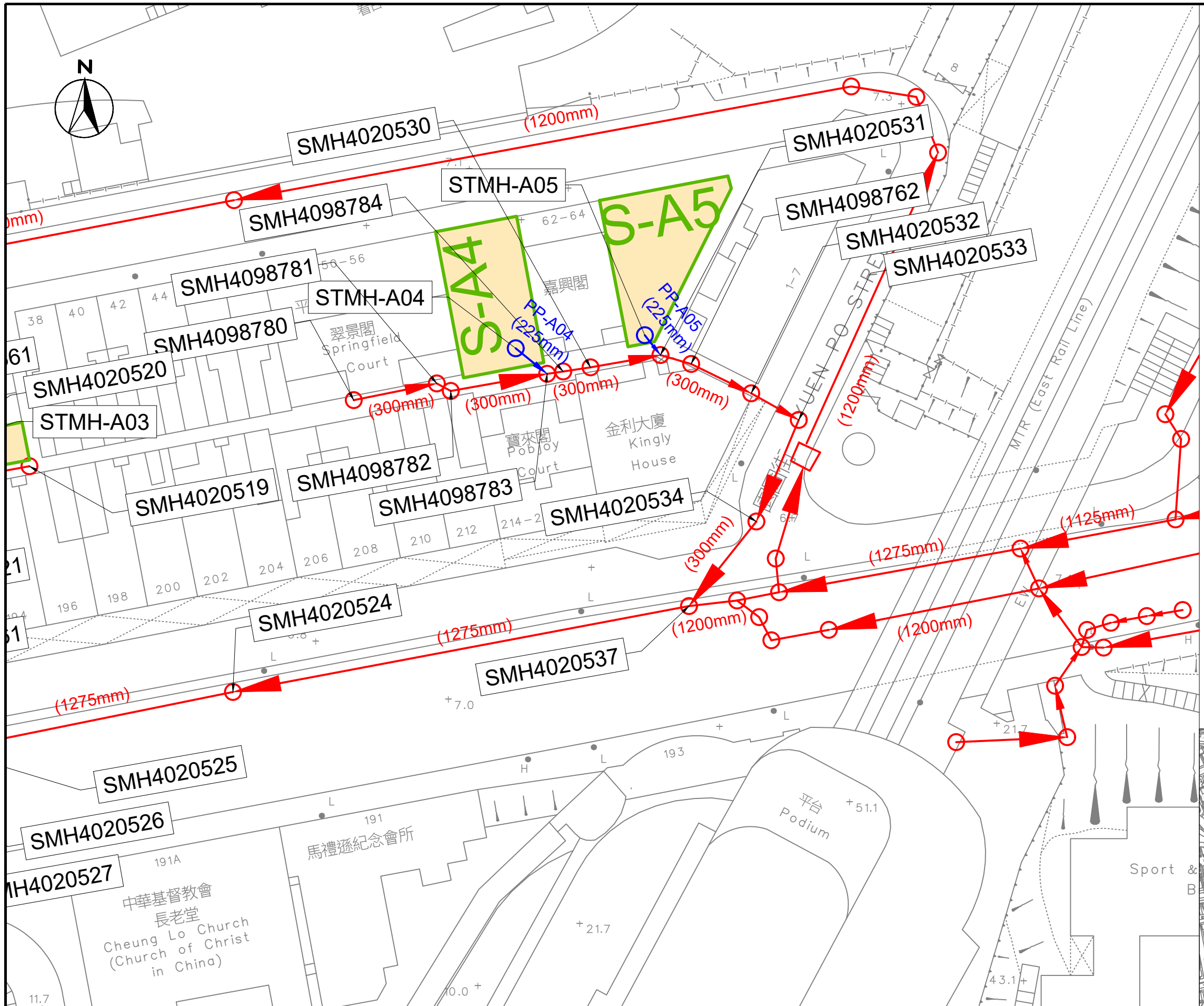


- Application Boundary
- Stormwater Catchment (Development)
- Stormwater Catchment (Open Area)
- Existing Public Stormwater Pipe to be Retained
- Existing Public Stormwater Manhole to be Retained
- Proposed New Stormwater Pipe
- Proposed New Stormwater Manhole
- Proposed Stormwater Pipe Upgrade
- Proposed Stormwater Manhole Upgrade/Modification

Key Plan
1:8000 @ A3

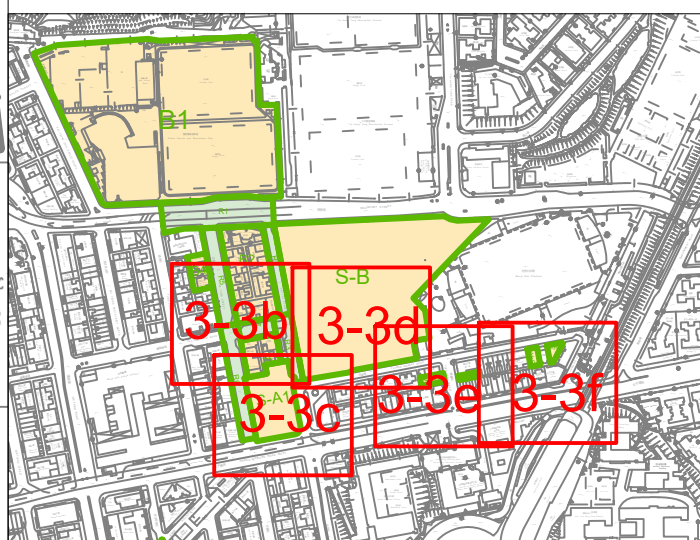


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		REV	-



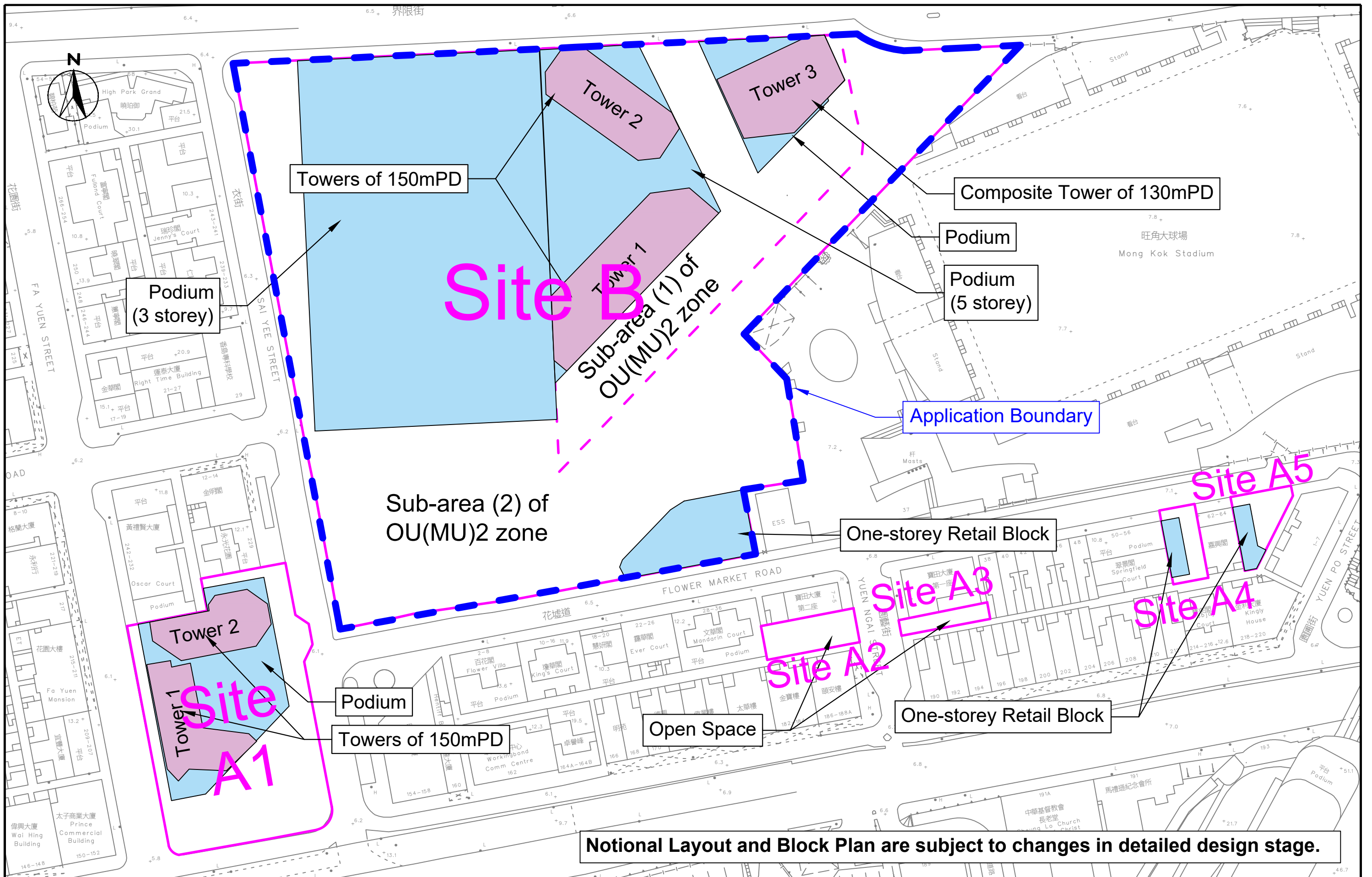
- Application Boundary
- Stormwater Catchment (Development)
- Stormwater Catchment (Open Area)
- Existing Public Stormwater Pipe to be Retained
- Existing Public Stormwater Manhole to be Retained
- Proposed New Stormwater Pipe
- Proposed New Stormwater Manhole
- Proposed Stormwater Pipe Upgrade
- Proposed Stormwater Manhole Upgrade/Modification

Key Plan
1:8000 @ A3



SCALE	1:500 @ A3	DATE	May 2026
CHECK	KS	DRAWN	CC
JOB No.	IA25056-S16	DRAWING No.	Fig. 3-3f
		REV	-

**APPENDIX 2-1
NOTIONAL PLAN OF THE PROPOSED
DEVELOPMENT**



**APPENDIX 3-1
STORMWATER DISCHARGE FROM
CATCHMENT ZONE**

Appendix 3-1 - Stormwater Discharge from Catchment Zone

Catchment Zone	S-A1	S-A2	S-A3	S-A4	S-A5	S-B1	B1	B2	B3
Description	Site A1	Site A2	Site A3	Site A4	Site A5	Site B	Existing Development	Existing Development	Existing Development
Catchment Area (m ²)	3570	268	123	233	251	24870	36749	4553	1334
Slope (m per 100m) ^[1]	2.50	2.50	2.50	2.50	2.50	2.50	0.16	2.50	2.50
L (m)	70.0	17.0	15.0	19.0	19.0	150.0	170.0	52.0	24.0
TOC (min) ^[3]	3.7	1.2	1.1	1.3	1.3	5.0	5.0	2.7	1.4
Runoff intensity (mm/hr) ^[2]	253.5	296.6	299.0	294.3	294.3	238.6	238.6	267.8	292.0
Paved area (m ²)	3570	268	123	233	251	24870	19449	4553	1334
Runoff coefficient (paved)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Drainage discharge (L/s)	226.4	19.9	9.2	17.2	18.5	1484.6	1161.0	305.0	97.5
Unpaved area (m ²) ^[3]	0	0	0	0	0	0	17300	0	0
Runoff coefficient (unpaved)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Stormwater discharge (L/s)	0.0	0.0	0.0	0.0	0.0	0.0	218.0	0.0	0.0
Total Stormwater discharge (L/s)	226.4	19.9	9.2	17.2	18.5	1484.6	1379.0	305.0	97.5
Rainfall increased and design allowance for end of 21 st century	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Total Stormwater discharge with Rainfall increased (L/s)	290.0	25.5	11.8	22.0	23.7	1901.7	1766.5	390.7	124.9

Note:
[1] A slope of 1:40 is assumed for flat catchment area.
[2] The run-off intensity is calculated by the equation in Section 4.3.3 of the CORRIGENDUM No. 1/2024:
$$i = \frac{a}{(t_d + b)^c}$$
where Table 3a - Storm Constants for 50years return period of HKO Headquarters are adopted.
a = 505.5
b = 3.29
c = 0.355
[3] The time of Concentration (TOC) has been capped to 5 minutes.

Appendix 3-1 - Stormwater Discharge from Catchment Zone

Catchment Zone	B4	R1	R2	R3	R4	R5	R6
Description	Existing Development	Paved Road	Paved Road	Paved Road	Paved Road	Paved Road	Paved Road
Catchment Area (m ²)	725	3595	1180	1199	699	1965	2064
Slope (m per 100m) ^[1]	2.50	0.20	0.15	0.15	0.15	0.57	0.16
L (m)	20.0	28.0	16.0	20.0	20.0	20.0	20.0
TOC (min) ^[3]	1.2	2.5	1.7	2.1	2.2	1.5	2.0
Runoff intensity (mm/hr) ^[2]	296.6	271.0	285.7	278.0	276.2	289.9	279.8
Paved area (m ²)	725	3595	1180	1199	699	1965	2064
Runoff coefficient (paved)	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Drainage discharge (L/s)	53.8	243.8	84.3	83.4	48.3	142.5	144.5
Unpaved area (m ²) ^[3]	0	0	0	0	0	0	0
Runoff coefficient (unpaved)	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Stormwater discharge (L/s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Stormwater discharge (L/s)	53.8	243.8	84.3	83.4	48.3	142.5	144.5
Rainfall increased and design allowance for end of 21 st century	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%
Total Stormwater discharge with Rainfall increased (L/s)	68.9	312.3	108.0	106.8	61.9	182.6	185.1

**APPENDIX 3-2
DETAILED CALCULATION OF PIPE
UTILIZATION**

Appendix 3-2 - Detailed Calculation of Pipe Utilization

Table A -Existing Pipes

Pipe No.	Upstream Manhole No.	Downstream Manhole No.	Upstream invert level (mP.D.) ^[3]	Downstream invert level (mP.D.) ^[3]	Length (m)	Diameter (m)	Area (m ²) ^[2]	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m ² /s)	Hydraulic Pipeline Roughness (m) ^[1]	Velocity (m/s)	Full Capacity (L/s)	Catchment	Peak Flow (L/s)	% of full capacity
Existing Pipes																
PS01	SMH4020140	SMH4093500	4.74	4.75	2.3	0.225	0.036	0.056	-0.006	1.14E-06	0.003	-	-	B3	124.9	-
PS02	SMH4093500	SMH4020139	4.75	4.77	2.6	0.225	0.036	0.056	-0.006	1.14E-06	0.003	-	-	B3	124.9	-
PS03	SMH4020576	SMH4059700	3.94	3.90	24.7	0.900	0.573	0.225	0.002	1.14E-06	0.006	0.93	531.1	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	623%
PS04	SMH4059700	SMH4020571	3.90	3.87	8.7	0.900	0.573	0.225	0.003	1.14E-06	0.003	1.50	858.4	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	385%
PS05	SMH4020571	SMH4020572	3.85	3.82	33.6	0.900	0.573	0.225	0.001	1.14E-06	0.006	0.69	393.8	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	840%
PS06	SMH4020572	SMH4020585	3.82	3.74	26.6	0.900	0.573	0.225	0.003	1.14E-06	0.003	1.40	802.5	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	412%
PS07	SMH4020585	SMH4059701	3.74	3.70	18.5	0.900	0.573	0.225	0.002	1.14E-06	0.006	1.07	612.8	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	540%
PS08 (Single Pipe)	SMH4059701	SMH4059702	2.57	2.55	6.9	0.700	0.346	0.175	0.003	1.14E-06	0.006	1.05	363.5	#N/A	#N/A	-
PS08	SMH4059701	SMH4059702	PS08 consist of two pipes										727.0	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	455%
PS09 (Single Pipe)	SMH4059702	to Nullah	2.55	2.54	8.1	0.700	0.346	0.175	0.001	1.14E-06	0.006	0.68	236.9	#N/A	#N/A	-
PS09	SMH4059702	to Nullah	PS09 consist of two pipes										473.8	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	698%

Note:
[1] The roughness coefficient for slime concrete sewer under poor condition is adopted; the ks values are 3mm for velocities greater than 1.2m/s, otherwise 6mm.
[2] According to Section 9.3 of Stormwater Drainage Manual (Fifth Edition), the effect of sedimentation should be estimated by 10% reduction in flow area.
[3] Highlighted invert levels are estimated values.
[4] The flow direction of PS01 to PS02 have been reversed based on the planned configuration instead of the existing configuration.

Appendix 3-2 - Detailed Calculation of Pipe Utilization

Table B - Proposed New Pipe

Pipe No.	Upstream Manhole No.	Downstream Manhole No.	Upstream invert level (mP.D.)	Downstream invert level (mP.D.)	Length (m)	Diameter (m)	Area (m ²) ^[2]	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m ² /s)	Hydraulic Pipeline Roughness (m) ^[1]	Velocity (m/s)	Full Capacity (L/s)	Catchment	Peak Flow (L/s)	% of full capacity
Proposed New Pipe [3]																
PP-A01	STMH-A01	to Nullah	--	--	--	0.500	0.177	0.125	0.020	1.14E-06	0.0003	3.33	588.1	S-A1	290.0	49%
PP-A02	STMH-A02	SMH4020522	--	--	--	0.225	0.036	0.056	0.020	1.14E-06	0.0003	2.02	72.2	S-A2	25.5	35%
PP-A03	STMH-A03	SMH4020520	--	--	--	0.225	0.036	0.056	0.020	1.14E-06	0.0003	2.02	72.2	S-A3	11.8	16%
PP-A04	STMH-A04	SMH4098783	--	--	--	0.225	0.036	0.056	0.020	1.14E-06	0.0003	2.02	72.2	S-A4	22.0	30%
PP-A05	STMH-A05	SMH4020531	--	--	--	0.225	0.036	0.056	0.020	1.14E-06	0.0003	2.02	72.2	S-A5	23.7	33%
PP-B01	STMH-B01	to Nullah	--	--	--	0.900	0.573	0.225	0.020	1.14E-06	0.0003	4.78	2735.8	S-B1	1901.7	70%
PP-D01	SMH4020120	SMH-D01	2.90	2.85	31.6	1.700	2.043	0.425	0.0016	1.14E-06	0.0003	1.96	3998.0	B1, B2, R1, R2, R3	2684.3	67%
PP-D02	SMH-D01	SMH4020576	2.85	2.80	28.8	1.700	2.043	0.425	0.0017	1.14E-06	0.0003	2.05	4192.4	B1, B2, B3, R1, R2, R3, R4	2871.1	68%
PP-D03	SMh4020139	SMH-D01	3.20	2.85	24.7	0.400	0.113	0.100	0.0142	1.14E-06	0.0003	2.43	275.2	B3	124.9	45%

Note:
[1] The roughness coefficient for slime uPVC sewer under poor condition is adopted; the ks values are 0.3mm for velocities greater than 1.2m/s, otherwise 1.5mm.
[2] According to Section 9.3 of Stormwater Drainage Manual (Fifth Edition), the effect of sedimentation should be estimated by 10% reduction in flow area.
[3] The details of the Proposed Pipe subject to change.
[4] Proposed changes are bold-underlined.

Appendix 3-2 - Detailed Calculation of Pipe Utilization

Table C - Proposed Upgrade Pipe

Pipe No.	Upstream Manhole No.	Downstream Manhole No.	Upstream invert level (mP.D.)	Downstream invert level (mP.D.)	Length (m)	Diameter (m)	Area (m ²) ^[2]	Hydraulic Radius (m)	Slope	Kinematic Viscosity (m ² /s)	Hydraulic Pipeline Roughness (m) ^[1]	Velocity (m/s)	Full Capacity (L/s)	Catchment	Peak Flow (L/s)	% of full capacity
Proposed Upgrade Pipe [3][4]																
PS01	SMH4020140	SMH4093500	4.74	<u>4.60</u>	2.3	<u>0.300</u>	0.064	0.075	0.061	1.14E-06	0.0003	4.24	269.8	B3	124.9	46%
PS02	SMH4093500	SMH4020139	<u>4.60</u>	<u>4.50</u>	2.6	<u>0.300</u>	0.064	0.075	0.038	1.14E-06	0.0003	3.34	212.2	B3	124.9	59%
PS03	SMH4020576	SMH4059700	<u>2.80</u>	<u>2.75</u>	24.7	<u>1.700</u>	2.043	0.425	0.002	1.14E-06	0.0003	2.21	4522.0	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	73%
PS04	SMH4059700	SMH4020571	<u>2.75</u>	<u>2.73</u>	8.7	<u>1.700</u>	2.043	0.425	0.002	1.14E-06	0.0003	2.21	4522.0	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	73%
PS05	SMH4020571	SMH4020572	<u>2.73</u>	<u>2.66</u>	33.6	<u>1.700</u>	2.043	0.425	0.002	1.14E-06	0.0003	2.21	4522.0	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	73%
PS06	SMH4020572	SMH4020585	<u>2.66</u>	<u>2.61</u>	26.6	<u>1.700</u>	2.043	0.425	0.002	1.14E-06	0.0003	2.21	4522.0	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	73%
PS07	SMH4020585	SMH4059701	<u>2.61</u>	<u>2.57</u>	18.5	<u>1.700</u>	2.043	0.425	0.002	1.14E-06	0.0003	2.21	4522.0	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	73%
PS08	SMH4059701	SMH4059702	<u>2.57</u>	<u>2.56</u>	6.9	<u>1.700</u>	2.043	0.425	0.002	1.14E-06	0.0003	2.21	4522.0	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	73%
PS09 (Single Pipe)	SMH4059702	to Nullah	<u>2.56</u>	<u>2.485</u>	8.1	<u>0.750</u>	0.398	0.188	0.009	1.14E-06	0.0003	2.90	1151.4	#N/A	#N/A	-
PS09	SMH4059702	to Nullah	PS09 consists of <u>four</u> pipes										4605.4	B1, B2, B3, B4, R1, R2, R3, R4, R5, R6	3307.6	72%

Note:
[1] The roughness coefficient for slime uPVC sewer under poor condition is adopted; the ks values are 0.3mm for velocities greater than 1.2m/s, otherwise 1.5mm.
[2] According to Section 9.3 of Stormwater Drainage Manual (Fifth Edition), the effect of sedimentation should be estimated by 10% reduction in flow area.
[3] The details of the Proposed Pipe subject to change.
[4] Proposed changes are bold-underlined.

**Section 16 Planning Application for Proposed Minor Relaxation of the
Maximum Domestic GFA of Site B for the Urban Renewal Authority
Sai Yee Street/ Flower Market Road Development Scheme
("YTM-013"), Mong Kok, Kowloon**

**Water Supply Impact Assessment
(V1.0)**

June 2026

Approved By 
(Project Manager: K.S. Lee)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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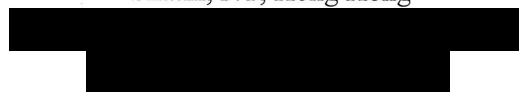


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1 INTRODUCTION

1.1 Background

- 1.1.1 The Urban Renewal Authority (URA) has proposed the Sai Yee Street / Flower Market Road Development Scheme (YTM-013) (the Scheme) under Section 25 of the Urban Renewal Authority Ordinance (URAO). The Chief Executive in Council (CE in C) approved the draft Development Scheme Plan (DSP) on April 8, 2025, and published this decision in the Government Gazette on 17th April 2025. The approved DSP No. S/K3/URA5/2 was exhibited for public inspection on the same day.
- 1.1.2 To optimize the utilization of the Scheme area and in view to the current unoptimistic office market sentiment with a high office vacancy rate and the Government’s directive of suspending the sales of commercial sites, the URA proposes to increase the maximum domestic Gross Floor Area (GFA) to allow flexibility for future development to meet the market needs and enhance market attractiveness of the Scheme. A Section 16 planning application (S.16 Application) is proposed to seek for minor relaxation of domestic GFA in Sub-area (1) of Site B (the whole Site B as the Application Site), zoned as “OU(MU)2” from 46,605 m² (equivalent to a Domestic Plot Ratio (DPR) 6.5) to 53,775 m² (equivalent to a DPR 7.5), while keeping the total maximum GFA of Site B unchanged. The Application Site of the current S.16 Application will only cover Site B of the approved DSP. **Figure 1-1** shows the Application Site of the current S.16 Application.
- 1.1.3 This S.16 Application is a non-scheme-based submission. The notional design is prepared based on the proposed minor relaxation of the Approved DSP parameters. Under the non-scheme-based approach, the notional design and indicative development parameters provided are only for illustrative purposes and for conducting necessary technical assessments to demonstrate the impacts of the proposed minor relaxation. Except for any planning condition(s) to be imposed, the design of the future development will not be bounded by the notional design submitted in the S.16 Application.
- 1.1.4 Cinotech Consultants Limited has been commissioned by the URA to conduct a Water Supply Impact Assessment (WSIA) to support the submission of the S.16 Application to the Town Planning Board (TPB) for consideration.

2 DESCRIPTION OF THE ENVIRONMENT

2.1 Existing Environment

- 2.1.1 To demonstrate the complete picture of the future development in the urban context, the assessment will describe the proposed development of the whole DSP (i.e. both Site A and Site B) (the Scheme). The Scheme is located in the northeastern part of Mong Kok. With a total gross site area of 29,315m², the Scheme is divided into Site A (about 4,445m²) and Site B (about 24,870m²). The location of the Scheme is shown on **Figure 1-1**.
- 2.1.2 Site B of the Scheme (the Application Site) is currently occupied by various leisure, recreation and GIC facilities, including Boundary Sports Centre No.1 and No.2, Boundary Street Recreation Ground, Sai Yee Street Children’s Playground, Boundary Street Amenity Plot, Boundary Street Sports Centres, Sai Yee Street (Flower Market Road) Refuse Collection Point, Sai Yee Street Public Toilet, Leisure and Cultural Services Department (“LCSD”) Boundary Street Plant Nursery and CLP Power Hong Kong Limited Boundary Street Sports Ground Substation. In addition, Site B also includes the whole of Flower Market Path, which is a public footpath.
- 2.1.3 Site A of the Scheme (not forming the Application Site) comprises five sub-areas, named Sites A1 to A5 respectively. All five sub-areas of Site A are currently occupied by low-rise residential/ composite buildings aged 60 and above.

2.2 The Proposed Development

Approved DSP and S.16 Application

- 2.2.1 According to the approved DSP of the Scheme, Site B, the Application Site, is zoned “Other Specified Uses (Mixed Uses) 2” (“OU(MU)2”), and is further divided into Sub-area (1) and Sub area (2). Sub-area (1) of Site B will be for a high-rise development with a maximum domestic gross floor area (“GFA”) of 46,605m² and a total GFA of 64,530 m², as well as a building height restriction (“BHR”) of 150mPD adopting a stepped height profile. Sub-area (2) of “OU(MU)2” zone comprises the Waterway Park and ancillary retail/ commercial uses and LCDS’s sports/ GIC facilities with a BHR of 30mPD. It has a maximum non-domestic GFA of 8,955 m²
- 2.2.2 Site A (not forming the Application Site) is zoned “Other Specified Uses (Mixed Use) 1” (“OU(MU)1”) and it consists of 5 Sub-areas – Sub-areas (1) to (5) (i.e. Sites A1 – A5). Site A1 will be developed for residential development cum commercial podium, with a BHR of 150mPD. Open space and 1-storey retail shops will be provided at Sites A2 to A5.
- 2.2.3 Under this minor relaxation application, the maximum domestic GFA of Sub-area (1) in Site B is proposed to increase from 46,605m² to approximately 53,775m², equivalent to an increase in DPR from 6.5 to 7.5 (see **Table 2-1**). The total GFA for Sub-area (1) remains at 64,530m² (PR = 9.0). The development parameters of Sub-area (2) of Site B remain the same as the under the previously endorsed DSP.

Comparison between the Approved DSP and Current S.16 Application Proposal (Site B)

- 2.2.4 A comparison between the development parameters of the approved DSP and that of the S.16 Application is provided in **Table 2-1** below.

Table 2-1 Comparison between the Approved DSP and the Current S.16 Application Proposal (Site B)

Development Parameters of Site B	Approved DSP [A]			Current S.16 Application [B]			Difference [B] – [A] (% change)
Zoning	OU(MU)2			OU(MU)2			N/A
Gross Site Area (m ²)	About 24,870			About 24,870			N/A
	Sub-area (1)	Sub-area (2)	Total [A]	Sub-area (1)	Sub-area (2)	Total [B]	
Net Site Area (m²) (for PR Calculation) [1]	About 7,170	About 17,700	About 24,870	About 7,170	About 17,700	About 24,870	N/A
Maximum GFA							
-Total GFA (m ²)	64,530	8,955	73,485	64,530	8,955	73,485	N/A
-Domestic GFA (m ²)	46,605	N/A	46,605	53,775	N/A	53,775	+15.4%
Maximum Building Height (mPD)	150	30	N/A	150	30	N/A	N/A

Remark:

[1] Subject to site survey

Notional Design

- 2.2.5 A notional design, which is illustrated in **Appendix 2-1**, is prepared based on the development parameters to demonstrate the proposed planning intention and development concepts of the Scheme. Compared to the notional design for the approved DSP, the current notional design for S.16 Application has only revised the design of Site B, while keeping the notional design of other parts in the DSP unchanged from the approved DSP.
- 2.2.6 Regarding the Application Site, under the current notional design for Sub-area (1) of Site B (the north-east corner of Site B), a development featuring 3 high-rise developments, including 2 residential towers and 1 mixed-use composite tower with residential/ hotel uses, along with retail/ recreation and GIC facilities at the podium level, is proposed. Ancillary parking and a public vehicle park (PVP) are proposed in the basement levels of Site B. An at-grade open space, named “Waterway Park,” is proposed in the Sub-area (2) of Site B. Ancillary retail facilities are planned at the ground level and the Waterway Park to enhance retail activities and vibrancy adjoining the existing Flower Market.
- 2.2.7 Compared to the approved Scheme for approved DSP, the major change is at Sub-area (1) of Site B, where the hotel/ office tower in the approved Scheme is changed to a composite tower of residential/ hotel tower, with the same height (130 mPD) in the current S.16 Application.
- 2.2.8 The notional design for Site A is the same as the approved DSP at planning stage and will be referenced for the purpose of technical assessments to support the S.16 Application. Site A1 is proposed to be developed into high-rise residential towers with retail podium, at-grade open space and basements for ancillary parking spaces and loading/ unloading bays. Sites A2-A5 are proposed to be developed into 1-storey retail blocks/ open space to create nodal points and continuation of retail frontages for the Flower Market.
- 2.2.9 The Proposed Development of the Scheme will be redeveloped in phases. Phased development and completion may be adopted by further sub-division of Site B, subject to

liaison and agreement with relevant government departments at the implementation stage. The tentative completion year of the whole Scheme is in 2036.

Development Parameters

2.2.10 The development parameters of the notional design of Site A shown in **Table 2-2** remains the same as those under the approved DSP. This assessment is prepared based on the development parameters in **Table 2-2** & **Table 2-3** of the notional design, which are subject to changes at detailed design stage.

Table 2-2 Development Parameters of the Notion Design (Site A)

Site A	A1	A2	A3	A4	A5
Gross Site Area	About 3,570m ²	About 268m ²	About 123m ²	About 233m ²	About 251m ²
	About 4,445m ²				
Net Site Area (subject to survey)	About 2,640m ²	About 239m ²	About 109m ²	About 202m ²	About 198m ²
	About 3,388m ²				
Zoning	OU(MU)1				
Domestic GFA [1]	23,716m ²	-	-	-	-
Non-Domestic GFA [1]	6,576m ²	-	-	100m ²	100m ²
No. of Building Blocks [2]	2	-	-	1	1
Building Height	150mPD	-	-	1 storey	1 storey
No. of Flats [2]	474	-	-	-	-
Average Flat Size [2]	50m ²	-	-	-	-
At-grade Open Space	About 800m ²				

Note

[1] Under the proposed “OU(MU)” zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.

[2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.

Table 2-3 Development Parameters of the Notion Design (Site B – Application Site)

Site B			
Gross Site Area	About 24,870m ²		
Zoning	OU(MU)2		
	Sub-area (1)	Sub-area (2)	Total
Net Site Area (subject to survey)	7,170m ²	17,700m ²	24,870m ²
Domestic GFA [1]	53,775m ²	-	53,775m ²
Non-Domestic GFA [1]	10,755m ²	8,955m ²	19,710m ²
- Retail	(5,755m ²)	(8,955m ²)	(14,710m ²)
- Hotel	(5,000m ²)	-	(5,000m ²)
GIC GFA (to be exempted from GFA calculation) [3]	30,000m ²		
No. of Building Blocks [2]	2 residential towers and 1 composite tower with residential and hotel uses on top of GIC/ recreation/ retail podia + 1 retail block		
Building Height	150mPD (residential towers) 130mPD (composite tower) 1 storey (retail block)		
No. of Flats [2]	About 1,080	-	About 1,080
Average Flat Size [2]	50m ²	-	50m ²
At-grade Open Space	About 8,800m ²		
Public Vehicle Park [4]	About 220 private car parking spaces + About 10 loading/unloading bays		

Note

- [1] Under the proposed "OU(MU)" zoning, flexibility is allowed to interchange GFA of various compatible uses. The proposed GFA mix in the current notional design is indicative only and subject to changes in detailed design stage.
- [2] Number of building blocks, number of flats and average flat size are indicative only and subject to detailed design.
- [3] The actual GIC GFA is subject to liaison with Government departments. As a conservative approach, 30,000m² GIC GFA is assumed in this assessment.
- [4] Subject to liaison with Transport Department.

Existing Fresh/Salt Water Mains Networks

- 2.2.11 The existing fresh and salt water mains networks in the vicinity are illustrated in **Appendices 2-2 and 2-3**.
- 2.2.12 Some existing fresh and salt water mains will be removed to accommodate the development requirements. The existing fresh and salt water mains within the back alleys of Site A1 will be removed. Therefore, diversions will be required for the existing development north of Site A1.
- 2.2.13 Within Site B, there are existing salt water mains. While these salt water mains currently serve only Site B, it is important to note that the 250 mm main serves as a network extension for the nearby area and will be preserved. Under the current notional Scheme, the 250 mm main within Site B is located at the proposed Waterway Park to be managed by LCSD. The treatment to facilitate the future operation and maintenance of that water main will be subject to detailed design and to agreement by relevant government departments.

- 2.2.14 On the other hand, due to the small scale of the development, no adverse water-supply impact is anticipated from Sites A2, A3, A4, and A5.
- 2.2.15 It is important to note that the removal of existing fresh and salt water mains can result in the suspension of nearby water supply. Therefore, during the detailed design stage, the necessity and procedure for removing or shutting down existing water mains will be carefully reviewed.

3 WATER SUPPLY IMPACT ASSESSMENT – FRESHWATER

3.1 Existing Freshwater Supply

- 3.1.1 As mentioned in **Section 2.1.1**, the assessment regarding both freshwater (**Section 3**) and salt water (**Section 4**) will take into account of the Proposed Development for both Site A and Site B under the notional design for a complete picture and its accumulated impacts to the existing water mains networks.
- 3.1.2 The Scheme Area is currently served by Ho Man Tin East FWSR (Capacity: 152,411 m³) & Ho Man Tin West FWSR (Capacity: 67,434 m³).
- 3.1.3 Site A1 is currently served by a few 100 mm mains connected to the 150mm mains at Fa Yuen Street to the west, 150mm mains at Sai Yee Street to the east, and 300mm mains at Playing Field Road to the north.
- 3.1.4 Site B is currently served by a 100mm main at Flower Market Road in the south, a few 50/80mm branches connected to a 150mm main at Sai Yee Street to the west, some 80/150mm branches from a 750mm main at Boundary Street in the north-west, and a 40mm main connected to a 100mm branch Boundary Street in the north-east.
- 3.1.5 Site A2 to A5 are currently served by a 100m mains along the back alley, which further connected to 150mm mains at Yuen Po Street, Yuen Ngai Street, and Sai Yee Street.
- 3.1.6 The simplified fresh water main records are illustrated in **Figure 3-1a to Figure 3-1d**. The WSD Fresh Water Mains Record Plan is provided in **Appendix 2-2**.

3.2 Freshwater Demand

- 3.2.1 The calculations for the water demand for the existing and proposed scenarios detailed in **Appendix 3-1** and summarized in **Table 3-1**. For a conservative assessment, 5% of additional water demand has been accounted for on top of the conservative unit demand factors to estimate the water demand for a reasonable worst scenario.
- 3.2.2 The fresh water demand for the Scheme is expected to increase from 747.0 m³/day to 2250.6 m³/d (an increase of 1,503.6 m³/day, or 1.504 MLD).
- 3.2.3 The fresh water demands of Site A1 & B are expected to be greatly increased from 178.5 m³/day and 537.0 m³/day to 453.9 m³/day and 1773.1 m³/day, respectively. For the Sites A2 to A5, reduction of fresh water demand is anticipated.

Table 3-1 Summary of Fresh Water Demand

	Daily Demand - Fresh Water (m ³ /day)		
	Existing	Proposed [1]	Net Increase
Site A1	178.5	453.9	275.4
Site A2	8.8	7.4	-1.4
Site A3	5.3	3.7	-1.6
Site A4	8.8	6.4	-2.4
Site A5	8.8	6.2	-2.5
Site B	537.0	1773.1	1236.1
Total	747.0	2250.6	1503.6

Note:

[1] 5% additional demand have been included for conservative assessment.

3.3 Freshwater Supply Impact - Ho Man Tin East FWSR & Ho Man Tin West FWSR

3.3.1 As shown in **Table D of Appendix 3-1**, there is substantially greater spare capacity (128.8 MLD) in Ho Man Tin East FWSR & Ho Man Tin West FWSR. The expected increase in demand (1.504 MLD) can therefore be accommodated by the existing Fresh Water Service Reservoirs. No adverse impact to the fresh water service reservoirs is anticipated.

3.4 Freshwater Supply Impact - Fresh Water Mains (Site A1)

3.4.1 Site A1 is currently served by a few 100 mm mains connected to the 150mm mains at Fa Yuen Street to the west, 150mm mains at Sai Yee Street to the east, and 300mm mains at Playing Field Road to the north as shown in **Figure 3-1b**.

3.4.2 With the implementation of the Scheme, the existing fresh water mains within the back alleys of the Site A1 will be removed. In order to provide a both-end feed fresh water supply to the existing development to the north of Site A1, a new 100mm fresh water main is proposed within the northern part of Site A1 to connect the existing 100mm fresh water main along the back alley to the 150mm fresh water main along Sai Yee Street to the east. To ensure proper maintenance and access to the proposed new water mains, subject to detailed design, a reserve area may be required along its alignment.

3.4.3 Similarly, the both-end feed fresh water supply to the existing development to the west of Site A1 will be affected. Therefore, a new 200mm fresh water main along Fa Yuen Street has been proposed.

3.4.4 Three time the estimated mean daily fresh water demand of the Proposed Development at Site A1 is ~1,362m³/day. With adopting a maximum sustained flow velocity as suggested in Departmental Instruction (DI) No. 1309 "Design Criteria" (**Table A2 of Appendix 3-1**), the capacity of 150mm & 200mm fresh water mains are 2,290 m³/day & 4,072 m³/day respectively. Therefore, a new 150mm fresh water main connecting to the new 200mm main along Fa Yuen Street to the west have been proposed for catering the fresh water demand of Site A1 as shown in **Figure 3-1b**. The alignment and connection point of the proposed new water pipe are subject to detailed design.

3.5 Freshwater Supply Impact - Fresh Water Mains (Sites A2 to A5)

- 3.5.1 Sites A2 to A5 are served by the 50mm branches from the 100mm fresh water mains along the back alley as shown in **Figure 3-1c**. As the fresh water consumption is expected to be reduced, no fresh water impact is anticipated.

3.6 Freshwater Supply Impact - Fresh Water Mains (Site B)

- 3.6.1 Site B is currently served by a 100mm main at Flower Market Road in the south, a few 50/80mm branches connected to a 150mm main at Sai Yee Street to the south-west, some 80/150mm branches from a 750mm main at Boundary Street in the north-west, and a 40mm main connected to a 100mm branch Boundary Street in the north-east as shown in **Figure 3-1d**.
- 3.6.2 With the implementation of the Scheme, some of the existing branches of fresh water mains that only serving the Site B will be removed.
- 3.6.3 Three time the estimated mean daily fresh water demand of the proposed development at Site B is ~5,319 m³/day. With adopting a maximum sustained flow velocity as suggested in Departmental Instruction (DI) No. 1309 “Design Criteria” (**Table A2 of Appendix 3-1**), the capacities of 200mm & 300mm fresh water mains are 4,072 m³/day & 9,160 m³/day, respectively. Therefore, two new 200mm fresh water mains connecting to the existing 300mm main along Boundary Street have been proposed for catering the fresh water demand of Site B as shown in **Figure 3-1d**. The alignment and connection points of the proposed new water pipes are subject to detailed design.

3.7 Freshwater Supply Impact - Proposed Pedestrian Subways

- 3.7.1 As separate revitalisation initiatives not forming part of the Scheme, there is a proposed pedestrian subway at Sai Yee Street connecting Site A1 & Site B (**Figure 3-1b**).
- 3.7.2 It should be noted that the proposed tunnel is still in very early stage thus only indicative alignment is available, while the detailed alignment, elevation and dimension are subject to detailed design and agreement with relevant Government departments.
- 3.7.3 There are multiple freshwater mains crossing the indicative alignment of the proposed tunnel, including freshwater mains of 150mm, 750mm, 900mm, and some 100mm or smaller freshwater mains to be removed (**Figure 3-1b**).
- 3.7.4 As freshwater mains are pressure driven, potential affected freshwater mains could be diverted vertically when necessary, subject to detailed design and technical feasibility. However, considered that the existing 750mm and 900mm freshwater mains along Sai Yee Street may be classified as trunk mains, during the detailed design stage, the proposed pedestrian subways will be thoroughly reviewed to minimize any potential adverse impact on these possible freshwater trunk mains. Therefore, no adverse freshwater supply impact arising from the proposed tunnel is anticipated at this stage.

4 WATER SUPPLY IMPACT ASSESSMENT – SALTWATER

4.1 Existing Saltwater Supply

- 4.1.1 The Scheme Area is currently served by Cheung Sha Wan SWPS (Design Pumping Capacity: 87 MLD).
- 4.1.2 Site A1 is currently served by a few 80mm mains connected to the 100mm mains at Fa Yuen Street to the west, 250mm mains at Sai Yee Street to the east, and 400mm mains at Playing Field Road to the north.
- 4.1.3 Site B is currently served by a 250mm main and a 40mm branch at Flower Market Road in the south.
- 4.1.4 There is an 80mm mains along the back alley of Site A2 to A5, which is further connected to a 250mm mains at Sai Yee Street and a 100mm mains at Yuen Po Street. Currently, only Site A5 is connected to the 80mm mains by two 40mm pipes, while Sites A2 to A4 are not connected to the 80mm mains.
- 4.1.5 The simplified salt water main records are illustrated in **Figure 3-2a to Figure 3-2d**. The WSD Salt Water Mains Record Plan is provided in **Appendix 2-3**.

4.2 Saltwater Supply Impact

- 4.2.1 The calculations for the water demand for the existing and proposed scenarios detailed in **Appendix 3-1** and summarized in **Table 4-1**. For a conservative assessment, the plot ratio of the Proposed Development has been fully utilized. In addition, 5% of additional water demand has been accounted for on top of the conservative unit demand factors to estimate the water demand for a reasonable worst scenario.
- 4.2.2 The salt water demand for the Scheme is expected to increase from 89.0 m³/day to 610.1 m³/d (an increase of 521.1 m³/day, or 0.521 MLD).
- 4.2.3 The salt water demands of Site A1 & Site B are expected to be greatly increased from 56.1 m³/day and 23.0 m³/day to 136.9 m³/day and 469.0 m³/day, respectively. For the Sites A2 to A5, reduction of salt water demand is anticipated.

Table 4-1 Summary of Salt Water Demand

	Daily Demand - Salt Water (m ³ /day)		
	Existing	Proposed	Net Increase
Site A1	56.1	136.9	80.8
Site A2	2.8	0.0	-2.8
Site A3	1.7	0.0	-1.7
Site A4	2.8	2.1	-0.6
Site A5	2.8	2.1	-0.7
Site B	23.0	469.0	446.0
Total	89.0	610.1	521.1

4.3 Saltwater Supply Impact - Cheung Sha Wan SWPS

- 4.3.1 As shown in **Appendix 3-1**, there is substantially greater spare capacity (23.0 MDL) in Cheung Sha Wan SWPS. The expected increase in demand (0.521 MLD) can therefore be accommodated by the existing SWPS. No adverse impact to the salt water pumping stations is anticipated.

4.4 Saltwater Supply Impact - Saltwater Mains (Site A1)

- 4.4.1 Site A1 is currently served by a few 80mm mains connected to the 100mm mains at Fa Yuen Street to the west, 250mm mains at Sai Yee Street to the east, and 400mm mains at Playing Field Road to the north as shown in **Figure 3-2b**.
- 4.4.2 With the implementation of the Scheme, the existing salt water mains within the back alleys of Site A1 will be removed. In order to provide a both-end feed salt water supply to the existing development in the north of Site A1, a new 80mm salt water main is proposed within the northern part of Site A1 to connect the existing 80mm salt water main along the back alley to the 250mm salt water main along Sai Yee Street. To ensure proper maintenance and access to the proposed new water mains, subject to detailed design, a reserve area may be required along its alignment.
- 4.4.3 Two time the estimated mean daily salt water demand of the Proposed Development at Site A1 is $\sim 274\text{m}^3/\text{day}$. With adopting a maximum sustained flow velocity as suggested in Departmental Instruction (DI) No. 1309 "Design Criteria" (**Table A2 of Appendix 3-1**), the capacity of 80mm & 250mm salt water mains are $651\text{ m}^3/\text{day}$ & $6,362\text{ m}^3/\text{day}$ respectively. Therefore, a new 80mm salt water main connecting to the existing 250mm main along Sai Yee Street has been proposed for catering the salt water demand of Site A1. The alignment and connection points of the proposed new water pipes are subject to detail design. The suggested new salt water mains are illustrated in as shown in **Figure 3-2b**.

4.5 Saltwater Supply Impact - Saltwater Mains (Sites A2 to A5)

- 4.5.1 Site A5 is currently served by two 40mm pipes connected to the 80mm mains along the back alley. Whereas, Sites A2 to A4 are not connected to the 80mm mains.
- 4.5.2 The existing two 40mm pipes shall be sufficient to cater the saltwater consumption of Site A5. For Site A4, it is recommended to provide a 40mm pipe to cater to the expected saltwater consumption, as shown in **Figure 3-2c**. Sites A2 and A3 are not expected to use saltwater at all, therefore, no new pipe is proposed.
- 4.5.3 As there is no saltwater demand for Site A2 & Site A3, and the salt water consumption for Site A4 & Site A5 is expected to be reduced, no salt water impact is anticipated.

4.6 Saltwater Supply Impact - Saltwater Mains (Site B)

- 4.6.1 Site B is currently served by a 250mm main and a 40mm branch at Flower Market Road in the south as shown in **Figure 3-2d**.
- 4.6.2 With the implementation of the Scheme, the existing 80mm & 100mm branches from the 250mm salt water main within Site B will be removed.

- 4.6.3 Two time the estimated mean daily salt water demand of the Proposed Development at Site B is $\sim 938.0 \text{ m}^3/\text{day}$. With adopting a maximum sustained flow velocity as suggested in Departmental Instruction (DI) No. 1309 "Design Criteria" (**Table A2 of Appendix IV**), the capacities of 100mm & 250mm salt water mains are $1,018 \text{ m}^3/\text{day}$ & $6,362 \text{ m}^3/\text{day}$ respectively. Therefore, a new 100mm saltwater main connecting to the existing 250mm main within Site B has been proposed for catering the salt water demand of Site B. The alignment and connection points of the proposed new water pipe are subject to detail design. The suggested new salt water mains are illustrated in as shown in **Figure 3-2d**.

4.7 Saltwater Supply Impact - Proposed Pedestrian Subways

- 4.7.1 As separate revitalisation initiatives not forming part of the Scheme, there is a proposed pedestrian subway at Sai Yee Street connecting Site A1 & Site B (**Figure 3-2b**).
- 4.7.2 It should be noted that the proposed tunnel is still in very early stage thus only indicative alignment is available, while the detailed alignment, elevation and dimension are subject to detailed design and agreement with relevant Government departments.
- 4.7.3 There is a 250mm saltwater mains crossing the site of the proposed tunnel (**Figure 3-2b**).
- 4.7.4 The depths of the existing saltwater mains crossing the proposed tunnels are subject to further studies. Nevertheless, the saltwater mains are pressure driven, it is expected that the potential affected saltwater mains could be diverted vertically when necessary, subject to detailed design and technical feasibility. Therefore, no adverse saltwater supply impact arising from the proposed tunnels is anticipated at this stage.

5 SUMMARY AND THE FUTURE WORKS

5.1.1 The fresh and salt water mains to be demolished are summarised in **Table 5-1**. The proposed new fresh and salt water mains are summarised in **Table 5-2**.

Table 5-1 Summary of Freshwater/Saltwater Mains to be Demolished

Site	Freshwater Mains	Saltwater Mains
Site A1	All existing 80-100mm freshwater main within Site A1	All existing saltwater main within Site A1, except the 250mm saltwater main
Site A2	N/A	N/A
Site A3	N/A	N/A
Site A4	N/A	N/A
Site A5	N/A	N/A
Site B	All existing freshwater main within Site B	The existing 80mm & 100mm branches from the 250mm salt water main within Site B
Others	The existing 100mm (and its 50-80mm branches) freshwater mains between Site A1 and Site B A short section of the 100mm freshwater mains along the back alley in the north of Site A1	A short section of the 80mm saltwater mains along the back alley in the north of Site A1

Table 5-2 Summary of Proposed New Freshwater/Saltwater Mains

Site	Freshwater Mains	Saltwater Mains
Site A1	A new 150mm freshwater mains from the new 200mm freshwater mains along Fa Yuen Street	A new 80mm saltwater mains from the existing 250mm saltwater mains along Sai Yee Street
Site A2	N/A	N/A
Site A3	N/A	N/A
Site A4	N/A	A 40mm saltwater mains from the existing 80mm saltwater mains along the back alley
Site A5	N/A	N/A
Site B	2 x new 200mm freshwater mains from the existing 300mm freshwater mains along Boundary Street.	A new 100mm saltwater main from the existing 250mm main within Site B
Others	A new 100mm freshwater mains from back alley in the north of Site A1 to the existing 150mm freshwater mains along Sai Yee Street A new 200mm freshwater mains along Fa Yuen Street	A new 80mm saltwater mains from back alley in the north of Site A1 to the existing 250mm saltwater mains along Sai Yee Street

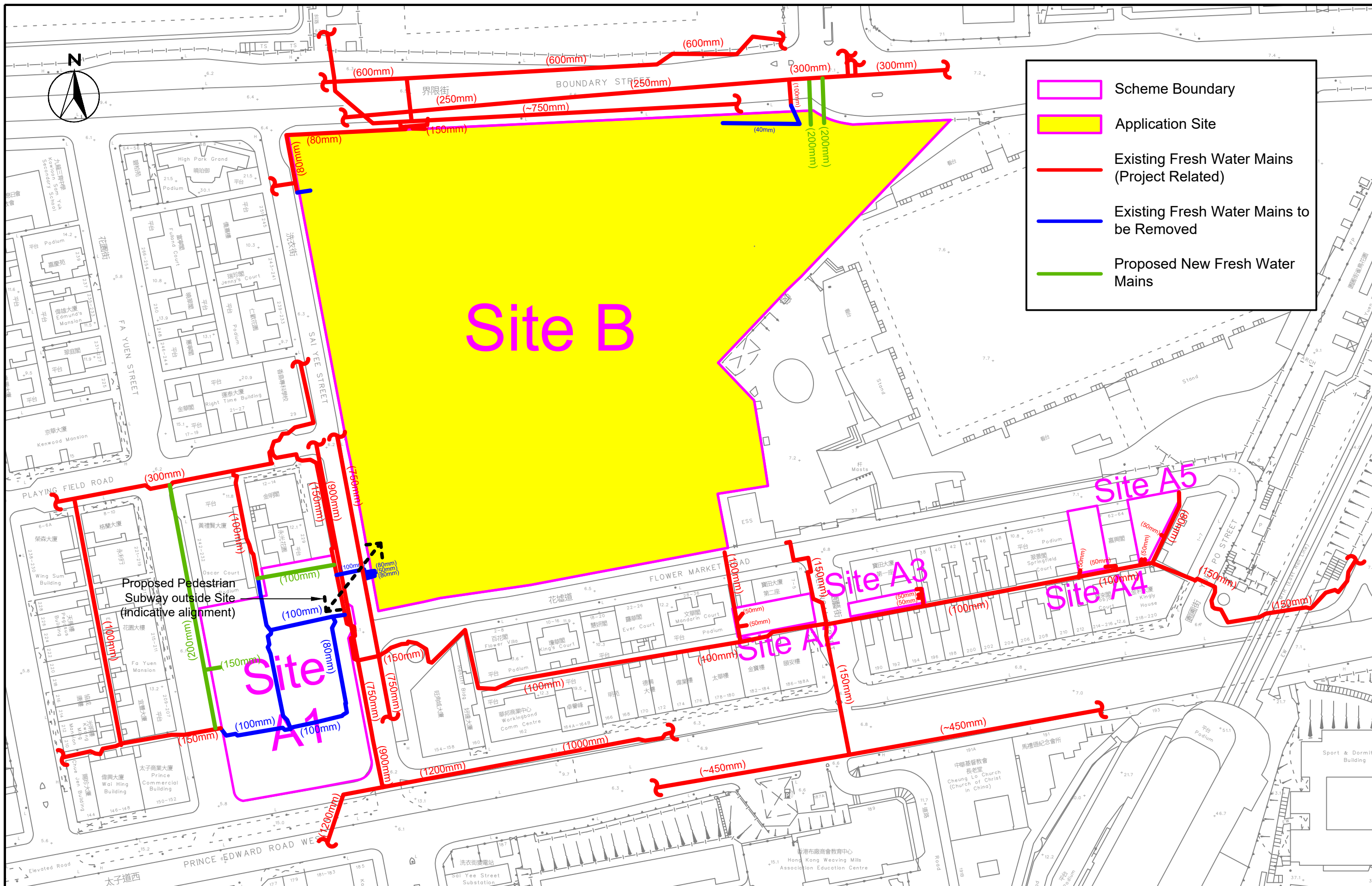
5.2 Construction and Maintenance

- 5.2.1 Responsibilities for the investigation, design, construction, repair and maintenance of the internal water supply facilities and connection to the main water system(s) will be discussed among URA/its joint venture partners/its assignees and relevant Government departments in detailed design stage.
- 5.2.2 The detailed connection arrangements for the Scheme Area and the local water mains will be reviewed in later stages during implementation of the Scheme. Local upgrading and/or realignment may be implemented if necessary.

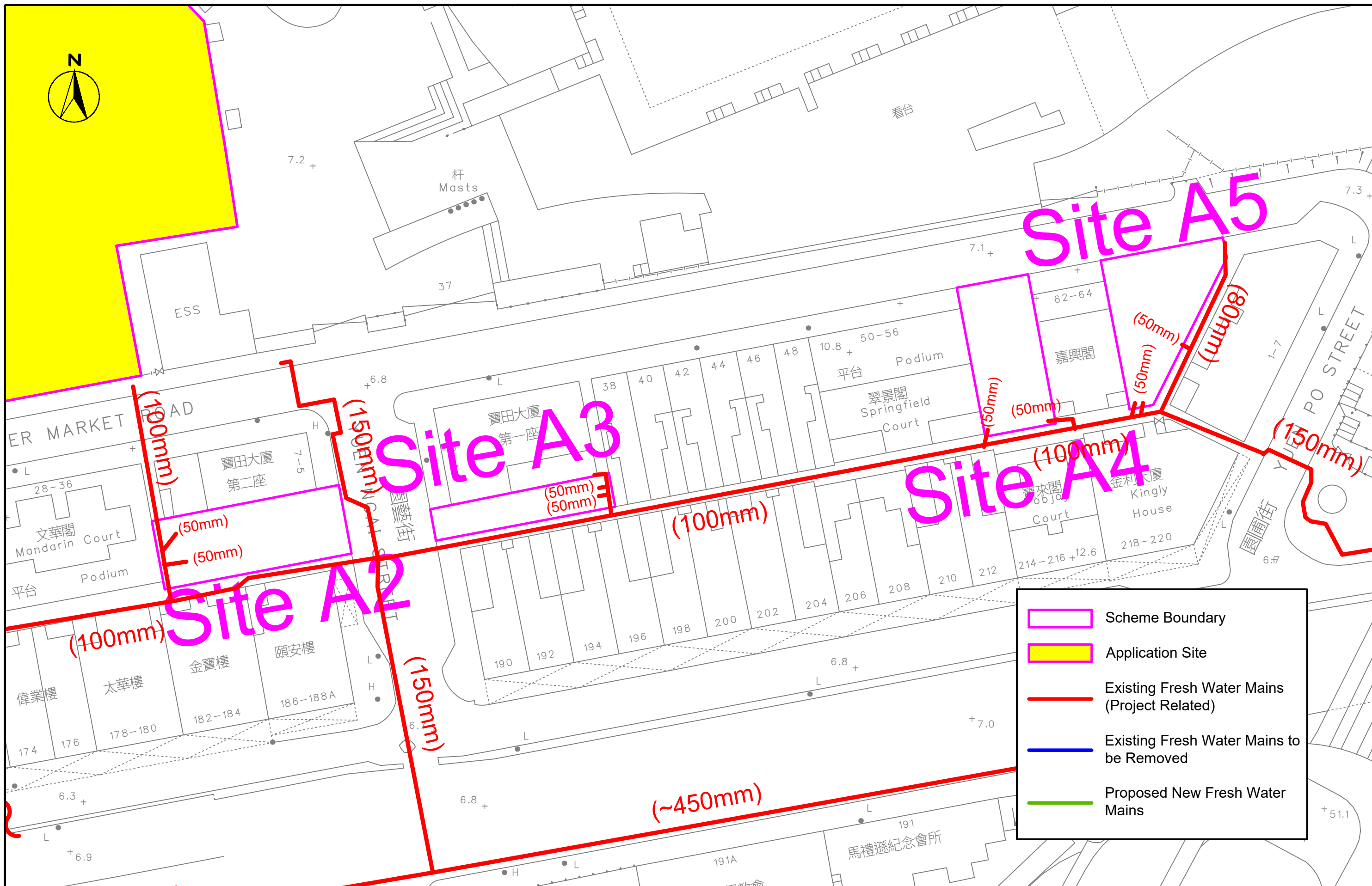
6 CONCLUSION

- 6.1.1 This Water Supply Impact Assessment has been undertaken to assess the potential water supply impact of the Proposed Development and to serve as a supporting document for the S.16 Application to the TPB for consideration.
- 6.1.2 The potential water supply impact under the worst-case scenario of the Proposed Development of the Scheme has been reviewed. The assessment conducted concludes that no upgrading works on the water supply infrastructure will be required. For the local water supply network, although the proposed Scheme at the Site will result in increases in both the fresh and salt water demands, the increases can be accommodated by the existing main supply facilities and the proposed new pipes. The indicative alignment of the proposed pedestrian subway outside the Scheme area is expected to cross a number of existing freshwater & saltwater mains. As the freshwater/saltwater mains are pressure driven, it is expected that the potential affected freshwater/saltwater mains could be diverted vertically when necessary. Therefore, no adverse water supply impact is anticipated from the Proposed Development with the minor relaxation of domestic GFA in Site B under the proposed S.16 Application.

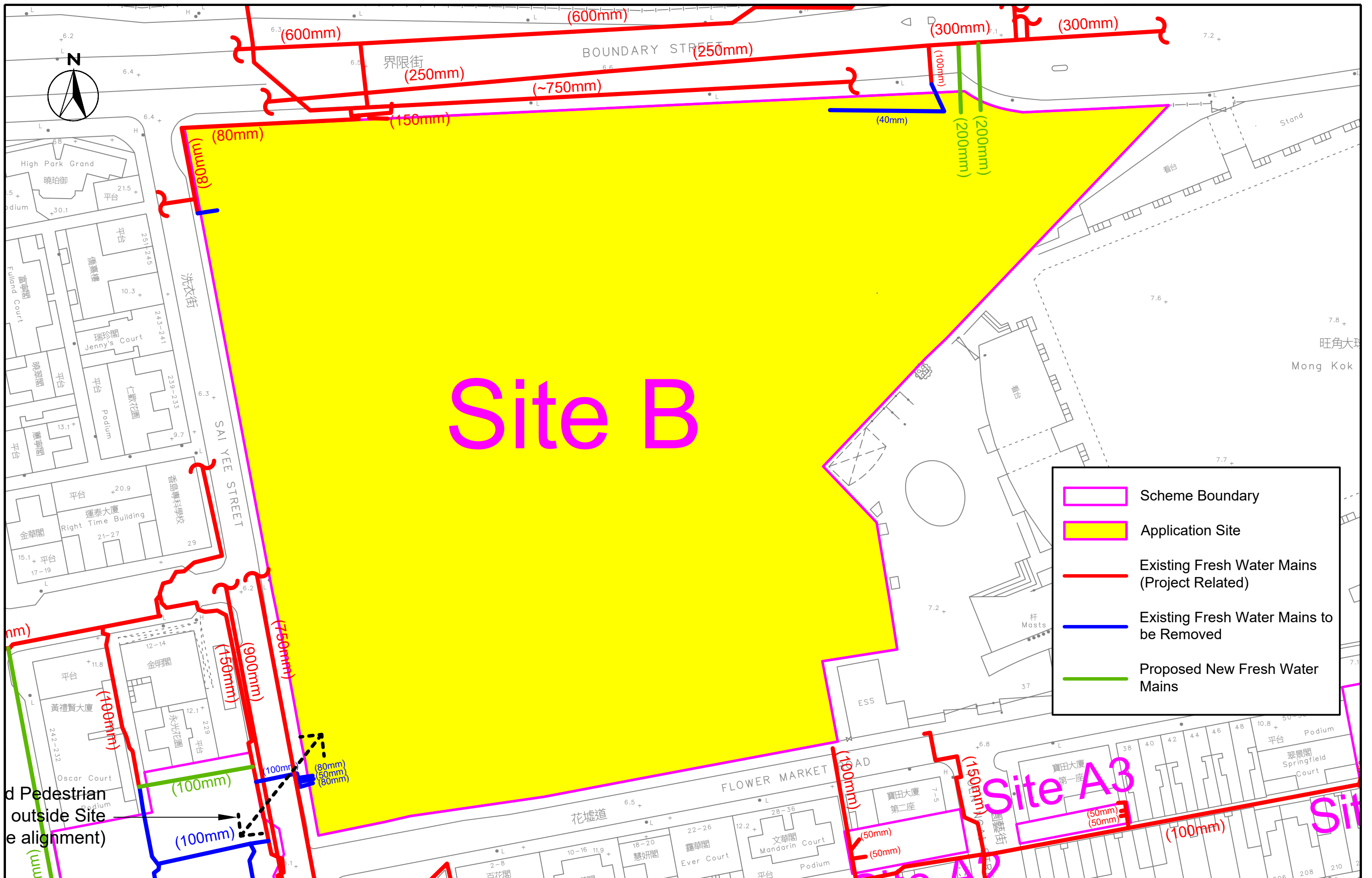
FIGURES

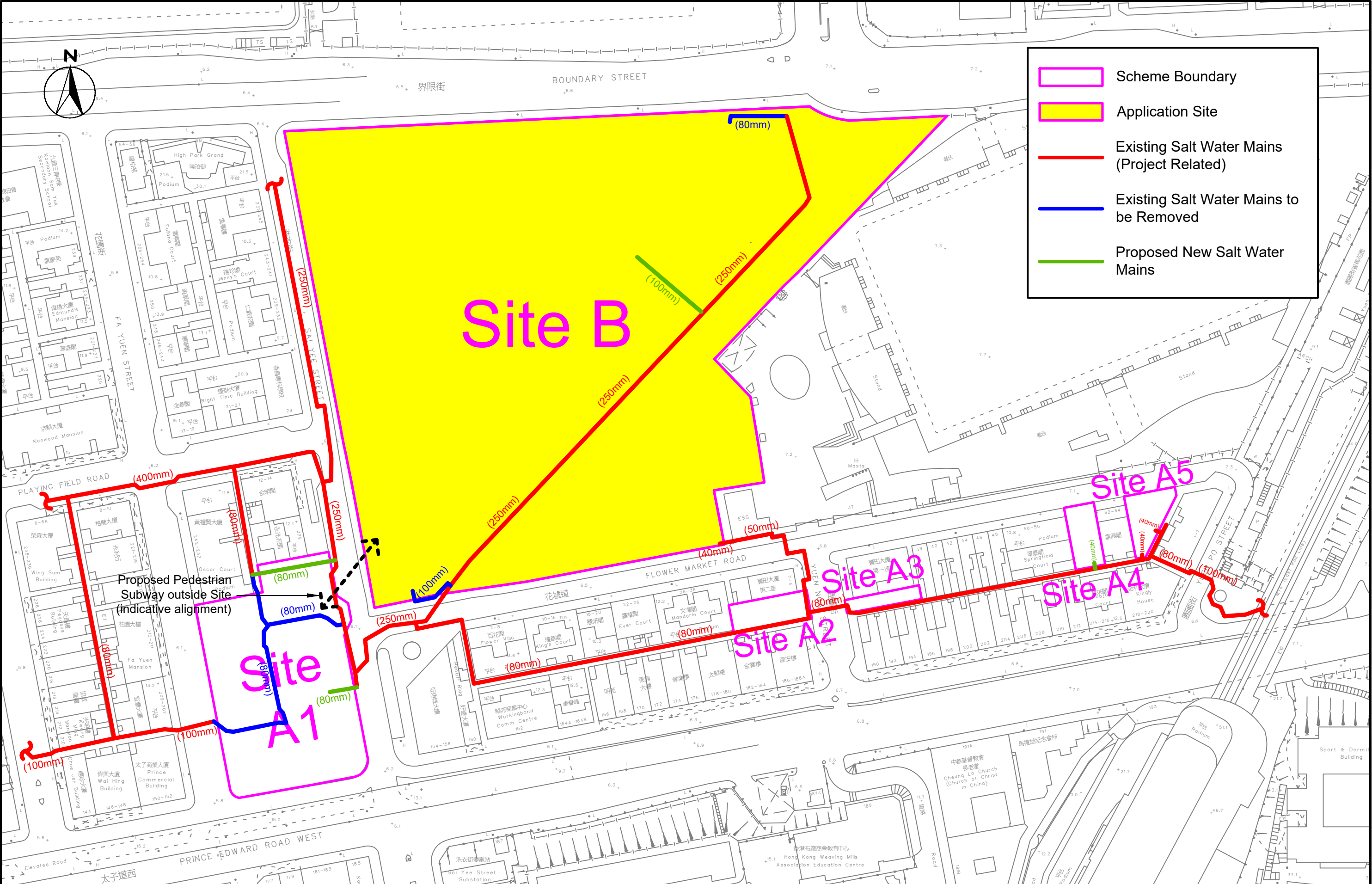


SCALE	1:1200 @ A3	DATE	May 2026
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JOB No.	IA25056-S16	DRAWING No.	Fig. 3-1a
		REV	-

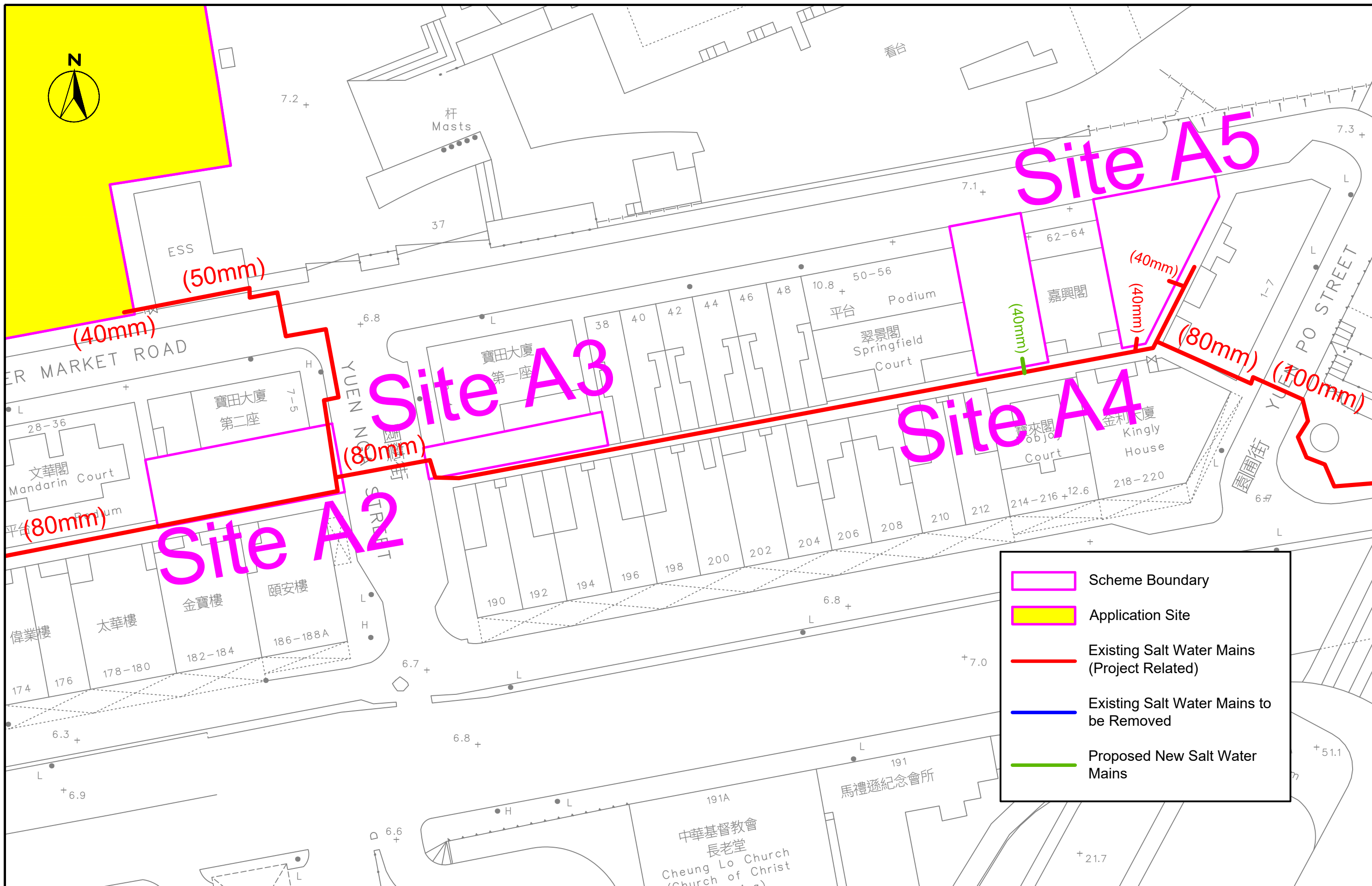


	Scheme Boundary
	Application Site
	Existing Fresh Water Mains (Project Related)
	Existing Fresh Water Mains to be Removed
	Proposed New Fresh Water Mains





SCALE	1:1200 @ A3	DATE	May 2026
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JOB No.	IA25056-S16	DRAWING No.	Fig. 3-2a
		REV	-



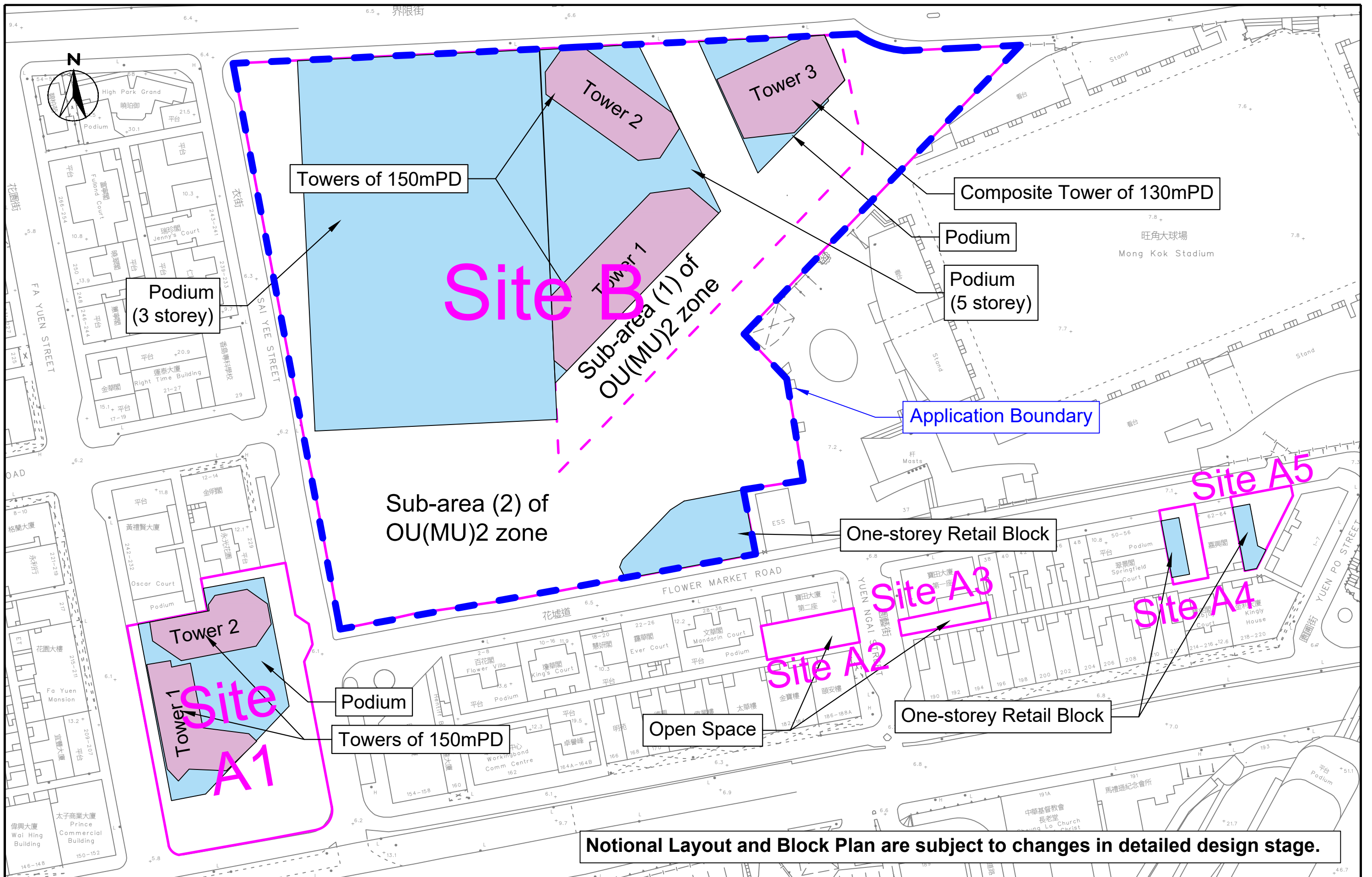
	Scheme Boundary
	Application Site
	Existing Salt Water Mains (Project Related)
	Existing Salt Water Mains to be Removed
	Proposed New Salt Water Mains



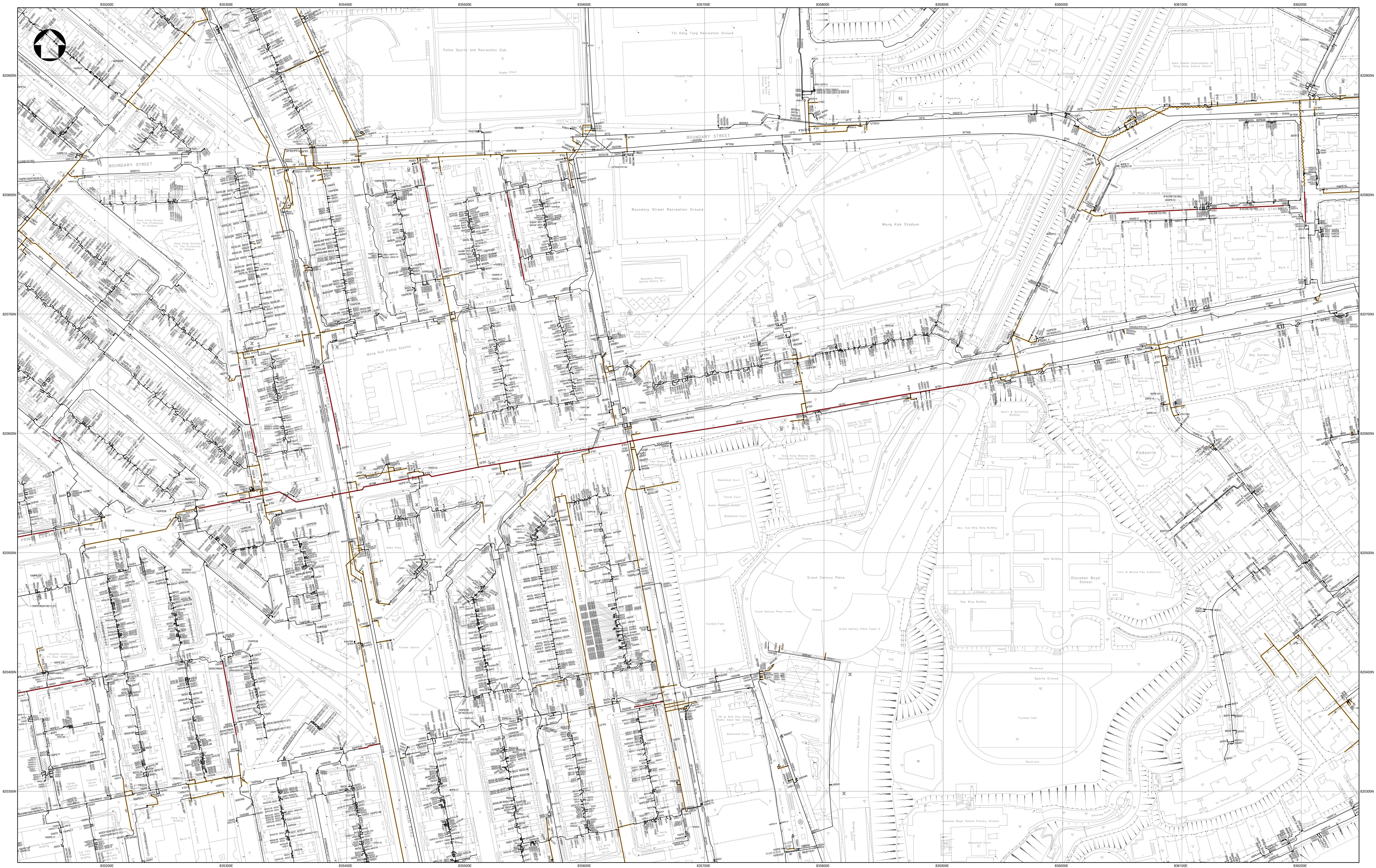
Section 16 Planning Application for Proposed Minor Relaxation of the Maximum Domestic GFA of Site B for the Urban Renewal Authority
 Sai Yee Street/ Flower Market Road Development Scheme
 Salt Water Mains in the Vicinity (Sites A2 to A5)

SCALE	1:500 @ A3	DATE	May 2026
CHECK	KS	DRAWN	CC
JOB No.	IA25056-S16	DRAWING No.	Fig. 3-2c
		REV	-

**APPENDIX 2-1
NOTIONAL PLAN OF THE PROPOSED
SCHEME**



APPENDIX 2-2
FRESH WATER MAINS RECORD PLAN



LEGEND:
1. FRESH WATER MAINS WITH AC MATERIAL
2. FRESH WATER MAINS WITH UNKNOWN MATERIAL

SUPPLEMENTARY INFORMATION OF ASBESTOS CEMENT (AC) OR UNKNOWN WATER MAINS

IMPORTANT: Please note that existing asbestos cement (AC) or unknown water pipes are identified in the vicinity of your project/works area. It is very likely that the unknown water pipes are AC water pipes. You are strongly advised to make special provisions including monitoring measures as necessary to protect these water pipes that are vulnerable to damage. Should diversion/replacement of AC or unknown water pipes be found necessary to be carried out in conjunction with your proposed works either detailed investigations or studies, you should instruct your consultants and/or contractors (as the case may be) to take all necessary measures during design and/or construction stages (as the case may be) to comply with all prevailing statutory requirements for the safe handling, removal, transportation and disposal of AC pipes.

APPENDIX 2-3
SALT WATER MAINS RECORD PLAN



LEGEND:
1. SALT WATER MAINS WITH AC MATERIAL
2. SALT WATER MAINS WITH UNKNOWN MATERIAL

SUPPLEMENTARY INFORMATION OF
ASBESTOS CEMENT (AC) OR UNKNOWN WATER MAINS

IMPORTANT: Please note that existing asbestos cement (AC) or unknown water pipes are identified in the vicinity of your project/works area. It is very likely that the unknown water pipes are AC water pipes. You are strongly advised to make special provisions including monitoring measures as necessary to protect these water pipes that are vulnerable to damage. Should diversion/replacement of AC or unknown water pipes be found necessary to be carried out in conjunction with your proposed works after detailed investigations or studies, you should instruct your consultants and/or contractors (as the case may be) to take all necessary measures during design and/or construction stages (as the case may be) to comply with all prevailing statutory requirements for the safe handling, removal, transportation and disposal of AC pipes.

SUBJECT SITE

**APPENDIX 3-1
DETAILED WATER DEMAND
CALCULATION**

Table A1 - Unit Daily Demand

Zone Type		Unit Demand Fresh Water ^[1]	Unit Demand Salt Water ^[2]	(unit)
Residential	R	0.35	0.11	m ³ /head/day
Commercial & Government, Institution/Community	C & GIC	300	100	m ³ /ha/day
Hotel	H	1	0.36	m ³ /room/day
Park (Irrigation)	IRR	700	0	m ³ /ha/day

[1] Unit Demand Fresh Water recommended by **WSD** :

- Residential - 0.35 m³/head/day, including service trade allowance.
- Commercial & G/IC - 300 m³/ ha of Site Area /day. Only applies to site without any residential development atop.
- Hotel - 1 m³/room/day
- Irrigation Area - 70 litre / sq. meters of irrigation area / day.

[2] Unit Demand Salt Water recommended by **WSD** :

- Residential - 0.11 m³/head/day, including service trade allowance.
- Commercial & G/IC - 100 m³/ ha of Site Area /day. Only applies to site without any residential development atop.
- Hotel - 0.36 m³/room/day

Table A2 - Flow Velocity Limit

Pipe Diameter	Fresh Water Distribution Mains	(unit)
> DN700	≤ 3	m/s
DN700 - DN525	≤ 2.5	m/s
DN450 - DN375	≤ 2	m/s
DN300 - DN200	≤ 1.5	m/s
< DN200	≤ 1.5	m/s
Pipe Diameter	Salt Water Distribution Mains	(unit)
≥ DN1000	≤ 3.0	m/s
DN900 - DN800	≤ 2.5	m/s
DN700 - DN525	≤ 2	m/s
DN450 - DN300	≤ 1.5	m/s
< DN300	≤ 1.5	m/s

[1] Refer to **WSD Departmental Instruction 1309**

Table B1 - Existing Development

Site A1

Site Area

	Area (m ²) [2]	Area (ha)
Net Site Area	2,640	0.264

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	122	510
- Prince Edward Building	54	
- 224 to 230 (even) Fa Yuen Street	32	
- 215 to 227 (odd) Sai Yee Street	36	

Non-Residential Area

	GFA (m ²) [2]	GFA (ha)
Shop and Retails	1,481.50	0.14815

Site A2

Site Area

	Area (m ²) [2]	Area (ha)
Net Site Area	239	0.0239

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	6	25
- 1 & 3 Yuen Ngai Street	6	

Non-Residential Area

	GFA (m ²) [2]	GFA (ha)
Shop and Retails	195.5	0.01955

Site A3

Site Area

	Area (m ²) [2]	Area (ha)
Net Site Area	109	0.0109

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	3	15
- 2 Yuen Ngai Street	3	

Non-Residential Area

	GFA (m ²) [2]	GFA (ha)
Shop and Retails	67.8	0.00678

Site A4

Site Area

	Area (m ²) [2]	Area (ha)
Net Site Area	202	0.0202

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	6	25
- 58 & 60 Flower Market Road	6	

Non-Residential Area

	GFA (m ²) [2]	GFA (ha)
Shop and Retails	133.7	0.01337

Table B1 - Existing Development

Site A5

Site Area

	Area (m ²) [2]	Area (ha)
Net Site Area	198	0.0198

Existing Residential Flats

	Units [1]	Popn. (Persons)
Residential Accommodation (R)	6	25
- 66 & 68 Flower Market Road	6	

Non-Residential Area

	GFA (m ²) [2]	GFA (ha)
Shop and Retails	131.4	0.01314

Site B

Site Area

	Area (m ²) [2]	Area (ha)
Net Site Area (existing developments only)	2,300	0.23

Existing Buildings

	GFA (m ²) [2]	GFA (ha)
Government, Institution/Community	5,500	0.55

Public Open Space

	Area (m ²) [2]	Area (ha)
Garden, Play Ground and Sitting-out Area	18,700	1.87

Note:

[1] The number of flats and population are estimated by URA.

[2] Estimated values.

Table B2 - Existing Water Demands

Site A1

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m ³ /head/day)	Unit Demand Salt Water (m ³ /head/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Residential Accommodation, Management and Club House Staff	R	510	0.350	0.110	178.5	56.1

Site A2

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m ³ /head/day)	Unit Demand Salt Water (m ³ /head/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Residential Accommodation, Management and Club House Staff	R	25	0.350	0.110	8.8	2.8

Site A3

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m ³ /head/day)	Unit Demand Salt Water (m ³ /head/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Residential Accommodation, Management and Club House Staff	R	15	0.350	0.110	5.3	1.7

Site A4

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m ³ /head/day)	Unit Demand Salt Water (m ³ /head/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Residential Accommodation, Management and Club House Staff	R	25	0.350	0.110	8.8	2.8

Site A5

Existing Residential Flats

	Category	Population	Unit Demand Fresh Water (m ³ /head/day)	Unit Demand Salt Water (m ³ /head/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Residential Accommodation, Management and Club House Staff	R	25	0.350	0.110	8.8	2.8

Site B

Existing Buildings

	Category	Site Area (ha)	Unit Demand Fresh Water (m ³ /ha/day)	Unit Demand Salt Water (m ³ /ha/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Government, Institution/Community	C & GIC	0.23	300.000	100.000	69.0	23.0

Garden and Sitting-out Area (Area of Public Open Space)

	Category	Area (ha) ^[1]	Unit Demand Fresh Water (m ³ /ha/day)	Unit Demand Salt Water (m ³ /ha/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Boundary Street Sports Centre No.1 & 2	IRR	0.67	700.000	0.000	468.0	0.0

Summary

	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Site A1	178.5	56.1
Site A2	8.8	2.8
Site A3	5.3	1.7
Site A4	8.8	2.8
Site A5	8.8	2.8
Site B	537.0	23.0
Total	747.0	89.0

Note:

[1] Estimated planting area

[2] The unit fresh/salt water demands are not applicable to the commercial areas that having residential development atop.

Table C1 - Proposed Development

Site A1

Site Area

	Area (m ²) [1]	Area(ha)
Net Site Area	2,640	0.264

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	474	2.5	1,185

Non-Residential Area

	GFA/Area (m ²) [1]	GFA (ha)
Retails/Restaurant	6576	0.6576
Garden, Play Ground and Sitting-out Area	500	0.05

Site A2

Site Area

	Area (m ²) [1]	Area(ha)
Net Site Area	239	0.0239

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	0	2.5	0

Non-Residential Area

	GFA/Area (m ²) [1]	GFA (ha)
Shop and Retails	0	0
Garden, Play Ground and Sitting-out Area	200	0.02

Site A3

Site Area

	Area (m ²) [1]	Area(ha)
Net Site Area	109	0.0109

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	0	2.5	0

Non-Residential Area

	GFA/Area (m ²) [1]	GFA (ha)
Shop and Retails	0	0
Garden, Play Ground and Sitting-out Area	100	0.01

Site A4

Site Area

	Area (m ²) [1]	Area(ha)
Net Site Area	202	0.0202

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	0	2.5	0

Non-Residential Area

	GFA/Area (m ²) [1]	GFA (ha)
Shop and Retails	100	0.01
Garden, Play Ground and Sitting-out Area	0	0

Table C1 - Proposed Development

Site A5

Site Area

	Area (m ²) [1]	Area(ha)
Net Site Area	198	0.0198

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	0	2.5	0

Non-Residential Area

	GFA/Area (m ²) [1]	GFA (ha)
Shop and Retails	100	0.01
Garden, Play Ground and Sitting-out Area	0	0

Site B

Site Area

	Area (m ²) [1]	Area(ha)
Net Site Area - Total	24,870	2.487
Net Site Area - Sub-Area (1) - mixed developments	7,170	0.717
Net Site Area - Sub-Area (2) - non-residential building area	8,900	0.89
Net Site Area - Sub-Area (2) - at-grade open garden	8,800	0.88

Proposed Residential Flats

	Units [1]	PPF [2]	Popn. (Persons)
Residential Accommodation (R)	1080	2.5	2,700

Non-Residential Area

	GFA/Area (m ²) [1]	GFA/Area (ha)
Retails/Restaurant - Sub-Area (1)	5,755	0.5755
Retails/Restaurant - Sub-Area (2)	8,955	0.8955
G/IC [3]	30,000	3
Garden, Play Ground and Sitting-out Area	8,800	0.88
Hotel	5,000	0.5

Note:

[1] The development parameters are provided by Project Proponent

[2] According to the Population Census 2021, the average domestic household size is 2.3 for Mong Kok East District Council Constituency Area and Tertiary Planning Unit 222; and 2.5 for Yau Tsim Mong District. For conservative assessment household size of 2.5 has been adopted.

[3] The actual G/IC GFA is not yet confirmed and subject to liaison with Government departments. As a conservative approach, 30,000m² GIC GFA is assumed in this assessment.

Table C2 - Water Demands under the Proposed Scheme

Site A1

Proposed Residential Flats

	Category	Population	Unit Demand Fresh Water (m ³ /head/day)	Unit Demand Salt Water (m ³ /head/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Residential Accommodation, Management and Club House Staff	R	1,185	0.350	0.110	414.8	130.4

Non-Residential Area

		GFA / Site Area (ha)	Unit Demand Fresh Water (m ³ /ha/day)	Unit Demand Salt Water (m ³ /ha/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
- Commercial & G/IC - 300 m ³ /ha of Site Area /day. Only applies to						
Garden, Play Ground and Sitting-out Area [1]	IRR	0.025	700.000	0.000	17.5	0.0

Site A2

Non-Residential Area

	Category	GFA / Site Area (ha)	Unit Demand Fresh Water (m ³ /ha/day)	Unit Demand Salt Water (m ³ /ha/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Garden, Play Ground and Sitting-out Area [1]	IRR	0.010	700.000	0.000	7.0	0.0

Site A3

Non-Residential Area

	Category	GFA / Site Area (ha)	Unit Demand Fresh Water (m ³ /ha/day)	Unit Demand Salt Water (m ³ /ha/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Garden, Play Ground and Sitting-out Area [1]	IRR	0.005	700.000	0.000	3.5	0.0

Site A4

Non-Residential Area

	Category	GFA / Site Area (ha)	Unit Demand Fresh Water (m ³ /ha/day)	Unit Demand Salt Water (m ³ /ha/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Retails/Restaurant	C & GIC	0.020	300.000	100.000	6.1	2.0

Site A5

Non-Residential Area

	Category	GFA / Site Area (ha)	Unit Demand Fresh Water (m ³ /ha/day)	Unit Demand Salt Water (m ³ /ha/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Retails/Restaurant	C & GIC	0.020	300.000	100.000	5.9	2.0

Table C2 - Water Demands under the Proposed Scheme

Site B

Proposed Residential Flats

	Category	Population	Unit Demand Fresh Water (m ³ /head/day)	Unit Demand Salt Water (m ³ /head/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Residential Accommodation, Management and Club House Staff	R	2,700	0.350	0.110	945.0	297.0

Non-Residential Area (exclude Hotel portion) [2]

	Category	GFA / Site Area (ha)	Unit Demand Fresh Water (m ³ /ha/day)	Unit Demand Salt Water (m ³ /ha/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Retails/Restaurant - Sub-Area (2)	C & GIC	0.90	300.000	100.000	268.7	89.6
Garden, Play Ground and Sitting-out Area [1]	IRR	0.44	700.000	0.000	308.0	0.0

Non-Residential Area (Hotel)

	Category	No. of Room [4]	Unit Demand Fresh Water (m ³ /Room/day)	Unit Demand Salt Water (m ³ /Room/day)	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Hotel	H	167	1.000	0.360	167.0	60.1

Summary [3]

	Daily Demand Fresh Water (m ³ /day)	Daily Demand Salt Water (m ³ /day)
Site A1	453.9	136.9
Site A2	7.4	0.0
Site A3	3.7	0.0
Site A4	6.4	2.1
Site A5	6.2	2.1
Site B	1773.1	469.0
Total	2250.6	610.1

Note:

[1] It is anticipated that around 50% of the Garden is planting area in the worst case scenario.

[2] The unit fresh/salt water demands are not applicable for the commercial and G/IC areas that having residential development atop.

[3] 5% additional demand have been included for conservative assessment.

[4] It is assume that there will be one Hotel Room per 30 m² GFA.

Table D - Summary of Water Demands

Fresh Water Demand

Site	Daily Demand - Fresh Water (m ³ /d)		
	Existing	Proposed [1]	Net Increase
Site A1	178.5	453.9	275.4
Site A2	8.8	7.4	-1.4
Site A3	5.3	3.7	-1.6
Site A4	8.8	6.4	-2.4
Site A5	8.8	6.2	-2.5
Site B	537.0	1773.1	1236.1
Total	747.0	2250.6	1503.6

Note:

[1] 5% additional demand have been included for conservative assessment.

Salt Water Demand

Site	Daily Demand - Salt Water (m ³ /d)		
	Existing	Proposed [1]	Net Increase
Site A1	56.1	136.9	80.8
Site A2	2.8	0.0	-2.8
Site A3	1.7	0.0	-1.7
Site A4	2.8	2.1	-0.6
Site A5	2.8	2.1	-0.7
Site B	23.0	469.0	446.0
Total	89.0	610.1	521.1

Note:

[1] 5% additional demand have been included for conservative assessment.

Fresh Water Reservoir Capacity

Reservoir	Capacity (x 1,000 m ³)	Supply Capacity @ Capacity Factor = 0.8 (MLD) ^[1]	Existing Daily Consumption (MLD) ^[2]	Spare Capacity (MLD)	Remarks
Ho Man Tin East FWSR	152.411	190.51	126.5	128.8	The spare capacity of 128.8 MLD >> net increase of 1.5 MLD from the Proposed Development
Ho Man Tin West FWSR	67.434	84.29	19.5		

Salt Water Pumping Capacity

Pumping Station	Design Pumping Capacity (MLD)	Existing Daily Consumption (MLD) ^[2]	Spare Capacity (MLD)	Remarks
Cheung Sha Wan SWPS	87	64.0	23.0	The spare capacity of 23.0 MLD >> net increase of 0.5 MLD from the Proposed Development

[1] For interconnected supply zone with critical consumers, the capacity of the Reservoir should be (75% + 5%) = 80% of the mean daily demand.

[2] An enquiry was made with WSD in February 2026.