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**Appendix G –  
Sewerage Impact Assessment**

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# Section 16 Planning Application for Proposed Mixed-Use Development with Minor Relaxation of Building Height Restriction at Lot 4354 in D.D. 124, Kiu Tau Wai, Yuen Long

Sewerage Impact Assessment

June 2026

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# 1. Introduction

## 1.1 Background

- 1.1.1 AECOM Asia Company Limited (AECOM) was commissioned by the Applicant to conduct a Sewerage Impact Assessment (SIA) in support of a Section 16 Application under the Town Planning Ordinance (Cap. 131), to facilitate a mixed-use development with residential and commercial uses at the Application Site, which is zoned “Commercial (2)” on the Outline Zoning Plan.
- 1.1.2 The Application Site is bounded by Ping Ha Road to the north, Kiu Cheong Road to the east and Hung Tin Road to the west. The location of the Application Site is indicated in **Figure 1**.

## 1.2 Objectives of this Submission

- 1.2.1 This report outlines the assessment results of the potential sewerage impacts caused by the Proposed Development at the Application Site. The main objectives of this assessment include the followings:
- (i) Identify any increase in sewage flow due to the Proposed Development.
  - (ii) Review the existing sewerage condition of the Application Site based on available information.
  - (iii) Outline the methodology adopted in this assessment.
  - (iv) Assess any potential impact on the existing or planned sewerage facilities nearby due to the Proposed Development.
  - (v) Propose mitigation measures and/or improvement works to minimize any potential sewerage impact from the Proposed Development.
  - (vi) Discuss the responsibility of the construction and maintenance aspects of the proposed sewerage system.

## 1.3 Nomenclature

1.3.1 The following abbreviations and shortened expressions in **Table 1** are adopted in this report.

ADWF	Average Dry Weather Flow
AECOM	AECOM Asia Company Limited
CIF	Catchment Inflow Factor
DSD	Drainage Services Department
EPD	Environmental Protection Department
F&B	Food and Beverage
GESF	Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning Version 1.0 (EPD)
GFA	Gross Floor Area
HKPSG	Hong Kong Planning Standards and Guidelines
mPD	Metres above Principal Datum
PlanD	Planning Department
SWSTW	San Wai Sewage Treatment Works
HTSPS	Ha Tsuen Sewage Pumping Station
SIA	Sewerage Impact Assessment
THEES	Tolo Harbour Effluent Export Scheme
UFF	Unit Flow Factor

**Table 1 – Nomenclature**

## 2. Development Proposal

### 2.1 The Indicative Development Proposal

2.1.1 The Application Site has an area of about 9,946 m<sup>2</sup> with a total plot ratio of about 8.0. The total Gross Floor Area (GFA) is about 79,568 m<sup>2</sup>.

2.1.2 The proposed development consists of residential and commercial portions. It comprises two residential towers providing about 1,140 units and one commercial/office tower, all situated above a 5-storey commercial/retail podium.

2.1.3 The Master Layout Plan (MLP) of the Proposed Development is shown in **Figure 2**. The development schedule is summarized in **Table 2**, **Table 3** and **Table 4** below.

#### The Overall Development

Application Site Area (m <sup>2</sup> ) (about)	9,946 m <sup>2</sup>
Total Plot Ratio (about)	8.0
<ul style="list-style-type: none"> <li>• Domestic Plot Ratio (about)</li> <li>• Non-Domestic Plot Ratio (about)</li> </ul>	<ul style="list-style-type: none"> <li>5.2</li> <li>2.8</li> </ul>
Total GFA (about)	79,568 m <sup>2</sup>
<ul style="list-style-type: none"> <li>• Domestic GFA (about)</li> <li>• Non-Domestic GFA <sup>(1)</sup> (about)                             <ul style="list-style-type: none"> <li>○ Commercial/Office Tower</li> <li>○ Commercial/Retail Podium</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>51,697 m<sup>2</sup></li> <li>27,871 m<sup>2</sup></li> <li>18,581 m<sup>2</sup></li> <li>9,290 m<sup>2</sup></li> </ul>
Maximum Site Coverage (above ground) (not more than)	
<ul style="list-style-type: none"> <li>• Podium                             <ul style="list-style-type: none"> <li>Below 15m</li> <li>Over 15m but not exceeding 20m</li> </ul> </li> <li>• Tower (Above 20m)</li> </ul>	<ul style="list-style-type: none"> <li>Not more than 100%</li> <li>Not more than 60%</li> <li>Not more than 38.5%                             <ul style="list-style-type: none"> <li>• Non-domestic: 11.5%</li> <li>• Domestic: 27%</li> </ul> </li> </ul>

**Table 2 – Development Parameters of the Overall Development**

### Residential Portion

Building Height (at main roof)	Not more than 160mPD
Number of Storeys <sup>(2)</sup>	38 storeys (above 5 levels of commercial/retail podium)
Number of Blocks	2
Number of Flats	1,140
Average Flat Size	45.3 m <sup>2</sup>
Anticipated Population <sup>(3)</sup>	3,192
Private Open Space (m <sup>2</sup> ) (not less than) <sup>(4)</sup>	3,192 m <sup>2</sup>

### Residents' Clubhouse Facilities

Clubhouse GFA (m <sup>2</sup> ) (about) <sup>(5)</sup>	2,250 m <sup>2</sup>
No. of Storeys	1

**Table 3 – Development Parameters of the Residential Development**

### Commercial Portion

Building Height (at main roof)	Not more than 106mPD
Number of Storeys	
<ul style="list-style-type: none"> <li>• Commercial/Office Tower <sup>(6)</sup></li> </ul>	17 storeys (above 5 levels of commercial/retail podium)
<ul style="list-style-type: none"> <li>• Commercial/Retail Podium</li> </ul>	5 storeys
Number of Blocks	1

**Table 4 – Development Parameters of the Commercial Development**

**Remarks:**

- (1) Including 'Eating Place', 'Office', 'Place of Entertainment', 'Place of Recreation, Sports or Culture', 'School' (kindergarten, nursery, language, computer, commercial and tutorial schools, art school, ballet and other types of schools providing interest / hobby related courses) and 'Shop and Services'.
- (2) Excluding transfer plates and 1 level of refuge floor.
- (3) Assuming a person-per-flat ratio of 2.8 for Hung Shui Kiu/Ha Tsuen NDA as per the 2021 Population Census.
- (4) Not less than 1m<sup>2</sup> per person according to HKPSG.
- (5) The residents' clubhouse GFA is about 4.352% of the domestic GFA and is exempted from plot ratio calculation.
- (6) Excluding transfer plates.

## 3. Assessment Methodology

### 3.1 Overview of Methodology

- 3.1.1 This assessment is carried out to assess the sewerage impact arising from the Proposed Development on the sewerage system.
- 3.1.2 The sewage generated from the Proposed Development is estimated according to “Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning” (GESF) published by Environmental Protection Department (EPD). The sewage calculation is in accordance with the Sewerage Manual published by Drainage Services Department (DSD).

### 3.2 Methodology and Assumptions

- 3.2.1 The adopted sewage unit flow factors for sewage estimation and calculation are summarized in **Table 5**.

Development Type	Flow Type	Unit Flow Factor (UFF) (m <sup>3</sup> /head/day)
Residential	R2	0.27
Retail (non-Food and Beverage)	J4	0.28
Office	J6	0.08
Restaurants	J10	1.58
Clubhouse	J11	0.28

**Table 5 – Unit Flow Factors**

- 3.2.2 For the non-domestic population, the worker density adopted for business use has made reference to Table T-2 of Chapter 5: Industry, of the Hong Kong Planning Standards and Guidelines (HKPSG) published by the Planning Department (PlanD). The adopted worker density are summarised in **Table 6**.

Commercial Activities	GFA per worker (m <sup>2</sup> )
Retail (Non-F&B)	20
Finance, Insurance, Real Estate & Business Services	20
Restaurants & Hotels	20
Community, Social & Personal Services	20

**Table 6 – Worker Density**

- 3.2.3 The peaking factor is demonstrated in **Table 7** below, referring to Table T-5 of GESF.

Contributing Population Range	Peaking Factor (including stormwater allowance) for facility with existing upstream sewerage)	Peaking Factor (excluding stormwater allowance) for facility with new upstream sewerage
5,000 - 10,000	5	4

**Table 7 – Peaking Factor**

3.2.4 **Table 8** displays the Catchment Inflow Factor (CIF) from Table T-4 of GESF used to calculate the sewage discharged to the existing 2,100mm diameter trunk sewer.

Catchment	Catchment Inflow Factor (CIF)
San Wai	1.00

**Table 8 – Catchment Inflow Factor**

## 4. Review on Existing Sewerage System

### 4.1 Existing Sewerage Network

- 4.1.1 The Application Site is located within the San Wai sewerage catchment area. The sewage flows generated from the sub-catchments upstream of the Application Site are collected by the existing sewerage systems and conveyed by Ha Tsuen Sewage Pumping Station (HTSPS) for onward discharge to San Wai Sewage Treatment Works (SWSTW) to carry out wastewater treatment.
- 4.1.2 According to the DSD record, there are existing 300 mm sewers and associated sewerage manholes located at the eastern side of the Application Site as shown in **Figure 3**. These sewers are then connected to the existing 2,100mm diameter trunk sewer located along Ping Ha Road. The trunk sewer collects the sewage flows generated from the upstream sub-catchments and the Application Site, conveying them to the existing HTSPS adjacent to Ping Ha Road, and ultimately discharging to SWSTW.

### 4.2 Sewage Treatment Capacity

- 4.2.1 According to the public information from DSD, the HTSPS and SWSTW have a maximum treatment capacity of 246,000 m<sup>3</sup>/day currently. Since the proposed sewage discharge of this application site is about 1,401 m<sup>3</sup>/day (see **Annex 1** for calculation), which is less than 1% of the capacity of HTSPS and SWSTW, the sewage discharge from the application site is insignificant compared to the treatment capacity of HTSPS and SWSTW, hence no sewerage impact is envisaged. The sewage flow will be discharged to the planned HSKEPP after its completion. The adjustment in various stages of switching the sewage discharge will be further reviewed in the future.

## 5. Proposed Sewerage System

### 5.1 Flow Estimation

5.1.1 The Proposed Development comprises residential and commercial portions. A summary of total sewage flow to be discharged from the Proposed Development are presented in **Annex 1**. The flow estimation is based on GESF method using unit flow factors multiplied by design population and peaking factor.

5.1.2 The estimated Average Dry Weather Flow (ADWF) generated from the Proposed Development is about 1,401 m<sup>3</sup>/d. **Table 9** below presents different types of sewage flow to be discharged from the Proposed Development.

Flow Type	Average Dry Daily Flow (ADWF) (m <sup>3</sup> /day)
Residential	861.84
Clubhouse	31.64
F&B	368.14
Retail	65.24
Office	74.40
<b>Total ADWF</b>	<b>1,401.26</b>

**Table 9 – Sewerage Estimation for the Proposed Development**

5.1.3 Peaking factor is determined based on the contributing population. The contributing population is calculated according to GESF Section 12.1.

$$\text{Contributing Population} = \frac{\text{Calculated total average flow (m}^3\text{/day)}}{0.27 \text{ (m}^3\text{/person/day)}}$$

5.1.4 With catchment inflow factor of 1.00, the ADWF will be about 1,401 m<sup>3</sup>/day. With a peaking factor of 5, the peak flow generated from the Proposed Development is about 81 L/s.

### 5.2 Mitigation Measures

5.2.1 Due to the limited capacity of the existing 300mm sewer and since the existing sewer does not connect directly to the Application Site, the sewage generated from the Proposed Development would be discharged into the proposed manhole FMH01 (Cover Level: +6.50mPD, Inlet Invert Level: +2.56mPD, Outlet Invert Level: +2.44mPD) from the proposed terminal manhole FTMH01 (Cover Level: +8.00mPD, Outlet Invert Level: +2.85mPD) to the proposed manhole FMH02 (Cover Level: +7.10mPD, Inlet Invert Level: 1.97mPD, Outlet Invert Level: -1.77mPD), and subsequently discharge into the existing 2,100mm diameter trunk sewer downstream located along Ping Ha Road as shown in **Figure 4**. **Figure 5** demonstrates the cross section of the proposed sewerage system.

5.2.2 Hydraulic calculation as shown in **Annex 2** confirmed that sewage discharged from the Proposed Development utilises only around 1.4% of the capacity of the existing 2,100mm diameter trunk sewer located along Ping Ha Road, hence the sewerage impact of the Proposed Development is negligible.

5.2.3 A sensitivity test has been carried out to hypothetically assess “what-if” some mixed-use developments are pursued at surrounding commercial sites. The hypothetical scenarios are assessment for demonstration purposes only. As shown in the sensitivity test, there would be a reduction in sewage generation at all sites. Therefore, no insurmountable sewerage impacts are anticipated. Please refer to **Annex 3** for details.

- 5.2.4 Sewage discharged from the Application Site to HTSPS then to SWSTW is insignificant, which is less than 1% of the capacity of HTSPS and SWSTW. Hence, the impact is considered insignificant.

## 6. Maintenance Responsibility

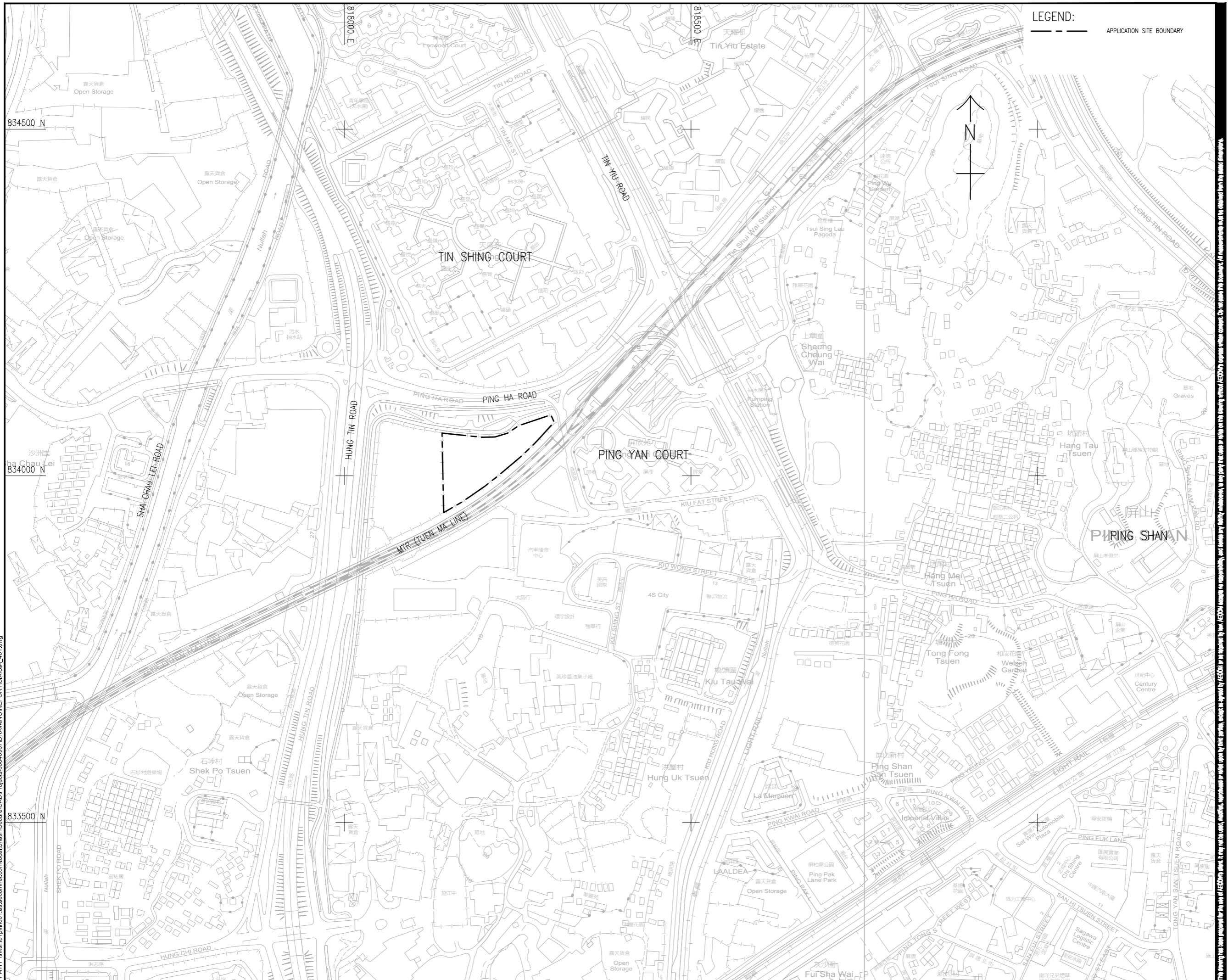
- 6.1.1 The Applicant will be responsible for construction of all internal sewer including the terminal manhole within the Application Site. The Development will be responsible for the maintenance of the internal sewer and manholes within the Application Site.
- 6.1.2 The Development will be responsible for construction of all necessary sewerage connection works to the public sewerage system. The sewerage systems outside the site boundary are proposed to be handed over to relevant government department for future maintenance.

## 7. Conclusion

- 7.1.1 This SIA report serves as a supporting document for proposing a mixed-use development with residential and commercial uses. The SIA has been carried out to assess the potential sewerage impact due to the Proposed Development.
- 7.1.2 The ADWF generated from the Application Site is about 1,401 m<sup>3</sup>/day. The sewage generated from the Application Site will be conveyed to the proposed manhole FMH01 from the proposed terminal manhole FTMH01, and then to the proposed manhole FMH02, via the proposed 400mm diameter sewer.
- 7.1.3 Sewage collected will then be subsequently discharged into the existing 2,100mm diameter trunk sewer located along Ping Ha Road. Sewage discharged from the Application Site to HTSPS and SWSTW is insignificant, which is less than 1% of the capacity of HTSPS and SWSTW. Hence, the impact is considered insignificant.
- 7.1.4 The proposed sewerage layout is shown in **Figure 4**. With the implementation of the proposed sewerage arrangement, the proposed development would be acceptable in sewerage terms.

**End of Report**

# Figures



LEGEND:  
 --- APPLICATION SITE BOUNDARY



**PROJECT**  
 SECTION 16 PLANNING  
 APPLICATION FOR  
 PROPOSED MIXED-USE  
 DEVELOPMENT WITH MINOR  
 RELAXATION OF BUILDING  
 HEIGHT RESTRICTION AT  
 LOT 4354 IN D.D. 124,  
 KIU TAU WAI, YUEN LONG

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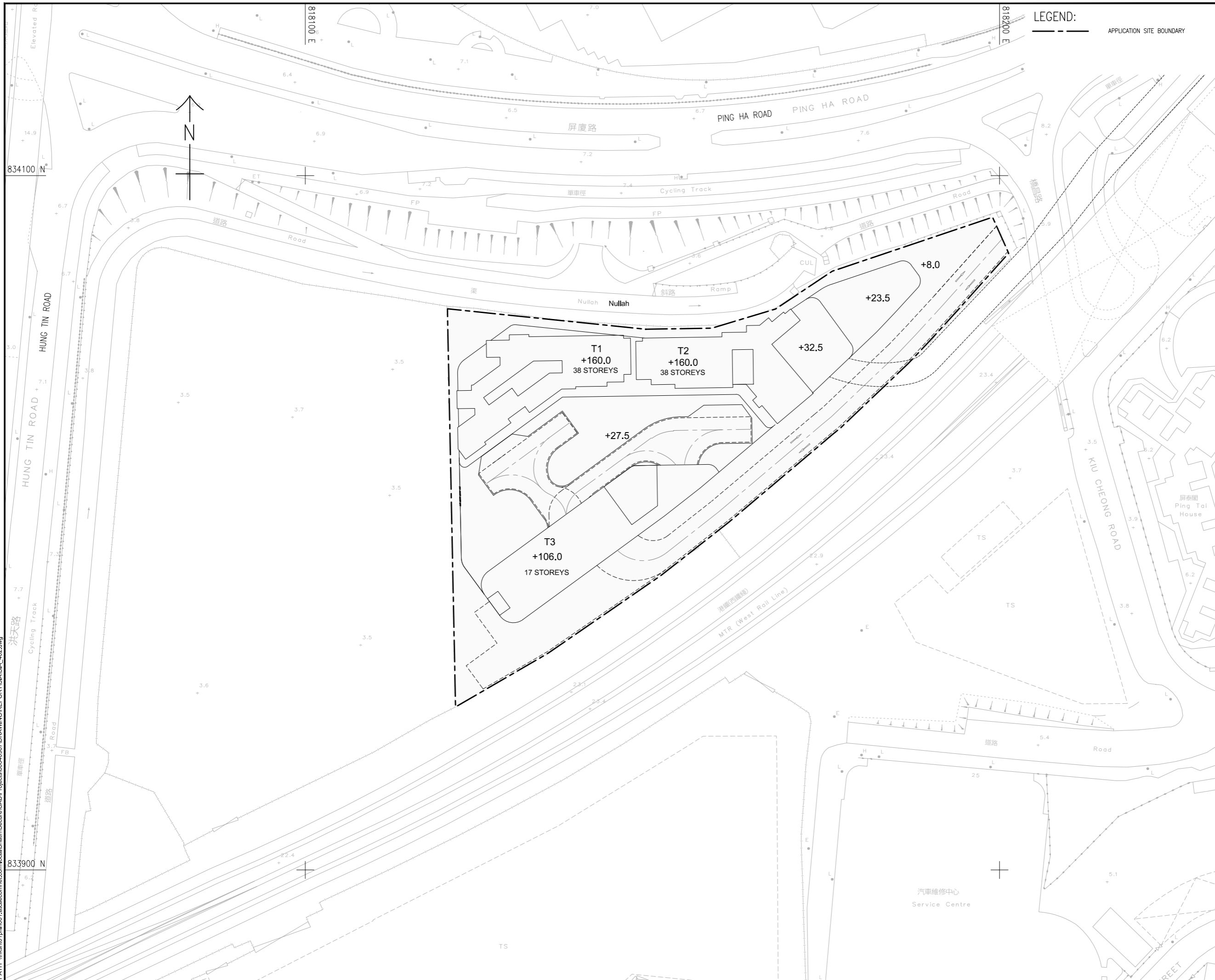
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 SITE LOCATION PLAN

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 --- APPLICATION SITE BOUNDARY



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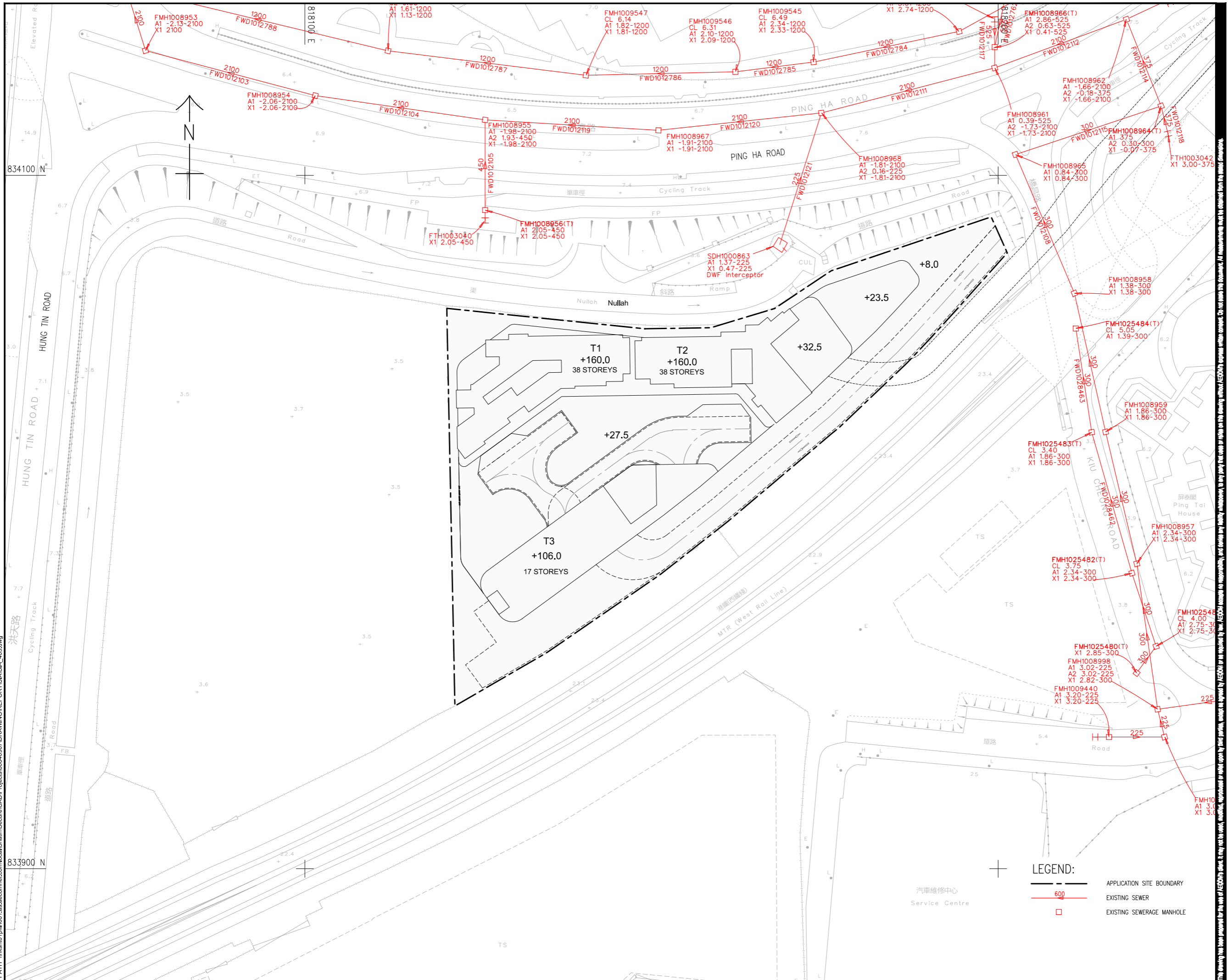
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 MASTER LAYOUT PLAN

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**LEGEND:**

- APPLICATION SITE BOUNDARY
- 600 EXISTING SEWER
- EXISTING SEWERAGE MANHOLE

汽車維修中心  
Service Centre



**PROJECT**  
SECTION 16 PLANNING APPLICATION FOR PROPOSED MIXED-USE DEVELOPMENT WITH MINOR RELAXATION OF BUILDING HEIGHT RESTRICTION AT LOT 4354 IN D.D. 124, KIU TAU WAI, YUEN LONG

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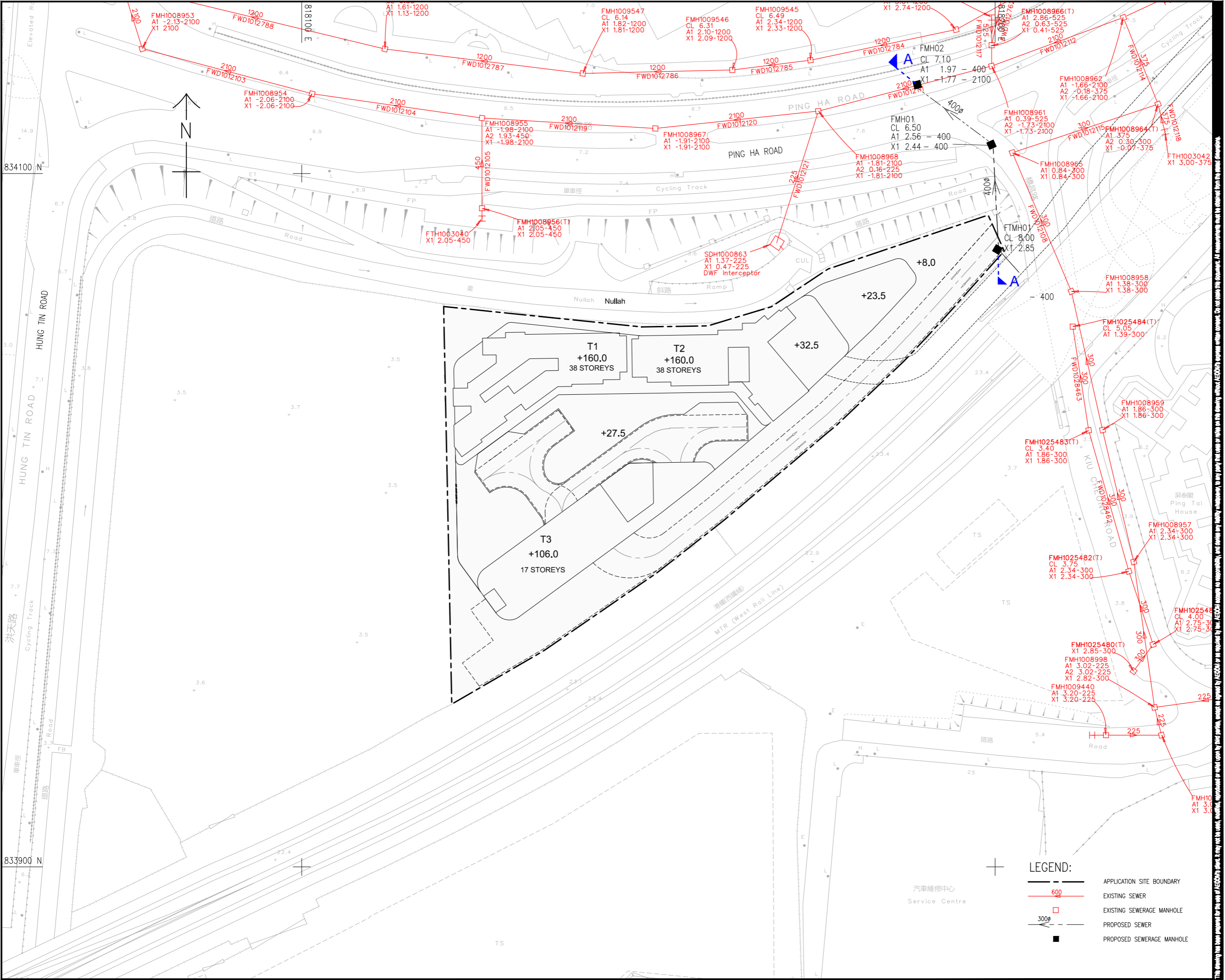
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EXISTING SEWERAGE LAYOUT PLAN

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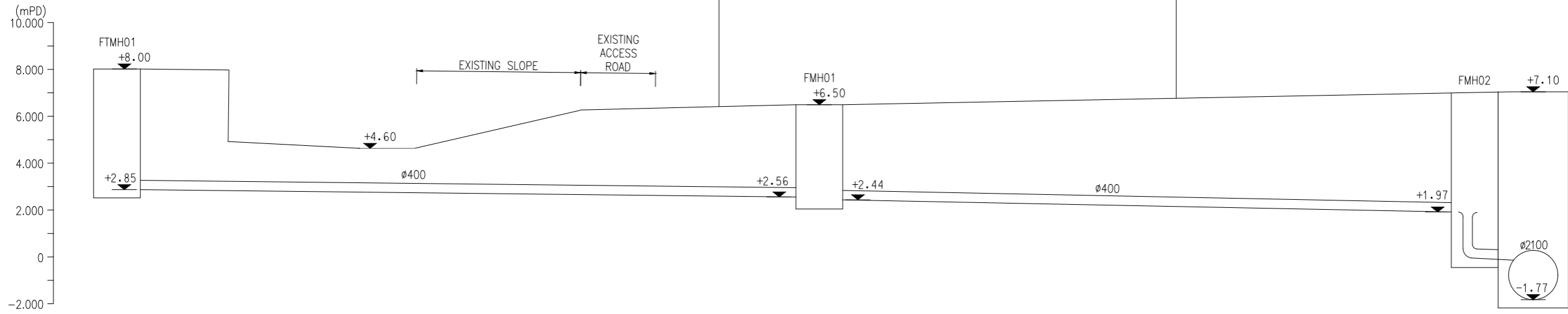
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**SHEET TITLE**  
 PROPOSED SEWERAGE LAYOUT  
 PLAN

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 60640967/SIA/FIGURE 4

- LEGEND:**
- APPLICATION SITE BOUNDARY
  - 600 EXISTING SEWER
  - EXISTING SEWERAGE MANHOLE
  - 300 PROPOSED SEWER
  - PROPOSED SEWERAGE MANHOLE



Section A-A

**PROJECT**

SECTION 16 PLANNING  
APPLICATION FOR  
PROPOSED MIXED-USE  
DEVELOPMENT WITH MINOR  
RELAXATION OF BUILDING  
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PROPOSED SEWERAGE LAYOUT  
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# Annex 1

## Proposed Development Sewage Estimation

<b>Residential</b>		<b>Development Type</b>	<b>Population</b>	<b>Unit Flow Factor</b>	<b>ADWF (m<sup>3</sup>/d)</b>
No. of Units	1,140				
<b>PPoF <sup>(1)</sup></b>					
2.8		Private R2	3,192	0.27	861.84
				Sub-total	861.84

<b>Workers</b>	<b>GFA (m<sup>2</sup>)</b>	<b>Worker's Type</b>	<b>Worker Density (m<sup>2</sup>/worker) <sup>(4)</sup></b>	<b>Employee</b>	<b>Unit Flow Factor</b>	<b>ADWF (m<sup>3</sup>/d)</b>
GFA for Clubhouse (m <sup>2</sup> )	2,250	Community, Social & Personal Services	20	113	0.28	31.64
GFA for F&B (m <sup>2</sup> ) <sup>(2)</sup>	4,645	Restaurants	20	233	1.58	368.14
GFA for Retail (m <sup>2</sup> ) <sup>(3)</sup>	4,645	Retail Trade	20	233	0.28	65.24
GFA for Office (m <sup>2</sup> )	18,581	Finance, Insurance, Real Estate & Business Services	20	930	0.08	74.40
					Sub-total	539.42

	<b>ADWF (m<sup>3</sup>/d)</b>	<b>Catchment Inflow Factor <sup>(5)</sup></b>	<b>ADWF with Catchment Inflow Factor (m<sup>3</sup>/d)</b>
Total	1,401.26	1.00	1,401.26

<sup>(1)</sup> The anticipated population is based on an assumption of 2.8 occupants per unit.

<sup>(2)</sup> Assume 50% of Retail GFA is for F&B use.

<sup>(3)</sup> Assume 50% of Retail GFA is for retail use.


<sup>(4)</sup> Worker Density is in GFA per worker according to T-2: Guidelines for Worker Densities in Ch.5 Industry of HKPSG, where Business and Office uses are assumed.

<sup>(5)</sup> Catchment Inflow Factor P<sub>CIF</sub> = 1 is based on the catchment area in San Wai.

# Annex 2

## Hydraulic Checking

# Annex 2

		Annex 2 Hydraulic Checking																	
		Manhole		Ground	Pipe										Sewage Usage				
U/S	D/S	Cover Level	Size	No. of Pipes	Invert Level		Length	Grad	Material	Condition	$k_s^{(3)}$	Velocity <sup>(4)</sup>	Time of Flow	Capacity	ADWF with CIF	Incl. / Excl. Stormwater Allowance	Peaking Factor	Total Peak Flow	Utilisation Rate <sup>(5)</sup>
		D/S	mm		U/S	D/S	m	1 in		(Assumed)	mm	m/s	min	m <sup>3</sup> /s	m <sup>3</sup> /day			m <sup>3</sup> /s	%
FTMH01	FMH01	8.00	400	1	2.85	2.56	28.0	96.55	HDPE	Poor	0.6	1.84	0.25	0.2037	1377.62	Exclude	4.00	0.064	31.3%
FMH01	FMH02	6.50	400	1	2.44	1.97	26.0	55.32	HDPE	Poor	0.6	2.44	0.18	0.2695	1377.62	Exclude	4.00	0.064	23.7%
FMH02	FMH1008968	7.1	2100	1	-1.77	-1.81	28.0	643.75	Conc.	Poor	3.0	1.72	0.27	5.9726	1377.62	Include	5.00	0.080	81.3%
FMH1008961	FMH1008968	7.1	2100	1	-1.73	-1.81	51.5	643.75	Conc.	Poor	3.0	1.72	0.50	5.9726	1377.62	Include	5.00	0.080	81.3%
FMH1008968	FMH1008967	7.4	2100	1	-1.81	-1.91	47.1	470.9	Conc.	Poor	3.0	2.02	0.39	6.9848	1377.62	Include	5.00	0.080	81.1%
FMH1008967	FMH1008955	7.5	2100	1	-1.91	-1.98	49.9	712.86	Conc.	Poor	3.0	1.64	0.51	5.6752	1377.62	Include	5.00	0.080	81.4%
FMH1008955	FMH1008954	7.7	2100	1	-1.98	-2.06	49.2	615.25	Conc.	Poor	3.0	1.76	0.47	6.1095	1377.62	Include	5.00	0.080	81.3%
FMH1008954	FMH1008953	7.1	2100	1	-2.06	-2.13	50.2	717.14	Conc.	Poor	3.0	1.63	0.51	5.6582	1377.62	Include	5.00	0.080	81.4%
FMH1008953 <sup>(1)</sup>	FMH1008949	6.8	2100	1	-2.13	-2.15	18.2	912	Conc.	Poor	3.0	1.45	0.21	5.0164	1377.62	Include	5.00	0.080	81.6%
FMH1008949	FMH1008952 <sup>(2)</sup>	7.5	2100	1	-2.20	-2.22	22.6	1000	Conc.	Poor	3.0	1.38	0.27	4.7902	1377.62	Include	5.00	0.080	81.7%
FMH1008952	FMH1008951	6.8	2100	1	-2.20	-2.26	40.5	675.17	Conc.	Poor	3.0	1.68	0.40	5.8317	1377.62	Include	5.00	0.080	81.4%
FMH1008951	FMH1008950	6.7	2100	1	-2.26	-2.33	47.1	673.29	Conc.	Poor	3.0	1.69	0.47	5.8399	1377.62	Include	5.00	0.080	81.4%
FMH1008950	FMH1008949	7.3	2100	1	-2.33	-2.45	31.0	258.17	Conc.	Poor	3.0	2.72	0.19	9.4365	1377.62	Include	5.00	0.080	80.8%

Remarks:

<sup>(1)</sup> Since no record of the upstream invert level of the pipe flowing from FMH1008953 to FMH1008949 is found, the upstream level of it is assumed to be equal to the downstream level of the pipe flowing from FMH1008954 to FMH1008953.

<sup>(2)</sup> Since no record of the downstream invert level of the pipe flowing from FMH1008949 to FMH1008952 is found, the gradient is assumed to be 1 in 1000.

<sup>(3)</sup> For pipe roughness ( $k_s$ ), that of HDPE is assumed to be clayware in poor condition.

<sup>(4)</sup> The velocity is estimated using Colebrook-white equation:

$$-\sqrt{32gRS_f} * \log_{10} \left( \frac{k_s}{14.8R} + \frac{1.255v}{R\sqrt{32gRS_f}} \right)$$

<sup>(5)</sup> Assume the utilisation rate of the existing sewerage pipes collecting existing upstream sewage to be 80%.

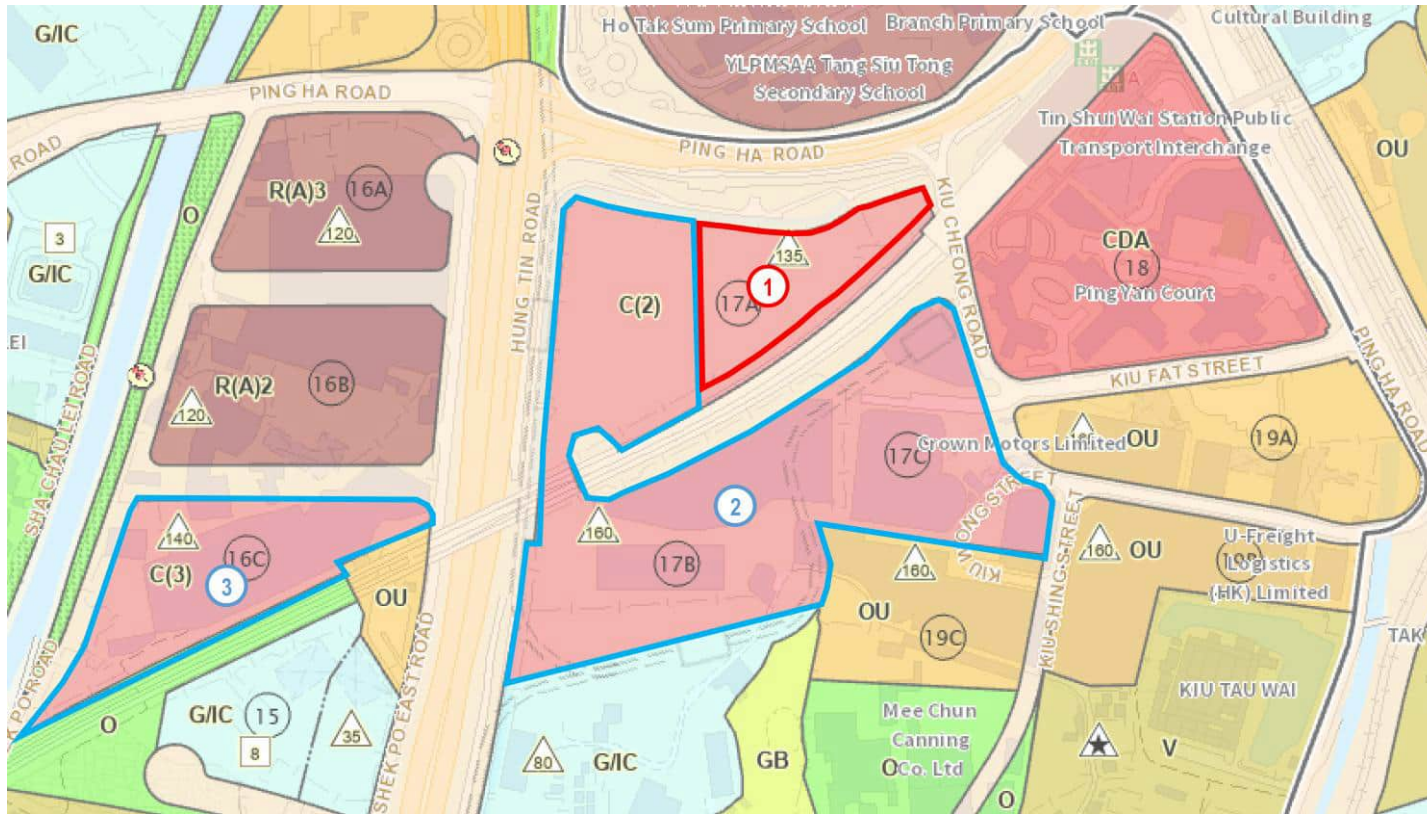
# Annex 3

## Sensitivity Test

# Annex 4

## Response to Departmental Comments

# Sensitivity Test



Area	OZP-Compliant Scenario	Mixed-use Scenario
	ADWF (m <sup>3</sup> /day)	
1)	3,676.2	2,158.3
2)	18,099.7	11,116.9
3)	3,334.9	2,048.7

No.	Zoning	Zoning Area (m <sup>2</sup> )	Site Reduction Factor <sup>(1)</sup>	OZP-Compliant Scenario					Sensitivity Test Mixed-Use Scenario						
				Total PR	Domestic PR	Non-Domestic PR	Domestic GFA (m <sup>2</sup> )	Non-Domestic GFA (m <sup>2</sup> )	Total PR	Domestic PR	Non-Domestic PR	Domestic GFA (m <sup>2</sup> )	No. of Units <sup>(2)</sup>	Anticipated Population <sup>(3)</sup>	Non-Domestic GFA (m <sup>2</sup> )
①	C(2)	9,946	-	8.0	-	8.0	-	79,568	8.0	5.2	2.8	51,697	1,140	3,192	27,871
②	C(2)	60,813	0.8	8.0	-	8.0	-	389,203	8.0	5.2	2.8	252,982	6,325	17,710	136,221
③	C(3)	17,923	0.8	5.0	-	5.0	-	71,692	5.0	3.25	1.75	46,600	1,165	3,262	25,092
<b>Total</b>								<b>540,463</b>				<b>351,279</b>	<b>8,630</b>	<b>24,164</b>	<b>189,184</b>

Assumptions:

- 1) Assume 65% of GFA is for domestic development.
- 2) For sites other than the Subject Site, a site reduction factor of 0.8 is applied when calculating GFA.
- 3) For sites other than the Subject Site, an average flat size of 40m<sup>2</sup> is assumed when calculating the number of units.
- 4) Assuming a person-per-flat ratio of 2.8 for Hung Shui Kiu/Ha Tsuen NDA as per the 2021 Population Census.
- 5) Assume 50% of the non-domestic GFA is for F&B use.
- 6) Assume 50% of the non-domestic GFA is for retail use.

OZP-Compliant Scenario

	Flow Type	GFA (m <sup>2</sup> )	Worker's Type	Worker Density (m <sup>2</sup> /head)	Population	UFF	ADWF (m <sup>3</sup> /day)	ADWF (m <sup>3</sup> /day)
Zone 1	F&B	39,784	Restaurant	20	1,990	1.58	3,144.2	3,676.2
	Retail	39,784	Retail		1,990	0.28	532	
Zone 2	F&B	194,601.5	Restaurant		9,731	1.58	15,375.0	18,099.7
	Retail	194,601.5	Retail		9,731	0.28	2,724.7	
Zone 3	F&B	35,846	Restaurant		1,793	1.58	2,832.9	3,334.9
	Retail	35,846	Retail		1,793	0.28	502.0	

Mixed-Use Scenario

	Flow Type	GFA (m <sup>2</sup> )	Worker's Type	Worker Density (m <sup>2</sup> /head)	Population	UFF	ADWF (m <sup>3</sup> /day)	ADWF (m <sup>3</sup> /day)
Zone 1	Residential	51,697	Private R2	20	3,192	0.27	861.8	2,158.3
	F&B	13,936	Restaurant		697	1.58	1101.3	
	Retail	13,936	Retail		697	0.28	195.2	
Zone 2	Residential	252,982	Private R2		17,710	0.27	4,781.7	11,116.9
	F&B	68,110.5	Restaurant		3,406	1.58	5,381.5	
	Retail	68,110.5	Retail		3,406	0.28	953.7	
Zone 3	Residential	46,600	Private R2		3,262	0.27	880.7	2,048.7
	F&B	12,546	Restaurant		628	1.58	992.2	
	Retail	12,546	Retail		628	0.28	175.8	

