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**Attachment 9 –  
Revised Water Supply Impact Assessment**

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**Section 16 Planning Application for Proposed  
Amendments to an Approved Comprehensive Residential  
Development Scheme and Minor Relaxation of Gross Floor  
Area and Building Height Restrictions at Various Lots in  
D.D. 385 and Adjoining Government Land,  
Tai Lam Chung, Tuen Mun**

**Water Supply Impact Assessment**

**(September 2025)**

**AECOM**

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**DRAWINGS**

WSIA/401	Location Plan
WSIA/402	Master Layout Plan
WSIA/403	Location Plan of Fresh Water Service Reservoir
WSIA/404	Existing Fresh Water Record Plan
WSIA/405	Fresh Water Connection Layout Plan
WSIA/406	Existing Flushing Water Record Plan
WSIA/407	Flushing Water Connection Layout Plan

**APPENDICES**

APPENDIX A	Hydraulic Review for Existing and Proposed Watermains located underneath Tai Lam Chung Road
APPENDIX B	Hydraulic Review for Existing and Proposed Water Main for Village Housing Sites
APPENDIX C	Water Main Record Plan
APPENDIX D	Approved Gazette Plan for Luen Hong Lane

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## **1 INTRODUCTION**

### **1.1 Background**

- 1.1.1 AECOM Asia Company Limited was commissioned to be the engineering consultant for Water Supply Impact Assessment (WSIA) to support the proposed residential development at Tai Lam Chung, Tuen Mun.
- 1.1.2 The Application Site situates at the east of Tai Lam Chung Nullah, adjacent to Hong Kong Customs College. The location of the Application Site is shown in **Drawing No. WSIA/401**.
- 1.1.3 The Application Site comprises the proposed development and site formation works for three village housing sites and provision of public facilities. The Master Layout Plan is shown in **Drawing No. WSIA/402**.
- 1.1.4 This WSIA report forms part of the technical supporting documents for the proposed development under Section 16 Application of the Town Planning Ordinance.

### **1.2 Purposes of this Submission**

- 1.2.1 This report outlines the assessment results of the potential water supply impact caused by the proposed development. The main objectives of this assessment include the followings:
  - a) Review the existing water supply system;
  - b) Estimate the water demand according to the development schedule of the proposed development;
  - c) Outline the methodology adopted in this assessment;
  - d) Identify any potential impact on the current water supply system due to future water supply demand from the proposed development;
  - e) Propose water supply mitigation measures where appropriate to mitigate the potential water supply impact;
  - f) Discuss the responsibility of the maintenance aspects of the proposed water supply system.

## **2 EXISTING CONDITION AT THE SITE**

- 2.1.1 There is no saltwater supply in the vicinity of the Application Site, flushing water is currently supplied by Temporary Mains Fresh water (TMF) mains. The source of portable water and flushing water were from Siu Lam and Siu Lam No. 2 Fresh Water Service Reservoirs (FWSR). The location is shown in **Drawing No. WSIA/403**.

### **2.2 Fresh Water Supply System**

- 2.2.1 The existing fresh water supply system in the vicinity of the Application Site is shown in **Drawing No. WSIA/404**.

#### **Proposed Development Site**

- 2.2.2 There is an existing 250mm fresh water main along the Tai Lam Chung Road, which tee-off from an existing 400mm fresh water main along Castle Peak Road – Tai Lam.

#### **Village Housing Site**

- 2.2.3 There are existing 80mm to 150mm fresh water mains across the village housing sites.

### **2.3 Flushing Water Supply System**

- 2.3.1 The existing flushing water supply system in the vicinity of the Application Site is shown in **Drawing No. WSIA/406**.

#### **Proposed Development Site**

- 2.3.2 There is an existing 150mm TMF mains along Tai Lam Chung Road, which tee-off from an existing 200mm TMF mains along Castle Peak Road - Tai Lam.

#### **Village Housing Site**

- 2.3.3 There are no existing flushing water mains across the village housing sites.

### 3 DEVELOPMENT PROPOSAL

#### 3.1 Overview of Development Proposal

- 3.1.1 The proposed development comprises 7 residential towers and 17 houses, two club houses, landscaped open spaces, commercial and retail areas, and covered transport layby. The development schedule is shown in **Table 3-1**.

**Table 3-1 Development Schedule**

Total Application Site Area (m <sup>2</sup> ) (about) <sup>(1)</sup>	61,127
Development Site Area (m <sup>2</sup> ) (about)	46,493
No. of Residential Blocks	24
• Towers	7
• Houses	17
No. of Units	2,670
• Tower Units	2,653
• House Units	17
Retail / Commercial <sup>(2)</sup>	2,000
Clubhouse GFA (m <sup>2</sup> ) (about)	3,500

**Remarks:**

- (1) Application Site is formulated largely based on the Pink, Purple, Orange and part of Green Areas of the draft land grant plan under lot to be known as TMTL No. 417 currently under process
- Pink Area: Residential Portion (about 46,493m<sup>2</sup>)
  - Purple Area: Formation Site for Village Housing; Orange Area: Site for Provision of Public Facilities; Green Area: Provision / Modification of Village Road, Pedestrian Access to Wong Uk Tsuen and Pedestrian Route to Burial Ground (about 14,634m<sup>2</sup> in total)
- (2) Include retail / commercial uses for 'Shop and Services', 'Eating Place', 'School' (nursery / kindergarten / language, computer, commercial or tutorial schools / technical institutes / other types of schools providing interests and hobby related courses for subjects such as arts, ballet and etc.), 'Place of Entertainment' and 'Place of Recreation, Sports or Culture' uses at the retail / commercial portion

#### 3.2 Village Housing Sites

- 3.2.1 There are also three village housing sites within the Application Site boundary. The location of the village housing sites is shown in **Drawing No. WSIA/402**.
- 3.2.2 According to the lease conditions, the applicant is responsible for the site formation of the village housing sites.

## 4 ASSESSMENT METHODOLOGY AND ASSUMPTION

### 4.1 Water Demand

4.1.1 A summary of the unit daily demand (UDD) used for different development types is shown in **Table 4-1** below.

**Table 4-1 – Unit Demand**

Development Type	Flow Type	Fresh Water UDD (L/head/day)	Flushing Water UDD (L/head/day)
Domestic	Traditional Village	300	106
	Private Residential – R2	300	106
	Private Residential – R3/R4	390	106
Non-domestic	Service Trades	35	/

### 4.2 Design Population

4.2.1 A summary of design population is shown in **Table 4-2** below.

**Table 4-2 – Summary of Design Population**

Development Type	No. of Units	PPF <sup>(1)</sup>	Population	Total
Proposed Development				
Tower Units	2653	2.8	7,429	7,497
House Unit	17	4	68	
Village Housing Sites				
Traditional Village	240	2.8	672	672

**Remarks:**

(1) Assuming a Person-Per-Flat ratio of 2.8 for tower units and traditional village as per the 2021 Population Census under District Council Constituency Areas;  
Assuming a Person-Per-Flat ratio of 4 for house units for conservative approach.

### 4.3 Peaking Factors

4.3.1 The peak demand factors below shall be adopted for design:

- Peak flow rate in fresh water distribution mains = 3 x mean daily demand (MDD)
- Peak flow in flushing water distribution mains = 2 x mean daily demand (MDD)

#### 4.4 Fire-fighting

- 4.4.1 Water supply for fire-fighting service has been considered in this WSIA. Fire-fighting requirement for residential zone is 6,000m<sup>3</sup>/day with discharge pressure of 17m head. The fire hydrant should be of standard pattern with minimum output pressure of not less than 25 psi. With multiple hydrants operating at the same time, total output of not less than 4,000L/min shall last for 60 minutes. **Table 4-4** summarizes the fire-fighting requirements.

**Table 4-4 – Fire Fighting Requirements**

Requirements	Minimum Values
Minimum fresh water supply	6,000 m <sup>3</sup> /day
Discharge pressure	17m
Minimum output not less than 25 psi	4,000 L/min (5,760m <sup>3</sup> /day) which lasts for an hour  (i.e., 4,000x60 = 240,000L/hour/day or 240m <sup>3</sup> /hour/day)

#### 4.5 Design Velocity and Head of Flow

- 4.5.1 The desirable flow velocities for hydraulic checking are as follows:

Maximum velocity (under peak flow condition)

Fresh water mains:

>DN700	≤ 3 m/s
DN700 – DN525	≤ 2.5 m/s
DN450 – DN375	≤ 2 m/s
DN300 – DN200	≤ 1.5 m/s

Flushing water mains:

≥DN1000	≤ 3 m/s
DN900 – DN800	≤ 2.5 m/s
DN700 – DN600	≤ 2 m/s
DN450 – DN300	≤ 1.5 m/s

Minimum velocity (under peak flow condition)

Fresh water mains:  $\geq 0.9$  m/s

Flushing water mains:  $\geq 0.9$  m/s

4.5.2 The pipeline shall have a minimum gradient of 1:400. Pipes shall be laid at a minimum separation of 300 mm away from existing utilities and underground structures.

4.5.3 The adopted minimum residual heads at extremity of the fresh water and flushing water supply system for the proposed development and village housing sites are as follow:

- Fresh water: 30m
- Flushing water: 15m

#### 4.6 Estimation of Development Water Demand

Proposed Development Site

4.6.1 By adopting the aforementioned design parameters, the fresh water demand and flushing water demand required by the proposed development are estimated to be 2,771 m<sup>3</sup>/day and 876 m<sup>3</sup>/day respectively upon full occupation. The water demand estimation is calculated in **Table 4-5** below.

**Table 4-5 – Water Demand Estimation of the Proposed Development**

Development Type	Flow Type	Population	Fresh Water UDD (L/head/day)	Flushing Water UDD (L/head/day)	Water Demand (m <sup>3</sup> /day)	
					Fresh Water	Flushing Water
Domestic	Private Residential – R2	7,429	300	106	2,229	788
	Private Residential – R3/R4	68	390	106	27	8
Non-domestic	Service Trade	7,497	35	-	263	-
Required water demand					2,519	796
<b>Total demand (with 10% contingency)</b>					<b><u>2,771</u></b>	<b><u>876</u></b>

**Remarks:**

Daily water demand does not include water demand for fire-fighting.  
Service trade adopted 100% of domestic population.

Village Housing Site

4.6.2 The fresh water demand and flushing water demand required by the village housing sites are estimated to be 226 m<sup>3</sup>/day and 72 m<sup>3</sup>/day respectively upon full occupation. The water demand estimation is calculated in **Table 4-6** below.

**Table 4-6 – Water Demand Estimation of the Village Housing Sites**

Development Type	Flow Type	Population	Fresh Water UDD (L/head/day)	Flushing Water UDD (L/head/day)	Water Demand (m <sup>3</sup> /d)	
					Fresh Water	Flushing Water
Domestic	Village	672	300	106	202	72
Non-domestic	Service Trade	672	35	-	24	-
<b>Required water demand</b>					<b>226</b>	<b>72</b>

**Remarks:**

Daily water demand does not include water demand for fire-fighting.  
Service trade adopted 100% of domestic population.

- 4.6.3 Since the village housing arrangement plan is currently unavailable, each pipe tee-off size is conservatively estimated to handle 50% of the total water demand for each village housing site. The calculation of pipe size estimation is shown in **Appendix B**.

## **5 POTENTIAL WATER SUPPLY IMPACTS AND MITIGATION MEASURES**

### **5.1 Fresh Water Supply System for the Proposed Development Site**

- 5.1.1 As mentioned in **Section 2.2** there are existing fresh water supply in the vicinity of the Application Site. At the west of the site, a **250mm** fresh water main is proposed to tee-off from the existing 400mm fresh water main along Tai Lam Chung Road to supply fresh water to the Proposed Development. The proposed **250mm** fresh water main is approximately 320m in length.
- 5.1.2 The proposed fresh water supply alignment is shown in **Drawing No. WSIA/405**. The hydraulic review of existing water mains and the proposed water mains are shown in **Appendix A**.
- 5.1.3 The size of the proposed fresh water supply system within the site and associated fittings will be further developed in detailed design stage.

### **5.2 Flushing Water Supply System for the Proposed Development Site**

- 5.2.1 As mentioned in **Section 2.3**, since there is no saltwater supply in the vicinity of the Application Site, flushing water is supplied by TMF mains in the vicinity of the Proposed Development.
- 5.2.2 At the west of the site, a 150mm flushing water main is proposed to tee-off from the existing 150mm TMF mains along Luen Hong Lane to supply flushing water to the Proposed Development. The proposed 150mm flushing water main is approximately 70m in length.
- 5.2.3 The proposed flushing water supply alignment is shown in **Drawing No. WSIA/407**. The hydraulic review of existing water mains and the proposed water mains are shown in **Appendix A**.
- 5.2.4 The size of the proposed flushing water supply system within the site and associated fittings will be further developed in the detailed design stage.

### **5.3 Water Supply System for Village Housing Sites**

#### **Fresh Water Supply System**

- 5.3.1 As mentioned in **Section 2.2**, there are existing 80mm to 150mm fresh water mains across the village housing sites. It is proposed to tee-off a 50mm fresh water main to supply fresh water demand, not exceeding 25m<sup>3</sup>/day in total. The proposed fresh water supply alignment is shown in Drawing No. **WSIA/405**.

#### **Flushing Water Supply System**

- 5.3.2 As mentioned in **Section 2.3**, there are no existing flushing water mains across the village housing sites. It is proposed to extend the flushing water mains along Luen Hong Lane to the proposed village housing sites and provide a **40mm** connection tee for the flushing water supply. The proposed flushing water supply alignment is shown in **Drawing No. WSIA/407**.
- 5.3.3 The hydraulic review of existing water mains and the proposed water mains for village housing sites are shown in **Appendix B**.

### **5.4 Proposed Fire-Fighting System**

- 5.4.1 The provision of fire hydrants and fire mains is in accordance with the relevant stipulations in "Technical Circular No. 4/2010: Fire Mains and Hydrants on New Trunk Roads and Elevated Highway Structures" published by Highway Department (HyD). The average spacing of fire hydrants to at-grade trunk road shall be at a distance of 100m. The detailed arrangement will be submitted to Fire Services Department (FSD) for approval during detailed design stage.
- 5.4.2 The provision of fire-fighting requirements are mentioned in **Section 4.4**. The water supply with discharge pressure of 1.7bar (17m head) and flow of 4,000L/min that lasts for one hour will be provided.
- 5.4.3 A 150mm tee-off separate connection is provided for the fire-fighting water connection. The proposed tee-off is shown in **Drawing No. WSIA/405**.

## **6 Waterworks Impact Assessment**

### **6.1 Overview**

- 6.1.1 The Application Site comprises the proposed private development, site formation works for three village housing sites, and a reserved site for public facilities provision.
- 6.1.2 According to the Water Main Record Plan provided by the Water Supplies Department (WSD) (**Appendix C**), sections of the WSD Access Road and certain water mains are located within the Application Site.

### **6.2 WSD Access Road**

- 6.2.1 According to the Water Main Record Plan, certain sections of the WSD Access Road are located within the Application Site. These sections are identified in **Appendix C1**.



6.2.2 One section of the existing WSD Access Road falls within the area designated for future village housing and will be blocked. As shown in the approved gazette plan in **Appendix D**, the alignment of the future village access road will be modified and will be capable of providing continued access for the WSD. The modified village access road will ensure proper access for WSD operations. The details are illustrated in **Appendix C2**.

6.2.3 The detailed design of the roadworks will be developed during the detailed design stage. A maintenance matrix for the relevant road sections will be prepared and submitted to the relevant government departments, including the WSD, for approval at that stage.

### **6.3 Water Mains**

#### **Water mains fall within the Development Boundary**

6.3.1 Certain water mains fall within the Development Boundary and currently supply water to an existing public toilet. The public toilet will be relocated, and the water mains within the Development Site will be demolished after the existing public toilet is relocated.

6.3.2 The details of the demolition will be designed at a later stage. The demolition of water mains will be carried out in accordance with WSD's standards and procedures to minimize any potential impact on water supply services.

6.3.3 Due to the planned realignment of future village access, some of the existing water mains will need to be diverted to accommodate the new alignment. The proposed diversion works are shown in **Drawing No. WSIA/405**.

#### **Water mains fall within the Village Housing Site Boundary and Public Facilities Reserved Site Boundary**

6.3.4 Site formation works will be conducted in village housing sites, and public facilities will be constructed in the reserved site. Certain water mains located within the Village Housing Site Boundary and Public Facilities Reserved Site Boundary may be affected by the proposed works.

6.3.5 It is proposed to retain these water mains during the construction period. The construction works will be carried out in accordance with the WSD's standards and procedures to ensure minimal disruption to existing water supply services.

## **7 MAINTENANCE RESPONSIBILITY**

### **Proposed Development Site**

7.1.1 The Applicant will be responsible for construction of all proposed water supply facilities within the development site boundary including all internal water mains, water supply lead-in valves and those proposed water distribution pipes.

7.1.2 The Applicant will be responsible for the maintenance of all necessary water supply facilities within the private development portion.

### **Village Housing Site**

- 7.1.3 The Applicant will be responsible for the construction of waterworks connecting to the three village housing sites that are located outside the boundaries of the village housing sites.
- 7.1.4 The Government will be responsible for the maintenance of waterworks connecting to the three village housing sites that are located within government land
- 7.1.5 The Applicant will be responsible for providing reserved water supply tees for both fresh water and flushing water use, respectively, for each village housing site for future connection.

### **Waterworks Facilities**

- 7.1.6 The Applicant is responsible for the construction of all necessary diversion or abandonment works for existing water mains. The proposed works are indicated in Drawing No. **WSIA/405 and 407**.
- 7.1.7 The Government will be responsible for the maintenance of all necessary water supply facilities outside the private development portion.

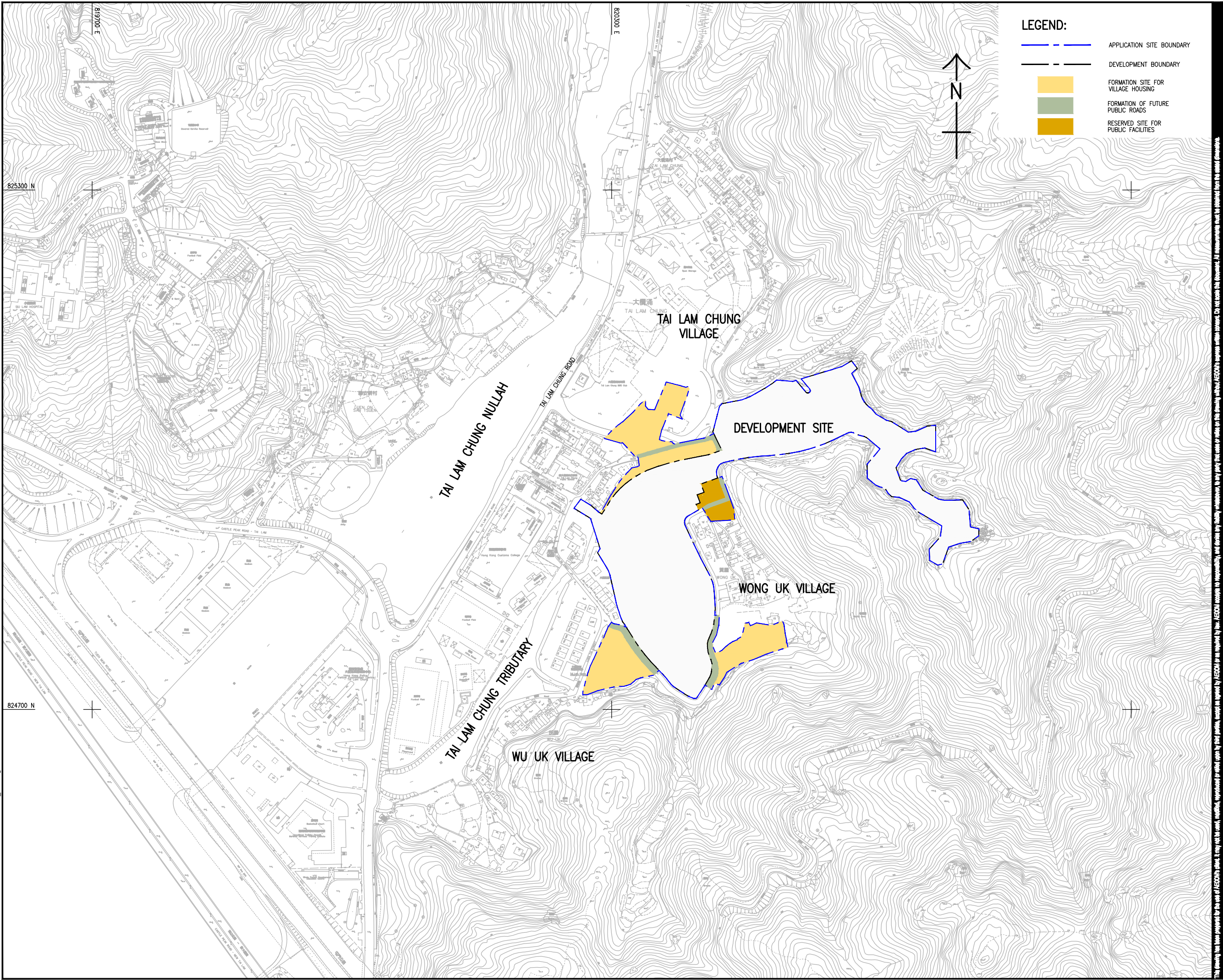
## **8 CONCLUSION**

- 8.1.1 The Application Site is located at the Eastern side of Tai Lam Chung Nullah adjacent to Hong Kong Customs College. The location plan can be referred to **Drawing No. WSIA/401**.
- 8.1.2 The Application Site comprises the proposed development and site formation works for three village housing sites and provision of various public facilities.
- 8.1.3 The proposed development comprises 7 residential towers and 17 houses, two club houses, landscaped open spaces, commercial and retail areas.
- 8.1.4 Approximately 2,771 m<sup>3</sup>/day of fresh water demand and 876 m<sup>3</sup>/day of flushing water demand will be required by the proposed development.
- 8.1.5 Approximately 226 m<sup>3</sup>/day of fresh water demand and 72 m<sup>3</sup>/day of flushing water demand will be required by the three village housing sites.
- 8.1.6 It is concluded that the proposed development will generate additional water demand. After implementation of the proposed watermains for the proposed development, the proposed development would be acceptable in water supply terms.

END OF TEXT

## Drawings





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PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND (LOT TO BE KNOWN AS TMTL NO. 417) TAI LAM CHUNG, TUN MUN

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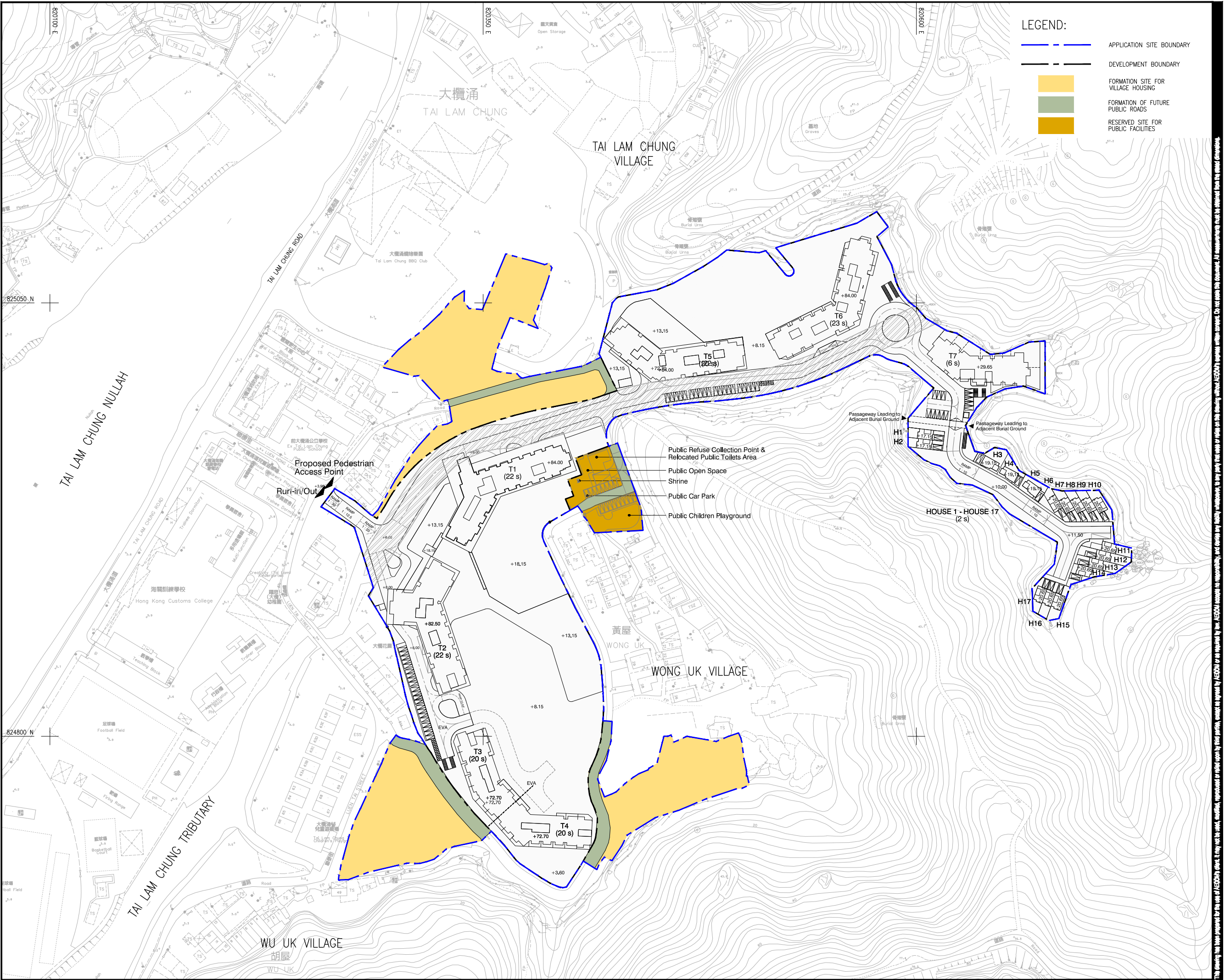
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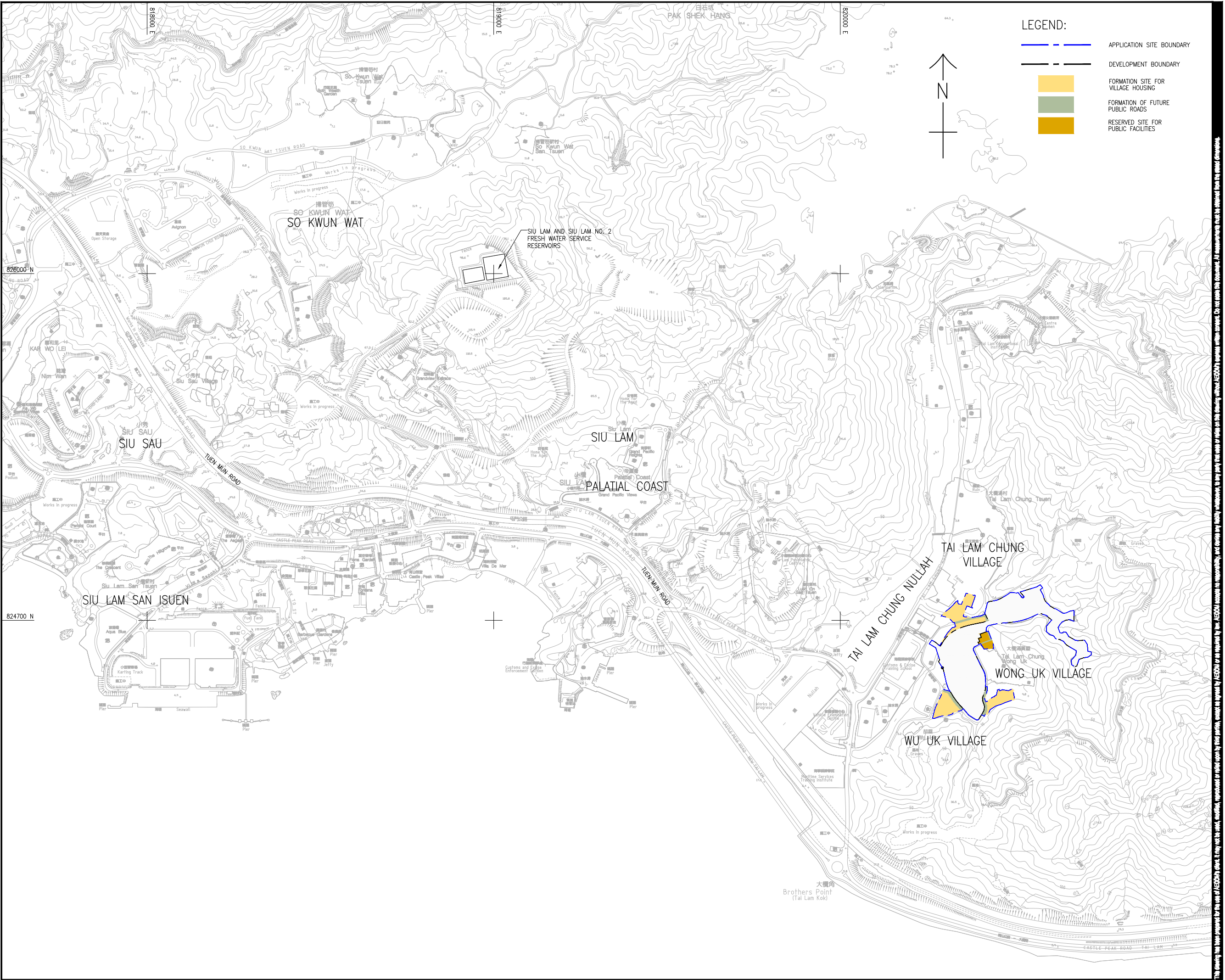
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MASTER LAYOUT PLAN

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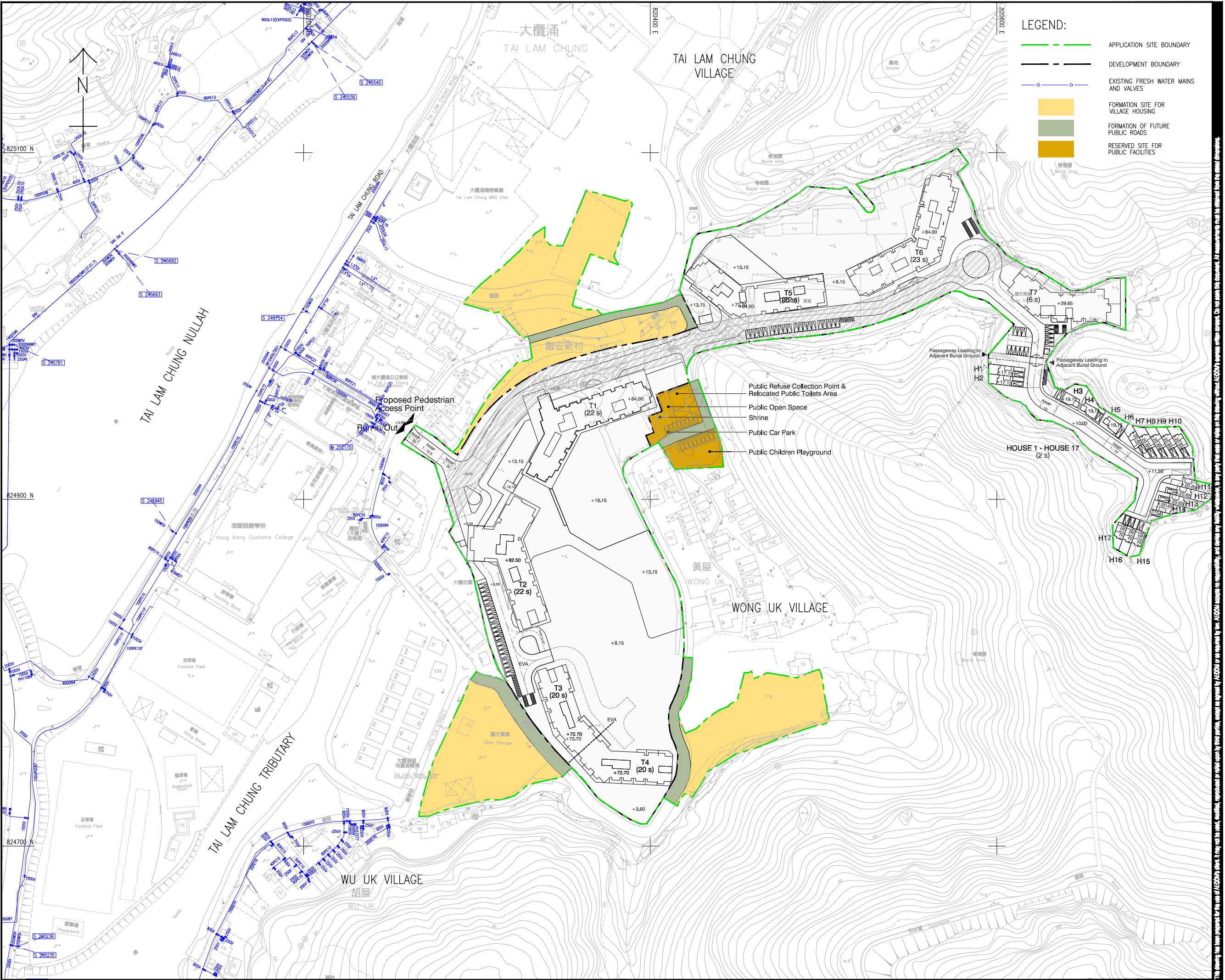
LOCATION PLAN OF FRESH WATER SERVICE RESERVOIR

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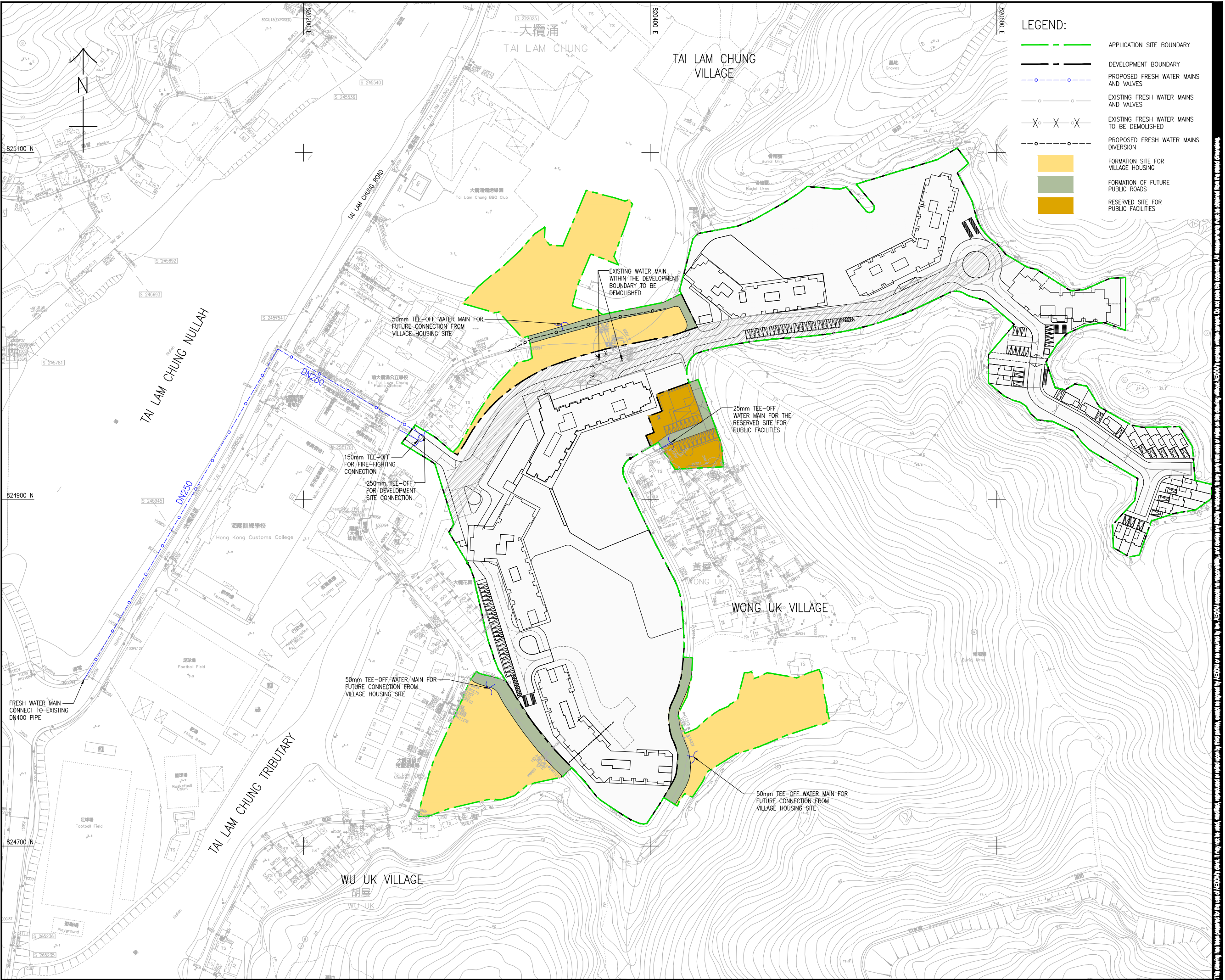
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EXISTING FRESH WATER RECORD PLAN

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FRESH WATER CONNECTION LAYOUT PLAN

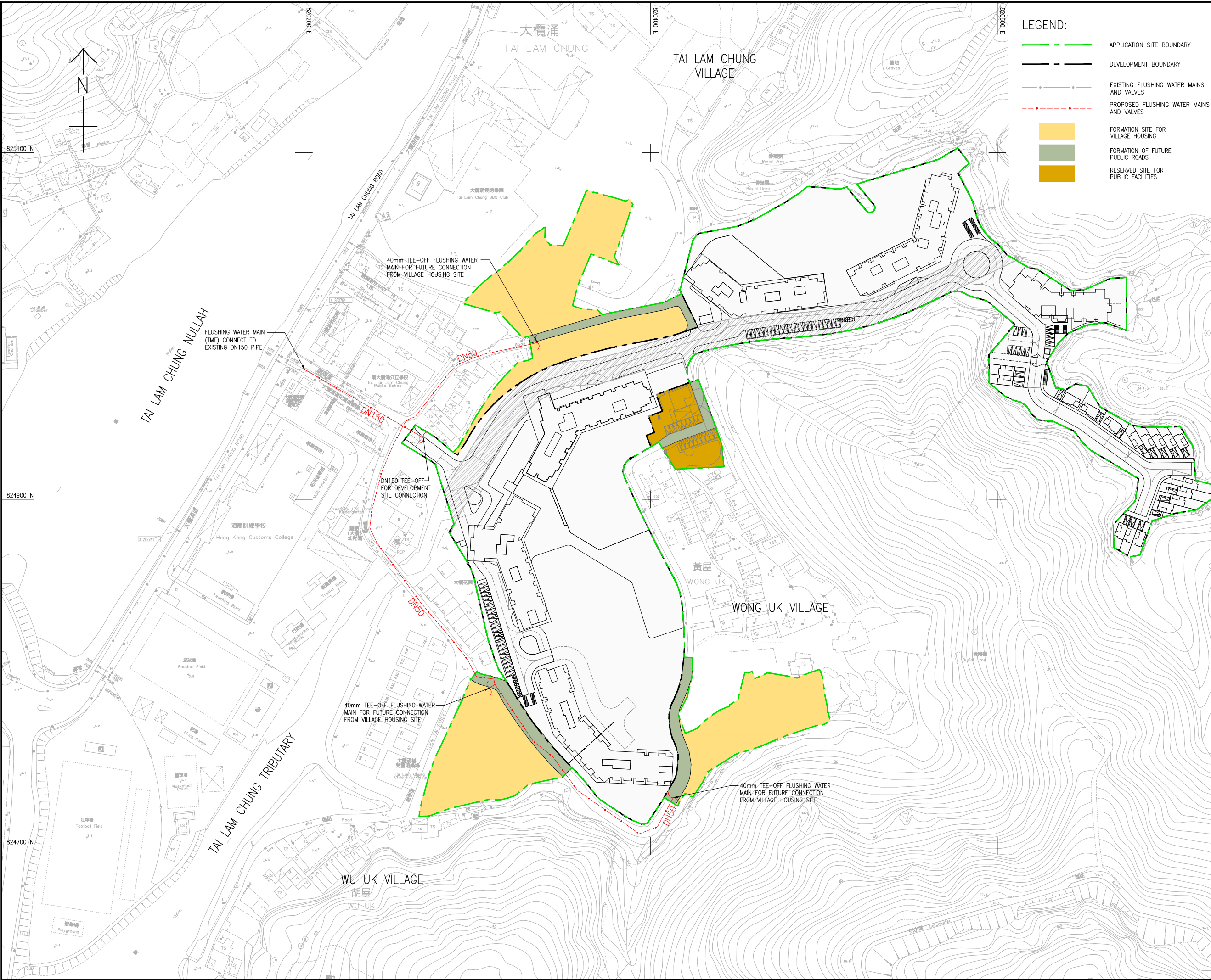
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LEGEND:

- APPLICATION SITE BOUNDARY
- DEVELOPMENT BOUNDARY
- EXISTING FLUSHING WATER MAINS AND VALVES
- PROPOSED FLUSHING WATER MAINS AND VALVES
- FORMATION SITE FOR VILLAGE HOUSING
- FORMATION OF FUTURE PUBLIC ROADS
- RESERVED SITE FOR PUBLIC FACILITIES

# AECOM

**PROJECT**  
PROPOSED AMENDMENTS TO AN APPROVED COMPREHENSIVE RESIDENTIAL DEVELOPMENT SCHEME AND MINOR RELAXATION OF GROSS FLOOR AREA AND BUILDING HEIGHT RESTRICTIONS AT VARIOUS LOTS IN D.D. 385 AND ADJOINING GOVERNMENT LAND (LOT TO BE KNOWN AS TMTL NO. 417), TAI LAM CHUNG, TUN MUN

**CLIENT**  
SUN HUNG KAI REAL ESTATE AGENCY LTD.

**CONSULTANT**  
AECOM Asia Company Ltd.  
www.aecom.com

**SUB-CONSULTANTS**

**ISSUE/REVISION**

NO.	DATE	DESCRIPTION	CHK.

**STATUS**

**SCALE**  
A1 1:1000

**DIMENSION UNIT**  
METRES

**KEY PLAN**

**PROJECT NO.**  
60281828

**CONTRACT NO.**

**SHEET TITLE**  
FLUSHING WATER CONNECTION LAYOUT PLAN

**SHEET NUMBER**  
60281828/WSIA/407

## **Appendix A**

### **Hydraulic Review for Existing and Proposed Watermains located underneath Tai Lam Chung Road**

## Appendix A - Hydraulic Review for Existing and Proposed Watermains located underneath Tai Lam Chung Road

### Fresh Water Main

Hydraulic Review for Existing DN400		
Estimated Fresh Water Demand	2997.0	m <sup>3</sup> /day
	0.0347	m <sup>3</sup> /s
Peak factor for distribution main	3	
Peak Flow rate	0.1041	m <sup>3</sup> /s
Size of Existing water main	400	mm
Design Internal Diameter	382	mm
Cross Section Area	0.115	m <sup>2</sup>
Peak Flow Velocity of water main	2	m/s
Capacity of water main	0.2292	m <sup>3</sup> /s
The percentage of watermain occupied by the development site's fresh water demand	45.40	%

Fresh water demand utilizes about 45.4% of the existing water main capacity.

Hydraulic Review for Proposed DN250		
Estimated Fresh Water Demand	2771.0	m <sup>3</sup> /day
	0.0321	m <sup>3</sup> /s
Peak factor for distribution main	3	
Peak Flow rate	0.0962	m <sup>3</sup> /s
Size of Proposed water main	250	mm
Design Internal Diameter	233	mm
Cross Section Area	0.043	m <sup>2</sup>
Proposed Flow Velocity of water main	2.26	m/s

# Annex A - Hydraulic Review for Existing and Proposed Watermains located underneath Tai Lam Chung Road

## Salt Water Main

Hydraulic Review for Existing DN150		
Estimated Flushing Water Demand	948.0	m <sup>3</sup> /day
	0.0110	m <sup>3</sup> /s
Peak factor for distribution main	2	
Peak Flow rate	0.0219	m <sup>3</sup> /s
Size of Existing water main	150	mm
Design Internal Diameter	138	mm
Cross Section Area	0.015	m <sup>2</sup>
Peak Flow Velocity of water main	1.5	m/s
Capacity of water main	0.0224	m <sup>3</sup> /s
The percentage of watermain occupied by the development site's flushing water demand	97.81	%

Flushing water demand utilizes about 97.81% of the existing water main capacity.

Hydraulic Review for Proposed DN150		
Estimated Flushing Water Demand	948.0	m <sup>3</sup> /day
	0.0110	m <sup>3</sup> /s
Peak factor for distribution main	2	
Peak Flow rate	0.0219	m <sup>3</sup> /s
Size of Proposed water main	150	mm
Design Internal Diameter	138	mm
Cross Section Area	0.015	m <sup>2</sup>
Proposed Flow Velocity of water main	1.47	m/s

## **Appendix B**

### **Hydraulic Review for Existing and Proposed Water Main for Village Housing Sites**

**Annex B - Hydraulic Review for Existing and Proposed Water Main for Village Housing Sites****Fresh Water Main**

<b>Hydraulic Review for Existing DN100</b>		
Estimated Fresh Water Demand	226.0	m <sup>3</sup> /day
	0.0026	m <sup>3</sup> /s
Peak factor for distribution main	3	
Peak Flow rate	0.0078	m <sup>3</sup> /s
Size of Existing water main	100	mm
<b>Design Internal Diameter</b>	<b>95</b>	<b>mm</b>
Cross Section Area	0.007	m <sup>2</sup>
Peak Flow Velocity of water main	1.5	m/s
Capacity of water main	0.0106	m <sup>3</sup> /s
The percentage of watermain occupied by the development site's fresh water demand	73.81	%

Fresh water demand utilizes about 73.81% of the existing water main capacity.

<b>Hydraulic Review for Proposed DN50 connection tee</b>		
Estimated Fresh Water Demand	113.0	m <sup>3</sup> /day
	0.0013	m <sup>3</sup> /s
Peak factor for distribution main	3	
Peak Flow rate	0.0039	m <sup>3</sup> /s
Size of Proposed water main	50	mm
<b>Design Internal Diameter</b>	<b>50</b>	<b>mm</b>
Cross Section Area	0.0020	m <sup>2</sup>
Proposed Flow Velocity of water main	2.00	m/s



## Hydraulic Review for Existing and Proposed Water Main for Village Housing Sites

### Salt Water Main

Hydraulic Review for Existing DN150		
Estimated Flushing Water Demand	72.0	m <sup>3</sup> /day
	0.0008	m <sup>3</sup> /s
Peak factor for distribution main	2	
Peak Flow rate	0.0017	m <sup>3</sup> /s
Size of Existing water main	150	mm
<b>Design Internal Diameter</b>	<b>138</b>	<b>mm</b>
Cross Section Area	0.01496	m <sup>2</sup>
Peak Flow Velocity of water main	1.5	m/s
Capacity of water main	0.0224	m <sup>3</sup> /s
The percentage of watermain occupied by the development site's flushing water demand	7.43	%

Flushing water demand utilizes about 7.43% of the existing water main capacity.

Hydraulic Review for Proposed DN50 connection tee		
Estimated Flushing Water Demand	72.0	m <sup>3</sup> /day
	0.0008	m <sup>3</sup> /s
Peak factor for distribution main	2	
Peak Flow rate	0.0017	m <sup>3</sup> /s
Size of Proposed water main	50	mm
<b>Design Internal Diameter</b>	<b>50</b>	<b>mm</b>
Cross Section Area	0.00196	m <sup>2</sup>
Proposed Flow Velocity of water main	0.85	m/s

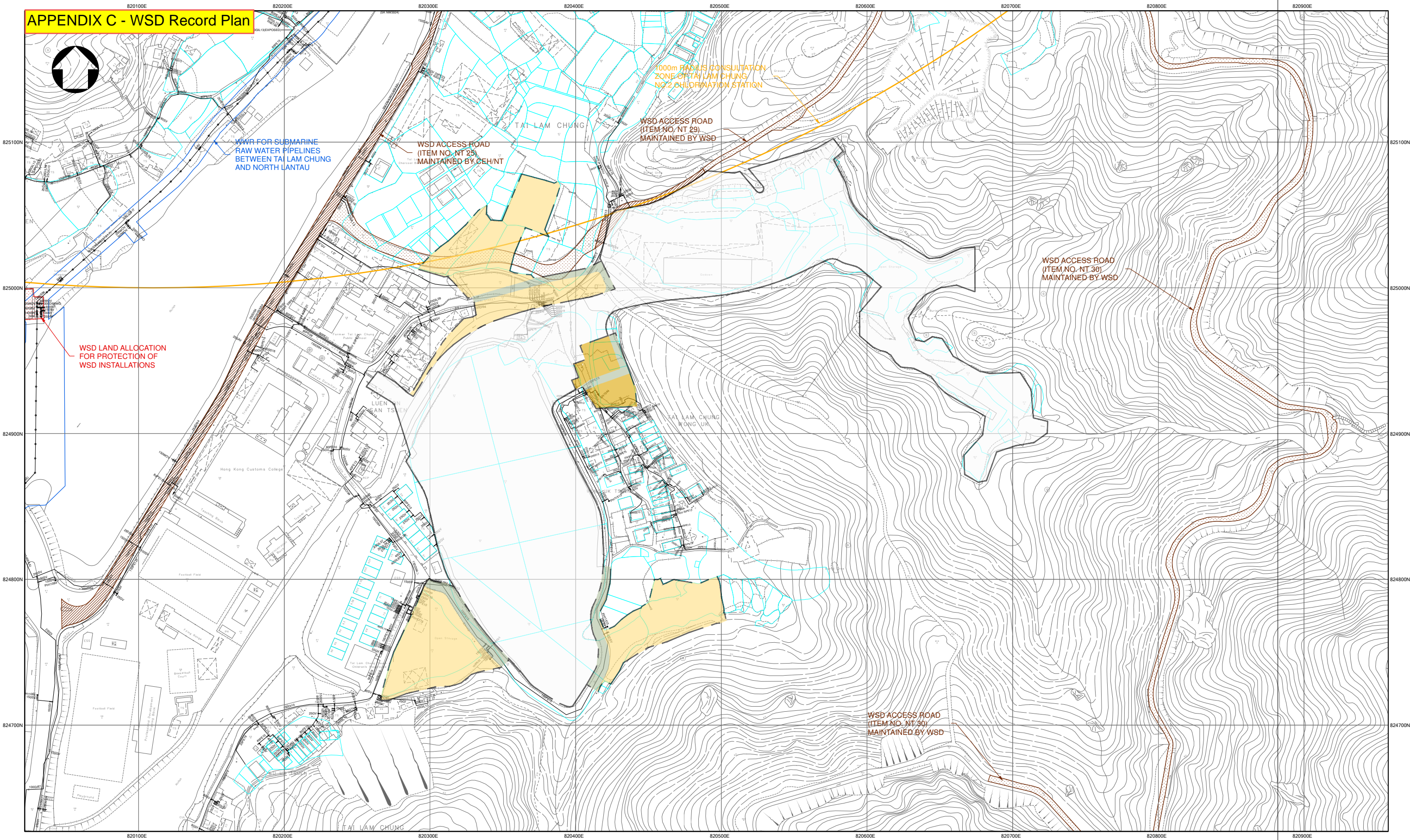
Hydraulic Review for Proposed DN40 connection tee		
Estimated Flushing Water Demand	36.0	m <sup>3</sup> /day
	0.0004	m <sup>3</sup> /s
Peak factor for distribution main	2	
Peak Flow rate	0.0008	m <sup>3</sup> /s
Size of Proposed water main	40	mm
<b>Design Internal Diameter</b>	<b>40</b>	<b>mm</b>
Cross Section Area	0.00126	m <sup>2</sup>
Proposed Flow Velocity of water main	0.66	m/s



## **Appendix C**

### **Water Main Record Plan**

APPENDIX C - WSD Record Plan



- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
  2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
  3. INFORMATION ON ALIGNMENT OF MAINS IS OF INDICATIVE VALUE ONLY, WHERE POSITIONAL ACCURACY MAY BE OF IMPORTANCE, DETAILS SHOULD BE SITE CHECKED.
  4. FOR MAINS RECORDS SIGN CONVENTIONS AND DESIGNATIONS SEE SKETCH NO. 3988.
  5. NO EXISTING WSD CABLE IN THE VICINITY OF THE SITE.
  6. NO PROPOSED WSD CABLE IN THE VICINITY OF THE SITE.
  7. THE SITE IS NOT WITHIN WSD GATHERING GROUNDS.
  8. THE SUBJECT SITE IS WITHIN 1000 m RADIUS CONSULTATION ZONE OF TAI LAM CHUNG NO.2 CHLORINATION STATION.

SUBJECT SITE  
PRIVATE LOT  
BOUNDARY  
(FOR REF. ONLY)

PART COPY OF FRESH WATER MAINS RECORD PLAN(S)

W67880/6-SW-24A & 24B

FILE REF: (17) IN WSD/M/SP 3051/413/2S/96 PT.12

REF. CODE: 48W24M

SHEET 1 OF 1

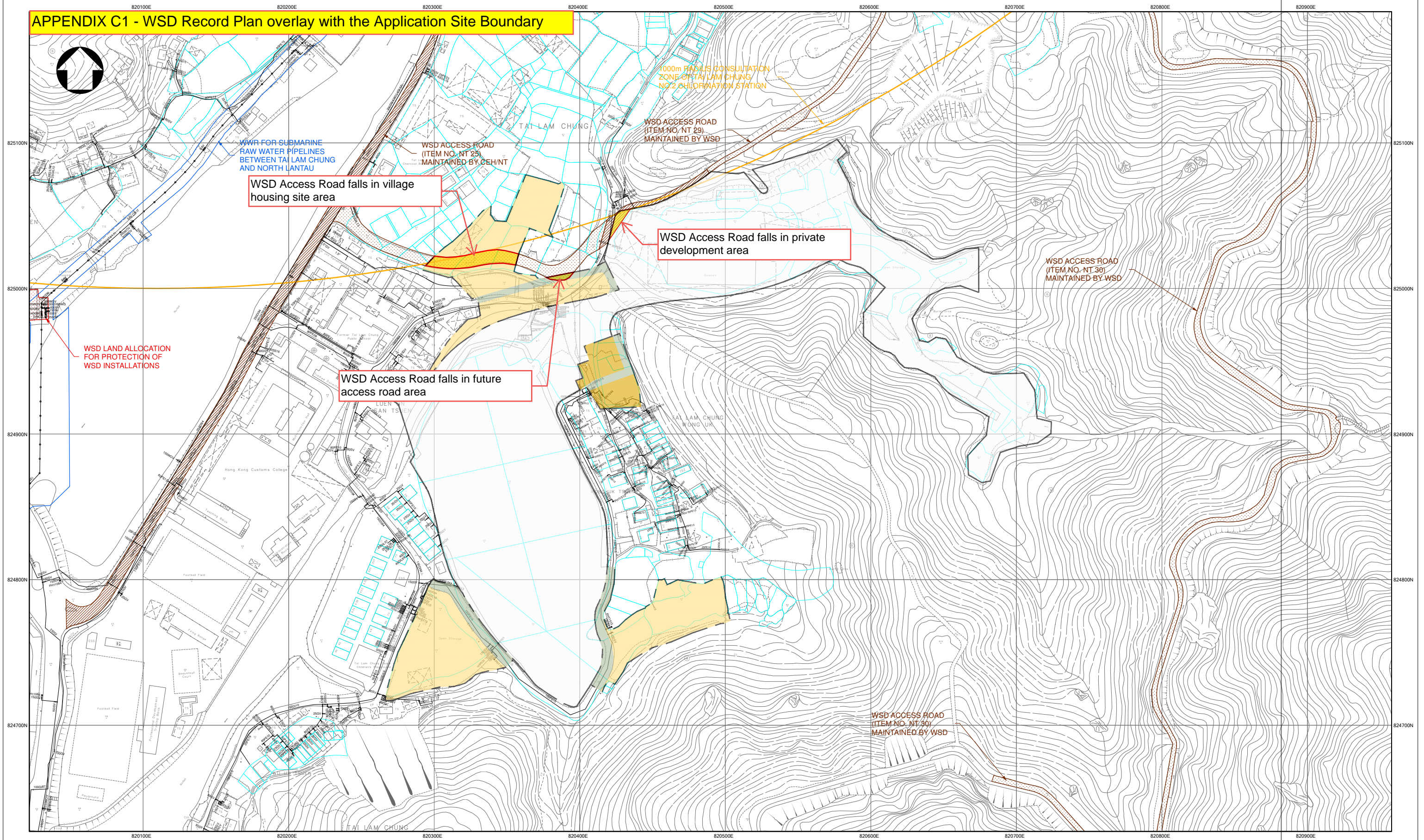
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## APPENDIX C1 - WSD Record Plan overlay with the Application Site Boundary



- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
  2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
  3. INFORMATION ON ALIGNMENT OF MAINS IS OF INDICATIVE VALUE ONLY, WHERE POSITIONAL ACCURACY MAY BE OF IMPORTANCE, DETAILS SHOULD BE SITE CHECKED.
  4. FOR MAINS RECORDS SIGN CONVENTIONS AND DESIGNATIONS SEE SKETCH NO. 3988.
  5. **NO EXISTING WSD CABLE IN THE VICINITY OF THE SITE.**
  6. **NO PROPOSED WSD CABLE IN THE VICINITY OF THE SITE.**
  7. THE SITE IS NOT WITHIN WSD GATHERING GROUNDS.
  8. THE SUBJECT SITE IS WITHIN 1000 m RADIUS CONSULTATION ZONE OF TAI LAM CHUNG NO.2 CHLORINATION STATION.

PART COPY OF FRESH WATER MAINS RECORD PLAN(S)
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W67880/6-SW-24A & 24B

FILE REF: (17) IN WSD/M/SP 3051/413/2S/96 PT.12

REF. CODE: 48W24M
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SHEET 1 OF 1

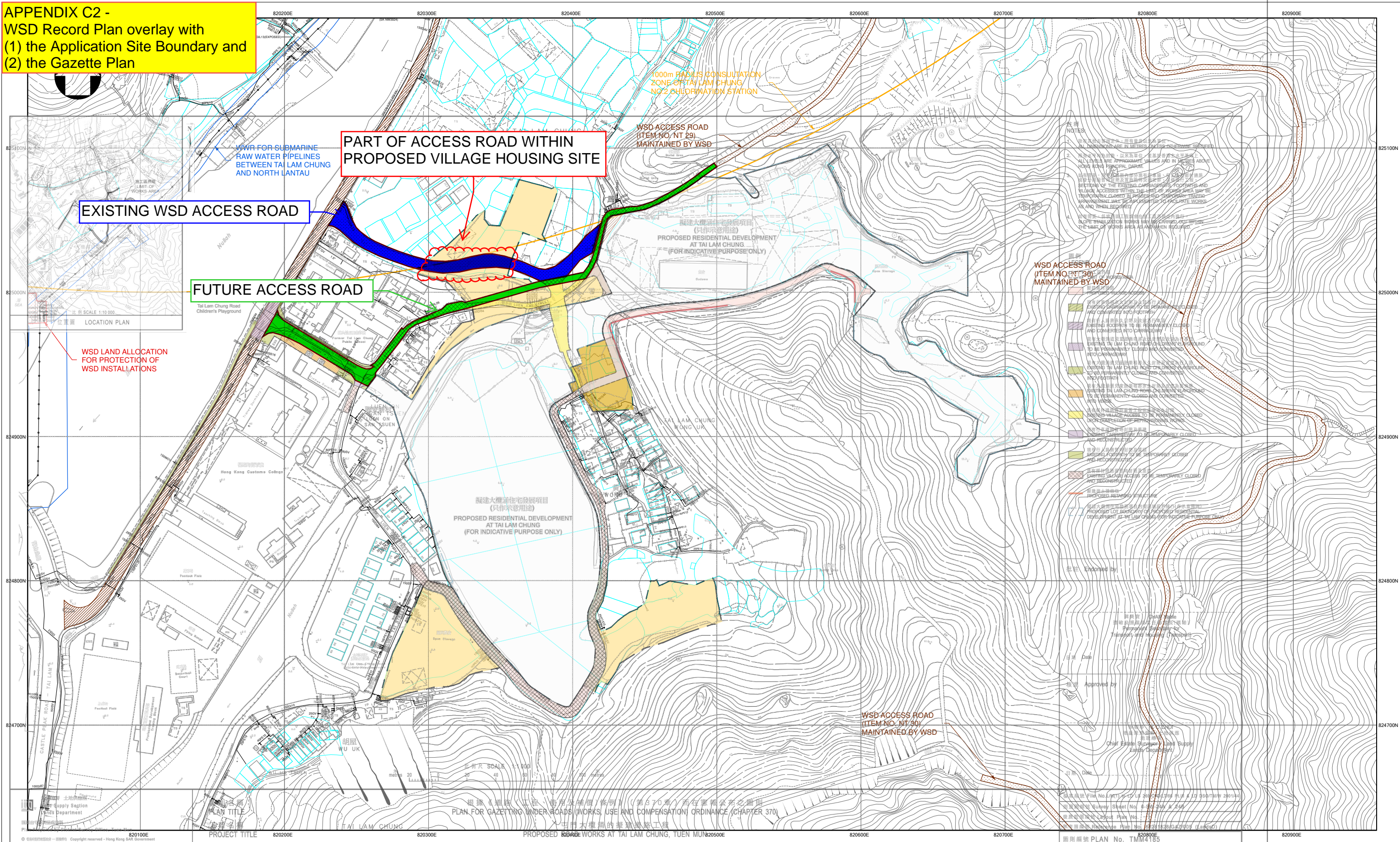
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**APPENDIX C2 -  
WSD Record Plan overlay with  
(1) the Application Site Boundary and  
(2) the Gazette Plan**



- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
  2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
  3. INFORMATION ON ALIGNMENT OF MAINS IS OF INDICATIVE VALUE ONLY, WHERE POSITIONAL ACCURACY MAY BE OF IMPORTANCE, DETAILS SHOULD BE SITE CHECKED.
  4. FOR MAINS RECORDS SIGN CONVENTIONS AND DESIGNATIONS SEE SKETCH NO. 3988.
  5. NO EXISTING WSD CABLE IN THE VICINITY OF THE SITE.
  6. NO PROPOSED WSD CABLE IN THE VICINITY OF THE SITE.
  7. THE SITE IS NOT WITHIN WSD GATHERING GROUNDS.
  8. THE SUBJECT SITE IS WITHIN 1000 m RADIUS CONSULTATION ZONE OF TAI LAM CHUNG NO.2 CHLORINATION STATION.

SUBJECT SITE  
  
PRIVATE LOT  
BOUNDARY  
(FOR REF ONLY)

PART COPY OF FRESH WATER MAINS RECORD PLAN(S)

W67880/6-SW-24A & 24B

FILE REF: (17) IN WSD/M/SP 3051/413/2S/96 PT.12

REF. CODE: 48W24M

SHEET 1 OF 1

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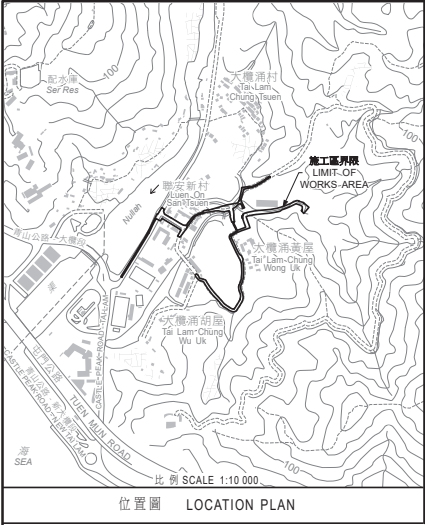
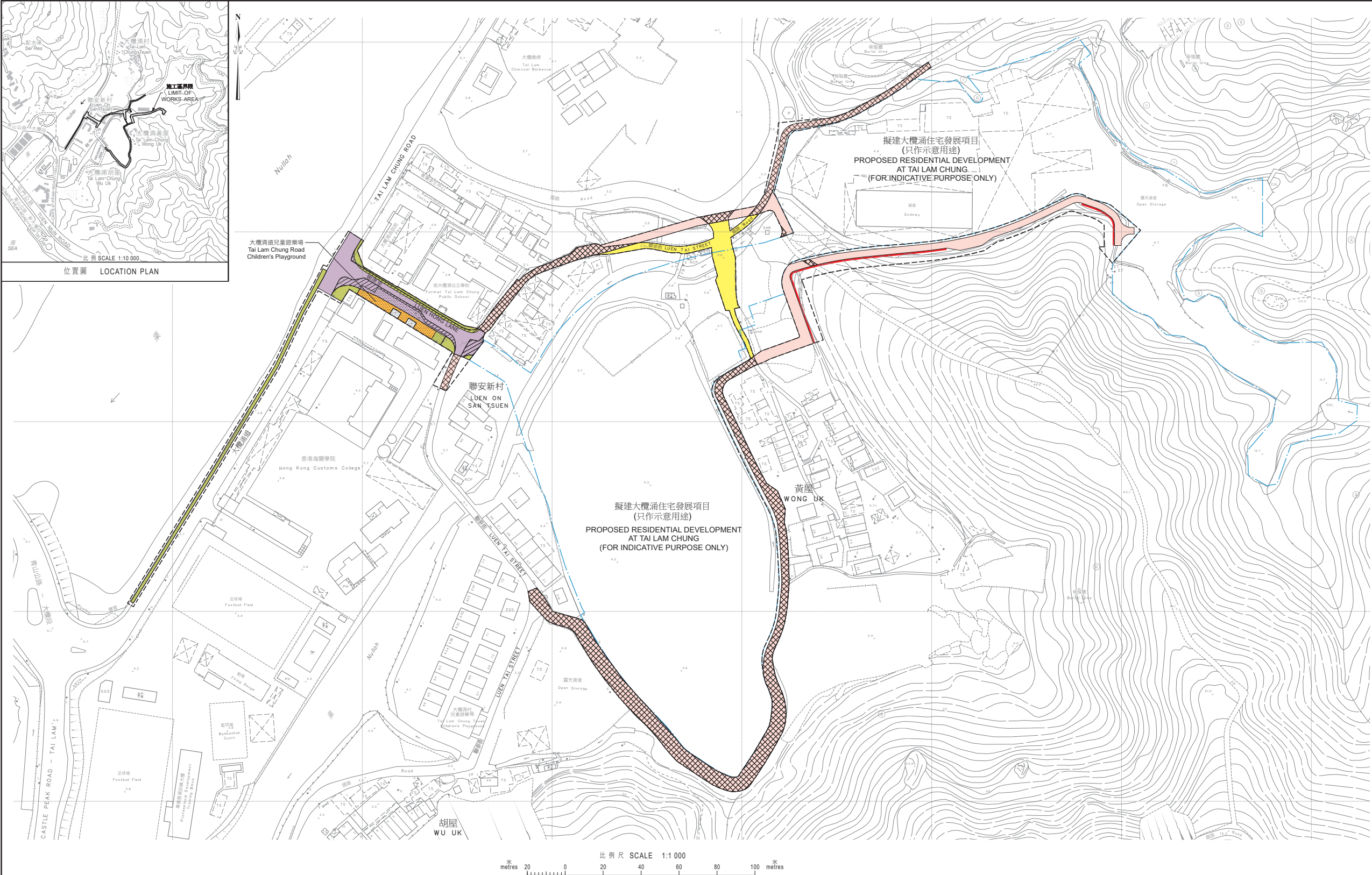


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## **Appendix D**

### **Approved Gazette Plan for Luen Hong Lane**



- 註釋 NOTES:
- 除在其他方面指定外，所有量度以米為單位。  
ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
  - 所有水平均為約數，以米為單位，並基於香港主水平基準上。  
ALL LEVELS ARE APPROXIMATE VALUES AND IN METRES ABOVE HONG KONG PRINCIPAL DATUM.
  - 如有需要，施工區界限內部分現有行車道、行人路及鄉村道路或會分段暫時封閉及實施臨時交通安排，以便進行工程。  
SECTIONS OF THE EXISTING CARRIAGEWAYS, FOOTPATHS AND VILLAGE ACCESSSES WITHIN THE LIMIT OF WORKS AREA MAY BE TEMPORARILY CLOSED IN PHASES AND TEMPORARY TRAFFIC ARRANGEMENT WILL BE IMPLEMENTED TO FACILITATE WORKS AS AND WHEN REQUIRED.
  - 如有需要，斜坡穩固工程或會在施工區界限之內進行。  
SLOPE STABILIZATION WORKS MAY BE CARRIED OUT WITHIN THE LIMIT OF WORKS AREA AS AND WHEN REQUIRED.

- 圖例 LEGEND:
- 施工區界限  
LIMIT OF WORKS AREA
  - 擬建鄉村道路  
PROPOSED VILLAGE ACCESS
  - 現有行車道將永久封閉及改建為行人路  
EXISTING CARRIAGEWAY TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH
  - 現有行人路將永久封閉及改建為行車道  
EXISTING FOOTPATH TO BE PERMANENTLY CLOSED AND CONVERTED INTO CARRIAGEWAY
  - 現有大機涌道兒童遊樂場將永久封閉及改建為行車道  
EXISTING TAI LAM CHUNG ROAD CHILDRENS PLAYGROUND TO BE PERMANENTLY CLOSED AND CONVERTED INTO CARRIAGEWAY
  - 現有大機涌道兒童遊樂場將永久封閉及改建為行人路  
EXISTING TAI LAM CHUNG ROAD CHILDRENS PLAYGROUND TO BE PERMANENTLY CLOSED AND CONVERTED INTO FOOTPATH
  - 現有大機涌道兒童遊樂場將永久封閉及改建為路旁帶  
EXISTING TAI LAM CHUNG ROAD CHILDRENS PLAYGROUND TO BE PERMANENTLY CLOSED AND CONVERTED INTO VERGE
  - 現有鄉村道路將於重置工程完成後永久封閉  
EXISTING VILLAGE ACCESS TO BE PERMANENTLY CLOSED UPON COMPLETION OF REPROVISIONING WORKS
  - 現有行車道將暫時封閉及重建  
EXISTING CARRIAGEWAY TO BE TEMPORARILY CLOSED AND RECONSTRUCTED
  - 現有行人路將暫時封閉及重建  
EXISTING FOOTPATH TO BE TEMPORARILY CLOSED AND RECONSTRUCTED
  - 現有鄉村道路將暫時封閉及重建  
EXISTING VILLAGE ACCESS TO BE TEMPORARILY CLOSED AND RECONSTRUCTED
  - 擬建護土牆构筑物  
PROPOSED RETAINING STRUCTURE
  - 擬建大機涌住宅發展項目的擬議地段界線(只作示意用途)  
PROPOSED LOT BOUNDARY OF PROPOSED RESIDENTIAL DEVELOPMENT AT TAI LAM CHUNG (FOR INDICATIVE PURPOSE ONLY)

批註 Endorsed by

陳美寶 CHAN Mable  
運輸及房屋局常任秘書長(運輸)  
Permanent Secretary for  
Transport and Housing (Transport)

日期 Date

核准 Approved by

C. CHOI  
總產業測量師/土地供應  
地政總署  
Chief Estate Surveyor / Land Supply  
Lands Department

日期 Date

地政總署 土地供應組  
Land Supply Section  
Lands Department

圖則由屯門測量處繪制  
Plan Prepared by District Survey Office, Tuen Mun

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圖則名稱  
PLAN TITLE

工程名稱  
PROJECT TITLE

根據《道路(工程、使用及補償)條例》(第370章)而在憲報公布之圖則  
PLAN FOR GAZETTING UNDER ROADS (WORKS, USE AND COMPENSATION) ORDINANCE (CHAPTER 370)

屯門大機涌的擬建道路工程  
PROPOSED ROAD WORKS AT TAI LAM CHUNG, TUEN MUN

檔案編號 File No. L/M(1) to LD LS 269/CPD/LT/66 Pt.III & LD DSO/TMW 2001/44

測量圖編號 Survey Sheet No. 6-SW-24A & 24B

發展藍圖編號 Layout Plan No. --

參考圖編號 Reference Plan No. 60281828/GAZ/005 (LandsD)

圖則編號 PLAN No. TMM4185

日期 Date 08/03/2021