
Appendix F –

Review of Water Supply Impact

Prepared for

Faith Luck Corporation Limited and Win Million International Limited

Prepared by

Ramboll Hong Kong Limited

SECTION 16 PLANNING APPLICATION FOR PROPOSED MINOR RELAXATION OF PLOT RATIO AND BUILDING HEIGHT RESTRICTIONS FOR PERMITTED FLAT DEVELOPMENT WITH SOCIAL WELFARE FACILITY AND PUBLIC VEHICLE PARK (PROPOSED AMENDMENTS TO AN APPROVED SCHEME UNDER APPLICATION NO. A/FSS/294) AT VARIOUS LOTS IN D.D. 51 AND ADJOINING GOVERNMENT LAND AT MA SIK ROAD, FANLING

REVIEW OF WATER SUPPLY IMPACT

Date **August 2026**

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Signed



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Principal Consultant

Signed



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1. INTRODUCTION

1.1 Background

- 1.1.1 A residential development with Social Welfare Facility and Public Vehicle Park is proposed at various lots in D.D. 51, Fanling, New Territories. The Application site is zoned "Residential (Group A)12" ("R(A)12") under the Approved Fanling/Sheung Shui Outline Zoning Plan No. S/FSS/28.
- 1.1.2 A Section 16 (S16) planning application (No. A/FSS/294) was submitted by the Applicant to the Town Planning Board (TPB) for minor relaxation of plot ratio and building height restrictions for the proposed development at the Application Site. Technical assessments including water supply impact assessment (WSIA) were prepared for the S16 planning application (No. A/FSS/294), drainage and sewerage impacts were addressed. The application was approved in June 2024.
- 1.1.3 Recently, due to further development of the design, further amendment to the Approved Scheme under the approved S16 planning application (No. A/FSS/294) is considered necessary. The current application proposes amendments to the Approved Scheme to provide carpark on G/F and 1/F, while maintaining all other major development parameters, including GFA, plot ratio, and the number of residential units, unchanged from those of the Approved Scheme.
- 1.1.4 Ramboll Hong Kong Limited has been commissioned by Faith Luck Corporation Limited and Win Million International Limited (hereinafter referred as "Applicant") and is responsible for preparing this Review of Water Supply Impact (RWSI) in support of the above-mentioned S16 Planning Application for the proposed development at the Application Site to TPB.

1.2 Application Site and its Environs

- 1.2.1 The Application Site area is about 13,232 m². The Application Site is bounded by Ma Sik Road to the north and Fan Ling Lau Road to the east. Good View New Village is located to the northwest of the Application Site, while Wing Fok Centre is to the east of the Application Site.

1.3 Proposed Development

- 1.3.1 The proposed development includes 5 nos. of blocks with 1,898 nos. of flats comprising a maximum domestic GFA of 79,392 m². The GFA of clubhouse, social welfare facility (120-place Residential Care Home for the Elderly (RCHE)) and Neighbourhood Elderly Centre is 3,000 m², 2,382m² and 300 m² respectively. For conservative purpose, the 3rd party lots not owned by the Applicant within "R(A)12" zone with GFA of about 5,050 m² or 126 units (based on PR of 5) is also included to ascertain the technical feasibility of the subject S16 application.
- 1.3.2 The tentative intake year of the proposed development is 2029, which is consistent with that assumed under the Approved Scheme.
- 1.3.3 **Appendix 1.1** shows the indicative Master Layout Plan of the proposed development.

2. APPRAISAL WATER SUPPLY IMPACT ASSESSMENT

2.1 Discussion

- 2.1.1 As mentioned in **Section 1.1.3**, carpark would be accommodated on G/F and 1/F. Other major development parameters including GFA, PR and number of residential units would not be changed. The tentative intake year of the proposed development is 2029, which is consistent with that assumed under the Approved Scheme. Accordingly, connections will be made to the existing freshwater watermains and reclaimed watermains to serve the Application Site and the existing freshwater mains inside the proposed lot would be either demolished or diverted outside the site boundary as proposed in the previous WSIA report. The assumptions, calculations and no upgrading works of the existing pumping stations, service reservoirs and water mains recommended in the previous WSIA report are considered to remain applicable. The assessment of the previous WSIA report is extracted and provided in **Appendix 2.1**.

3. OVERALL CONCLUSION

- 3.1.1 Referring to the WSIA, connections will be made to the existing freshwater watermains and reclaimed watermains to serve the Application Site. Existing freshwater mains inside the proposed lot would be either demolished or diverted outside the site boundary. No upgrading works of the existing pumping stations, service reservoirs and water mains are recommended.

Figures

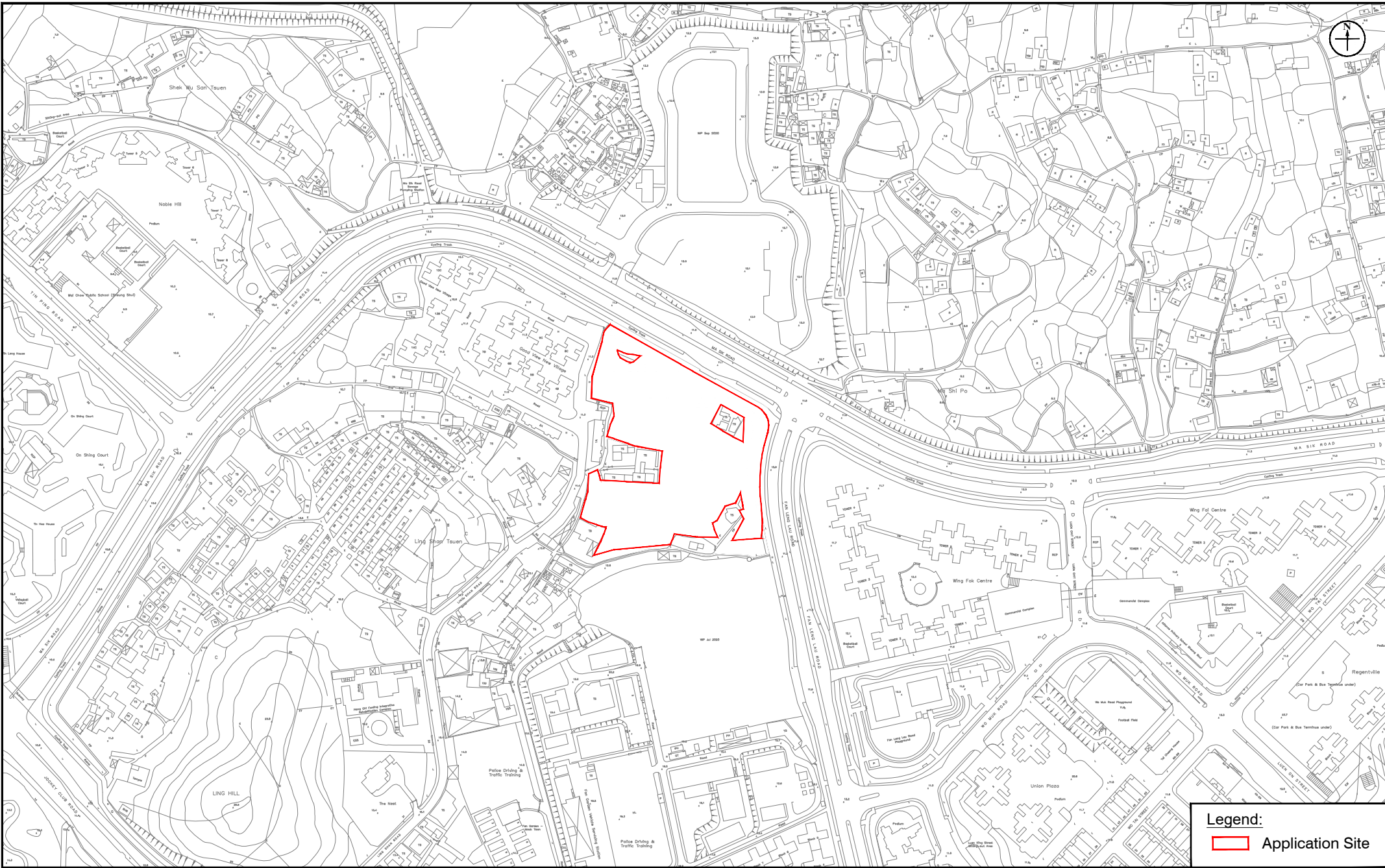
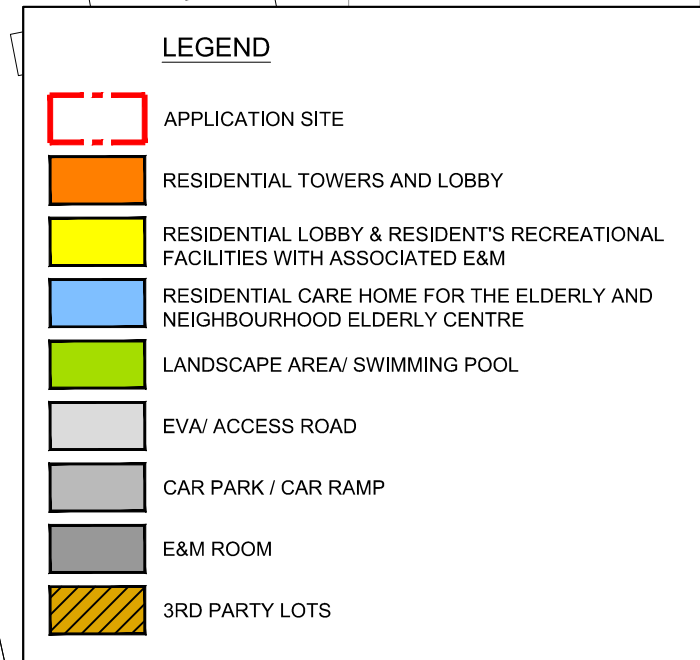


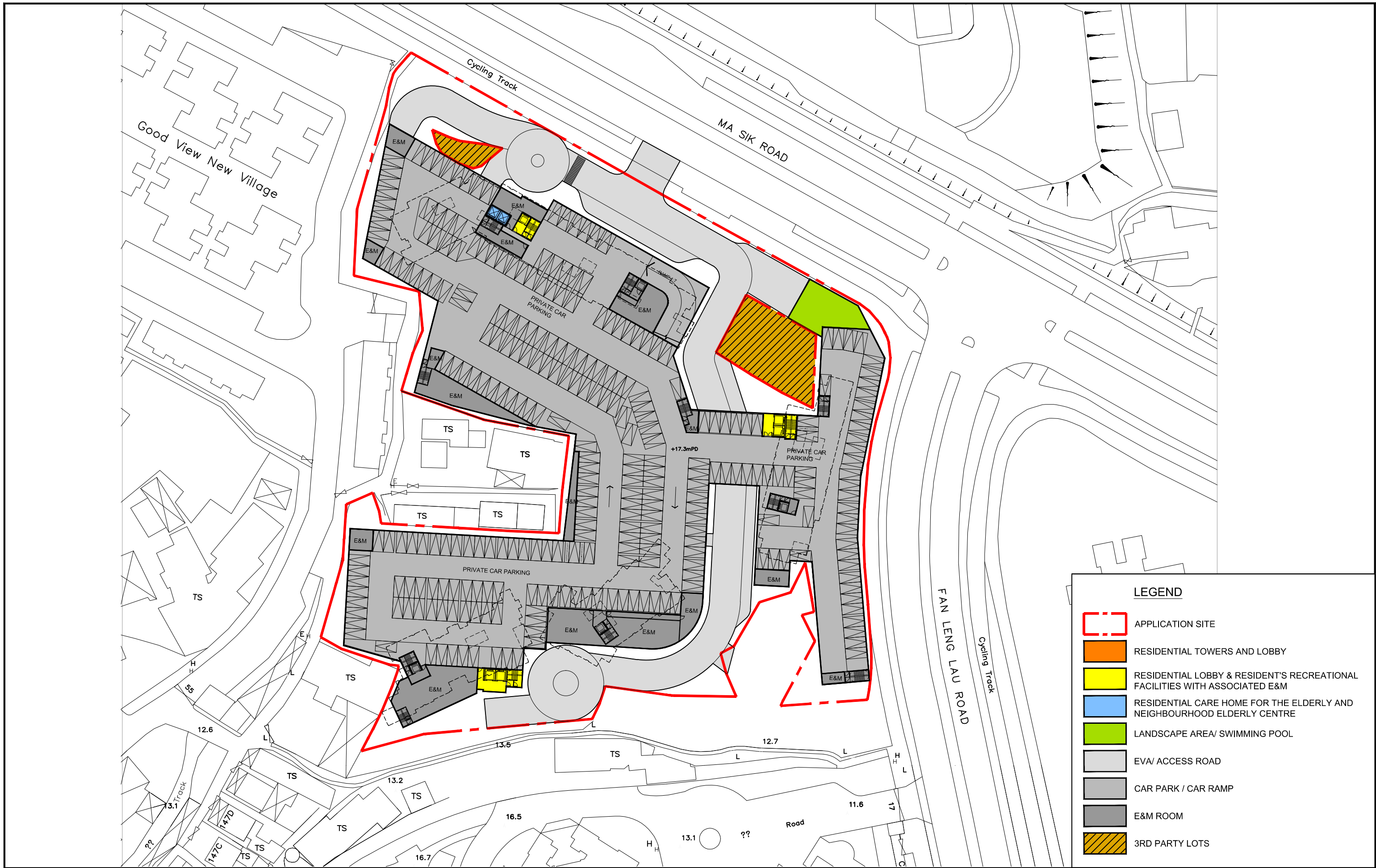
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Project: Section 16 Planning Application for Proposed Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Flat Development with Social Welfare Facility and Public Vehicle Park (Proposed Amendments to an Approved Scheme under Application No. A/FSS/294) at Varous Lots in D.D. 51 and Adjoining Governmnet Land at Ma Sik Road, Fanling		Checked by: BF	
		Rev.: 1.0	
		Date: Aug 2026	

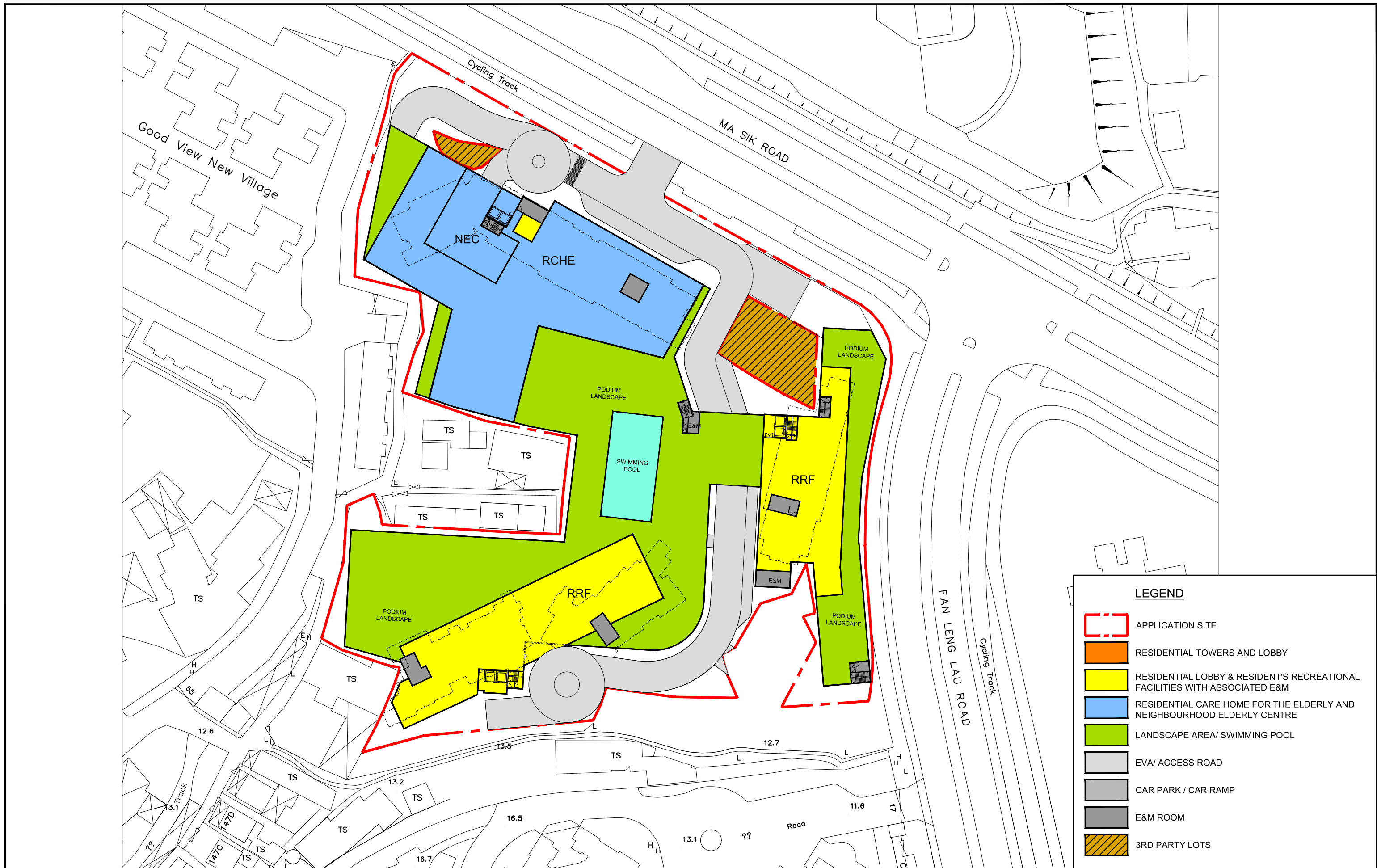
Appendix 1.1 Master Layout Plan of the Proposed Development



INDICATIVE BLOCK PLAN

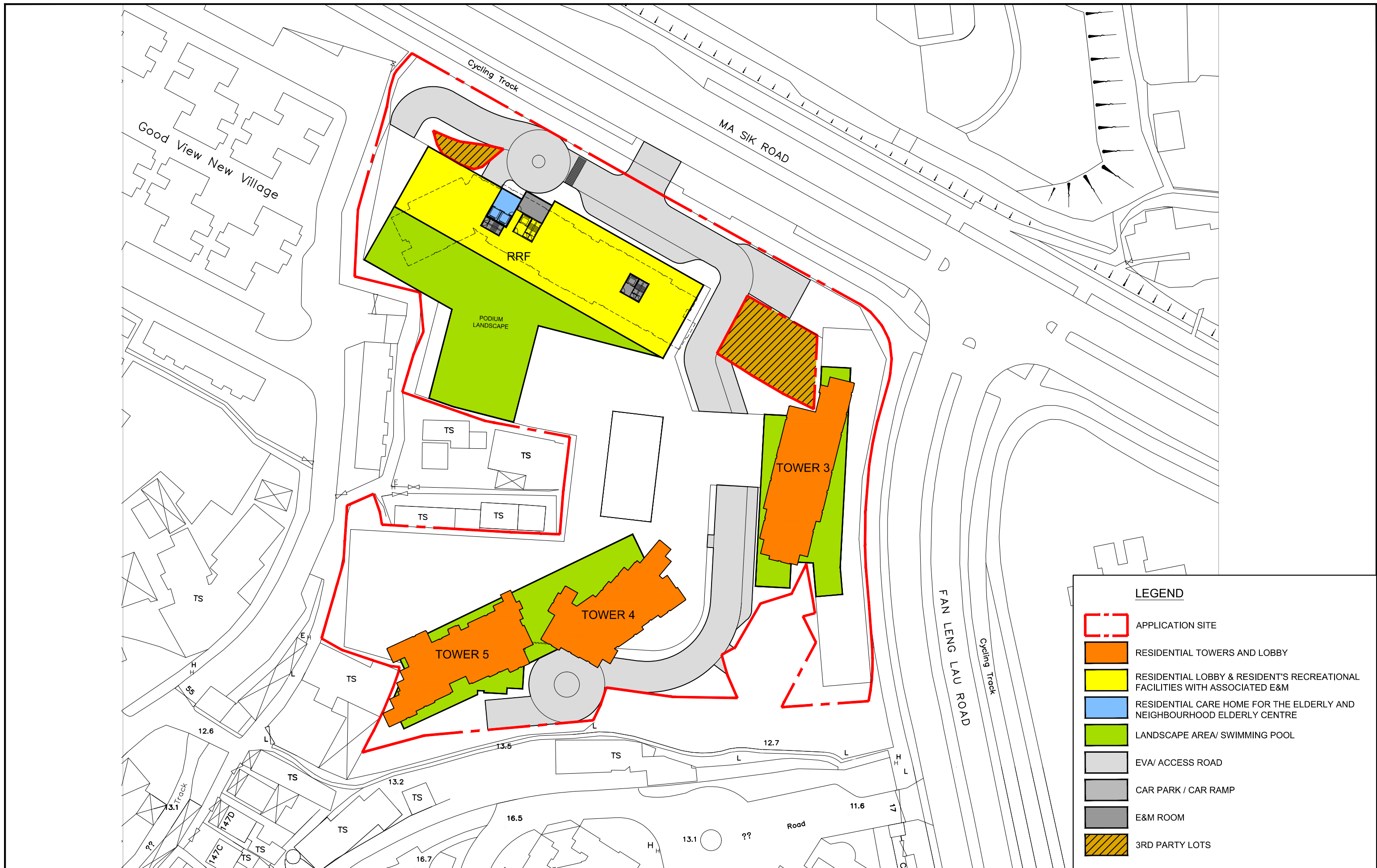
18/08/2026
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PROPOSED RESIDENTIAL DEVELOPMENT CUM SOCIAL WELFARE FACILITY AND PUBLIC VEHICLE PARK
AT VARIOUS LOTS IN DD51, MA SIK ROAD, FANLING

INDICATIVE SECOND FLOOR PLAN

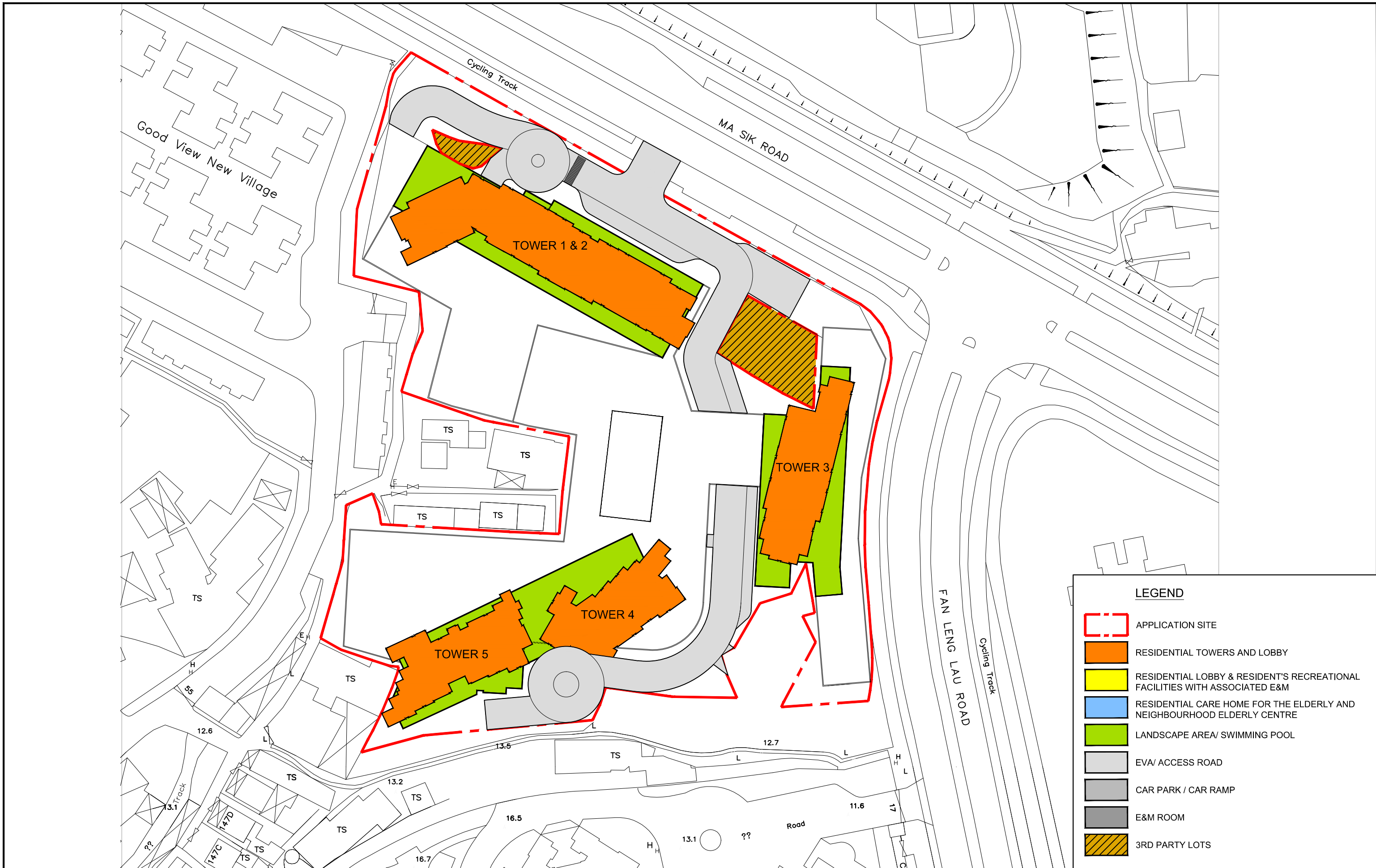


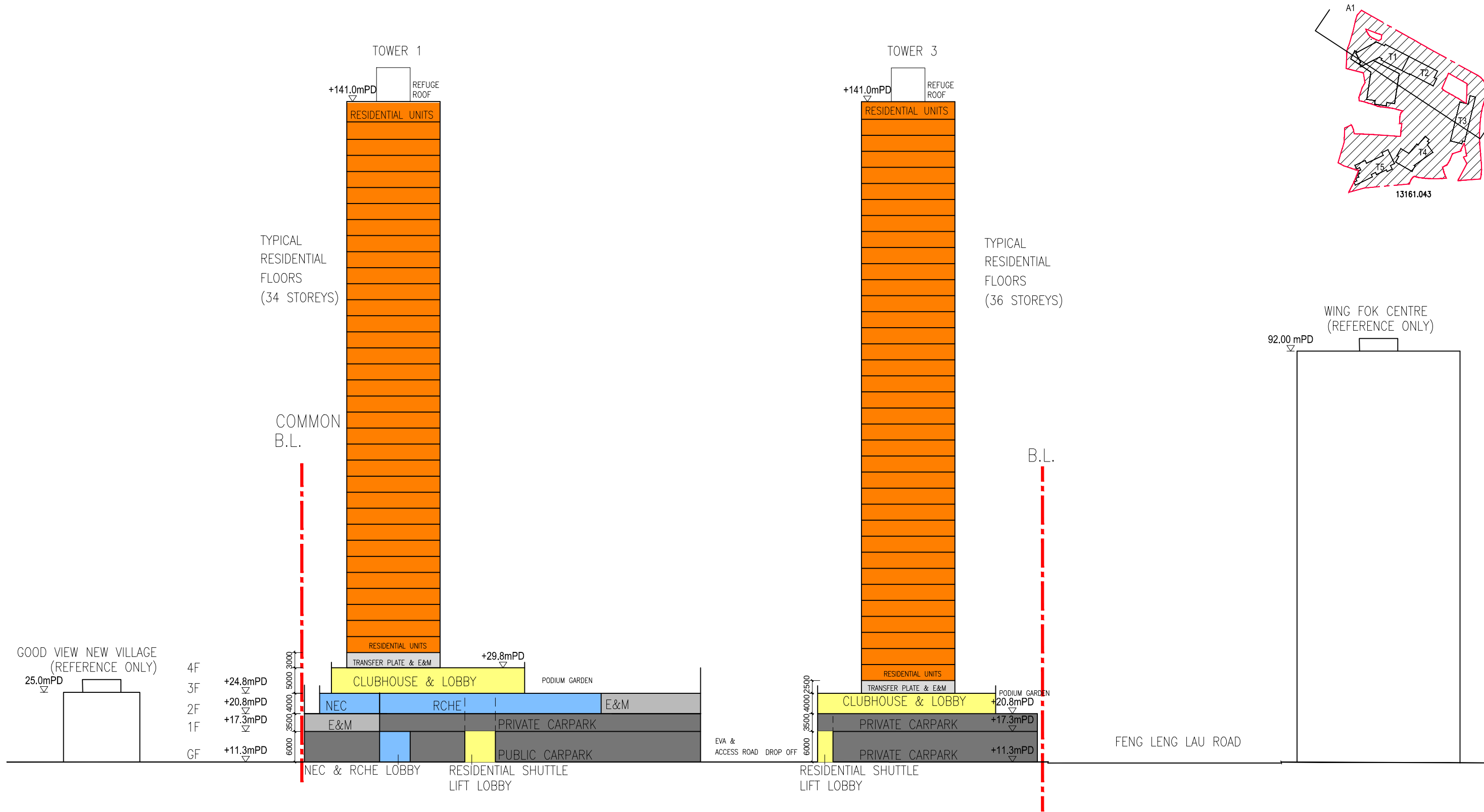
LEGEND

- APPLICATION SITE
- RESIDENTIAL TOWERS AND LOBBY
- RESIDENTIAL LOBBY & RESIDENT'S RECREATIONAL FACILITIES WITH ASSOCIATED E&M
- RESIDENTIAL CARE HOME FOR THE ELDERLY AND NEIGHBOURHOOD ELDERLY CENTRE
- LANDSCAPE AREA/ SWIMMING POOL
- EVA/ ACCESS ROAD
- CAR PARK / CAR RAMP
- E&M ROOM
- 3RD PARTY LOTS

PROPOSED RESIDENTIAL DEVELOPMENT CUM SOCIAL WELFARE FACILITY AND PUBLIC VEHICLE PARK
AT VARIOUS LOTS IN DD51, MA SIK ROAD, FANLING

INDICATIVE THIRD FLOOR PLAN





SECTION A1-A1'

PROPOSED RESIDENTIAL DEVELOPMENT CUM SOCIAL WELFARE FACILITY AND PUBLIC VEHICLE PARK
AT VARIOUS LOTS IN DD51, MA SIK ROAD, FANLING

Appendix 2.1 Water Supply Impact Assessment Extracted from Previous WSIA

2. WATER SUPPLY IMPACT ASSESSMENT

2.1 Scope of Work

- 2.1.1 The aim of this study is to estimate potable and flushing water demand arising from the proposed development and other arrangement such as connection.

2.2 Information Available for the Study

- 2.2.1 Reference has been made to the WSD Departmental Instruction (DI) 1309 (where available).

2.3 Assessment Criteria and Methodology

- 2.3.1 There is existing freshwater main in the vicinity of the Application Site. As information from WSD provided, there will be reclaimed water supply to the Application Site. The existing water supply network is shown in **Figure 2.1** and **Figure 2.2**.
- 2.3.2 WSD DI 1309 sets out the design criteria for water supplies in Hong Kong and includes unit water demands for various classes of consumer, including different types of residential density zones and commercial consumers.
- 2.3.3 For this WSIA, WSD's data from DI 1309 has been referenced to provide unit water demands for the various population categories.
- 2.3.4 The unit water demand has been combined with the relevant development parameters to assess the future water demands, from which the potential impacts have been assessed. Calculations for the water demands of the Indicative Scheme are included in **Appendix 2.2**.

2.4 Assessment of Water Demand

- 2.4.1 As shown in **Appendix 2.2**, the mean daily demand (MDD) from the proposed development will amount to about 1,858.0 m³/day of fresh water and 568.3 m³/day of flushing water.

2.5 Proposed Water Supply System

- 2.5.1 There is an existing Ø400 mm freshwater main on the north-eastern side of the Application Site near the location of main entrance. To supply freshwater to the Application Site, it is proposed to lay new connections to this existing freshwater main to serve the Application Site. **Figure 2.1** shows proposed freshwater supply scheme. A Ø200 mm internal water pipe is proposed for freshwater supply.
- 2.5.2 As information from WSD, there will be propose reclaimed water supply serving the site. There is an Ø450 mm reclaimed water main on the north side of the Application Site and one Ø80 mm reclaimed water main will be connected to Ø150 mm reclaimed water main at Ma Sik Road. To supply flushing water to the Application Site, it is proposed to lay new connection (Ø80 mm flushing water main) to the existing reclaimed water main to serve the Application Site. **Figure 2.2** shows proposed flushing water supply scheme.
- 2.5.3 According to Manual of Mainlaying Practice (2012 Edition) by WSD, pipelines should be of sufficient size such that the maximum flow velocity under peak flow for both pumping mains and distribution mains should be less than 3 m/s. Peak factor of 3 for freshwater and peak factor of 2 for flushing water are adopted with reference to WSD DI 1309.
- 2.5.4 A hydraulic assessment (**Appendix 2.2**) is conducted to determine the peak flow velocity and the friction head loss of the proposed freshwater supply system. The peak

flow velocity of the proposed Ø200 mm freshwater main is 2.05 m/s, which is under the maximum peak flow velocity (3 m/s). The friction head of the proposed freshwater main is 5.1 m.

- 2.5.5 A hydraulic assessment (**Appendix 2.2**) is conducted to determine the peak flow velocity and the friction head loss of the proposed flushing water supply system. The peak flow velocity of the proposed Ø80 mm flushing water main is 2.62m/s, which is under the maximum peak flow velocity (3m/s). The friction head of the proposed flushing water main is 0.43 m.
- 2.5.6 No upgrading works of the existing pumping stations, service reservoirs and water mains are therefore recommended.
- 2.5.7 The proposed water pipe will be aligned along the pavement outside of the Site and internal access road within the Site so that no foreseeable problem on this alignment is anticipated. Existing water mains inside the proposed lot would be either demolished or diverted outside the site boundary (**Figure 2.1**). Details of the internal water supply system for fresh and flushing water supply, the proposed connection to the public water supply system and the proposed alignment of the water main diversion is for indicative purpose only and would be finalized in the detailed design stage.

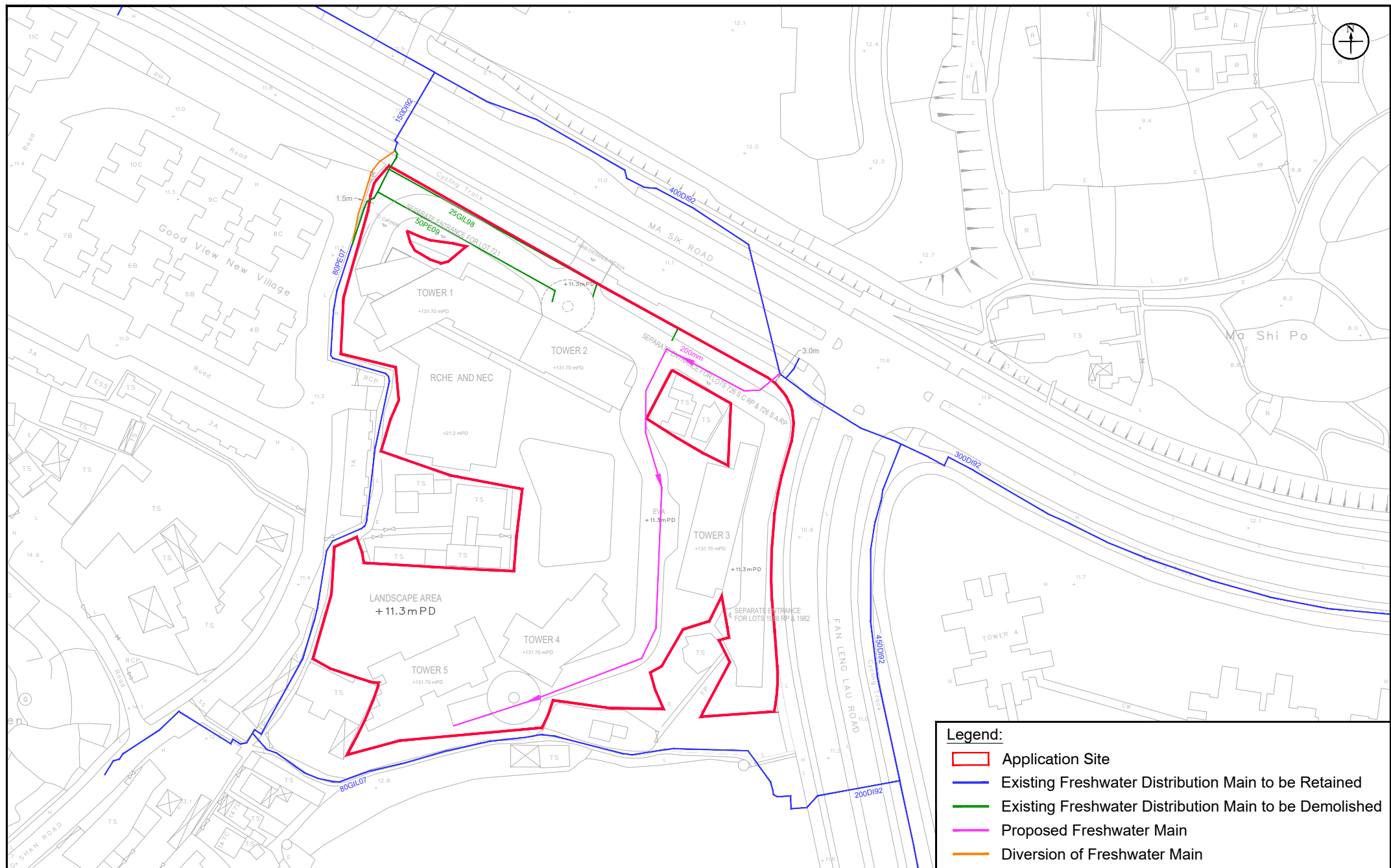


Figure: 2.1	RAMBOLL
Title: Existing and Proposed Freshwater Supply System	Drawn by: MW
Project: S16 Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Residential Development with Social Welfare Facilities at Varous Lots in D.D. 51 and Adjoining Governmnet Land at Ma Sik Road, Fanling, New Territories	Checked by: BF
	Rev.: 2.2
	Date: Jan 2024

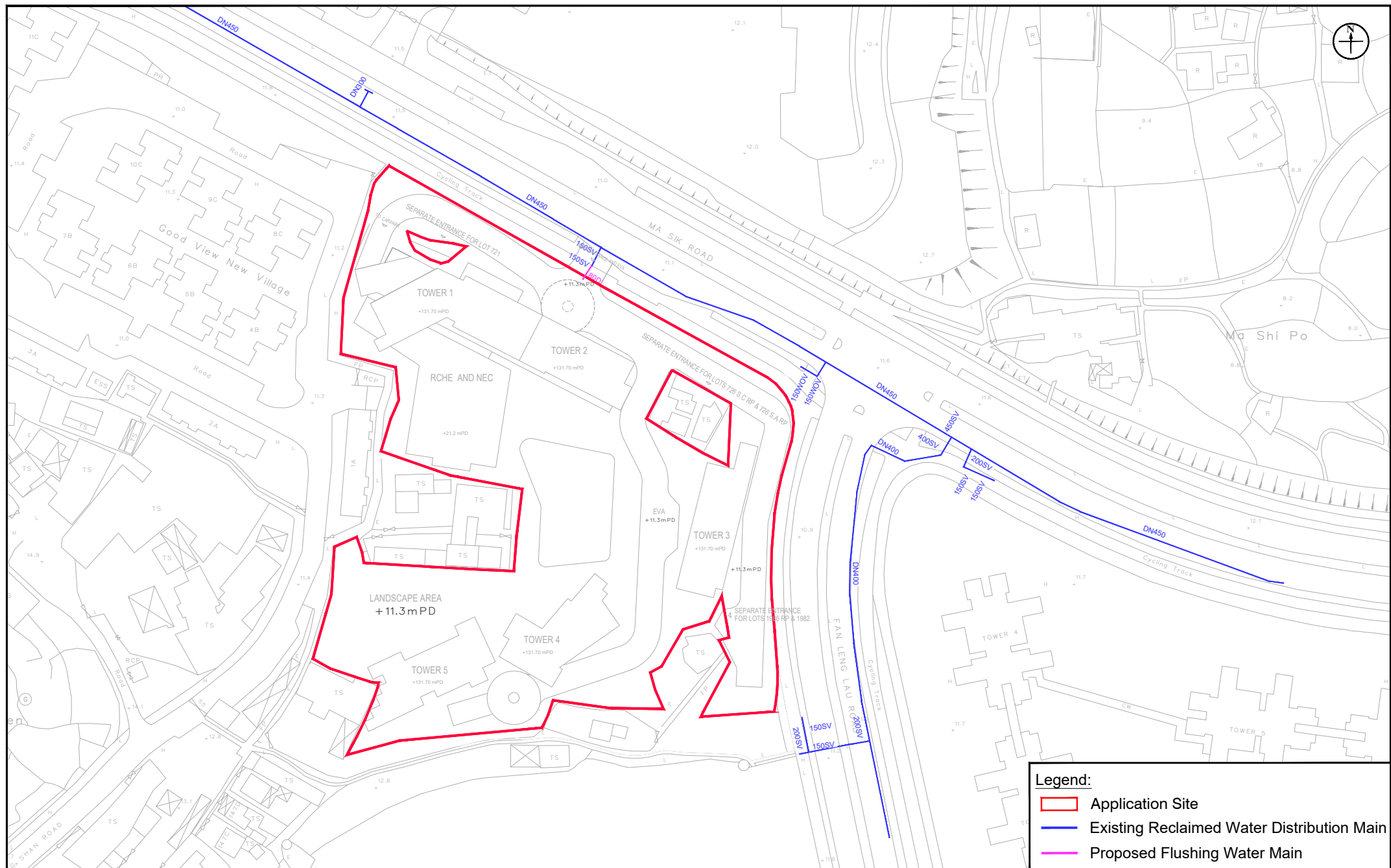


Figure: 2.2	RAMBOLL
Title: Existing and Proposed Flushing Water Supply System	Drawn by: MW Checked by: BF
Project: S16 Minor Relaxation of Plot Ratio and Building Height Restrictions for Permitted Residential Development with Social Welfare Facilities at Varous Lots in D.D. 51 and Adjoining Governmnet Land at Ma Sik Road, Fanling, New Territories	Rev.: 2.1 Date: Oct 2023

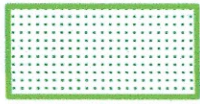
Appendix 2.1 Records Obtained from Water Supplies Department



- 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. 3986.
 5. NO EXISTING SALT WATER MAINS IN THE VICINITY OF THE SITE.
 6. NO EXISTING WSD CABLE IN THE VICINITY OF THE SITE.
 7. NO PROPOSED WSD CABLE IN THE VICINITY OF THE SITE.
 8. THE SITE IS NOT WITHIN WSD GATHERING GROUNDS.
 9. NO WSD LAND ALLOCATION / WWR WITHIN THE SITE AREA.
 10. NO WSD SLOPES ARE AFFECTED IN THE VICINITY OF THE SITE.

PART COPY OF FRESH WATER MAINS RECORD PLAN(S)

SUBJECT SITE



W67890/3-SW-2C, 2D, 7A, 7B, 7C & 7D

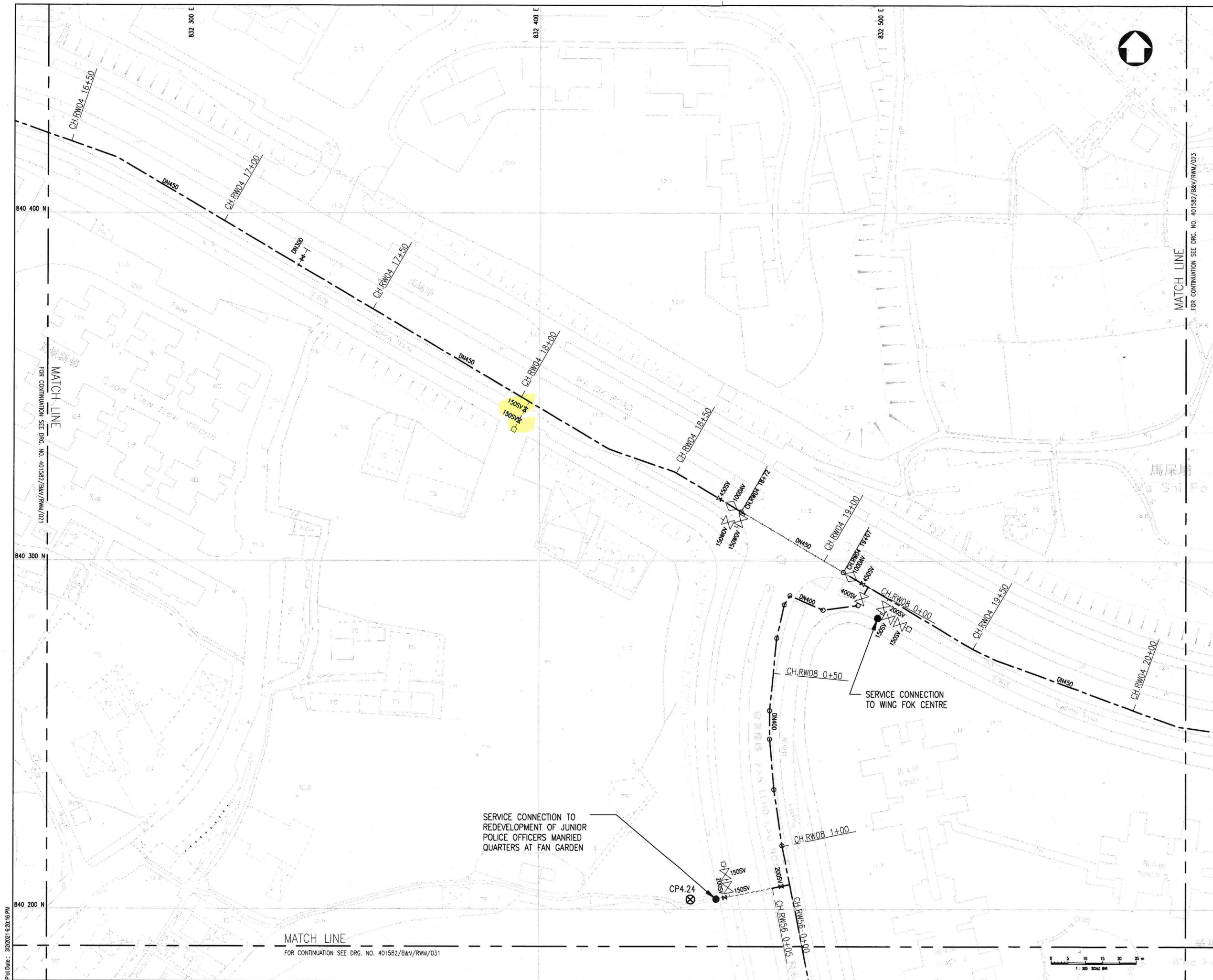
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SHEET 1 OF 1

SCALE 1:1500



水務署
Water Supplies Department



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NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
- ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
- EXACT LOCATION OF CONVERSION POINTS TO BE DETERMINED ON SITE AND ACCEPTED BY THE PROJECT MANAGER.

LEGEND:

- PROPOSED RECLAIMED WATER MAIN TO BE LAID BY OPEN-CUT METHOD
- PROPOSED RECLAIMED WATER MAINS TO BE LAID BY TRENCHLESS METHOD
- PROPOSED RECLAIMED WATER MAIN WITH LEAKAGE COLLECTION SYSTEM TO BE LAID BY OPEN-CUT METHOD
- 150SV PROPOSED 150 NOMINAL DIA. SLUICE VALVE
- 50GV PROPOSED 50 NOMINAL DIA. GATE VALVE
- 25SAV PROPOSED 25 NOMINAL DIA. SINGLE AIR VALVE
- 100DAV PROPOSED 100 NOMINAL DIA. DOUBLE AIR VALVE
- PROPOSED LEAKAGE COLLECTION MANHOLE
- 150FM PROPOSED 150 NOMINAL DIA. FLOWMETER
- 150PRV PROPOSED 150 NOMINAL DIA. PRESSURES REDUCING VALVE
- 150STR PROPOSED 150 NOMINAL DIA. TN-LINE STRAINER
- 600IT PROPOSED 600 NOMINAL DIA. INSPECTION TEE
- PROPOSED TAPER
- PROPOSED SWAN NECK FIRE HYDRANT
- PROPOSED PEDESTAL FIRE HYDRANT
- 80WV PROPOSED 80 NOMINAL DIA. WASHOUT VALVE
- PROPOSED DOUBLE AIR VALVE ON INSPECTION TEE
- BLANK FLANGE
- CP2.01 CONVERSION POINTS FOR DEVELOPMENT

Revision	Date	Description	Initial	
Initial	WH	TL	SZ	GC
Date	02/21	02/21	02/21	02/21

Approved

Contract No. 3/WSD/20

Contract Title RECLAIMED WATER SUPPLY TO SHEUNG SHUI AND FANLING

Drawing Title PROPOSED RECLAIMED WATER MAINS - ALIGNMENT PLAN

(SHEET 22 OF 51)

Drawing No. 401582/B&V/RWM/AL/022

Scale A1 1 : 500

水務署 Water Supplies Department

binnies BINNIES HONG KONG LIMITED 賓尼新工程顧問有限公司

Appendix 2.2 Detailed Water Supply Impact Assessment Calculations

Future Water Demands of the Subject Site

				Freshwater		Flushing Water	
		Type of Use	Population (head)	Daily Unit Demand ⁽¹⁾ (m ³ /head/day)	Daily Demand (m ³ /day)	Daily Unit Demand ⁽¹⁾ (m ³ /head/day)	Daily Demand (m ³ /day)
Future (Subject Site)	Residential Development	Residential Density Zone R2	5125	0.340	1742.36	0.104	532.96
	Residential Development of 3 rd Parties Lots	Residential Density Zone R2	340	0.340	115.67	0.104	35.38
					1858.0		568.3

Total Freshwater Demand (m³/day) = 1858.0

Total Flushing Water Demand (m³/day) = 568.3

Remarks:

(1) Water Supplies Department Departmental Instruction 1309. Service Trade of 0.040 m³/head/day (Fanling/Sheung Shui) adopted.

Hydraulic Assessment of the Proposed Water Supply System

Freshwater Supply System

Portion	Diameter (mm)	Material	Length (m)	Hazen-Williams Coefficient	Peak factor	Q (cu. m/day)	Factored Q (cu. m/s)	Area (m ²)	Velocity (m/s)	Status	HL/Length	HL (m)
Proposed Freshwater Main	200	DI	182.0	110	3	1858.0	0.06	0.031	2.05	OK	0.028	5.1

Flushing Water Supply System

Portion	Diameter (mm)	Material	Length (m)	Hazen-Williams Coefficient	Peak factor	Q (cu. m/day)	Factored Q (cu. m/s)	Area (m ²)	Velocity (m/s)	Status	HL/Length	HL (m)
Proposed Flushing Water Main	80	DI	3.4	110	2	568.3	0.01	0.005	2.62	OK	0.128	0.43