

規劃署

粉嶺、上水及元朗東規劃處
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Planning Department

Fanling, Sheung Shui & Yuen Long East
District Planning Office
Unit 2202, 22/F, CDW Building,
388 Castle Peak Road, Tsuen Wan, N.T.

來函檔號 Your Reference : S3114/YPR_LPH/23/007Lg
本署檔號 Our Reference : () in TPB/A/YL-MP/341
電話號碼 Tel. No. : 3168 4072
傳真機號碼 Fax No. : 3168 4074 / 3168 4045

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| INWARD | |
| Recd: | 20 SEP 2024 |
| KT | |
| PL | M |
| DF | |
| KW | |
| GN | |
| CL | |

13 September 2024



Dear Madam,

Compliance with Approval Condition (f) Submission of a Revised Sewerage Impact Assessment

**Proposed Temporary Light Public Housing Development for a Period of 3 Years and
Associated Filling and Excavation of Land in "Recreation" and "Residential (Group C)"
Zones, Various Lots in D.D. 104 and Adjoining Government Land,
Yau Pok Road, Mai Po, Yuen Long
(Planning Application No. A/YL-MP/341)**

I refer to your submission dated 5.8.2024 regarding the submission of a revised sewerage impact assessment for compliance with approval condition (f). Your submission is considered:

- Acceptable. The captioned condition has been complied with. Please find detailed departmental comments in *Appendix*.
- Acceptable. Since the captioned condition requires both the submission and implementation of the proposal, it has not been fully complied with. Please proceed to implement the accepted proposal for full compliance with the approval condition.
- Not acceptable. The captioned condition has not been complied with.

Should you have any queries, please contact Ms. Jolitta CHAN (Tel: 2835 1112) of Environmental Protection Department or Mr. Terence TANG (Tel: 2300 1257) of the Drainage Services Department directly.

Yours sincerely,



(Josephine LO)
District Planning Officer/
Fanling, Sheung Shui and Yuen Long East
Planning Department

c.c.

DEP
CE/MN, DSD
CTP/TPB(3)

(Attn: Ms. Jolitta CHAN)
(Attn: Mr. Terence TANG)

JL/ckl

Appendix

Detailed comments of the CE/MN, DSD:

- (i) Should there be any changes of design parameters in the course of the development which would materially affect the validity of the sewerage impact assessment (SIA) report, the applicant should review/ revise the SIA report and submit it to the Planning Department and Drainage Services Department for comment.
- (ii) The applicant is required to rectify the sewerage system if they are found to be inadequate or ineffective during operation. The applicant shall also be liable for and shall indemnify claims and demands arising out of damage or nuisance caused by a failure of the sewerage system.

By Email

Our Ref: S3114/YPR_LPH/23/002Lg

29 February 2024

Fanling, Sheung Shui &
Yuen Long East District Planning Office
Planning Department
Unit 2202
22/F CDW Building
388 Castle Peak Road
Tsuen Wan, N.T..

Attn: Mr Gary Lam

Dear Gary,

**S16A(2) Application for Amendment to Permission
Approved Temporary Light Public Housing Development For a Period of 3 Years
at Various Lots in DD 104 and the Adjoining Government Land,
Yau Pok Road, Yuen Long
TPB Ref.: AYL-MP/341
- Discharge of Approval Condition (f) -**

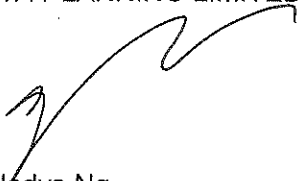
Reference is made to the S16 Planning Application approved by the Town Planning Board on 9 June 2023. We hereby submit information to facilitate compliance with the following Planning Approval Condition:

(f) – *“the submission of a revised sewerage impact assessment within 9 months from the date of planning approval to the satisfaction of the Director of Drainage Services and the Director of Environmental Protection or of the TPB by 9.3.2024”*

Meanwhile, should you have any queries in relation to the attached, please do not hesitate to contact Mr Kenneth To or the undersigned at [REDACTED]

Thank you for your kind attention.

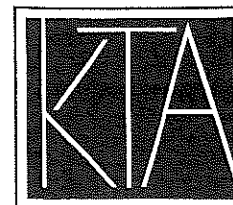
Yours faithfully
For and on behalf of
KTA PLANNING LIMITED


Gladys Ng

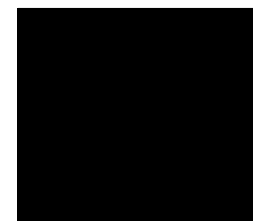
Encl.

cc. the Applicant & Team

KT/GN/vy



PLANNING LIMITED
規劃顧問有限公司



FS 579819

By Email

Our Ref: S3114/YPR_LPH/23/005Lg

8 May 2024

Fanling, Sheung Shui &
Yuen Long East District Planning Office
Planning Department
Unit 2202
22/F CDW Building
388 Castle Peak Road
Tsuen Wan, N.T..

Attn: Mr Gary Lam

Dear Gary,

**S16A(2) Application for Amendment to Permission
Approved Temporary Light Public Housing Development For a Period of 3 Years
at Various Lots in DD 104 and the Adjoining Government Land,
Yau Pok Road, Yuen Long
TPB Ref.: A/YL-MP/341
- Discharge of Approval Condition (f) -**

Reference is made to the S16 Planning Application approved by the Town Planning Board on 9 June 2023, submission of Sewerage Impact Assessment on 29 February 2024 and comments received from the Environmental Protection Department on 12 March 2024.

In response to the comments received, we hereby submit a Response-to-Comment Table and a revised Sewerage Impact Assessment for the consideration by the Environmental Protection Department.

Meanwhile, should you have any queries in relation to the attached, please do not hesitate to contact Mr Kenneth To or the undersigned at [REDACTED].

Thank you for your kind attention.

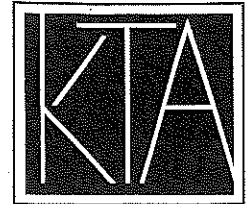
Yours faithfully
For and on behalf of
KTA PLANNING LIMITED


Gladys Ng

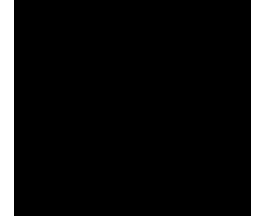
Encl.

cc. the Applicant & Team

KT/GN/vy



PLANNING LIMITED
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FS 579819

By Email

Our Ref: S3114/YPR_LPH/23/007Lg

5 August 2024

Fanling, Sheung Shui &
Yuen Long East District Planning Office
Planning Department
Unit 2202
22/F CDW Building
388 Castle Peak Road
Tsuen Wan, N.T..

Attn: Ms Jane Lau

Dear Jane,

**S16A(2) Application for Amendment to Permission
Approved Temporary Light Public Housing Development For a Period of 3 Years
at Various Lots in DD 104 and the Adjoining Government Land,
Yau Pok Road, Yuen Long
TPB Ref.: A/YL-MP/341
- Discharge of Approval Condition (f) -**

Reference is made to the S16 Planning Application approved by the Town Planning Board on 9 June 2023, submission of Sewerage Impact Assessment on 8 May 2024 and comments received from the Environmental Protection Department on 21 May 2024.

In response to the comments received, we hereby submit a Response-to-Comment Table and a revised Sewerage Impact Assessment for the consideration by the Environmental Protection Department.

Meanwhile, should you have any queries in relation to the attached, please do not hesitate to contact Mr Kenneth To or the undersigned at [REDACTED].

Thank you for your kind attention.

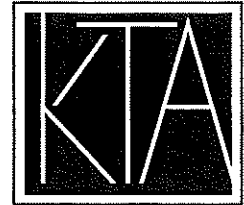
Yours faithfully
For and on behalf of
KTA PLANNING LIMITED


Gladys Ng

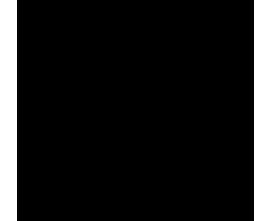
Encl.

cc. the Applicant & Team

KT/GN/vy



PLANNING LIMITED
規劃顧問有限公司



FS 579819



Prepared by
Ramboll Hong Kong Limited

DESIGN AND CONSTRUCTION OF LIGHT PUBLIC
HOUSING AT YAU POK ROAD, YUEN LONG

SEWERAGE IMPACT ASSESSMENT

Date August 2024

Prepared by Gary Yuen
Environmental Consultant

Signed 

Approved by Steve Lo
Principal Consultant

Signed 

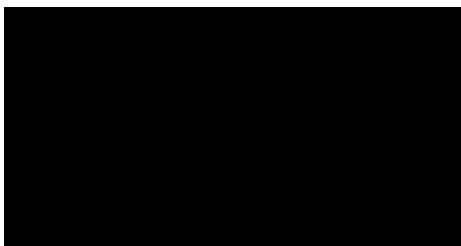
Project Reference CHEM518-ED00

Document No. R9292_v1.2

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Ramboll Hong Kong Limited



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1. INTRODUCTION

1.1 Background

- 1.1.1 The Applicant is responsible for the design and construction of the Light Public Housing (hereafter as "LPH") Development on a 3-year temporary basis (hereafter as "Proposed Development"), located at Yau Pok Road, Yuen Long (hereafter as "the Application Site").
- 1.1.2 Ramboll Hong Kong Limited is commissioned to prepare this Sewerage Impact Assessment (SIA) for the Indicative Scheme at the Application Site. This SIA report has been prepared with respect to the Indicative Scheme to assess the likely sewerage flows from the Indicative Scheme and measures for proper disposal.
- 1.1.3 The design of the indicative schematic design and other technical information on the Indicative Scheme are provided by the Project Architect.

1.2 Project Location and Scope

- 1.2.1 The Application Site is located at East of Fairview Park in Yuen Long, abutting Yau Pok Road. The location of the Site is shown in Figure 1.
- 1.2.2 The majority of the Application Site is currently a vacant land with site clearance done.

1.3 Indicative Scheme

- 1.3.1 The Proposed Development is divided into two zones and comprises 10 three-storey LPH blocks to offer a total of 2,161 residential units for home of about 5,100 population. The Proposed Development also offer ancillary facilities including management office and retail shops.
- 1.3.2 In this Sewerage Impact Assessment, in the aim of providing a conservative estimation of the sewage generation by the Indicative Scheme, maximum designated population of units of the LPH (i.e. 2 and 4 population for 1-2P units and 3-4P units respectively) are used in this assessment.
- 1.3.3 Table 1 shows the key development parameters relevant to this assessment by zones for consolidation purpose.

Table 1 Key Development Parameters by Zones

| Key Development Parameters | Zones | |
|---|----------------------|----------------------|
| | <u>1</u> | <u>2</u> |
| No. of 1-2P units | 939 | 833 |
| No. of 3-4P units | 181 | 208 |
| Total no. of Residential Units | 1120 | 1041 |
| Designated Max Population* | 2602 | 2498 |
| Community Services | Yes | Yes |
| Community Services GFA | 80.5 m ² | 83.4 m ² |
| Retail | Yes | Yes |
| Total Retail GFA | 272 m ² | 244.1 m ² |
| F&B GFA | 89.6 m ² | 0 m ² |
| Non-F&B GFA | 182.4 m ² | 244.1 m ² |
| * For conservative approach, it is assumed that the designated number of residents would be at maximum (i.e. 2 for 1-2P units and 4 for 3-4P units), such that the calculation of sewage generation rate would be presented in the worst scenario. In this regard, according to the number of flats shown in Table 1, the total assumed population of the indicative scheme of the Application Site would be 5,100. | | |

1.3.4 The Master Layout Plan, floor plans and sections of the Indicative Scheme are shown in Appendix A.

1.4 Planning and Implementation Programme

1.4.1 The Project will be planned and implemented under the supervision of appropriately qualified and experience professionals. The construction of any works for the Project will be carried out by the Applicant.

1.4.2 The Proposed Development is anticipated to begin operation in Year 2025. The LPH is planned to operate for three years.

2. SEWERAGE IMPACT ASSESSMENT

2.1 Scope of Work

- 2.1.1 The Application Site has no existing connection to the public sewerage system.
- 2.1.2 The aim of this study is to assess whether the existing sewerage facilities serving the Application Site area are sufficient to cope with the sewerage flow from the Proposed Development and, if appropriate, to identify necessary improvement works and/or alternative disposal options.

2.2 Assessment Criteria and Methodology

- 2.2.1 Reference has been made to DSD Drainage Record Plans, which cover the vicinity of the Application Site. Figure 2 shows the existing sewerage arrangement.
- 2.2.2 Based on the information collected from DSD Drainage Record Plans and site inspection, no existing sewerage system is found within the Application Site. The nearby developments such as local villages are all served by their own sewage treatment facilities such as septic tanks/soak away facilities or secondary treatment works.
- 2.2.3 Reference has also been made to DSD's Sewerage Manual, Part I and EPD's Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning (GESF).

2.3 Wastewater generated by the Indicative Scheme

- 2.3.1 Sewage flows arising from the Indicative Scheme will be primarily contributed by the residential population, with some additional flows from the employees in the community services facilities and the retail shops at the Application Site.
- 2.3.2 The estimated peak discharge from the Indicative Scheme is set out in Appendix 3. Based on the worst-case scenario, the overall generated flow from the Indicative Scheme is expected to be approximately 995.4 m³/day, the estimated peak flow for the Indicative Scheme will be approximately 34.6 L/s.

2.4 Proposed Effluent Treatment

Proposed Sewage Pumping Station

- 2.4.1 As the Application Site is not served by any public sewerage, it is required to provide their own sewage treatment or disposal facilities to ensure the sewage can be discharged in a proper manner and hence achieving the best protection to the public and the nearby environment. On-site Sewage Pumping Stations (hereafter as "SPS") are recommended for the Indicative Scheme to be constructed on the Application Site to ensure the sewage generated from the Indicative Scheme will be discharged and pumped to nearby public pumping station for further treatment. The total design ADWF of the proposed SPS is 1056 m³/day (with the adopted pumping capacity of 0.064 m³/s). The SPS will then pump the generated sewage to the Nam Sang Wai Sewage Pumping Station ("NSWSPS") located at southeast side of the Proposed Development. It is demonstrated that the proposed SPS have sufficient capacity to cater for the sewage generated from the Proposed Development in the future.
- 2.4.2 The effluent discharge from the Proposed Development will be collected by the holding tank via underground drainage system by gravity. The sewage will be discharged to holding tanks with screening which will be constructed in dry-pit arrangement. The total maximum flow rate of north and south side shall not exceed 37 L/s. The sewage will then be diverted from the holding tank by sump pumps to the proposed SPS to be constructed by Drainage Services Department ("DSD"). Subsequently, the proposed SPS will pump the sewage through a proposed twin rising main to be constructed by DSD to NSWSPS. The sewage discharged from the Proposed Development is conveyed to Yuen Long Sewage Treatment Works ("YLSTW") for further treatment and ultimate disposal.
- 2.4.3 Based on the information provided by DSD, the design capacity of NSWSPS is 42,921 m³/day. The rolling average flow data from March 2022 to February 2023 showed that the existing flow handling by NSWSPS is 3,625 m³/day. With the Proposed Development, the total handling flow of NSWSPS will be 4681 m³/day, where only 10.76% of the capacity is occupied. NSWSPS has 3 pumps in total (2 duty, 1 standby) and design capacity for each NSWSPS's pump is 0.738 m³/s, while as mentioned in S.2.4.1, the pumping capacity of the proposed SPS will be 0.064 m³/s. Hence, the SPS has adequate pumping capacity for the sewage pumped from the proposed SPS. Therefore, the capacity of NSWSPS is adequate to cater for the additional flow from the operation of the Proposed Development.
- 2.4.4 The existing treatment capacity of the YLSTW is 35,000 m³/day due to upgrading works. Based on the data provided by DSD, the existing flow handling by the YLSTW based on the rolling average flow data from March 2022 to February 2023 is 24,709 m³/day, adding the sewage loading from the Proposed Development will only take up 73.61% in capacity of the YLSTW, which proven that no potential issue associated with increase in sewage generated by the Proposed Development. Upon completion of the stage 1 upgrading works, the treatment capacity of the YLSTW will be 100,000 m³/day.
- 2.4.5 Owing to sufficient capacity to cater for the additional sewage flow generated from the Proposed Development, no adverse impact to public sewerage system associated with the Proposed Development is anticipated.

Proposed Sewage Rising Main

- 2.4.6 After collection of the sewage generated within the Proposed Development by the proposed SPS, it will be conveyed by 200 mm diameter twin rising mains with total length of approximately 1700m to be laid adjacent to Ngau Tam Mei Open Channel along Yau Pok Road and Pok Wai South Road before its connection to the existing NSWSPS. The location of the SPS and the proposed rising mains are shown in Figure

2. The site level is lower which causes the gravity sewer incapable to gravitate the sewage to the NSWSPS. Hence, rising main is proposed to pump the sewage. The sewage rising main is designed with sufficient capacity to convey the sewage.

3. CONCLUSION

- 3.1.1 A Sewerage Impact Assessment (SIA) has been conducted to evaluate the potential impacts due to the sewage generation from the Indicative Scheme.
- 3.1.2 The estimated sewage generations from the Indicative Scheme will be approximately 995.4 m³/day.
- 3.1.3 The generated sewage from the Proposed Development will be collected and pumped by on-site sewage pumping stations through sewage rising main to the public Nam Sang Wai Sewage Pumping Station, and further delivered to Yuen Long Sewage Treatment Works for further treatment and ultimate disposal.
- 3.1.4 To conclude, there is no sewerage impact arising from the Indicative Scheme.

Figure

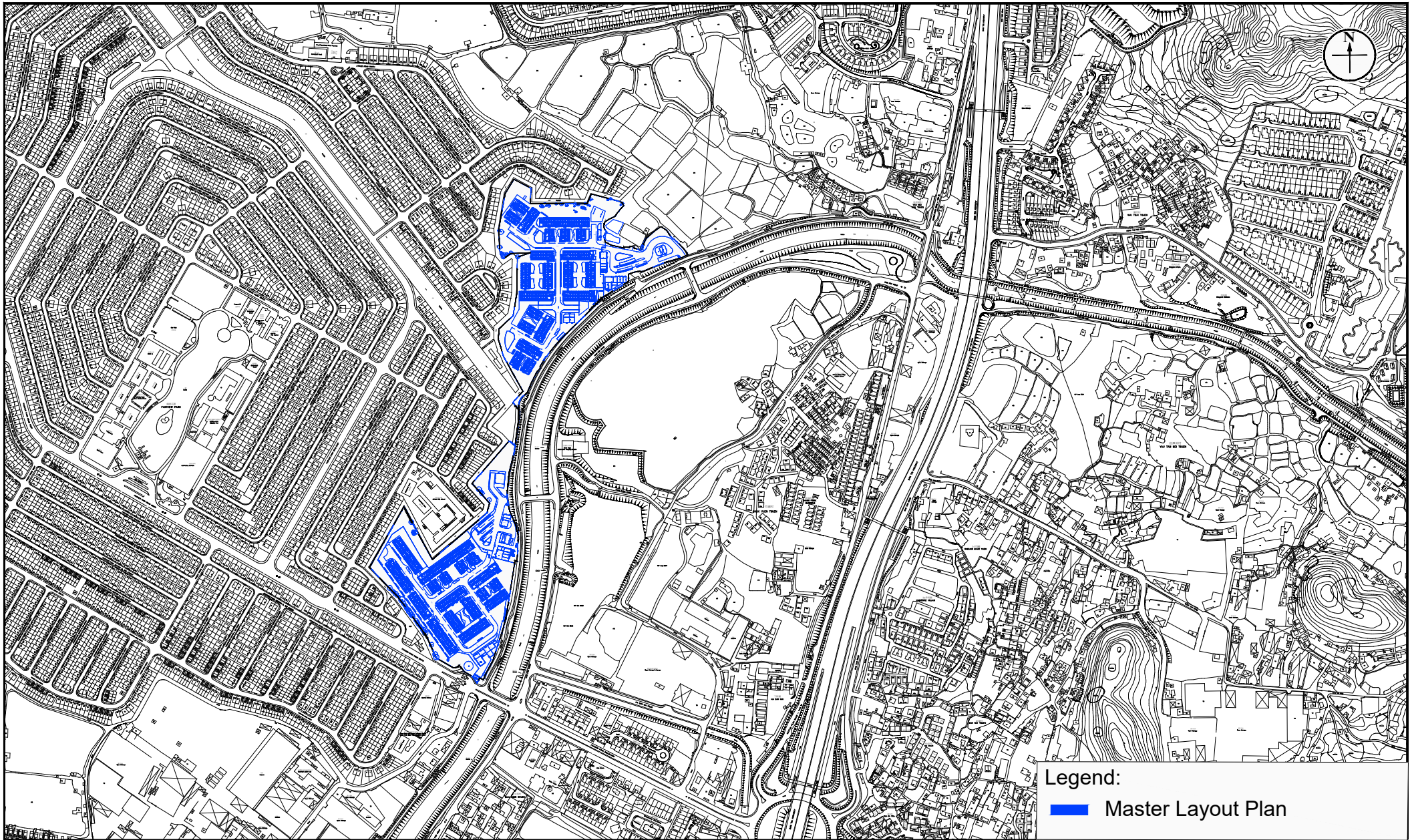


Figure: 1

Title: Location of the Application Site and its Environs

Project: Design and Construction of Light Public Housing at Yau Pok Road, Yuen Long

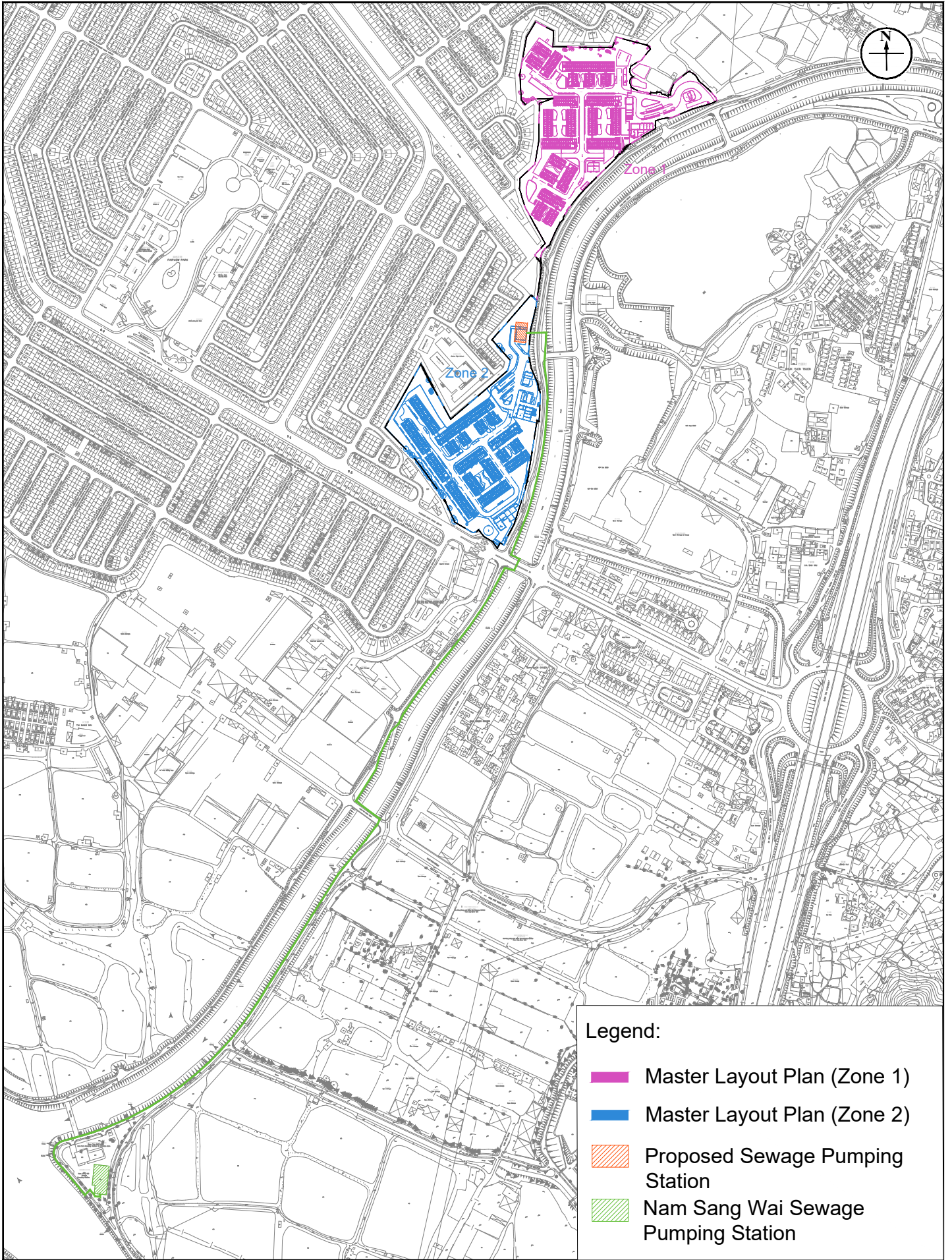
RAMBOLL

Drawn by: GY

Checked by: TC

Rev.: 1.0

Date: Jan 2024



Legend:

- Master Layout Plan (Zone 1)
- Master Layout Plan (Zone 2)
- Proposed Sewage Pumping Station
- Nam Sang Wai Sewage Pumping Station

Figure: 2

Title: Proposed Effluent Discharge Location

Project: Design and Construction of Light Public Housing at Yau Pok Road, Yuen Long



Drawn by: GY

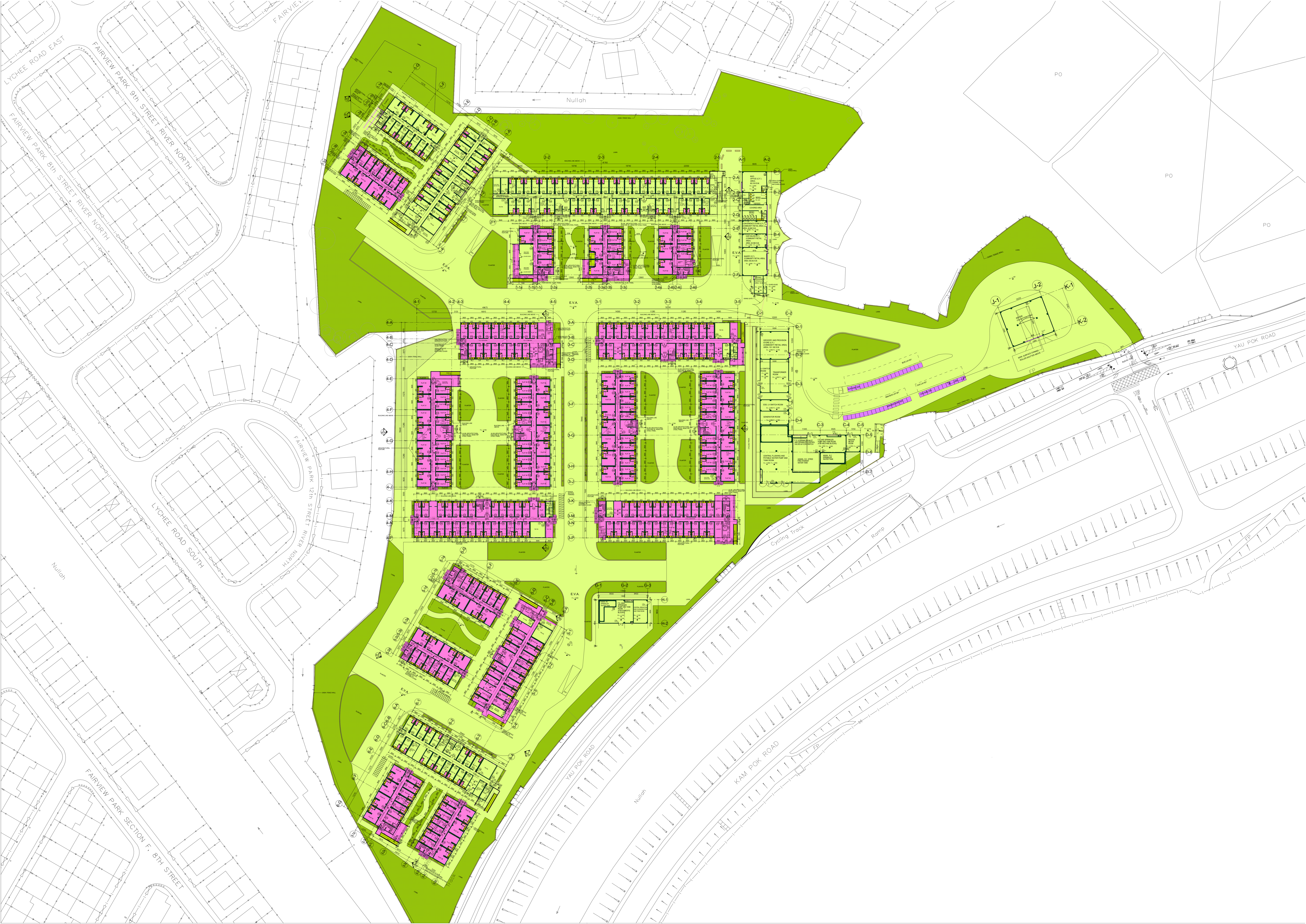
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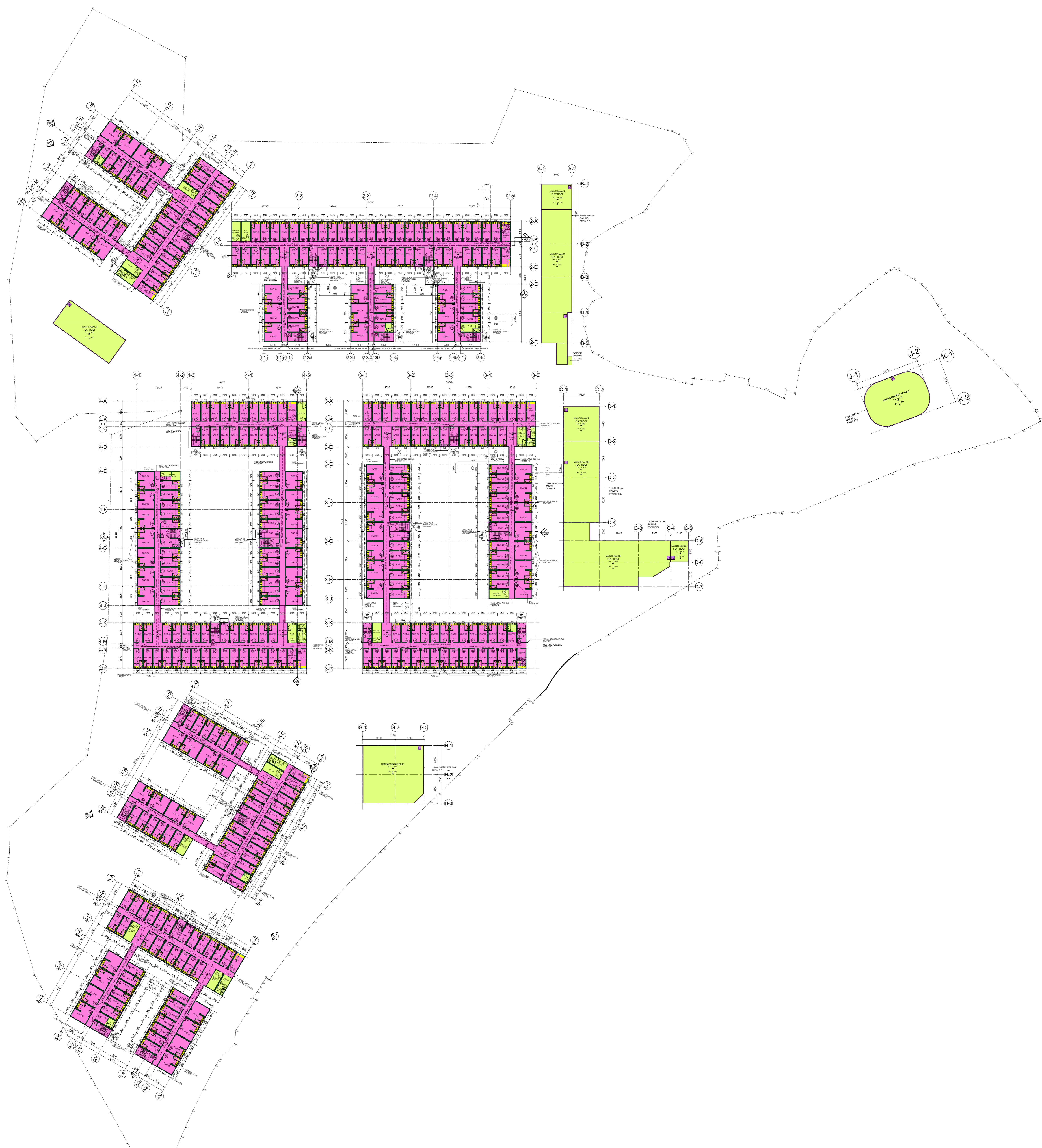
Rev.: 1.1

Date: Mar 2024

Appendix 1

Drawings of Development Plan







Bethel High School

FAIRVIEW PARK SECTION F, 4TH STREET

Basketball Court

Basketball Court

FAIRVIEW PARK ROAD SOUTH

FAIRVIEW PARK SECTION C, 7TH STREET

ION C, 8TH STREET

FUNG CHUK ROAD

Nullah

Outfall

Nullah

YAU POK ROAD

YAM POK ROAD

PO

TS

TS

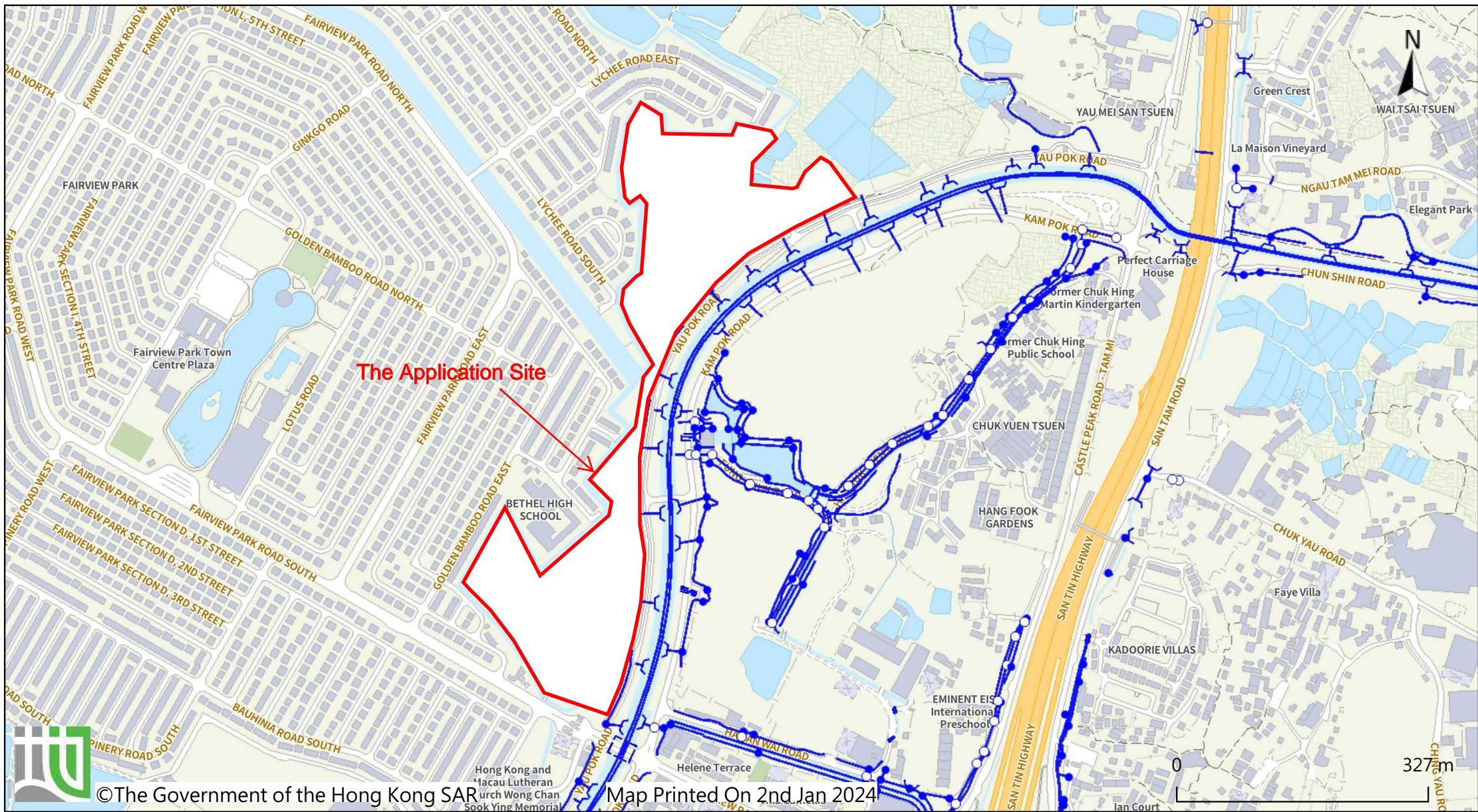
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Appendix 2

DSD Record Plan



Appendix 3

Calculation of Peak Flow

Appendix 3 Calculation for Sewage Generation Rate of the Indicative Scheme at the Application Site

Zone 1

Proposed Residential

| | | | |
|-------------------------------|---|--|---|
| 1a. Total number of units | = | 1120 units | (No. of 1-2P units: 939; 3-4P units: 181) |
| 1b. Total number of residents | = | 2602 people -- (provided by Project Architect) | (For 1-2P unit: 1878; 3-4P unit: 724) |
| 1c. Design flow | = | 190 litre/person/day -- (Public Rental in Table T-1 of GESF) | |
| 1d. Sewage generation rate | = | 494.4 m ³ /day | |

Proposed Community Services

| | | | |
|---|---|---|--|
| 2a. Assumed area | = | 80.5 m ² | |
| 2b. Total number of employee | = | 25 employees, by assumption | |
| 2c. Design flow for commercial employee | = | 80.0 litre/person/day (Table T-2 of GESF) | |
| 2d. Design flow for commercial activities | = | 200.0 litre/person/day (Table T-2 of GESF, Type J11 - Commercial, Social & Personal Services) | |
| 2e. Sewage generation rate | = | 7.0 m ³ /day | |

Proposed Retail Area

| | | | |
|--------------------------------------|---|---|--|
| 3a. <u>Proposed Retail Shop Area</u> | = | 182.4 m ² , provided by Project Architect | |
| 3b. Assumed floor area per employee | = | 28.6 m ² per worker -- (refer to Table 8 of CIFSUS - Retail Trade) | |
| 3c. Total number of employees | = | 7.0 employees | |
| 3d. Unit Flow Factor | = | 280.0 litre/employee/day -- (refer to Table T-2 of GESF - J4) | |
| 3e. Sewage Generation rate | = | 2.0 m ³ /day | |

4a. Proposed F&B Area

| | | | |
|-------------------------------------|---|--|--|
| 4b. Assumed floor area per employee | = | 89.6 m ² , provided by Project Architect | |
| 4c. Total number of employees | = | 19.6 m ² per worker -- (refer to Table 8 of CIFSUS - Restaurants) | |
| 4d. Unit Flow Factor | = | 5.0 employees | |
| 4e. Sewage Generation rate | = | 1580.0 litre/employee/day -- (refer to Table T-2 of GESF Job Type J10) | |
| | = | 7.9 m ³ /day | |

Total Flow Rate of Zone 1

= **511.2** m³/day

Zone 2

Proposed Residential

| | | | |
|-------------------------------|---|--|---|
| 9a. Total number of units | = | 1041 units | (No. of 1-2P units: 833; 3-4P units: 208) |
| 9b. Total number of residents | = | 2498 people -- (provided by Project Architect) | (For 1-2P unit: 1666; 3-4P unit: 832) |
| 9c. Design flow | = | 190 litre/person/day -- (Public Rental in Table T-1 of GESF) | |
| 9d. Sewage generation rate | = | 474.6 m ³ /day | |

Proposed Community Services

| | | | |
|--|---|---|--|
| 10a. Assumed area | = | 83.4 m ² | |
| 10c. Total number of employee | = | 25 employees, by assumption | |
| 10d. Design flow for commercial employee | = | 80.0 litre/person/day (Table T-2 of GESF) | |
| 10e. Design flow for commercial activities | = | 200.0 litre/person/day (Table T-2 of GESF, Type J11 - Commercial, Social & Personal Services) | |
| 10f. Sewage generation rate | = | 7.0 m ³ /day | |

Proposed Retail Area

| | | | |
|---------------------------------------|---|---|--|
| 11a. <u>Proposed Retail Shop Area</u> | = | 244.1 m ² , provided by Project Architect | |
| 11b. Assumed floor area per employee | = | 28.6 m ² per worker -- (refer to Table 8 of CIFSUS - Retail Trade) | |
| 11c. Total number of employees | = | 9.0 employees | |
| 11d. Unit Flow Factor | = | 280.0 litre/employee/day -- (refer to Table T-2 of GESF - J4) | |
| 11e. Sewage Generation rate | = | 2.5 m ³ /day | |

Total Flow Rate of Zone 2

= **484.1** m³/day

Total Flow of Proposed Development

| | | | |
|-----------------------------------|---|---|--|
| Flow Rate (Total of Zone 1 and 2) | = | 995.4 m ³ /day | |
| Contributing Population | = | 3687 people, calculation referenciung Section 12 of Technical Paper for ESFSIP Guidelines | |
| Peaking factor | = | 3 (excluding stormwater allowance) for facility with new Pumping Stations, refer to Table T-5 of GESF for population < 10,000 | |
| Peak Flow | = | 2986.1 m ³ /day | |
| | = | 34.6 litre/sec | |