Annex 6

Sewerage Impact Assessment

Section 16 Application for Partial Conversion of an Existing Commercial Building for Proposed 'Hotel (Student Hostel)' Use at 86 Hung To Road, Kwun Tong, Kowloon

Sewerage Impact Assessment Report

Prepared by Skyline Consultants Ltd

Name: Willie Wong

Date: 13 January 2026

Report Ref.: P177R043-01 (Ver. 2)

Table of Contents

List of Figures

List of Tables

List of Annexes

1 Introduction

1.1.1.1 The Applicant intends to partially convert an existing commercial building, Rich China Center, into student hostel (hereafter called as "the proposed development") at 86 Hung To Road, Kwun Tong, Kowloon (the Site).

1.1.1.2 Owing to the anticipated change in sewage generation arising from the proposed development, Skyline Consultants Limited (Skyline) has been commissioned to conduct a Sewerage Impact Assessment (SIA) to facilitate the consideration of this planning application.

1.1.1.3 The objectives of this SIA are to assess the potential sewerage impact arising from the proposed development and recommend the mitigation measures, if necessary, to alleviate the impacts.

2 Site Description

2.1 Site Location

2.1.1.1 The Site is bounded by Hung To Road to its northeast and surrounded by industrial and commercial developments. The site area is approximately 464 m^2. The following uses or buildings are located in close proximity to the Site:

- Northwest: hotel development of Dorsett Kwun Tong;
- Northeast: commercial and industrial buildings separated by Hung To Road;
- Southeast: industrial building of Ray Centre; and
- Southwest: office development of Four Seas Group Centre.

2.1.1.2 **Figure 2-1** shows the Site location and its surrounding areas.

2.2 Proposed Development Scheme

2.2.1.1 The proposed development involves converting from the existing 10-storeys commercial use to student hostel which will include 225 beds. There will be no change to the existing building bulk and building height. The schedule of the proposed development is listed in **Table 2-1** and the development plans are shown in **Annex A**.

Table 2-1 Proposed Development Schedule

Floor	Major Uses
G/F	Lobby / Shop / Cafe / Plant Rooms
1/F – 9/F	Student Dormitory / Supporting Facilities
R/F	Plant Rooms

2.3 Existing Sewerage

2.3.1.1 The drainage plans (plan no.: 11-NE-23A-4) were obtained from the Drainage Services Department (DSD) to gather the background information on sewerage infrastructure in the vicinity of the Site. The relevant drainage data were extracted from the drainage plans and are presented in **Figure 2-2**.

2.3.1.2 According to the drainage plans from the Buildings Department, sewage generation from the existing Rich China Center is discharged into the existing 225 mm diameter sewer at manhole A2 (manhole no.: FMH4061162) which is located at the south-western boundary of the Site (refer to **Figure 2-2**).

3 Sewerage Impact

3.1 Assessment Assumptions and Methodology

3.1.1.1 All sewage generation from the proposed development will be discharged into the existing 225 mm diameter sewer at manhole A2 (manhole no.: FMH4061162) via the 150 mm diameter connection pipe (refer to **Figure 3-1**). The adequacy in capacities of the existing downstream sewers and the 150 mm diameter connection pipe between proposed terminal manhole X1 and manhole A2 have been checked based on the estimation of the future sewage generation from the proposed development.

3.1.1.2 This assessment is being conducted in accordance with "*Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning*" (hereafter as "GESF") published by Environmental Protection Department (EPD) in 2005.

3.2 Sewage Generation

3.2.1.1 To estimate the sewage flows of the proposed and existing developments, the planning units flow factors as stated in the GESF have been adopted.

3.2.1.2 The sewage generation from the proposed development includes the flow contributions employees and visitors. The estimated number of population of the proposed development are summarised in **Table 3-1**. The detailed calculations of sewage generations from the proposed development are provided in **Annex B** for reference.

Table 3-1 Population Estimation of Proposed Development

Type of People	No. of People	Unit Flow Factors (m^3/day)	Reference
Residents	225	0.190	"Institutional and special class" in GESF
Employees for Property Management	8	0.280	Commercial Employee + Commercial Activities (General–territorial average) in GESF
Employees for Café Area	4.2	1.580	"Commercial Employee + Commercial Activities J10 - Restaurants & Hotels" in GESF
Employees for Shop Area	3.8	0.280	"Commercial Employee + Commercial Activities: J4 Wholesale & Retail" in GESF

3.3 Sewerage Capacity

3.3.1.1 According to the "*Sewerage Manual – Key Planning Issues and Gravity Collection System (Third Edition)*" published by DSD in 2013, the capacities of respective sewers have been calculated based on Colebrook-White equation for circular pipes:

$$V = -\sqrt{(8gDs)}\log\left(\frac{ks}{3.7D} + \frac{2.5\,\mathrm{l}v}{D\sqrt{(2gDs)}}\right)$$

where V = mean velocity (m/s)
g = gravitational acceleration (m/s^2)
D = pipe diameter (m)
k_s = hydraulic pipeline roughness (m) ("poor" condition of clayware slimed sewer was assumed)
v = kinematic viscosity of fluid (m^2/s)
s = frictional slope (energy gradient due to frictional loss)

3.3.1.2 The sewerage impact on various segments of the sewer was evaluated by comparing the estimated peak flow against the capacity of the respective sewer segments. The detailed calculations are provided in **Annex C**.

4 Assessment Results

4.1 Existing Sewerage

4.1.1.1 Based on the results of the assessment, the total estimated daily flow of the proposed development will be approximately 58.0 m^3/day. The final discharge point from the proposed development will be connected to the existing 225 mm diameter sewer at the manhole A2 (manhole no.: FMH4061162) (refer to **Figure 3-1**).

4.1.1.2 The capacity of each segment for the downstream sewers (i.e., from segment X1 to A5 as shown in **Figure 3-1**) between each manhole has been evaluated and are summarised in **Table 4-1**. The percentages of capacity used by the proposed development for the downstream sewers will be ranged from about 12% to 114%. Estimation of the flows and capacities are detailed in **Annex B** and **Annex C**, respectively.

Table 4-1 Estimated Downstream Sewer Capacities

Pipe Segment	Diameter, mm	Gradient	Pipe Capacity, m^3/s	Estimated Peak Flow, m^3/s	% of Capacity
X1 – A2	150	0.0650	0.046	0.005	12%
A2 – A3	225	0.0019	0.017	0.020	**114%**
A3 – A4	300	0.0047	0.060	0.024	40%
A4 – A5	300	0.0883	0.332	0.089	27%

4.1.1.3 The assessment results as presented in **Table 4-1** indicates that the sewage flow for segment A2 to A3 with 225 mm diameter will exceed the capacity under the worst-case scenario. As such, upgrading works on the existing sewerage network is required.

4.2 Proposed Upgrading of Sewerage

4.2.1.1 The sewer segment of A2 to A3 are proposed to be upgraded from 225 to 300 mm diameter (i.e., internal diameter) and the outgoing pipe invert level of manhole A2 (FMH4061162) is proposed to be changed from +2.65 mPD to +2.68 mPD (shown in **Figure 4-1**). The proposed pipe material of the sewer segment A2 to A3 will be polyethylene. The relevant flow capacity of the proposed upgrading of segment is estimated in **Table 4-2**. Estimation of pipe capacity after upgrading is detailed in **Annex D**.

Table 4-2 Estimated Sewer Capacities of Proposed Upgrading

Pipe Segment (1)	Diameter, mm	Gradient	Pipe Capacity, m^3/s	Estimated Peak Flow, m^3/s	% of Capacity
A2 – A3	300	0.0046	0.067	0.020	30%

Note: (1) proposed sewer pipe material will be polyethylene.

4.2.1.2 Upon the upgrading works for sewer segments A2 to A3, the flow capacity will be capable to cater the cumulative peak flow from the proposed development and upstream & downstream developments. As such, no adverse sewerage impact arising from the proposed development is anticipated.

5 Conclusion

5.1.1.1 This Sewerage Impact Assessment (SIA) aims to evaluate the sewerage impacts on the local sewerage network due to the operation of the proposed development.

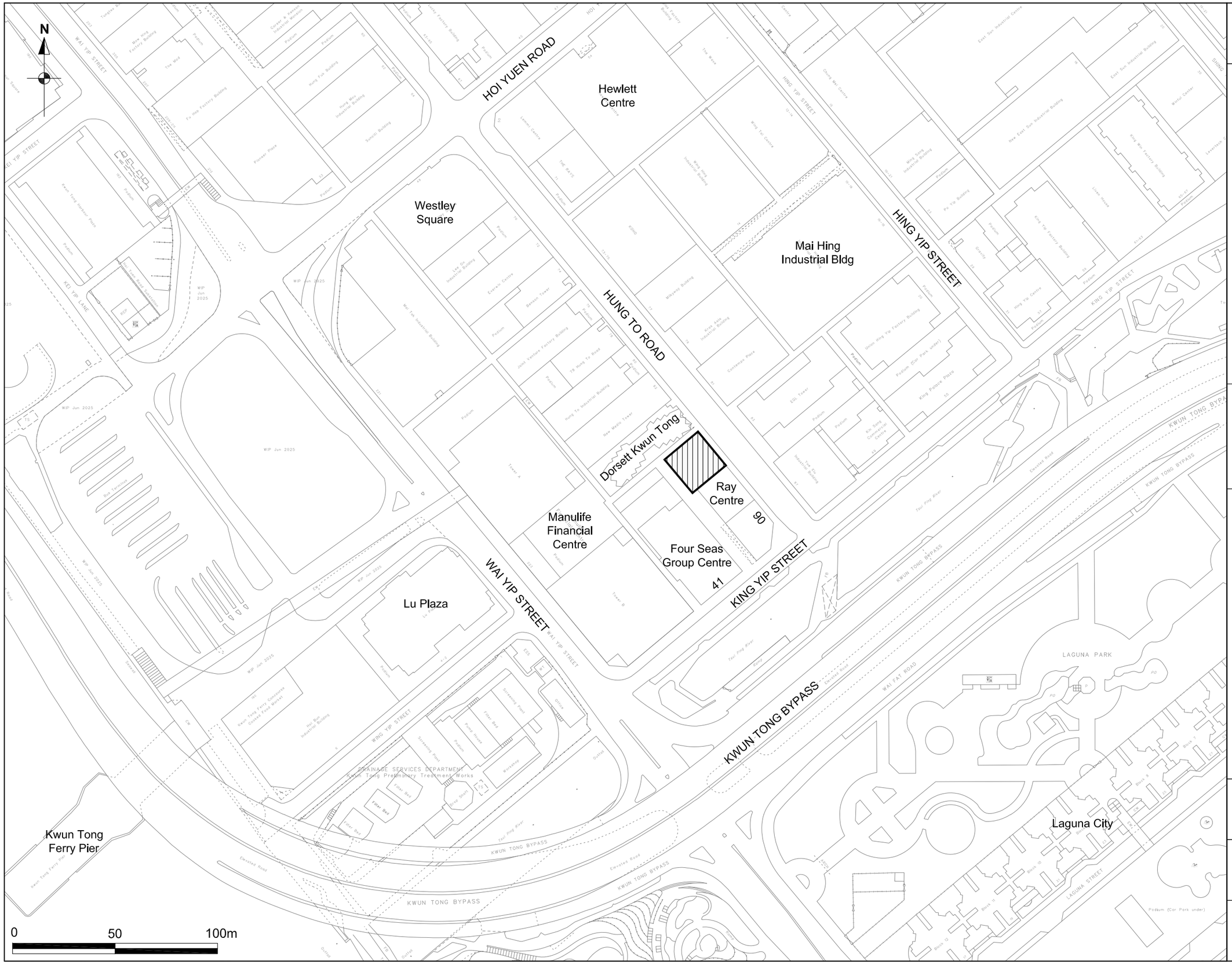
5.1.1.2 The findings of the assessment have demonstrated that with the provision of the proposed upgrading sewer work, there should be sufficient sewage capacity for the public sewers along service lane to handle sewage generation from the proposed development.

5.1.1.3 The project proponent will be responsible for the design and construction of the proposed upgrading works which will be further discussed with DSD at the detailed design stage of the project. The detailed technical studies will be submitted to relevant Government Departments for further consideration thereafter.

5.1.1.4 Since this SIA is carried out based on the current situation at the early planning stage, it should be taken into account that there may be other future planning or developments in the vicinity resulting in change of the sewerage network and to assess the sewerage impact on the further downstream sewers. Hence, this SIA Report will be updated and re-submitted to EPD and DSD for further review and comment at the detailed design stage of the project.

5.1.1.5 Based on the above, it is concluded that the sewerage impact arising from the proposed development should be acceptable.

Figures



PROJECT NO :

P177R_043

PROJECT TITLE :

Section 16 Application for Partial Conversion of an Existing Commercial Building for Proposed 'Hotel (Student Hostel)' Use at 86 Hung To Road, Kwun Tong, Kowloon

Sewerage Impact Assessment

FIGURE TITLE :

Site Location

LEGEND :

Subject Site

FIGURE NO :

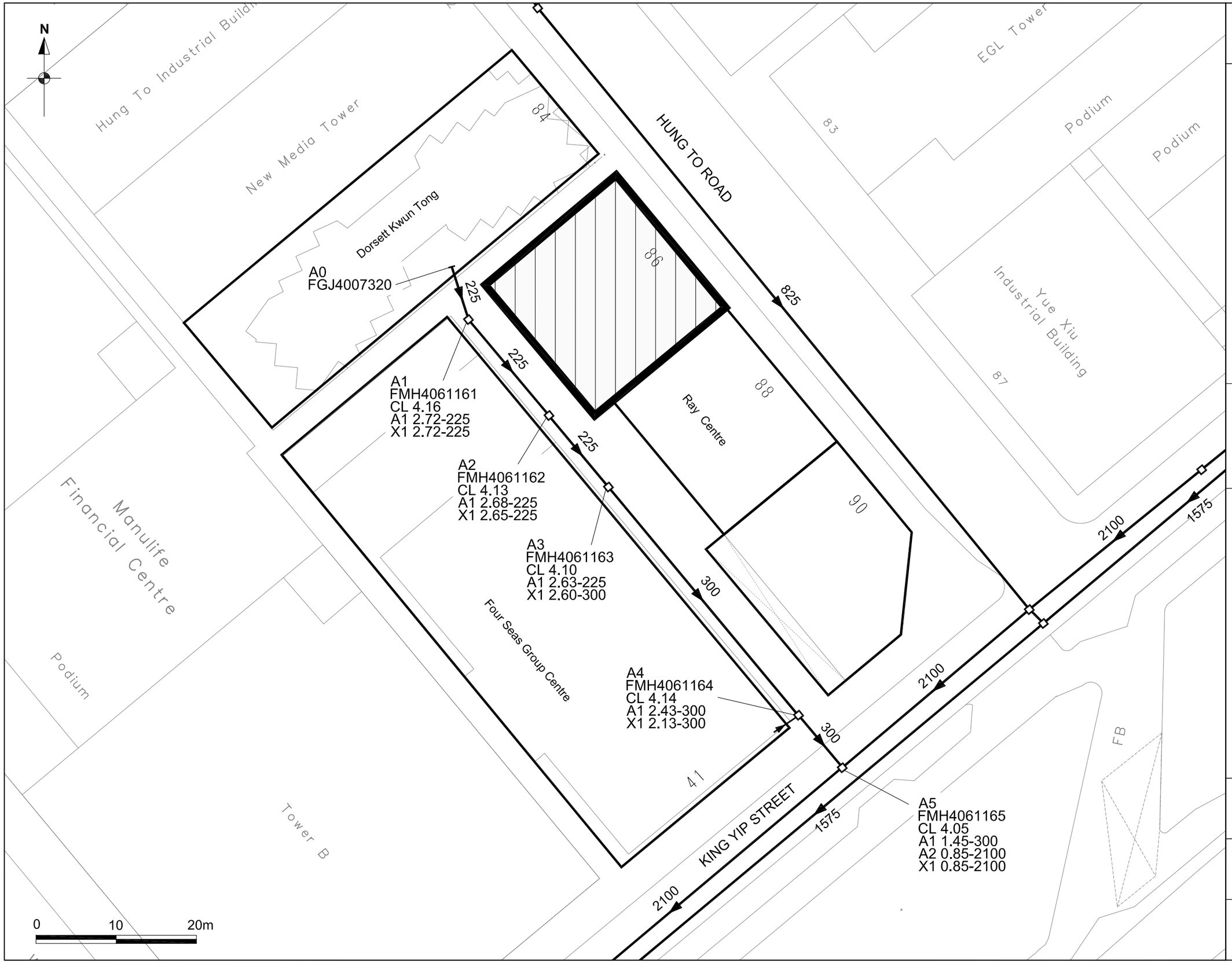
2 - 1

DATE :

2025-08-13

CONSULTANT :

Skyline Consultants Ltd



PROJECT NO :

P177R_043

PROJECT TITLE :

Section 16 Application for Partial Conversion of an Existing Commercial Building for Proposed 'Hotel (Student Hostel)' Use at 86 Hung To Road, Kwun Tong, Kowloon

Sewerage Impact Assessment

FIGURE TITLE :

Existing Sewerage

LEGEND :

Subject Site

Public Sewer

FMH7013690
CL 4.17
A1 2.56-225
X1 2.55-225

- DSD manhole number
- Cover level or ground level in mPD
- 225mm dia. incoming pipe invert level in mPD
- 225mm dia. outgoing pipe invert level in mPD

FIGURE NO :

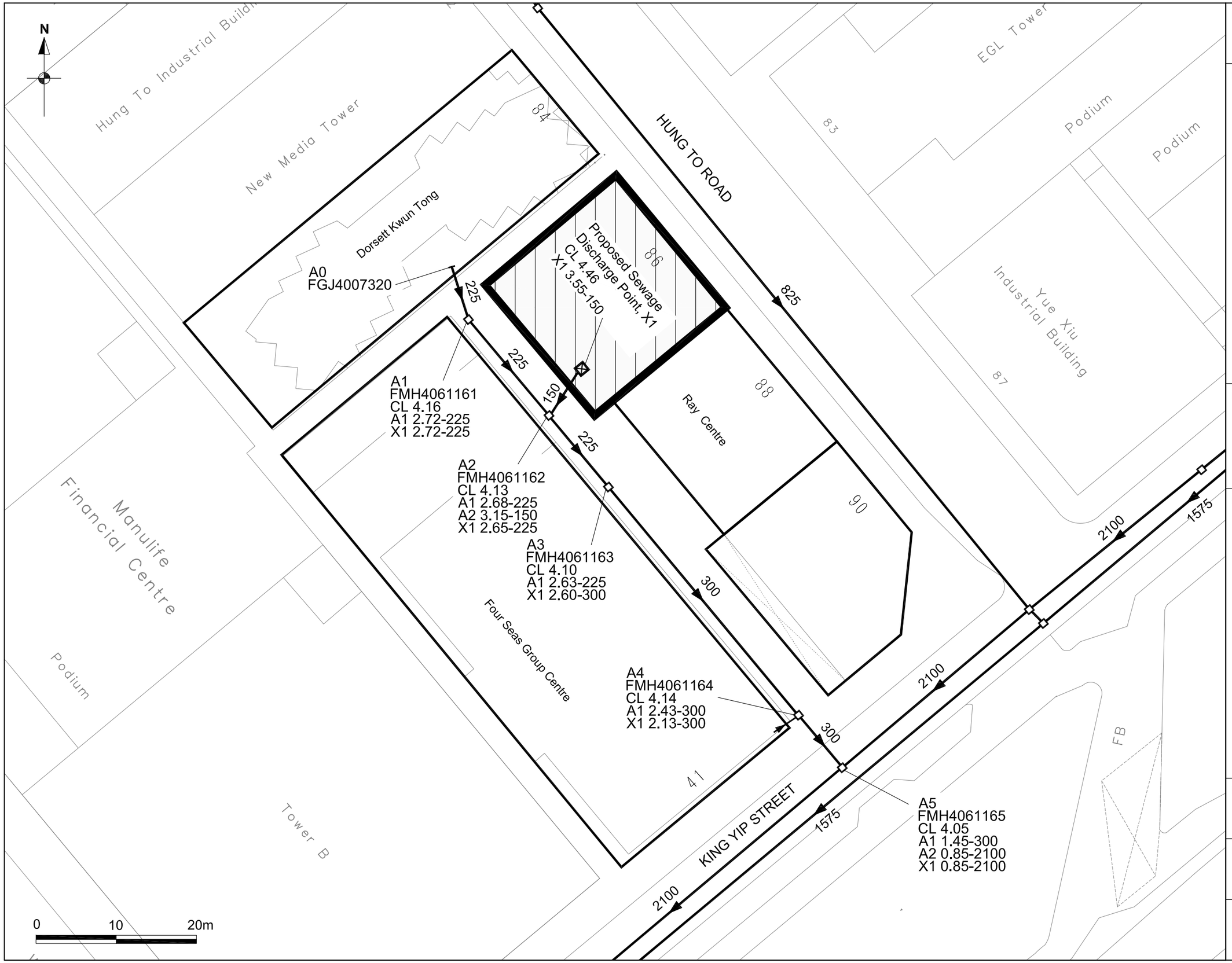
2 - 2

DATE :

2025-08-13

CONSULTANT :

Skyline Consultants Ltd



PROJECT NO :

P177R_043

PROJECT TITLE :

Section 16 Application for Partial Conversion of an Existing Commercial Building for Proposed 'Hotel (Student Hostel)' Use at 86 Hung To Road, Kwun Tong, Kowloon

Sewerage Impact Assessment

FIGURE TITLE :

Proposed Sewage Discharge Location

LEGEND :

- Subject Site
- Existing Sewer
- Proposed Sewage Terminal Manhole

FMH7013690 — DSD manhole number
CL 4.17 — Cover level or ground level in mPD
A1 2.56-225 — 225mm dia. incoming pipe invert level in mPD
X1 2.55-225 — 225mm dia. outgoing pipe invert level in mPD

FIGURE NO :

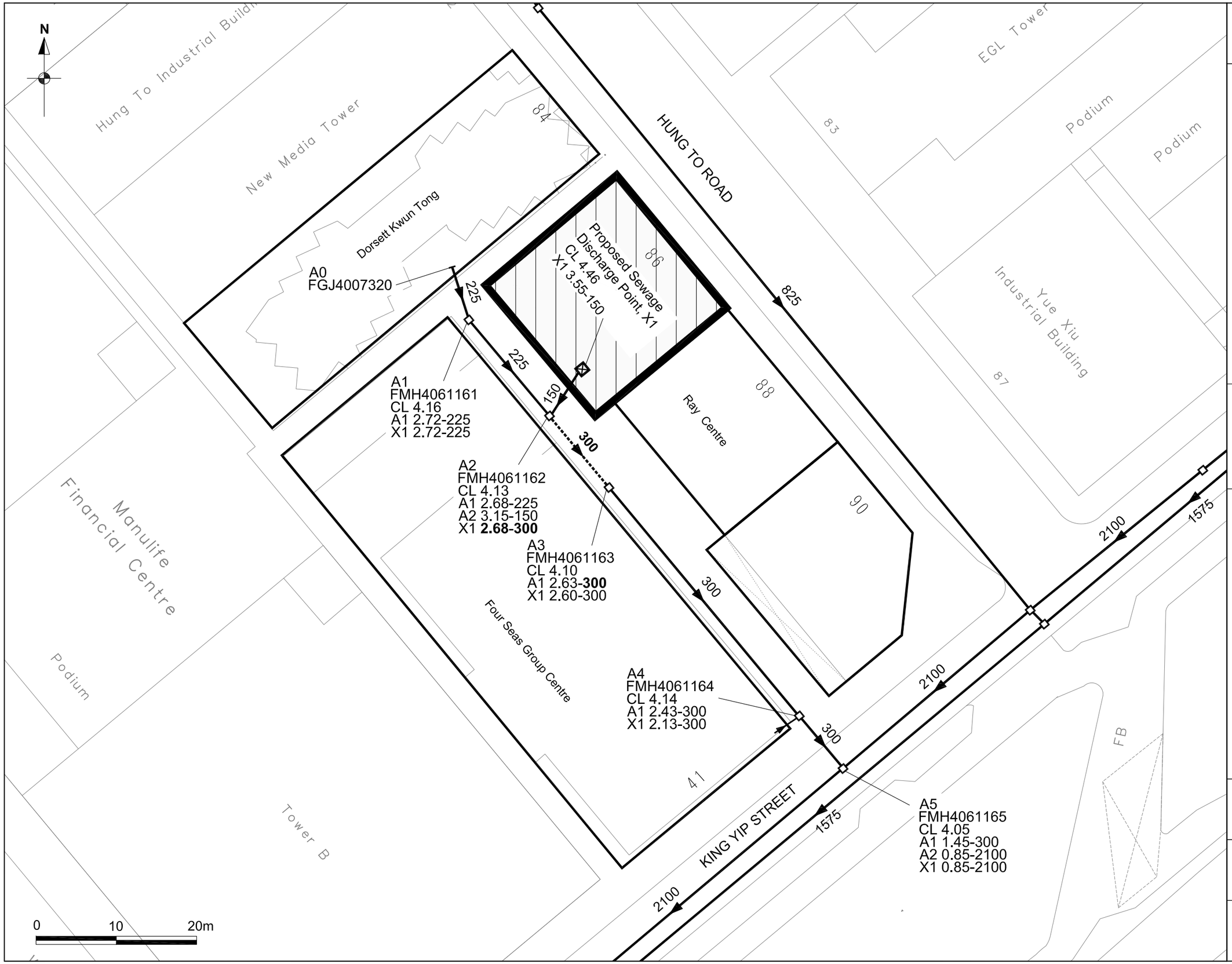
3 - 1

DATE :

2025-09-18

CONSULTANT :

Skyline Consultants Ltd



PROJECT NO :

P177R_043

PROJECT TITLE :

Section 16 Application for Partial Conversion of an Existing Commercial Building for Proposed 'Hotel (Student Hostel)' Use at 86 Hung To Road, Kwun Tong, Kowloon

Sewerage Impact Assessment

FIGURE TITLE :

Proposed Upgrading Sewer

LEGEND :

- Subject Site
- Existing Sewer
- Proposed Sewage Terminal Manhole
- Proposed Upgrading Sewer

FMH7013690 — DSD manhole number
CL 4.17 — Cover level or ground level in mPD
A1 2.56-225 — 225mm dia. incoming pipe invert level in mPD
X1 2.55-225 — 225mm dia. outgoing pipe invert level in mPD

FIGURE NO :

4 - 1

DATE :

2025-09-18

CONSULTANT :

Skyline Consultants Ltd

Annex A

Development Plans

HUNG TO ROAD (18.3mW)

PAVEMENT

- STUDENT DORMITORY AREA
- STUDENT DORMITORY SUPPORTING FACILITIES AREA (AREA: 3s.m., GFA ACCOUNTABLE)
- CORRIDOR, STAIRCASE AND LIFT
- NON-STUDENT DORMITORY AREA

GENERAL NOTES
1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
4. ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.

DEVELOPMENT PARAMETERS

SITE AREA	= 464.461 s.m.
PROPOSED FLOOR AREA – NON-DOMESTIC PART	= 3848.766 s.m.
PLOT RATIO	= 8.2865
SITE COVERAGE	= 79.97%
BUILDING HEIGHT	= 36.72 m
NO. OF STOREY	= 10
NO. OF STUDENT HOSTEL ROOMS	= 117
– SINGLE ROOMS	= 9
– TWIN ROOMS	= 108
NO. OF BED SPACES	= 225
NO. OF PARKING SPACES AND LOADING / UNLOADING SPACES	
ACCESSIBLE CARPARK	= 1
LIGHT GOODS VEHICLES	= 1
SUPPORTING FACILITIES AREA (GFA ACCOUNTABLE)	= 745 s.m.
SUPPORTING FACILITIES AREA (EXEMPTED GFA)	= 8 s.m.

BED SPACE AND GFA SUMMARY

FLOOR	NO. OF BED SPACE	EXISTING GFA (s.m.)	PROPOSED GFA (s.m.)
G/F	–	344.065	349.827[1]
1/F	23	464.461	460.387
2/F	23	442.442	438.521
3/F	23	371.433	371.433
4/F	23	371.433	371.433
5/F	23	371.433	371.433
6/F	23	371.433	371.433
7/F	29	371.433	371.433
8/F	29	371.433	371.433
9/F	29	371.433	371.433
TOTAL	225	3850.999	3848.766

1. GFA OF SHOP AND CAFE (INCLUDING TOILETS) = 197.508s.m.
GFA OF HOSTEL AREA = 197.508s.m. = 152.319 s.m.

2026.1.13

Project:
SECTION 16 APPLICATION FOR PARTIAL CONVERSION OF AN EXISTING COMMERCIAL BUILDING FOR PROPOSED 'HOTEL (STUDENT HOSTEL)' USE AT 86 HUNG TO ROAD, KWUN TONG, KOWLOON

Drawing Title:
G/F PLAN

Drawing No.:
GP-01

Architect:
楙安建築師有限公司
L&N Architects Ltd.
Rooms 1203-1204, 12/F Belgian Bank Building,
721-725 Nathan Road, Kowloon
Tel: (852) 3422 3082, Fax: (852) 3428 2269

1/F GFA : 460.387 s.m.

DORMITORY NO.	AREA (INCLUDING SHOWER ROOM) (m^2)	NO. OF BED SPACE
1	9.0	2
2	5.1	1
3	9.1	2
4	9.6	2
5	10.9	2
6	26.5	2
7	17.4	2
8	10.5	2
9	11.7	2
10	16.0	2
11	19.7	2
12	19.1	2
TOTAL	**164.6**	**23**

STUDENT DORMITORY AREA
STUDENT DORMITORY SUPPORTING FACILITIES AREA (AREA: 120s.m., GFA ACCOUNTABLE)
STUDENT DORMITORY SUPPORTING FACILITIES AREA (AREA: 4s.m., EXEMPTED GFA)
CORRIDOR, STAIRCASE AND LIFT
FLAT ROOF AND CANOPY
GREENERY
NON-STUDENT DORMITORY AREA

GENERAL NOTES
1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
4. ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.

2026.1.13

Project:
SECTION 16 APPLICATION FOR PARTIAL CONVERSION OF AN EXISTING COMMERCIAL BUILDING FOR PROPOSED 'HOTEL (STUDENT HOSTEL)' USE AT 86 HUNG TO ROAD, KWUN TONG, KOWLOON

Drawing Title:
1/F PLAN

Drawing No.:
GP-02

Architect:

楙安建築師有限公司
L&N Architects Ltd.
Rooms 1203-1204, 12/F Belgian Bank Building,
721-725 Nathan Road, Kowloon
Tel: (852) 3422 3082, Fax: (852) 3428 2269

2/F GFA : 438.521 s.m.

DORMITORY NO.	AREA (INCLUDING SHOWER ROOM) (m^2)	NO. OF BED SPACE
1	9.0	2
2	5.1	1
3	9.2	2
4	9.6	2
5	10.9	2
6	26.5	2
7	17.4	2
8	10.5	2
9	11.7	2
10	13.0	2
11	14.3	2
12	15.7	2
TOTAL	152.9	23

STUDENT DORMITORY AREA
STUDENT DORMITORY SUPPORTING FACILITIES AREA (AREA: 119s.m., GFA ACCOUNTABLE)
STUDENT DORMITORY SUPPORTING FACILITIES AREA (AREA: 4s.m., EXEMPTED GFA)
CORRIDOR, STAIRCASE AND LIFT
NON-STUDENT DORMITORY AREA

GENERAL NOTES
1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
4. ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.

2026.1.13

Project:
SECTION 16 APPLICATION FOR PARTIAL CONVERSION OF AN EXISTING COMMERCIAL BUILDING FOR PROPOSED 'HOTEL (STUDENT HOSTEL)' USE AT 86 HUNG TO ROAD, KWUN TONG, KOWLOON

Drawing Title:
2/F PLAN

Drawing No.:
GP-03

Architect:

樑安建築師有限公司
L&N Architects Ltd.
Rooms 1203-1204, 12/F Belgian Bank Building,
721-725 Nathan Road, Kowloon
Tel: (852) 3422 3082, Fax: (852) 3428 2269

3/F GFA : 371.433 s.m.

DORMITORY NO.	AREA (INCLUDING SHOWER ROOM) (m^2)	NO. OF BED SPACE
1	8.7	2
2	5.1	1
3	7.9	2
4	7.9	2
5	8.8	2
6	10.0	2
7	27.1	2
8	25.0	2
9	9.1	2
10	9.9	2
11	9.0	2
12	10.7	2
TOTAL	**139.2**	**23**

STUDENT DORMITORY AREA
STUDENT DORMITORY SUPPORTING FACILITIES AREA (AREA: 101s.m., GFA ACCOUNTABLE)
CORRIDOR, STAIRCASE AND LIFT
FLAT ROOF AND CANOPY
GREENERY
NON-STUDENT DORMITORY AREA

GENERAL NOTES
1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
4. ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.

2026.1.13

Project:
SECTION 16 APPLICATION FOR PARTIAL CONVERSION OF AN EXISTING COMMERCIAL BUILDING FOR PROPOSED 'HOTEL (STUDENT HOSTEL)' USE AT 86 HUNG TO ROAD, KWUN TONG, KOWLOON

Drawing Title:
3/F PLAN

Drawing No.:
GP-04

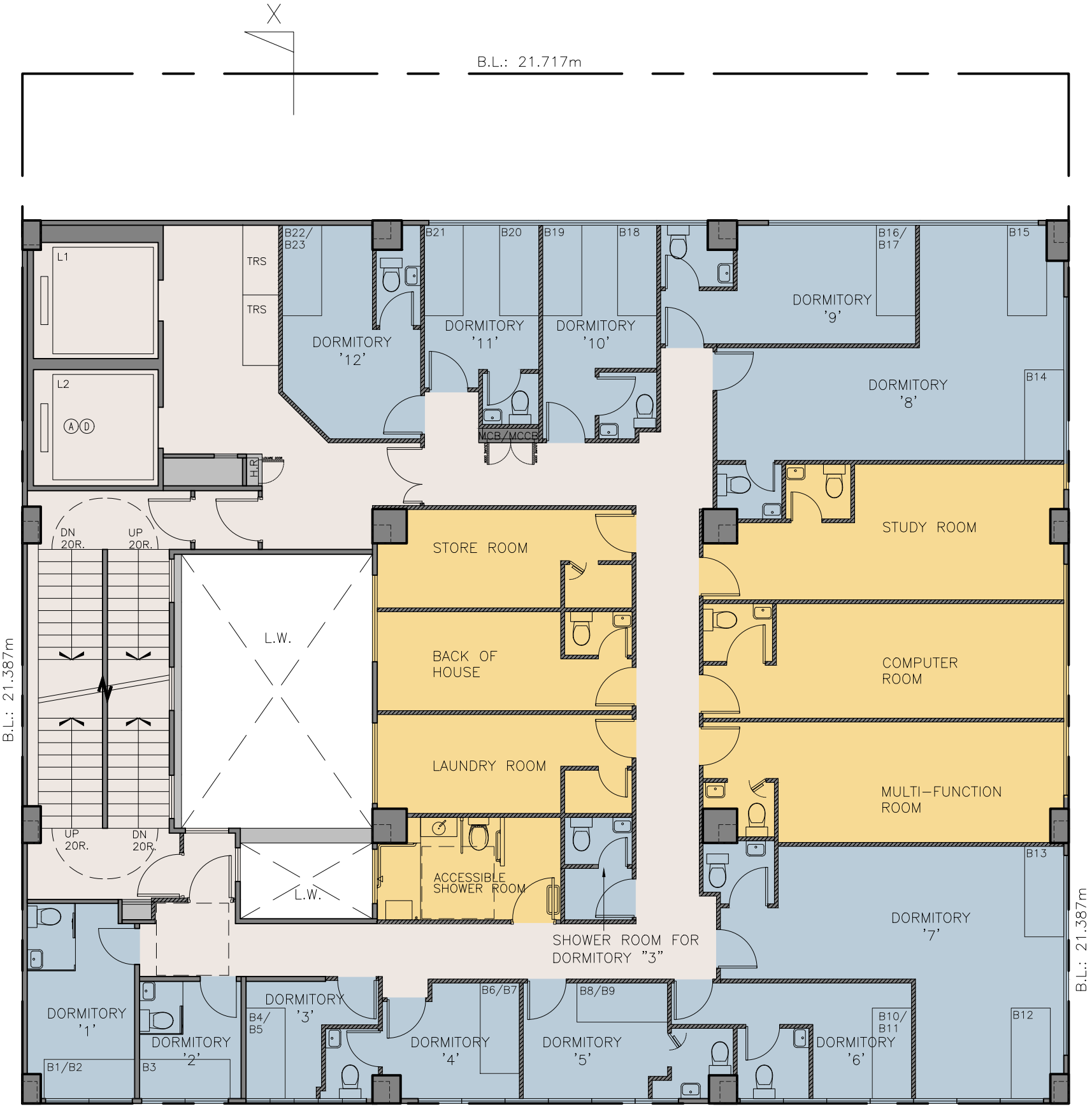
Architect:

樑安建築師有限公司
L&N Architects Ltd.
Rooms 1203-1204, 12/F Belgian Bank Building,
721-725 Nathan Road, Kowloon
Tel: (852) 3422 3082, Fax: (852) 3428 2269

4/F–6/F GFA (EACH STOREY): 371.433 s.m.

DORMITORY NO.	AREA (INCLUDING SHOWER ROOM) (m^2)	NO. OF BED SPACE
1	8.8	2
2	5.1	1
3	7.9	2
4	7.9	2
5	8.9	2
6	9.9	2
7	27.6	2
8	25.8	2
9	9.1	2
10	10.4	2
11	8.9	2
12	11.9	2
TOTAL	**142.2**	**23**

STUDENT DORMITORY AREA
STUDENT DORMITORY SUPPORTING FACILITIES AREA (AREA: 91s.m., GFA ACCOUNTABLE)
CORRIDOR, STAIRCASE AND LIFT
NON–STUDENT DORMITORY AREA



GENERAL NOTES
1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
4. ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.

2026.1.13

Project:
SECTION 16 APPLICATION FOR PARTIAL CONVERSION OF AN EXISTING COMMERCIAL BUILDING FOR PROPOSED 'HOTEL (STUDENT HOSTEL)' USE AT 86 HUNG TO ROAD, KWUN TONG, KOWLOON

Drawing Title:
4/F - 6/F PLAN

Drawing No.:
GP-05

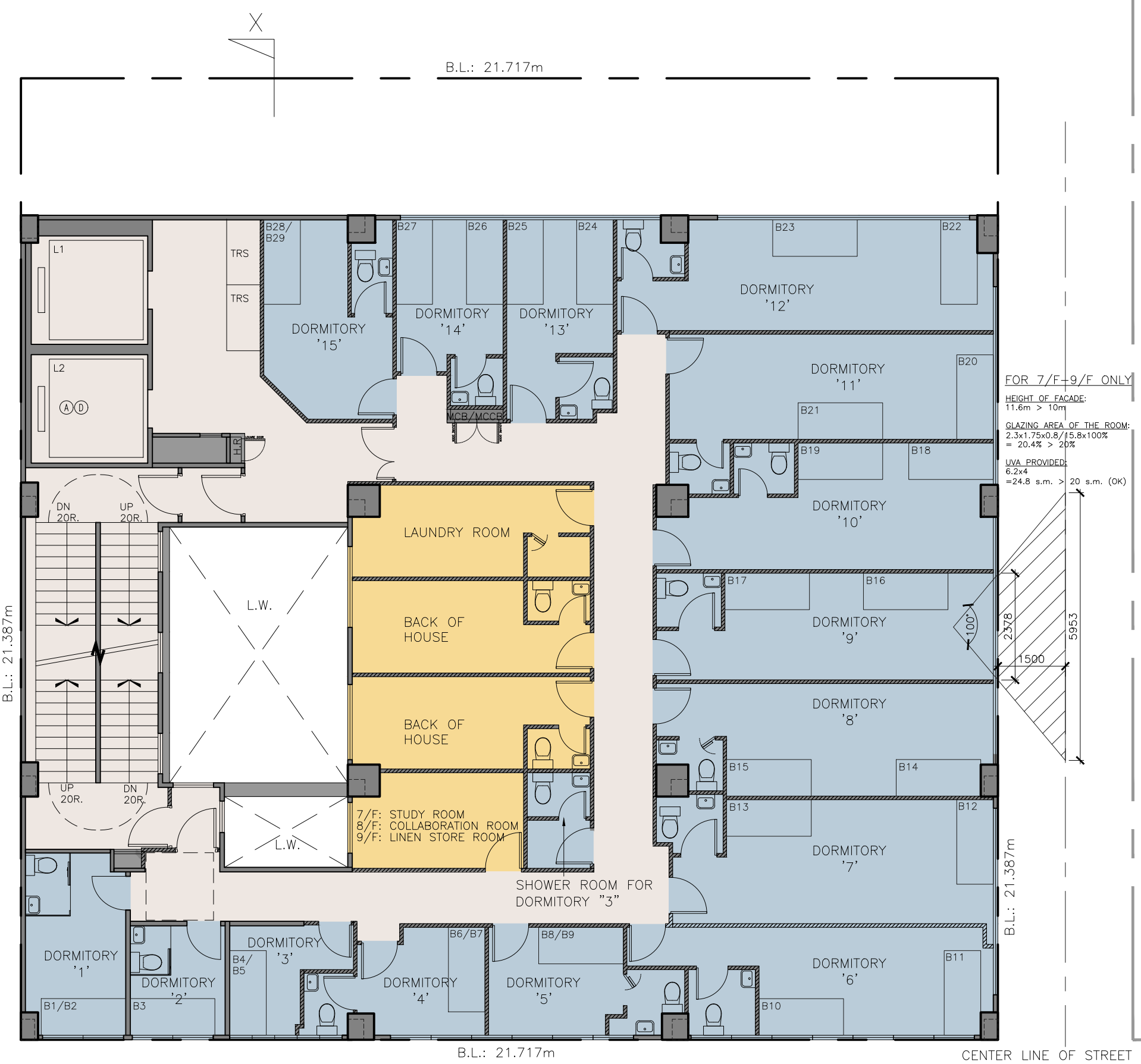
Architect:

楙安建築師有限公司
L&N Architects Ltd.
Rooms 1203-1204, 12/F Belgian Bank Building,
721-725 Nathan Road, Kowloon
Tel: (852) 3422 3082, Fax: (852) 3428 2269

7/F–9/F GFA (EACH STOREY): 371.433 s.m.

DORMITORY NO.	AREA (INCLUDING SHOWER ROOM) (m^2)	NO. OF BED SPACE
1	8.8	2
2	5.1	1
3	7.9	2
4	7.9	2
5	8.9	2
6	17.2	2
7	20.1	2
8	17.9	2
9	17.8	2
10	18.5	2
11	18.4	2
12	20.0	2
13	10.4	2
14	8.9	2
15	11.9	2
TOTAL	**199.7**	**29**

STUDENT DORMITORY AREA
STUDENT DORMITORY SUPPORTING FACILITIES AREA (AREA: 43s.m., GFA ACCOUNTABLE)
CORRIDOR, STAIRCASE AND LIFT
NON–STUDENT DORMITORY AREA



GENERAL NOTES
1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
4. ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.

2026.1.13

Project:
SECTION 16 APPLICATION FOR PARTIAL CONVERSION OF AN EXISTING COMMERCIAL BUILDING FOR PROPOSED 'HOTEL (STUDENT HOSTEL)' USE AT 86 HUNG TO ROAD, KWUN TONG, KOWLOON

Drawing Title:
7/F - 9/F PLAN

Drawing No.:
GP-06

Architect:

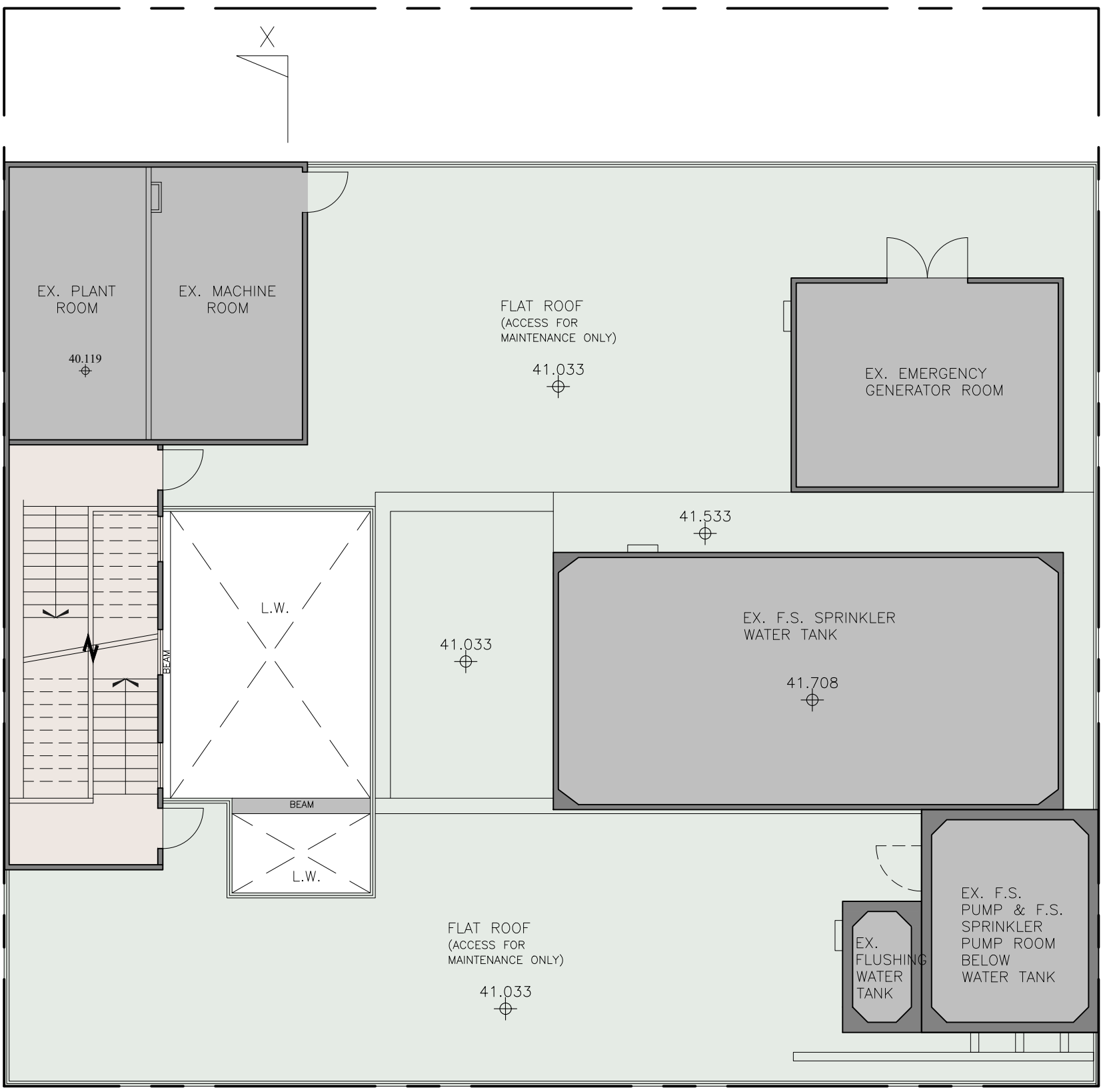
樑安建築師有限公司
L&N Architects Ltd.
Rooms 1203-1204, 12/F Belgian Bank Building,
721-725 Nathan Road, Kowloon
Tel: (852) 3422 3082, Fax: (852) 3428 2269

CALCULATION OF ROOF TOP OF BUILDING

TOTAL AREA OF ROOF TOP ANCILLARY STRUCTURES OF BUILDING: 178 s.m.
THE ROOF AREA OF THE FLOOR BELOW (i.e. 9/F): 371.433 s.m.

-> % OF ALL THE ENCLOSED STRUCTURES ON ROOF TOP OF BUILDING IS 48% OF THE ROOF AREA OF THE FLOOR BELOW

CORRIDOR, STAIRCASE AND LIFT
FLAT ROOF
NON-STUDENT DORMITORY AREA



GENERAL NOTES
1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
4. ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.

2026.1.13

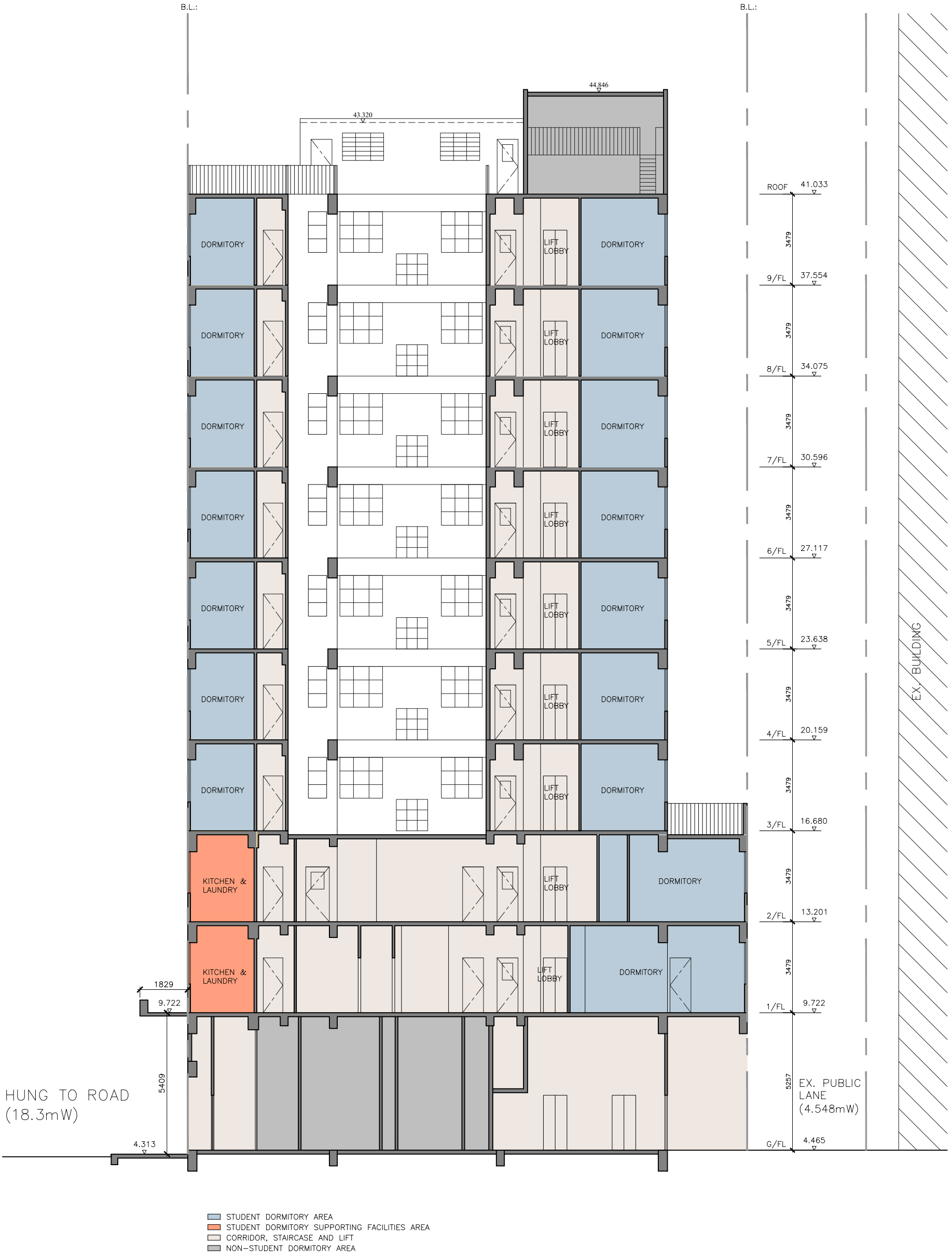
Project:
SECTION 16 APPLICATION FOR PARTIAL CONVERSION OF AN EXISTING COMMERCIAL BUILDING FOR PROPOSED 'HOTEL (STUDENT HOSTEL)' USE AT 86 HUNG TO ROAD, KWUN TONG, KOWLOON

Drawing Title:
R/F PLAN

Drawing No.:
GP-07

Architect:

樑安建築師有限公司
L&N Architects Ltd.
Rooms 1203-1204, 12/F Belgian Bank Building,
721-725 Nathan Road, Kowloon
Tel: (852) 3422 3082, Fax: (852) 3428 2269



GENERAL NOTES
1. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK.
4. ARCHITECT SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.

2026.1.13

Project:
SECTION 16 APPLICATION FOR PARTIAL CONVERSION OF AN EXISTING COMMERCIAL BUILDING FOR PROPOSED 'HOTEL (STUDENT HOSTEL)' USE AT 86 HUNG TO ROAD, KWUN TONG, KOWLOON

Drawing Title:
SECTION X

Drawing No.:
GP-08

Architect:

梁安建築師有限公司
L&N Architects Ltd.
Rooms 1203-1204, 12/F Belgian Bank Building,
721-725 Nathan Road, Kowloon
Tel: (852) 3422 3082, Fax: (852) 3428 2269

Annex B

Calculations of Sewage Generation

Sewerage Impact Assessment **Calculation of Sewage Generation**

1	**Estimation of Sewage Flow from the Proposed Development**			**Notes**
a)	**Generation from Residents**			
	Total number of residents	225	persons	
	Unit flow	0.190	m^3/person/day	Refer to the planning unit flow for "Institutional and Special Class" in Table T-1 of GESF [(a)].
	Estimated daily flow	42.8	m^3/day	
b)	**Generation from Employees Activities for Property Management**			
	Max. number of employees	8	persons	Advised by the project operators.
	Unit flow	0.280	m^3/person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: General–territorial average" in Table T-2 of GESF [(a)].
	Estimated daily flow	2.2	m^3/day	
c)	Total café area (GFA)	83	m^2	
	Assumed worker density	5.1	workers per 100 m^2	Refer to worker density for "Restaurants" in Table 8 of CIFSUS [(b)].
	Total number of employees	4.2	persons	
	Unit flow	1.58	m^3/person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities J10 - Restaurants & Hotels" in Table T-2 of GESF [(a)].
	Estimated daily flow	6.7	m^3/day	
d)	Total shop area (GFA)	109	m^2	
	Assumed worker density	3.5	workers per 100 m^2	Refer to worker density for "Retail Trade" in Table 8 of CIFSUS [(b)].
	Total number of employees	3.8	persons	
	Unit flow	0.28	m^3/person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: J4 Wholesale & Retail" in Table T-2 of GESF [(a)].
	Estimated daily flow	1.1	m^3/day	
	Total estimated daily flow	**52.7**	m^3/day	
	Catchment inflow factor	1.10		Refer to the Catchment Inflow Factor for "East Kowloon" in Table T-4 of GESF [(a)].
	Estimated daily flow including catchment inflow factor	**58.0**	m^3/day	

2	**Ray Centre (88 Hung To Road)**			**Notes**
	Total Gross Floor Area (GFA)	4,410	m^2	Refer to building plans from the Buildings Department.
	Assumed worker density	2.3	workers per 100 m^2	Refer to worker density for "Manufacturing" in Table 8 of CIFSUS [(b)].
	Total number of employees	101.4	persons	
	Unit flow	0.53	m^3/person/day	Refer to the planning unit flow factor for "Industrial employee" + "Industrial activities: J1 Manufacturing - East Kowloon" in Table T-3 of GESF [(a)].
	Estimated daily flow	53.8	m^3/day	
	Total estimated daily flow	**53.8**	m^3/day	
	Catchment inflow factor	1.10		Refer to the Catchment Inflow Factor for "East Kowloon" in Table T-4 of GESF [(a)].
	Estimated daily flow including catchment inflow factor	**59.1**	m^3/day	

3	**90 Hung To Road**			**Notes**
	Assumed total eating place area (GFA)	3,836	m^2	All area was assumed for “Eating Place” as worst-case scenario.
	Assumed worker density	5.1	workers per 100 m^2	Refer to worker density for "Restaurants" in Table 8 of CIFSUS [(b)].
	Total number of employees	196	persons	
	Unit flow	1.58	m^3/person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities J10 - Restaurants & Hotels" in Table T-2 of GESF [(a)].
	Estimated daily flow	309.7	m^3/day	
	Total estimated daily flow	**309.7**	m^3/day	
	Catchment inflow factor	1.10		Refer to the Catchment Inflow Factor for "East Kowloon" in Table T-4 of GESF [(a)].
	Estimated daily flow including catchment inflow factor	**340.6**	m^3/day	

Sewerage Impact Assessment **Calculation of Sewage Generation**

				Notes
4	**Four Seas Group Centre (41 King Yip Street)**			
a)	Total office area (GFA)	29,450	m^2	Refer to Planning Application No.: A/K14/766.
	Assumed worker density	5.5	workers per 100 m^2	Refer to worker density for "Financial, Insurance, Real Estate & Business Services" in Table 8 of CIFSUS [(b)].
	Total number of employees	1,619.8	persons	
	Unit flow	0.28	m^3/person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities: General–territorial average" in Table T-2 of GESF [(a)].
	Estimated daily flow	453.5	m^3/day	
b)	Total eating place area (GFA)	1,126	m^2	Refer to Planning Application No.: A/K14/766.
	Assumed worker density	5.1	workers per 100 m^2	Refer to worker density for "Restaurants" in Table 8 of CIFSUS [(b)].
	Total number of employees	57	persons	
	Unit flow	1.58	m^3/person/day	Refer to the planning unit flow factor for "Commercial Employee" + "Commercial Activities J10 - Restaurants & Hotels" in Table T-2 of GESF [(a)].
	Estimated daily flow	90.1	m^3/day	
	Total estimated daily flow	**543.6**	m^3/day	
	Catchment inflow factor	1.10		Refer to the Catchment Inflow Factor for "East Kowloon" in Table T-4 of GESF [(a)].
	Estimated daily flow including catchment inflow factor	**597.9**	m^3/day	

Note:

(a) GESF - "*Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning*" published by Environmental Protection Department (EPD).

(b) CIFSUS - "*Commercial and Industrial Floor Space Utilization Survey*" published by Planning Department (PlanD).

Annex C

Calculations of Sewer Capacities

Sewerage Impact Assessment **Estimated Pipe Capacity and Adequacy Check for Sewerage**

Sewer Pipe	Manhole no.		Length	Level (out)	Level (in)	d	A_w	k_s (1)	v	s	g	V	Q_C	Q_d	PF (2)	Q_P	Is $Q_c > Q_P$?	Contribution from Proposed Development	Notes
	Upstream	Downstream	m	mPD	mPD	m	m^2	m	m^2/s	-	m/s^2	m/s	m^3/s	m^3/day	-	m^3/s	Y/N	%	
Upstream Sewer																			
A1-A2	FMH4061161	FMH4061162	14.8	2.72	2.68	0.225	0.040	0.0030	1.14E-06	0.003	9.806	0.531	0.021	227.9	8	0.021	Y	100%	Assume Q_p from Dorsett Kwun Tong (No.84 Hung To Road) is full bore flow of segment A1-A2 as a conservative approach; Q_d is based on the back-calculation from Q_p and PF.
Downstream Sewer																			
X1 - A2	Terminal Manhole	FMH4061162	6.1	3.550	3.150	0.150	0.018	0.0006	1.14E-06	0.0656	9.806	2.590	0.046	58.0	8	0.005	Y	12%	Qd = estimated daily flow of the proposed development.
A2 - A3	FMH4061162	FMH4061163	10.8	2.65	2.63	0.225	0.040	0.0030	1.14E-06	0.0019	9.806	0.439	0.017	285.9	6	0.020	N	**114%**	Q_p = Sum of the flow of former segment A1-A2 and the estimated peak flow from the proposed development.
A3 - A4	FMH4061163	FMH4061164	36.2	2.60	2.43	0.300	0.071	0.0030	1.14E-06	0.0047	9.806	0.851	0.060	345.0	6	0.024	Y	40%	Q_p = Sum of the flow of former segment A2-A3 and the estimated peak flow from the Ray Centre (88 Hung To Road).
A4 - A5	FMH4061164	FMH4061165	7.7	2.13	1.45	0.300	0.071	0.0006	1.14E-06	0.0883	9.806	4.695	0.332	1283.6	6	0.089	Y	27%	Q_p = Sum of the flow of former segment A3-A4 and the estimated peak flow from 90 Hung To Road and 41 King Yip Street.

Note:

(1) Assume ks is for slimed sewers of clayware at "Poor" condition for the existing sewers.

(2) Adopted Peaking Factor (PF) is based on the contributing population of the upstream development(s) and referred to Table T-5 of GESF.

Legend

A_w = *wetted area,* m^2

k_s = *equivalent sand roughness, m*

v = kinematic viscosity of fluid, m^2/s

s = slope of the total energy line

g = gravitational acceleration, m/s^2

V = velocity of flow calculated based on Colebrook-White Equation, m/s

Q_c = *flow capacity,* m^3/s

Q_d = *estimated daily flow,* m^3*/day*

PF = Peaking Factor

Q_p = *estimated peak flow,* m^3/s

Annex D

Calculations of Sewer Capacities after Upgrading

Sewerage Impact Assessment

Estimated Pipe Capacity and Adequacy Check for Upgrading Sewerage

Sewer Pipe	Manhole no.		Length	Level (out)	Level (in)	d	A_w	k_s (1)	v	s	g	V	Q_C	Q_d	PF (2)	Q_P	Is $Q_c > Q_P$?	Contribution from Proposed Development	Notes
	Upstream	Downstream	m	mPD	mPD	m	m^2	m	m^2/s	-	m/s^2	m/s	m^3/s	m^3/day	-	m^3/s	Y/N	%	
Downstream Sewer																			
A2 - A3	FMH4061162	FMH4061163	10.8	**2.68**	2.63	**0.300**	0.071	0.0015	1.14E-06	0.0046	9.806	0.941	0.067	285.9	6	0.020	Y	30%	Q_P = Sum of the flow of former segment A1-A2 and the estimated peak flow from the proposed development.

Note:

(1) Assume ks is for slimed sewers of uPVC at "Poor" condition for the proposed upgrading sewer.

(2) Adopted Peaking Factor (PF) is based on the contributing population of the upstream development(s) and referred to Table T-5 of GESF.

(3) Proposed 300mm pipe is the internal diameter.

Legend

A_w = wetted area, m^2

k_s = equivalent sand roughness, m

v = kinematic viscosity of fluid, m^2/s

s = slope of the total energy line

g = gravitational acceleration, m/s^2

V = velocity of flow calculated based on Colebrook-White Equation, m/s

Q_c = flow capacity, m^3/s

Q_d = estimated daily flow, m^3/day

PF = Peaking Factor

Q_p = estimated peak flow, m^3/s