Appendix 6 –

Sewerage Statement with Previous Sewerage Impact Assessment Reattached Section 12A Application for Amendment to the Approved Yuen Long Outline Zoning Plan (OZP) No. S/YL/27 For Permitted Flat with Shop and Services and Social Welfare Facility Uses at Lot 3678 in D.D. 120, Yuen Long, New Territories

Sewerage Statement

1. INTRODUCTION

This Sewerage Statement is to support the Section 12A Application for proposed Amendment to the Approved Yuen Long Outline Zoning Plan (OZP) No. S/YL/27 to rezone the application site from "Residential (Group A)" to "Residential (Group A)9" at Lot 3678 in D.D. 120, Yuen Long, New Territories.

The applicant submitted a development proposal which involves a 21-storey composite building block for about 74 residential flats (from 10/F to 20/F), a RCHE with 170 beds and ancillary facilities (from 3/F to 9/F) and commercial uses (i.e. shop and services) (from G/F to 2/F) with two levels of basement car parks through a Section 16 planning application (case no. A/YL/319). As liaised with the Planning Department, a Section 12A application is however a more appropriate mechanism to facilitate the proposal. Hence, a new S12A application under the same set of scheme and development parameters is now applied.

In support of the said Section 16 planning application (A/YL/319), a Sewerage Impact Assessment (SIA) has been conducted and confirmed the technical feasibility of the proposed development in sewerage aspects. With the incorporation of mitigation measures, significant adverse sewerage impacts are not anticipated and the Director of Environmental Protection (DEP) has no objection to the application from environmental planning perspective.

2. SEWERAGE IMPACT

This Sewerage Statement is submitted to reaffirm that the scheme and development programme as the basis of the approved SIA is remained unchanged for the current Section 12A Application (**Table 1.1** refers).

Table 1.1 Key Development Parameters of the Proposed Development under the Previous Schemesubmitted under Section 16 Planning Application and the Current Scheme for Section 12AApplication

	Previous Scheme submitted	Current Scheme for Section 12A
	under Section 16 Planning Application (A/VL/319)	Application
No. of Store ys	21 storeys and 2 basement floors	21 storeys and 2 basement floors
Total Gross Floor Area (GFA) (about)	9,333m ²	9,333m ²
Building Height	Not more than +82.34 mPD	Not more than +82.34 mPD
Proposed Major Floor Use	B2/F to B1/F: Carpark G/F: Shop and Services, RCHE(s) (Lobby and Lift), Carpark Entrance and Lay-by 1/F to 2/F: Shop and Services and RCHE(s) (lift) 3/F to 7/F: Dormitory for RCHE(s) 8/F to 9/F: Office and Back-of- House for RCHE(s) 10/F to 19/F: Flats 20/F: Clubhouse	B2/F to B1/F: Carpark G/F: Shop and Services, RCHE(s) (Lobby and Lift), Carpark Entrance and Lay-by 1/F to 2/F: Shop and Services and RCHE(s) (lift) 3/F to 7/F: Dormitory for RCHE(s) 8/F to 9/F: Office and Back-of- House for RCHE(s) 10/F to 19/F: Flats 20/F: Clubhouse
Population Size (for Flat only)	208 (Based on an average household size of 2.8)	208 (Based on an average household size of 2.8)
Tentative Population Intake Year	2027/2028	2027/2028
Proposed RCHE		
Total No. of Beds	160 to 220 (The current scheme proposes 170 RCHE beds)	160 to 220 (The current scheme proposes 170 RCHE beds)
Proposed Flats		
Total No. of Flats	74	74

The assessment results and the mitigation measures identified in the approved SIA Report are also applicable to the current S.12A application. Therefore, it is evaluated that insurmountable adverse sewerage impacts are also not anticipated for the current S.12A application. The same SIA Report with relevant wordings updated to "S.12A application" is attached.

PROPOSED RELAXATION OF PLOT RATIO RESTRICTION FOR FLAT WITH SHOP AND SERVICES AND SOCIAL WELFARE FACILITY (RESIDENTIAL CARE HOME FOR THE ELDERLY) USES IN LOT NO. 3678 IN D.D. 120, YUEN LONG, NEW TERRITORIES

SEWERAGE IMPACT ASSESSMENT REPORT

AUGUST 2024

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Appendix 7 – Calculation of Flow Capacity

1. INTRODUCTION

1.1 PROJECT BACKGROUND

The Full Year Limited (the Applicant) proposes to develop a 23-storey composite building (including 2 basement floors) comprising mainly flat with shop and services and social welfare facility (Residential Care Home(s) for the Elderly) (RCHE(s)) in Lot No. 3678 in D.D. 120, Yuen Long, New Territories (the proposed development/the Site).

DeSPACE (International) Limited has been engaged to prepare a Sewerage Impact Assessment (SIA) Report for the Section 12A Planning Application under the Town Planning Ordinance of the proposed development.

1.2 PROJECT LOCATION

The Site is located at south of Yuen Long Pau Cheung Square and is surrounded by composite buildings. It was formerly the site of an old theatre with around 60 years of history which was closed in 2020 and demolished. **Appendix 1** shows the location of the Site.

1.3 PROPOSED LAND USE

The master layout plan is provided in **Appendix 2**. The Site area, of approximately 780m², is expected to comprise a 23-storey composite building (including 2 basement floors) with mainly flat with shop and services and RCHE(s) in "Residential (A)" ("R(A)") zone within the approved Yuen Long Outline Zoning Plan No. S/YL/27 (the OZP). The anticipated year of the population intake is 2027/2028.

1.4 OBJECTIVE OF THE REPORT

The objective of this SIA Report is to assess whether the capacity of the sewerage networking is sufficient to cope with the peak sewage flow arising from the proposed Development during its operation stage and to recommend appropriate mitigation measures to alleviate unacceptable sewerage impact, if any.

2. BACKGROUND

2.1 EXISTING CONDITION

With reference to the drainage records obtained from the Drainage Services Department's drainage record plans, the sewage discharged from the application premises discharged via the public sewer (Manhole No. FMH1048046) along the north of the Site (Please refer to **Appendix 3**).

The collected sewage will flow along the 150mm diameter sewer underneath the north of the Site, then further flow via the 150mm diameter sewer at Manhole No. FMH1018371 underneath the Yuen Long Pau Cheung Square with the discharge from catchment from the south side.

2.2 SEWAGE IMPACT DURING OPERATION OF PROPOSED REDEVELOPMENT

Sewage during operation is mainly generated by the residents of the residential units and RCHE and the customers and staff of the shop and services. Sewage will be collected by internal sewage system within the Site and discharge to the municipal sewerage system via Manhole No. FMH1048046, then flow along the original sewerage pipe to downstream.

Sewage generated from the Proposed Development would be collected and conveyed to the nearest public sewerage system, which is the Ping Shun Street Sewage Pumping Station and San Wai Sewage Treatment Works, via proper connections. No sewage will be released to the environment without treatment.

3. SEWERAGE ANALYSIS

3.1 ASSUMPTION

In order to assess the acceptability of the sewerage impact arising from the operation of the proposed development, the sewage generation has been estimated based on the assumptions shown in **Table 3.1**.

Table	3.1	Summary	of	Parameters	for	Estimating	Sewage	Generation	from	the
Propo	sed	Developme	ent							

Parameters	Value	Justification
Population		
RCHE Dormitory at 3/F to	220 persons	There will be a range of 160-220
7/F		beds according to the

		supplementary planning statement, 220 persons is adopted for conservation approach. (NB: The current scheme proposes
Unit Flow Factors		
Car Park at B2/F, B1/F and G/F	0.18 m³/day	GESF (Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.1 (J3 Transport, Storage & Communication)
Management Office for Residential Unit at G/F (Employee)	0.28 m³/day	GESF (Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.2 (Community, Social & Personal Service)
Shop and Services at G/F to 2/F	0.28 m³/day	GESF (Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) + 0.2 (Wholesale & Retail)
RCHE at G/F, 3/F to 9/F (Resident)	0.19 m³/day	GESF (Table T-1) - UFF for Institutional and Special Class
RCHE at G/F, 3/F to 9/F (Employee)	0.28 m³/day	GESF (Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.2 (Community, Social & Personal Service)
Kitchen for RCHE at 8/F (Employee)	1.58 m³/day	GESF (Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +1.5 (Restaurants & Hotel)
Flat at 10/F to 20/F (clubhouse at 20/F)	0.37 m³/day	GESF(Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development)
Clubhouse at 20/F (Employee)	0.28 m³/day	GESF (Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) + 0.2 (Community, Social & Personal Services)

Catchment Inflow Factor		
Pcif	1.00	Catchment Inflow Factor = 1 for vicinity located in 'Yuen Long' based on EPD's GESF Table T-4.
Peaking Factor		
Ρ	8	Peaking factor = 8 for contributing population <1,000 for sewer (including storm water allowance) based on EPD's GESF Table T-5
Roughness Values (k _s)		
Existing Pipes	0.6mm	Conservation value of 'Sewers slimed to about half depth; velocity, when flowing half full, approximately 1.2 m/s – Clayware' was adopted based on the Sewerage Manual (Part 1) Table 5

3.2 METHODOLOGY

Evaluation of the capacity of sewers has been conducted by estimating the sewage/ wastewater generation from the upstream and downstream catchments of the receiving sewers, and to further study the acceptability of the sewerage impact arising from operation of the proposed development.

The capacities of the downstream sewers have been calculated by Colebrook-White Equation for circular pipes flowing full, assuming full bore flow with no surcharge, as follows:

$$V = -\sqrt{8gDs} * \log(\frac{ks}{3.7D} + \frac{2.51v}{D\sqrt{2gDs}})$$

Where

v=mean velocity, m/s
g=gravitational acceleration, m/s²
D=internal pipe diameter, m
ks=hydraulic pipeline roughness, m
v=kinematic viscosity of fluid, m²/s
s=hydraulic gradient (energy loss per unit length due to friction)

The flow capacity of sewer from Manhole FMH1018375 to Manhole FMH1018369 has been assessed to ensure the downstream section have sufficient capacity for the sewage flowing from all the section upstream, provided that the capacity of the upstream sections is not exceeded. Therefore, if the sewerage system can provide sufficient receiving capacity for the cumulative sewage quantities, there would be no unacceptable impact on the downstream sewerage system.

3.3 Assessment Results & Discussion

Detailed calculations of sewage flow generation and hydraulic capacity are provided in **Appendices 4 to 7**. The estimated cumulative peak discharge of all downstream sewerage of the proposed Site account for no more than 100% of the hydraulic capacity of the concerned sewer. No exceedance of hydraulic capacity for all cumulative peak discharge is anticipated under the proposed sewerage network with upgraded pipework.

3.4 Assessment Summary

To summarize, there will be one sewer discharge point from the Site to the inlet of proposed sewer terminal manhole which will then be connected to the public sewer manhole along the Yuen Long Pau Cheung Square. In view of the proposed development and the vicinity, the following proposed upgraded pipe works are recommended:

Proposed upgraded pipe works for the Pipes FWD1019560, FWD1019561,
 FWD1062247, FWD1019559 and FWD1019558 by new 200 mm, 200 mm, 225 mm,
 500 mm and 500 mm diameter sewers respectively.

According to the estimated sewage generation calculations, it is anticipated that the proposed sewerage will have sufficient capacity to cater for the sewage generated from the proposed Site. No adverse sewerage impact associated with the proposed Development is anticipated.

Detailed alignment and the design of the connecting sewer will be subject to the detailed design of the Project¹. The Applicant shall be responsible for appointing a qualified engineer for properly design and construct of the connecting sewers, likely at the design stage of Project. Agreement and approval from relevant government departments, including DSD, shall be obtained in due course.

¹ The cover level(s) of the terminal manhole(s) should be higher than that of the downstream public manholes(s).

4. CONCLUSION

The potential sewerage impact due to the application site has been quantitatively addressed. Based on the estimated sewage flow for the Site presented in **Appendix 4**, the total peak sewage flow projected for the Site is about 161.59 m³/day.

All sewage generated from the Site will be conveyed to the public sewerage system via the proposed sewer terminal manhole. The sewage generation calculations on the proposed sewerage system have indicated that the proposed upgraded pipe works for the Pipes FWD1019560, FWD1019561, FWD1062247, FWD1019559 and FWD1019558 by new 200 mm, 200 mm, 225 mm, 500 mm and 500 mm diameter sewers respectively, will have sufficient capacity to cater for sewage discharged from the Site and surrounding catchments

The maximum estimated peak flow from the proposed Site and all cumulative catchment areas will account for less than 100% of the flow capacity of the sewerage system. Hence, it is concluded that no adverse sewerage impacts arising from the development is anticipated.

Location Plan



Proposed Development Scheme



B2/F LAYOUT PLAN

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Planning Consultant : DeSPACE (International) Limited		
Architect :		
I Consultants & Contracting Company Limited Traffic Consultant :		
CTA Consultants Limited		
Environmental Consultant : BeeXergy Consulting Limited		
Structural and Geotechnical Engineer : S. T. Wong & Partners Limited		
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Traffic Consultants & Contracting Company Limited		
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4/F TO 7/F LAYOUT PLAN (DORMITORY FOR RCHE)

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4/F TO 7/F LAYOUT PLAN											
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8/F LAYOUT PLAN (OFFICE & BOH FOR RCHE)

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10/F TO 19/F LAYOUT PLAN

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Existing Sewerage Plan

Calculation of Sewage Generation from the Proposed Development

Calculation of Sewage Generation from the Proposed Development

1. YLT - Car Park at B1 and B2		
Total GFA	958	m ²
Area/Employee	26.32	CIFSUS (Table 8) - Worker Density, 3.8 (Transport)
Estimated Population	36	
Linit Flow Factor	0.18	GESE/Table T-2) - LIEE for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.1 (13 Transport Storage & Communication)
Estimated Dry Weather Flow	6.55	
Estimated by Weather How	0.00	ni /uay
2. YLT - Management Office for Residentia	I Unit at G/F (Emp	ployee)
Total GFA	4.25	m ²
Total number of employees	1.0	Based on the proposed operation for management office
Unit Flow Factor	0.28	GESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.2 (Community, Social & Personal Service)
Estimated Dry Weather Flow	0.28	m ³ /day
3. YLT - Shop at G/F to 2/F		
Total GFA	1546	m ²
Area/Employee	28.571	 CIFSUS (Table 8) - Worker Density 3.5 (Retail Trade)
Estimated Population	54.11	
Unit Flow Factor	0.28	GESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) + 0.2 (Wholesale & Retail)
Estimated Dry Weather Flow	15.15	m ³ /day
4. TLI-RCHE at G/F, 3/F to 9/F (Resident)	000	
I otal number of beds	220	CESE/Table T 1) LIEE for Institutional and Special Class
Utilit Flow Factor	0.19	3.
Estimated Dry weather Flow	41.0	m'/day
5. YLT- RCHE at G/F, 3/F to 9/F (Employee)		
Total GFA	1187	m ²
Area/Employee	30.3030303	CIFSUS (Table 8) - Worker Density 3.3 (Community, Social & Personal Service)
Estimated Population	39.171	
Unit Flow Factor	0.28	GESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.2 (Community, Social & Personal Service)
Estimated Dry Weather Flow	10.96788	m ³ /day
6. YLT - Kitchen for RCHE at 8/F (Employed	e)	
Total GEA	116	m ²
Area/Employee	19 60784314	CIFSUS (Table 8) - Worker Density 5.1 (Restaurants)
Total number of employees	5.9	
Unit Flow Factor	1.58	GESE/Table T-2) - LIEE for Commercial Flow and Student Flow 0.080 (Commercial Employee) +1.5 (Restaurants & Hotel)
Estimated Dry Weather Flow	9.34728	
		-
7. YLT - Flat at 10/F to 20/F		
Total number of units	74	
Total number of residents	207.2	Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District
Unit Flow Factor	0.37	GESF(Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development)
Estimated Dry Weather Flow	76.664	m ³ /day
8. YLT - Clubhouse at 20/F (Employee)		
Total GFA	89.1	m ²
Area/Employee	30.3030303	CIFSUS (Table 8) - Worker Density 3.3 (Community, Social & Personal Services)
Total number of employees	2.9	
Unit Flow Factor	0.28	GESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) + 0.2 (Community, Social & Personal Services)
Estimated Dry Weather Flow	0.823284	m³/day
Total Flow from Proposed Development		
Total Average Daily Dry Woother Flow	161 50	
	101.39	m /day

Calculation of Sewage Generation from Upstream and Downstream Catchments

Calculation of Sewage Generation from Catchments	Upstream and Downstream	Remarks						
Catchment A								
Assumed Full Bored								
Catchment B								
36 Fook Tak St, Yuen Long	G/F to M/F							
Total GFA	177.276 m^2							
Area/Employee	28.57	3.5 (Retail)						
Estimated Population	6.20466							
		CESE/(T-bla T 2) LIEE for Communical Element of Student Elem						
Unit Flow Factor	0.28 m ³ /person/day	0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)						
Estimated Dry Weather Flow	$1.74 \text{ m}^3/\text{day}$	······						
36 Fook Tak St, Yuen Long	2/F to 5/F							
l otal number of units	10 units	Average Household Size of 2.8 in Yuen Long from						
Total number of residents	28 people	2022 Population and Household Statistics Analysed by District Council District						
Unit Flow Factor	0.37 m ³ /person/day	GESF(Table T-1) - UFF for Domestic Flow						
Estimated Dry Weather Flow	10.36 m ³ /day	0.370 (R3 Private Development)						
On Ting Building, 41-45 On Ning Road	G/F to M/F							
Total GFA	289.476 m ²							
Area/Employee	28.57	3.5 (Retail)						
Estimated Population	10.13100	GESE(Table T-2) - UFE for Commercial Flow and Student Flow						
Unit Flow Factor	0.28 m ³ /person/day	0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)						
Estimated Dry Weather Flow	2.84 m ³ /day							
On Ting Building 41 45 On Ning Boad	2/E to 5/E							
Total number of units	16 units							
Total number of residents	44.8 neonle	Average Household Size of 2.8 in Yuen Long from						
	rito people	2022 Population and Household Statistics Analysed by District Council District						
Unit Flow Factor	0.37 m ³ /person/day	0.370 (R3 Private Development)						
Estimated Dry Weather Flow	16.576 m ³ /day	. ,						
Man Yau Building, 37-39 On Ning Road	G/F to M/F							
Total GFA	223.584 m ²							
Area/Employee	28.57	3.5 (Retail)						
Estimated Population	7.82544	GESE(Table T-2) - LIFE for Commercial Flow and Student Flow						
Unit Flow Factor	0.28 m ³ /person/day	0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)						
Estimated Dry Weather Flow	2.19 m ³ /day							
Man Yau Building 37-39 On Ning Road	2/E to 5/E							
Total number of units	10 units							
Total number of residents	28 people	Average Household Size of 2.8 in Yuen Long from						
	- 1 1	2022 Population and Household Statistics Analysed by District Council District						
Unit Flow Factor	0.37 m ³ /person/day	0.370 (R3 Private Development)						
Estimated Dry Weather Flow	10.36 m ³ /day							
Catchment D								
20-34 Fook Tak St, Yuen Long	G/F to M/F							
Total GFA	865.98 m ²							
Area/Employee	28.57	3.5 (Retail)						
Esumated Population	50.5095	GESF(Table T-2) - UFF for Commercial Flow and Student Flow						
Unit Flow Factor	0.28 m ³ /person/day	0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)						
Estimated Dry Weather Flow	8.49 m ³ /day							
20-34 Fook Tak St. Yuen Long	2/F to 5/F							
Total number of units	40 units							
Total number of residents	112 people	Average Household Size of 2.8 in Yuen Long from						
		2022 Population and Household Statistics Analysed by District Council District GESF(Table T-1) - UFF for Domestic Flow						
Unit Flow Factor	0.37 m ³ /person/day	0.370 (R3 Private Development)						
Estimated Dry Weather Flow	41.44 m ³ /day							
Hung Wan Building 21-35 On Ning Road	G/F to M/F							
Total GFA	762.96 m ²							
Area/Employee	28.57	3.5 (Retail)						
Estimated Population	26.7036	GESE(Table T.2) - HEE for Commercial Flow and Student Flow						
Unit Flow Factor	0.28 m ³ /person/day	0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)						
Estimated Dry Weather Flow	7.48 m ³ /day							

Tool number of residents Average Hearchold Size of 2.8 in Year Long from Distribution of Hearchold Statistics Analyses by Durine Connell Durine Distribution of Hearchold Statistics Analyses by Durine Connell Distribution Distribution of Hearchold Statistics Analyses by Durine Connell Distribution Distribution of Hearchold Statistics Analyses by Distribution of Hearchold Statistics Analyses by Distribution of Distribution Distribution of Hearchold Statistics Analyses by Distribution of Distribution of Hearchold Statistics Analyses by Distribution of Distrest Distribution of Hearchold Statis Stanalyses by	Hung Wan Building, 21-35 On Ning Road Total number of units	2/F to 5/F 36 units	
Lini Flow Faster 0.37 m ² percentality Districted Dy Wardler Flow 37.296 m ² day 18 Fool Tak S, Yoan Loga, Assimpting Carlos Control	Total number of residents	100.8 people	Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District
Estimated Day Weather Flow 37:286 m ² /day 18 Feast Tab. Sty Vene Long Cor P to MF Total CP 1 17:286 m ² /day 25:10:100 25:10:100 Estimated Daylation 6.21:18 Unit Flow Faster 0.28 m ² /persondup 19 Feast Tab. Sty Vene Long Cor P to MF Total annaber of runins 28 sopile 10 runins Total annaber of runins Total annaber of runins 28 sopile 10 runins 28 sopile Catchment F 0.37 m ² /persondup Chin Shafest Flow 0.37 m ² /persondup 10.36 m ² /day 28 sopile Catchment F 0.37 m ² /persondup Cition Mark 28 sopile Catchment F 0.37 m ² /persondup Cition Mark Tabling, 19 On Nong Rd Cor P to MF Cition Mark Tabling, 19 On Nong Rd 13.722 m ² Cition Mark Tabling, 19 On Nong Rd 13.722 m ² Cition Mark Total GrAf 27 to SF Cition Mark Total GrAf 28 sopile Cition Mark Total GrAf 28 sopile Cition Mark Tore reader <td>Unit Flow Factor</td> <td>0.37 m³/nerson/day</td> <td>GESF(Table T-1) - UFF for Domestic Flow</td>	Unit Flow Factor	0.37 m ³ /nerson/day	GESF(Table T-1) - UFF for Domestic Flow
18 Fook Tak Stylen Long GR W MF 18 Fook Tak Stylen Long GR W MF 12 Aradian Dipologics 22.57 13 Fook Tak Stylen Long 22.57 14 Fook Tak Stylen Long 22.57 15 Fook Tak Stylen Long 22.57 16 Fook Tak Stylen Long 22.57 17 Fook Tak Stylen Long 22.57 18 Fook Tak Stylen Long 22.57 10 miles 10 miles 10 Tool number of tesidents 29 for S4 10 Tool number of tesidents 20.56 m ³ /aprovoldy 10 Tool number of tesidents 20.57 m ³ /percendeg 10 Tool number of tesidents 20.57 m ³ /percendeg 10 Tool number of tesidents 24 for MF 11 Tool number of tesidents 24 for MF 12 Tool number of tesidents 24 for MF 12 Tool number of tesidents 24 for S4 13 Tool number of tesidents 2.4 for S4 13 Tool number of tesidents 2.4 for S4 13 Tool number of tesidents <td>Estimated Dry Weather Flow</td> <td>37.296 m³/day</td> <td>0.370 (R3 Private Development)</td>	Estimated Dry Weather Flow	37.296 m ³ /day	0.370 (R3 Private Development)
Access Employee 28.57 3.5 (R-tail) Estimated Day Weather Flow 0.28 m ³ /percender GEST(Table T-2): UFF for Commercial Flow and Student Flow 0.00 (Commercial Employee): 40.2 (14 Wholesale & Retail) 0.00 (Commercial Employee): 40.2 (14 Wholesale & Retail) Total number of testionts 29 for 54 Total number of residents 29 for 54 Estimated Day Weather Flow 0.03 fm ³ /percender Estimated Day Weather Flow 0.03 fm ³ /percender Catchmeet F Geff to MF C1(in) Mm Tat Building, 19 On Ning Rd Geff to MF Total number of tomis 2.35 m ³ /percender Utt Flow Factor 0.37 m ³ /percender	18 Fook Tak St, Yuen Long Total GFA	G/F to M/F 177.48 m ²	
Unit How Factor 0.28 m ³ /persorder GESP(Table 7.2) - UFF for Commercial Flow and Studen Flow 18 Fork Tab 8, Year Long 10 min 18 Tork Tab 8, Year Long 10 min 19 Total number of units 10 min 10 anime 25 to 57 10 min 25 to 57 10 min 25 to 56 10 min 25 to 57 10 min 25 to 56 11 Min How Factor 0.37 m ³ /persorder 12 C1(1) Mm Tit Building 19 On Ning Rd GPT to MP 13 Fork Tab 9, Year How Factor 0.38 m ³ /persorder 14 Total number of minis 28 m ³ /persorder 15 (Retail) 10 minis 14 Total number of minis 8 minis 15 (Retail) 10 S m ³ /persorder 15 (Retail) 10 S m ³ /persorder 15 (Retail) 10 S m ³ /persorder 16 (1) Minis Tab Building 19 On Ning Rd 27 to 57 17 Guil number of residents 22 to 54 16 (1) Minis Total number of residents 22 to 54 17 Guil number of residents 22 to 54 18 Total number of residents 22 to 54 11 Total number of residents 22 to 54 12 Total number of residents 33 m ³ /persorder 13 Total number of residents 25 (8 C mail 14 Total nu	Area/Employee Estimated Population	28.57 6.2118	3.5 (Retail)
Estimated Dry Weather Flow 1.74 m ³ day 18 Fook TaS S, Ynen Long Tool a number of residents 24° to 57° 10 units Catchment E 0.37 m ³ personidary Unit Flow Factor 0.37 m ³ personidary Estimated Dry Weather Flow 10.36 m ³ day Catchment E 0.37 m ³ personidary Catchment E 0.37 m ³ personidary Cit(1) Man Tat Building, 19 On Nag Rd GP to MP Cli(2) Man Tat Building, 19 On Nag Rd GP to MP Cli(3) Man Tat Building, 19 On Nag Rd GP to MP Cli(3) Man Tat Building, 10 On Nag Rd Cate Flow Cli(3) Man Tat Building, 10 On Nag Rd Cate Status Cli(3) Man Tat Building, 10 On Nag Rd Cate Status Cli(3) Man Tat Building, 10 On Nag Rd Cate Status Cli(3) Man Tat Building, 10 On Nag Rd Cate Status Cli(3) Man Tat Building, 10 On Nag Rd Cate Status Cli(3) Man Tat Building, 10 On Nag Rd Clif to MP Clig Unit Flow Factor 0.37 m ³ personidary Estimated Dry Weather Flow 3.38 m ³ /day Pook Loi Building, 11-17 On Ning Road Clif to MP Cli(3) Man Tat Building, 10 On Ning Road Clif to MP Clig Unit Flow Factor 0.37 m ³ personidary Estimated Dry Weather Flow 3.3176724 m ³ day Status Status	Unit Flow Factor	0.28 m ³ /person/day	GESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)
18 Feek Task, Yven Long Toal anumber of nisis 28 Fe 57 10 units 28 people 28 people Unit Flow Factor Estimated Dry Weather Flow 0.37 m ² persondar 0.38 m ² daw Catchment E 0.37 m ² persondar 0.30 (R3 Private Development) Catchment E 0.37 m ² persondar 0.30 (R3 Private Development) Catchment E 0.37 m ² persondar 0.30 (R3 Private Development) Catchment E 0.37 m ² persondar 0.30 (R3 Private Development) Catchment E 0.37 m ² persondar 0.30 (R3 Private Development) Catchment E 0.37 m ² persondar 0.30 (R3 Private Development) Catchment E 0.37 m ² persondar 0.30 (R3 Private Development) Catchment E 0.37 m ² persondar 0.30 (R3 Private Development) Catchment F 1.3104756 m ² (day Catchment F 0.37 m ² persondar 0.30 (R3 Private Development) Catchment F 0.37 m ² persondar 0.30 (R3 Private Development) Catchment F 0.37 m ² persondar 0.30 (R3 Private Development) Catchment F 0.37 m ² persondar 0.30 (R4 Private Development) Catchment Plow 3.3176724 m ² day Prode Loi Building, 1-17 On Ning Road Toal number of nisis 2.4 people Catchment Plow 3.3176724 m ² day Fook Loi Building, 1-17 On Ning Road Toal number of nisis 2.4 people Catchment Plow 3.3176724 m ² day Fook Lo	Estimated Dry Weather Flow	1.74 m ³ /day	
Total number of residents 28 people Average Household Size of 28 in Yuen Long from 2022 Population and Household Sizes (28 in Yuen Long from 2022 Populations: Analysed by District Council District 0537 (Table T-1) - UFF for Commercial Flow Catchment E Catchment Flow C1(i).Mus Tat Building, 19 On Ning Rd GF to MF Total OFA Total OFA C1(ii).Mus Tat Building, 19 On Ning Rd GF to MF Total number of residents 2.8 m ² /person/day C1(ii).Mus Tat Building, 19 On Ning Rd C.8 m ² /person/day C1(iii).Mus Tat Building, 19 On Ning Rd 2.8 m ² /person/day C1(iii).Mus Tat Building, 19 On Ning Rd 2.4 people Total number of residents 2.4 people Unit Flow Factor 0.37 m ² /person/day C1(iii).Mus Tat Building, 11 On Ning Rd 2.4 people Total number of residents 2.4 people Unit Flow Factor 0.37 m ² /person/day Fook Loi Building, 11-17 On Ning Rod 2.5 for SF Total number of residents 3.3 176724 m ² /day Fook Loi Building, 11-17 On Ning Rod 3.3 176724 m ² /day Total number of residents 8 people Unit Flow Factor 0.32 m ² /person/day Fook Loi Building, 5-10 Ning Rod 7.6 to SF Total number of residents 8 people Unit Flow Factor 0.32 m ² /person/day <td>18 Fook Tak St, Yuen Long Total number of units</td> <td>2/F to 5/F 10 units</td> <td></td>	18 Fook Tak St, Yuen Long Total number of units	2/F to 5/F 10 units	
Unit Flow Factor 0.37 m ² /persondag GEST[Table T-1] - UFF for Demestic Flow 3.370 (RJ Private Development) Catchment E Control GFA Treat GFA Anterphysics Control GFA 22.572 m ² 22.572 m ² 25.572	Total number of residents	28 people	Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District
Estimated Dry Weather Flow 10.36 m²day Citchment E Cif to MF Citchment E Cif to MF Citchment E S.5 (Retail) Citchment E Ciff to MF Citchment E 0.28 m²personitay Distinued Dop Weather Flow 1.3104756 m²/day Citchina Tar Building, 19 On Ning Red 2F to SF Total number of units 8 units Total number of units 2.4 people Bisimated Dop Weather Flow 0.37 m²personitay Citchina Hart Building, 19 On Ning Red Cif to MF Total number of units 2.8 units Total citch 2.4 people Bisimated Dop Weather Flow 0.37 m²personitay Bisimated Dop Waather Flow 3.316774 m²/day Fook Loi Building, 11-17 On Ning Read Cif to MF Total number of units 3.3 n² Bisimated Dop Weather Flow 3.3176724 m²/day Fook Loi Building, 1-17 On Ning Read 2.5 to 5.5 Total number of units 3.0 units Total Cif A 2.25 to 5.5	Unit Flow Factor	0.37 m ³ /person/day	GESF(Table T-1) - UFF for Domestic Flow
Catchment E GF to MF C1(1).Man Tat Building, 19 On Ning Rd GF to MF Total GFA 133,722 m² Area:Employee 28,57 Unit Flow Factor 0.28 m²/persondry Estimated Dy Weather Flow 1.3104756 m²/day C1(ii).Man Tat Building, 19 On Ning Rd 2F to 5F Total number of residents 22.4 people Unit Flow Factor 0.37 m²/persondry Estimated Dy Weather Flow 8 units Total number of residents 22.4 people Unit Flow Factor 0.37 m²/persondry Estimated Dy Weather Flow 8.288 m²/day Flook Loi Building, 11-17 On Ning Rdd 333.578 m² Area: Employee 28.57 Estimated Dy Weather Flow 0.33 m²/persondry Outi Flow Factor 0.28 m²/persondry Estimated Dy Reador 0.48 m²/day Fook Loi Building, 11-17 On Ning Rdd 27 fo 5 5F Total number of ruitis 8 4 people Unit Flow Factor 0.37 m²/persondry Other Net Factor 0.37 m²/persondry Estinated Dy Weather Flow 31.6 for MF	Estimated Dry Weather Flow	10.36 m ³ /day	
C1(i).Man Tat Building, 19 On Ning Rd GF to MF Total GFA 28,57 AreaEmployce 28,57 Unit Flow Factor 0.28 m²/personida Estimated Dy Weather Flow 1.3104756 m²/qay C1(ii).Man Tat Building, 19 On Ning Rd 2F to 5F Total number of residents 22.4 people Unit Flow Factor 0.37 m²/personiday Estimated Dy Weather Flow 3.35.38 m² Total number of residents 2.2.4 people Estimated Dry Weather Flow 6.37 m²/personiday Fook Loi Building, 11-17 On Ning Rad GF to MF Total number of residents 3.3.176724 m²/day Fook Loi Building, 11-17 On Ning Rad 2/F to 5/F Total number of residents 84 people Unit Flow Factor 0.28 m²/personiday C3(i) On Wing Building, 5-0 On Ning Rad 2/F to 5/F Total number of ruits 84 people Unit Flow Factor 0.28 m²/personiday C3(i) On Wing Building, 5-0 On Ning Rad 2/F to 5/F Total number of ruits 2/F to 5/F So (Retail) CESTTable T-2) - UFF for Commercial Flow and Student Flow C3(i) On Wing Building, 5-0 On Ning Road	Catchment E		
AcutEmployce 12.8.5 m² Estimated Population 4.68027 Unit Flow Factor 0.28 m²/persondap C1(ii) Man Tat Building, 19 On Ning Rad 2/F to 5/F Total number of units 8 units Xorrage Household Size of 2.8 in Yuen Long from 2/2 Popilation and Household Size of 2.8 in Yuen Long from Unit Flow Factor 0.37 m²/persondap Estimated Dy Weather Flow 8.288 m²/day Fook Loi Building, 11-17 On Ning Road C4F to 5/F Estimated Population 11.84883 Duit Flow Factor 0.37 m²/persondap Estimated Population 11.84883 Duit Flow Factor 0.28 m²/persondap Estimated Population 11.84883 Duit Flow Factor 0.37 m²/persondap Diational mumber of units 30 units Atorage Household Size of 2.8 in Yuen Long from 2022 Popilation and Household Size of 2.8 in Yuen Long from 2030 (Commercial Employce) 2.2 for 5/F Catinal number of residents 4 popilation Atorage Household Size of 2.8 in Yuen Long from 2022 Population and Household Size of 2.8 in Yuen Long from 2030 (RS Private Development) Catinal number of residents 4 popilation Atorage Household Size of 2.8 in Yuen Long from 2022 Popilation and Household Size of 2	C1(i).Man Tat Building, 19 On Ning Rd Total GFA	G/F to M/F 133 722 m^2	
Estimated Population 4.6807 Unit Flow Factor 0.28 m²/personidap Estimated Dry Weather Flow 1.3104756 m²/day CI(ii).Man Tat Building, 19 On Ning Rd 2/F to 5/F Total number of units 8 units Total number of units 8 units Total number of residents 2.24 people Unit Flow Factor 0.37 m²/personidap Estimated Dry Weather Flow 8.288 m²/day Fook Loi Building, 11-17 On Ning Road GF to MF Total number of units 33 538 m² Sitimated Dry Weather Flow 3.3176724 m²/day Fook Loi Building, 11-17 On Ning Road 2/F to 5/F Total number of units 3.0 (R3 Private Development) Estimated Dry Weather Flow 3.3176724 m²/day Fook Loi Building, 11-17 On Ning Road 2/F to 5/F Total number of units 84 people Unit Flow Factor 0.37 m²/personidap C2(i).On Wing Building, 5-9 On Ning Road C/F to M/F Total number of units 84 people Unit Flow Factor 0.37 m²/personidap Estimated Dry Weather Flow 3.108 m²/day C2(i).On Wing Building, 5-9 On Ning Road C/F t	Area/Employee	28.57	3.5 (Retail)
Unit How Factor 0.0.8 m²/personday Estimated Dry Weather Flow 1.3104756 m²/day C1(ii),Man Tut Building, 19 On Ning Rd 2/F to 5/F Total number of residents 2.24 people Bindleng, 1-17 On Ning Road GP to M/F Fook Loi Building, 1-17 On Ning Road GP to M/F Total number of residents 2.8 m²/personday Signa of the state for polyation 0.38 m²/personday Fook Loi Building, 1-17 On Ning Road GP to M/F Total number of residents 2.8 m²/personday Bindleng of tot M/F 3.3176724 m²/day Fook Loi Building, 1-17 On Ning Road CP to 5/F Total number of neisdents 84 people Bindleng of polyation 3.1076724 m²/day Fook Loi Building, 1-17 On Ning Road CP to 5/F Total number of neisdents 84 people Unit Flow Factor 0.37 m²/personday C3(0.0n Wing Building, 5-9 On Ning Road G/F to M/F Total number of nuiss 6/F to M/F Stimated Dry Weather Flow 3.108 m²/day C3(0.0n Wing Building, 5-9 On Ning Road G/F to M/F Total number of fusidents 84 people Stimated Dry Weather Flow 2.49008 m²/day C3(0.0n Wing Building, 5-9 On Ning Road G/F to M/F Total number of fusidents	Estimated Population	4.68027	GESF(Table T-2) - UFF for Commercial Flow and Student Flow
1.310#/50 m/day C1(ii).Man Tat Building, 19 On Ning Rd 2/F to 5/F Total number of units 2.2.4 pcople Unit Flow Factor 0.37 m²/person/day Estimated Dry Weather Flow 8.288 m²/day Fook Loi Building, 11-17 On Ning Road G/F to M/F Total number of residents 0.38 m²/person/day Mark Estimated Dry Weather Flow 3.3176724 m²/day Fook Loi Building, 11-17 On Ning Road G/F to M/F Total number of residents 3.3176724 m²/day Fook Loi Building, 11-17 On Ning Road 2/F to 5/F Stimated Dry Weather Flow 3.3176724 m²/day Fook Loi Building, 11-17 On Ning Road 2/F to 5/F Total number of residents 84 pcople Unit Flow Factor 0.37 m²/person/day Estimated Dry Weather Flow 3.108 m²/day C3(i) On Wing Building, 59 On Ning Road 2/F to 5/F C3(i) On Wing Building, 59 On Ning Road 2/F to 5/F C3(ii) On Wing Building, 59 On Ning Road 2/F to 5/F C3(ii) On Wing Building, 59 On Ning Road 2/F to 5/F C3(iii) On Wing Building, 59 On Ning Road 2/F to 5/F C3(iii) On Wing Building, 59 On Ning Road 2/F to 5/F C3(iii) On Wing Building, 59 On Ning Road 2/F to 5/F C3(iii) On Wing Building, 59 On Ning Road 2/F to 5/F <td></td> <td>0.28 m³/person/day</td> <td>0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)</td>		0.28 m ³ /person/day	0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)
C1(ii).Man Tat Building, 19 On Ning Rd 2/F to 5/F Total number of units 2.2.4 people Unit Flow Factor 0.37 m³/person/day Pook Loi Building, 11-17 On Ning Road G/F to M/F Total and Point 3.8.338 m² Arraz Employce 28.57 Stimated Dry Weather Flow 3.3.176724 m²/day Fook Loi Building, 11-17 On Ning Road G/F to M/F Total number of units 0.28 m²/person/day Fook Loi Building, 11-17 On Ning Road 0.27 for S/F Stimated Population 0.28 m²/person/day Fook Loi Building, 11-17 On Ning Road 2/F to 5/F Otal number of units 30 units Areaz Employce 2.8.57 Jotal number of units 84 people Unit Flow Factor 0.37 m²/person/day C3(i).On Wing Building, 5-9 On Ning Road 2/F to 5/F Areaz Employce 2.8.57 Stimated Dry Weather Flow 3.16/7 to MF C3(i).On Wing Building, 5-9 On Ning Road 2/F to 5/F Stimated Dry Weather Flow 2.48 m²/person/day C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Stimated Dry Weather Flow 2.4900/14/2 <	Estimated Dry weather Flow	1.3104/56 m ² /day	
Total number of residents 2.4 people Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Size of 2.8 in Yuen Long from 2022 Population and Household Size of 2.8 in Yuen Long from 2022 Population and Household Size of 2.8 in Yuen Long from 2022 Population 2022 Pop	C1(ii).Man Tat Building, 19 On Ning Rd Total number of units	2/F to 5/F 8 units	
Unit Flow Factor 0.37 m ³ /person/day GESF(Table T-1) - UFF for Domestic Flow Estimated Dry Weather Flow 8.288 m ³ /day 0.370 (R3 Private Development) Fook Loi Building, 11-17 On Ning Road Total GFA G/F to M/F 33.8.538 m ² Arear Employce 2.85.7 3.5 (Retail) Estimated Population 11.84883 GESF(Table T-2) - UFF for Commercial Flow and Student Flow Unit Flow Factor 0.28 m ³ /person/day GESF(Table T-2) - UFF for Commercial Flow and Student Flow Fook Loi Building, 11-17 On Ning Road Total number of units 2/F to 5/F GESF(Table T-2) - UFF for Domestic Flow Unit Flow Factor 0.37 m ³ /person/day GESF(Table T-1) - UFF for Domestic Flow 0.080 (Commercial Employee) +0.2 (/4 Wholesale & Retail) Estimated Dry Weather Flow 31.08 m ³ /day Average Household Size of 2.8 in Yuen Long from 0.022 Population and Household Statistics Analysed by District Council District GESF(Table T-1) - UFF for Domestic Flow C3(i),On Wing Building, 5-9 On Ning Road G/F to M/F 2.5 (Retail) 3.5 (Retail) Estimated Pop Weather Flow 2.479008 m ³ /day 3.5 (Retail) GESF(Table T-2) - UFF for Commercial Flow and Student Flow C3(ii),On Wing Building, 5-9 On Ning Road 2/F to 5/F 3.5 (Retail) GESF(Table T-1) - UFF for Domestic Flow	Total number of residents	22.4 people	Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District
Estimated Dry Weather Flow 8.288 m³/day 0.50 (20 Firme Development) Fook Loi Building, 11-17 On Ning Road Total GFA G/F to M/F 33.85,33 m² ArearEmployce 2.85.7 3.5 (Retail) Estimated Population 11.84883 GESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail) Estimated Dry Weather Flow 3.3176724 m²/day GESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail) Fook Loi Building, 11-17 On Ning Road Total number of residents 2/F to 5/F Unit Flow Factor 0.37 m²/person/day Estimated Dry Weather Flow 31.08 m²/day C3(i).On Wing Building, 5-9 On Ning Road Total GFA 252.96 m² Area/Employce 28.57 S.5 (Retail) GESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.370 (R3 Private Development) C3(ii).On Wing Building, 5-9 On Ning Road Total number of units 20 units S total number of units 20 units Total number of units 20 units C3(ii).On Wing Building, 5-9 On Ning Road Total number of units 21/F to 5/F 2(3(ii).On Wing Building, 5-9 On Ning Road Total number of units 20 units S for people 0.37 m²/person/day	Unit Flow Factor	0.37 m ³ /person/day	GESF(Table T-1) - UFF for Domestic Flow
Fook Loi Building, 11-17 On Ning Road Total GFA GF to M/F 338,538 m² ArearEmployce 28,57 3.5 (Retail) Estimated Population 11.84883 GFF (Table T-2) - UFF for Commercial Flow and Student Flow 0.80 (Commercial Employce) +0.2 (14 Wholesale & Retail) Fook Loi Building, 11-17 On Ning Road Total number of residents 2/F to 5/F Unit Flow Factor 0.37 m²/person/day Stimated Dry Weather Flow 31.08 m²/day Fook Loi Building, 5-9 On Ning Road 2/F to 5/F ArearEmployce 28.57 ArearEmployce 2.5 (Retail) C3(i) On Wing Building, 5-9 On Ning Road GFF to M/F Total CFA 252.96 m² ArearEmployce 2.8.57 Stimated Population 0.28 m²/person/day Unit Flow Factor 0.28 m²/person/day C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of residents 56 people 2.3 (iii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of residents 56 people Oating 3.7 m²/person/day C3(iii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of resi	Estimated Dry Weather Flow	8.288 m ³ /day	0.570 (KS Trivate Development)
Area/Employee 28.57 3.5 (Retail) Estimated Population 11.84883 Unit Flow Factor 0.28 m²/person/day Fook Loi Building, 11-17 On Ning Road 2/F to 5/F Total number of residents 84 people Unit Flow Factor 0.37 m²/person/day Estimated Dry Weather Flow 3.108 m²/day Fook Loi Building, 5-9 On Ning Road 2/F to 5/F C3(i).On Wing Building, 5-9 On Ning Road 2/F to 5/F Estimated Dry Weather Flow 3.108 m²/day C3(i).On Wing Building, 5-9 On Ning Road 2/F to 5/F Estimated Dry Weather Flow 3.108 m²/day C3(i).On Wing Building, 5-9 On Ning Road 2/F to 5/F Estimated Dry Weather Flow 2.28 of m² Estimated Dry Weather Flow 2.596 m² S.536 3.5 (Retail) GESF(Table T-1) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) 2.8.57 Estimated Dry Weather Flow 2.479008 m²/day C3(i).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of residents 56 people Unit Flow Factor 0.37 m²/person/day C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of residents 56 people Unit Flow Factor 0.37 m²/person/day <td>Fook Loi Building, 11-17 On Ning Road</td> <td>G/F to M/F 338 538²</td> <td></td>	Fook Loi Building, 11-17 On Ning Road	G/F to M/F 338 538 ²	
Estimated Fopulation 11.34883 Unit Flow Factor 0.28 m³/person/day Estimated Dry Weather Flow 3.3176724 m³/day Fook Loi Building, 11-17 On Ning Road 2/F to 5/F Total number of residents 84 people Unit Flow Factor 0.37 m³/person/day Estimated Dry Weather Flow 3.3176724 m³/day Fook Loi Building, 11-17 On Ning Road 2/F to 5/F Total number of residents 84 people Unit Flow Factor 0.37 m³/person/day Estimated Dry Weather Flow 31.08 m³/day C3(i),On Wing Building, 5-9 On Ning Road C/F to M/F Estimated Population 8.8536 Unit Flow Factor 0.28 m³/person/day Estimated Dry Weather Flow 2.479008 m³/day C3(i),On Wing Building, 5-9 On Ning Road 2/F to 5/F Estimated Dry Weather Flow 2.479008 m³/day C3(ii),On Wing Building, 5-9 On Ning Road 2/F to 5/F C3(ii),On Wing Building, 5-9 On Ning Road 2/F to 5/F C3(ii),On Wing Building, 5-9 On Ning Road 2/F to 5/F C3(ii),On Wing Building, 5-9 On Ning Road 2/F to 5/F C3(ii),On Wing Building, 5-9 On Ning Road 2/F to 5/F	Area/Employee	28.57	3.5 (Retail)
0.08 (Commercial Employee) +0.2 (J4 Wholesale & Retail) Estimated Dry Weather Flow 3.3176724 m³/day Fook Loi Building, 11-17 On Ning Road Total number of units 2/F to 5/F Total number of residents Total number of residents 84 people Unit Flow Factor 0.37 m³/person/day Estimated Dry Weather Flow 31.08 m³/day C3(i).On Wing Building, 5-9 On Ning Road Total GFA G/F to M/F Total GFA 22.2 population and Household Size of 2.8 in Yuen Long from 2022 population and Household Statistics Analysed by District Council District GESF(Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development) C3(i).On Wing Building, 5-9 On Ning Road Lestimated Population G/F to M/F X.8536 Unit Flow Factor 0.28 m³/person/day Estimated Dry Weather Flow 2.479008 m³/day C3(ii).On Wing Building, 5-9 On Ning Road Total number of units 20 units 20 units 20 units Total number of residents 56 people Unit Flow Factor 0.37 m³/person/day C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of residents 56 people Unit Flow Factor 0.37 m³/person/day C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of residents 56 people Unit Flow Factor 0.37 m³/person/day Estimated Dry Weather Flow <td>Estimated Population</td> <td>11.84883</td> <td>GESF(Table T-2) - UFF for Commercial Flow and Student Flow</td>	Estimated Population	11.84883	GESF(Table T-2) - UFF for Commercial Flow and Student Flow
Fook Loi Building, 11-17 On Ning Road Total number of units 2/F to 5/F 30 units Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District GESF(Table T-1) - UFF for Domestic Flow 0.37 m³/person/day C3(i),On Wing Building, 5-9 On Ning Road Total GFA G/F to M/F 252.96 m² Area/Employee 3.5 (Retail) Estimated Population 8.8536 Unit Flow Factor 0.28 m³/person/day C3(i),On Wing Building, 5-9 On Ning Road Estimated Population G/F to M/F 252.96 m² Area/Employee 3.5 (Retail) C3(ii),On Wing Building, 5-9 On Ning Road Unit Flow Factor 0.28 m³/person/day 3.5 (Retail) C3(ii),On Wing Building, 5-9 On Ning Road Unit Flow Factor 2.479008 m³/day 3.6 (Retail) C3(ii),On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow 2.479008 m³/day 3.6 (Person/day Cate number of residents 3.6 people Unit Flow Factor 0.27 m³/person/day Cate number of residents 2.6 people 3.7 (R3 Private Development) Unit Flow Factor 0.37 m³/person/day Catehoment F 3.7 (R3 Private Development) 3.7 (R3 Private Development) Catehoment F 20.72 m³/day 2.0.72 m³/day 3.7 (R3 Private Development) 3.7 (R3 Private Development)	Estimated Dry Weather Flow	3.3176724 m ³ /day	0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)
Total number of units1 is 0 unitsTotal number of units30 unitsTotal number of units30 unitsUnit Flow Factor0.37 m³/person/dayC3(i).On Wing Building, 5-9 On Ning Road Total CFAG/F to M/F 252.96 m² 2.8.57C3(i).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow2.479008 m³/dayC3(i).On Wing Building, 5-9 On Ning Road Total number of units2/F to 5/F 2.00 unitsC3(i).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow2.479008 m³/dayC3(ii).On Wing Building, 5-9 On Ning Road Total number of units2/F to 5/F 2.00 unitsC3(ii).On Wing Building, 5-9 ON Ning Road Estimated Dry Weather Flow2/F to 5/F 2.00 unitsC3(ii).On Wing Building, 5-9 ON Ning Road Estimated Dry Weather Flow2/F to 5/F 2.00 unitsC3(ii).On Wing Building, 5-9 ON Ning Road Total number of units2/F to 5/F 2.00 unitsC3(ii).On Wing Building, 5-9 ON Ning Road Total number of ensidents2/F to 5/F 2.00 unitsC3(ii).On Wing Building, 5-9 ON Ning Road Total number of units2/F to 5/F 2.00 unitsC3(ii).On Wing Building, 5-9 ON Ning Road Total number of units2/F to 5/F 2.00 unitsC3(ii).On Wing Building, 5-9 ON Ning Road Total number of units2/F to 5/F 2.00 unitsC3(ii).On Wing Building, 5-9 ON Ning Road Total number of the state of 0.37 m³/person/dayAverage Household State of 2.8 in Yuen Long from 2.02.2 Population and Household Statistics Analysed by District Council District GESF(Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development)Catchment FEstimated Dry Weath	Fook Loi Building, 11-17 On Ning Road	2/F to 5/F	
Total number of residents84 peopleAverage Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District GESF(Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development)C3(i).On Wing Building, 5-9 On Ning Road Total GFAG/F to M/F 252.96 m² 28.573.5 (Retail)C3(i).On Wing Building, 5-9 On Ning Road Estimated PopulationG/F to M/F 28.573.5 (Retail)C3(i).On Wing Building, 5-9 On Ning Road Unit Flow Factor0.28 m³/person/day 0.28 m³/person/dayGESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)C3(ii).On Wing Building, 5-9 On Ning Road Unit Flow Factor2/F to 5/F 20 units 20 units	Total number of units	30 units	
Unit Flow Factor 0.37 m ³ /person/day GESF(Table T-1) - UFF for Domestic Flow C3(i).On Wing Building, 5-9 On Ning Road G/F to M/F Total GFA 252.96 m ² Area/Employee 28.57 Estimated Population 8.8336 Unit Flow Factor 0.28 m ³ /person/day Estimated Population 8.8336 Unit Flow Factor 0.28 m ³ /person/day Estimated Dry Weather Flow 2.479008 m ³ /day C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of units 20 units C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of residents 56 people Unit Flow Factor 0.37 m ³ /person/day C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of residents 56 people Unit Flow Factor 0.37 m ³ /person/day Catchment F 20.72 m ³ /day Catchment F 161.59 m ³ /day Refer to Appendix 5 Kefer to Appendix 5	Total number of residents	84 people	Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District
Estimated Dry Weather Flow 31.08 m³/day C3(i).On Wing Building, 5-9 On Ning Road Area/Employee G/F to M/F Total GFA 252.96 m² 252.96 m² Area/Employee 3.5 (Retail) Estimated Population 8.8536 GESF(Table T-2) - UFF for Commercial Flow and Student Flow 0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail) C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow 2/F to 5/F Total number of units Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District GESF(Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development) C3(ii).On Wing Building, 5-9 On Ning Road Luint Flow Factor 0.72 m³/day Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District GESF(Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development) Catchment F Infe Subject Site Estimated Dry Weather Flow 161.59 m³/day	Unit Flow Factor	0.37 m ³ /person/day	(GESF(Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development)
C3(i).On Wing Building, 5-9 On Ning Road Total GFA Area/Employee Estimated Population Estimated Population Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Total number of units Total number of residents Unit Flow Factor Unit Flow Factor Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road C3(ii).On Wing Building, 5-9 On Ning Road C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road Estimated Dry Weather Flow C3(ii).On Wing Building, 5-9 On Ning Road C3(ii).On Wing Building, 5-9 On Ning Road	Estimated Dry Weather Flow	31.08 m ³ /day	
Area/Employee 28.57 3.5 (Retail) Area/Employee 28.57 3.5 (Retail) Estimated Population 8.8536 GESF(Table T-2) - UFF for Commercial Flow and Student Flow Unit Flow Factor 0.28 m³/person/day GESF(Table T-2) - UFF for Commercial Flow and Student Flow C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F 0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail) C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F 20 units Total number of units 20 units Average Household Size of 2.8 in Yuen Long from Unit Flow Factor 0.37 m³/person/day Average Household Size of 2.8 in Yuen Long from Unit Flow Factor 0.37 m³/person/day 0.370 (R3 Private Development) Catchment F 20.72 m³/day 0.370 (R3 Private Development) Catchment F 161.59 m³/day Refer to Appendix 5	C3(i).On Wing Building, 5-9 On Ning Road	G/F to M/F	
Estimated Population 8.8536 Unit Flow Factor 0.28 m³/person/day Estimated Dry Weather Flow 2.479008 m³/day C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F Total number of units 20 units Total number of residents 56 people Unit Flow Factor 0.37 m³/person/day Estimated Dry Weather Flow 20.72 m³/day Catchment F The Subject Site 161.59 m³/day Refer to Appendix 5	Area/Employee	232.96 m ² 28.57	3.5 (Retail)
Unit Flow Factor 0.28 m³/person/day 0.080 (Commercial Employee) + 0.2 (J4 Wholesale & Retail) C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F 0.080 (Commercial Employee) + 0.2 (J4 Wholesale & Retail) C3(ii).On Wing Building, 5-9 On Ning Road 2/F to 5/F 701 units Total number of units 20 units 86 people Unit Flow Factor 0.37 m³/person/day Average Household Size of 2.8 in Yuen Long from Unit Flow Factor 0.37 m³/person/day 6ESF(Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development) 0.370 (R3 Private Development) 0.370 (R3 Private Development) Catchment F The Subject Site 161.59 m³/day Refer to Appendix 5	Estimated Population	8.8536	GESE(Table T-2) - LIFE for Commercial Flow and Student Flow
C3(ii).On Wing Building, 5-9 On Ning Road Total number of units Total number of residents Unit Flow Factor Estimated Dry Weather Flow Catchment F The Subject Site Estimated Dry Weather Flow Catchment F In Aday Difference Catchment F In Aday Difference Catchment F In Aday Catchment F In Aday	Unit Flow Factor Estimated Drv Weather Flow	0.28 m ³ /person/day 2.479008 m ³ /day	0.080 (Commercial Employee) +0.2 (J4 Wholesale & Retail)
Catchment F The Subject Site Total number of varies 20 units Yerage Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District GESF(Table T-1) - UFF for Domestic Flow 0.37 m³/person/day	C2(ii) On Wing Building 5.0 On Ning B1	2/E to 5/E	
Total number of residents 56 people Average Household Size of 2.8 m Yuen Long from 2022 Population and Household Statistics Analysed by District Council District GESE/Table T-1) - UFF for Domestic Flow 0.370 (R3 Private Development) Catchment F The Subject Site Estimated Dry Weather Flow 161.59 m ³ /day	Total number of units	20 units	Annual Hansheld Size of 2.8 Str. 4
Unit Flow Factor 0.37 m ³ /person/day Estimated Dry Weather Flow 20.72 m ³ /day Catchment F Estimated Dry Weather Flow 161.59 m ³ /day Refer to Appendix 5	Total number of residents	56 people	Average Household Size of 2.8 in Yuen Long from 2022 Population and Household Statistics Analysed by District Council District GESE(Table T 1). UPE for Demotion Flour
Estimated Dry Weather Flow 20.72 m ³ /day Catchment F The Subject Site Estimated Dry Weather Flow 161.59 m ³ /day Refer to Appendix 5	Unit Flow Factor	0.37 m ³ /person/day	0.370 (R3 Private Development)
Catchment F Catchment F The Subject Site Estimated Dry Weather Flow 161.59 m³/day Refer to Appendix 5	Estimated Dry Weather Flow	20.72 m ³ /day	
The Subject Site Estimated Dry Weather Flow 161.59 m ³ /day Refer to Appendix 5	Catchment F		
Estimated Dry Weather Flow $161.59 \text{ m}^3/\text{day}$ Refer to Appendix 5	The Subject Site	100 3	
	Estimated Dry Weather Flow	161.59 m ³ /day	Reter to Appendix 5

Total Estimated Peak Flow After Development

Total Estimated Peak Flow After Development

After Development

Catchment	From the Most Upstream	Total Estimated Catchment Cumul Dry Weather Flow Inflow Dry V (m³/day) Factor ^[1] Image: Catchment of the sector		Cumulative Average Dry Weather Flow (m ³ /day)	Contributing Population ^[2]	Peaking Factor ^[3]	Total Estimated Peak Flow (m ³ /day)	Total Estimated Peak Flow (L/s)
D	36 Fook Tak St, Yuen Long	12.10	1	12.10	44.80	8	96.78	1.12
В	On Ting Building, 41-45 On Ning Road	19.41	1	31.51	116.70	8	252.08	2.92
B to C	Man Yau Building, 37-39 On Ning Road	12.55	1	44.06	163.19	8	352.49	4.08
	20-34 Fook Tak St, Yuen Long	49.93	1	93.99	348.10	8	751.90	8.70
B to C to D	Hung Wan Building, 21-35 On Ning Road	44.77	1	138.76	513.93	8	1110.09	12.85
	18 Fook Tak St, Yuen Long	12.10	1	150.86	558.74	8	1206.88	13.97
	Man Tat Building, 19 On Ning Rd	9.60	1	160.46	594.29	8	1283.67	14.86
B to C to D to E	Fook Loi Building, 11-17 On Ning Road	34.40	1	194.86	721.69	8	1558.85	18.04
	On Wing Building, 5-9 On Ning Road	23.20	1	218.06	807.61	8	1744.44	20.19
B to C to D to E to F	The Subject Site	161.59	1	379.64	1406.08	6	2277.85	26.36
B to C to D to E to F to A	Assumed Full Bored							

Remarks:

^[1] Catchment Inflow Factor = 1.00 (Yuen Long) based on EPD's GESF Table T-4

^[2] Based on the equation from GESF: Contributing Population = $\frac{\text{Calculated total average flow (m³/day)}}{0.27 (m³/person/day)}$

^[3]Peaking Factor=8 for population <1000, and 6 for population 1000-5000 (including stormwater allowance) base on EPD's GESF Table T-5

Calculation of Flow Capacity

Calculation of Flow Capacity

Proposed Building	oposed Building (Without Mitigation Measures)																								
	Manhole Re	ference	×	Invert La	evel (mPD)									0						Sewage	Flow (L/s)	% of Peak	Flow to 9	6 of	
Pipe Name	Upstream	Downstream	(m)	Upstream	Downstream	d (m)	r (m)	s	g (m/s ²)	Ks (m)	(m ² /s)	v (m/s)	Area (m ²)	(m ³ /s)	(m ³ /day)	P _c	Р	Catchment	(L/s)	Before Development	After Development	Before Development	After Development cap	vacity %	Remarks
FWD1019563	FMH1018375	FMH1018371	23	3 1.55	1.5	0.45	0.225	0.002	9.810	0.00060	0.0000011	0.940	0.159	0.134	Assumed full bored	Assumed full bored	1	8 A	. 134.50	134.50	134.50	100%	100%	100% As	ssumed full bored
FWD1019541	FMH1018351	FMH1048045	18	3 2.41	2.35	0.15	0.075	0.003	9.810	0.00060	0.0000011	0.573	0.018	0.009	31.51	116.70	1	8 B	9.12	2.92	2.92	31.99%	31.99% 3	1.99%	
FWD1062244 ^{note 3}	FMH1048045	FMH1018374	27	7 2.35	2.32	0.15	0.075	0.001	9.810	0.00060	0.0000011	0.326	0.018	0.005	44.06	163.19	1	8 B+C	5.18	4.08	4.08	78.72%	78.72% 7	8.72%	
FWD1019562	FMH1018374	FMH1018373	26.5	5 2.32	1.93	0.15	0.075	0.015	9.810	0.00060	0.0000011	1.220	0.018	0.019	150.86	558.74	1	B+C+D	19.40	13.97	13.97	72.00%	72.00% 7	2.00%	
FWD1019561	FMH1018373	FMH1018372	15.5	5 1.93	1.86	0.15	0.075	0.005	9.810	0.00060	0.0000011	0.670	0.018	0.011	150.86	558.74	1	B B+C+D	10.65	13.97	13.97	131.16%	131.16% 13	1.16%	
FWD1019560	FMH1018372	FMH1048046	15.3	3 1.86	1.79	0.15	0.075	0.005	9.810	0.00060	0.0000011	0.674	0.018	0.011	218.06	807.61	1	B+C+D+E	10.72	20.19	20.19	188.32%	188.32% 18	8.32%	
FWD1062247	FMH1048046	FMH1018371	15	1.57	1.5	0.15	0.075	0.004	9.810	0.00060	0.0000011	0.604	0.018	0.010	379.64	1406.08	(6 B+C+D+E+site(F)	9.60	20.19	26.36	210.33%	274.65% 27	4.65%	
FWD1019559	FMH1018371	FMH1018370	24	4 1.5	1.43	0.45	0.225	0.003	9.810	0.00060	0.0000011	1.091	0.159	0.156	379.64 ^{note 4}	1406.08	(6 A+B+C+D+E+site(F)	156.10	154.69	160.86	99.10%	103.05% 10	3.05%	
FWD1019558note 3	FMH1018370	FMH1018369	6.4	4 1.43	1.36	0.45	0.225	0.011	9.810	0.00060	0.0000011	2.125	0.159	0.304	379.64 ^{note 4}	1406.08	(6 A+B+C+D+E+site(F)	304.18	154.69	160.86	50.85%	52.88% 5	2.88%	
Proposed Building	(With Mitigation Measur	es)																							
	Manhole Reference		ce Langth		nvert Level (mPD)		r .		σ	k	v	v	Area	0.	Accumulated ADWF				Sewer Canacity	Sewage	Flow (L/s)	% of Peak	Flow to %	6 of	
Pipe Name	Upstream	Downstream	(m)	Upstream	Downstream	(m)	(m)	s	(m/s ²)	(m)	(m ² /s)	(m/s)	(m ²)	(m ³ /s)	(m³/day)	Pc	Р	Catchment	(L/s)	Before Development	After Development	Before Development	After Development cap	vacity %	Remarks
FWD1019563	FMH1018375	FMH1018371	23	3 1.55	1.5	0.45	0.225	0.002	9.810	0.00060	0.0000011	0.940	0.159	0.134	Assumed full bored	Assumed full bored	1	8 A	. 134.50	134.50	134.50	100%	100% 10	0.00% As	ssumed full bored
FWD1019541	FMH1018351	FMH1048045	18	3 2.41	2.35	0.15	0.075	0.003	9.810	0.00060	0.0000011	0.573	0.018	0.009	31.51	116.70	1	8 B	9.12	2.92	2.92	31.99%	31.99% 3	1.99%	
FWD1062244 ^{note 3}	FMH1048045	FMH1018374	27	7 2.35	2.32	0.15	0.075	0.001	9.810	0.00060	0.0000011	0.326	0.018	0.005	44.06	163.19		8 B+C	5.18	4.08	4.08	78.72%	78.72% 7	8.72%	
FWD1019562	FMH1018374	FMH1018373	26.5	5 2.32	1.93	0.15	0.075	0.015	9.810	0.00060	0.0000011	1.220	0.018	0.019	150.86	558.74		B+C+D	19.40	13.97	13.97	72.00%	72.00% 7	2.00%	
FWD1019561	FMH1018373	FMH1018372	15.5	5 1.93	1.86	0.2	0.1	0.005	9.810	0.00060	0.0000011	0.809	0.031	0.023	150.86	558.74	1	B+C+D	22.86	13.97	13.97	61.10%	61.10% 6	1.10%	
FWD1019560	FMH1018372	FMH1048046	15.3	3 1.86	1.79	0.2	0.1	0.005	9.810	0.00060	0.0000011	0.814	0.031	0.023	218.06	807.61	1	B+C+D+E	23.01	20.19	20.19	87.73%	87.73% 8	7.73%	
FWD1062247	FMH1048046	FMH1018371	15	1.57	1.5	0.225	0.1125	0.004	9.810	0.00060	0.0000011	0.787	0.040	0.028	379.64	1406.08	(6 B+C+D+E+site(F)	28.17	20.19	26.36	71.68%	93.60% 9	3.60%	
FWD1019559	FMH1018371	FMH1018370	24	4 1.5	1.43	0.5	0.25	0.003	9.810	0.00060	0.0000011	1.166	0.196	0.206	379.64 ^{note 4}	1406.08	(5 A+B+C+D+E+site(F)	206.01	154.69	160.86	75.09%	78.09% 7	8.09%	
FWD1019558 ^{note 3}	FMH1018370	FMH1018369	6.4	4 1.43	1.36	0.5	0.25	0.011	9.810	0.00060	0.0000011	2.271	0.159	0.325	379.64 ^{note 4}	1406.08	(5 A+B+C+D+E+site(F)	325.04	154.69	160.86	47.59%	49.49% 4	9.49%	
Hydraulic Check of	f the Proposed Connection	n Sewer																							
	Manhole Re	ference	Length	Invert La	evel (mPD)	d	r		g	k.	v	v	Area	Q _c	ADWF				Sewer Canacity	Sewage	Flow (L/s)	% of Peak	Flow to %	6 of	
Pipe Name	Upstream	Downstream	(m)	Upstream	Downstream	(m)	(m)	s	(m/s ²)	(m)	(m ² /s)	(m/s)	(m ²)	(m ³ /s)	(m ³ /day)	Pe	Р	Catchment	(L/s)	Before Development	After Development	Before Development	After Development cap	wacity %	Remarks
Proposed Pipe	Proposed Manhole	FMH1048046	4.2	2 2.6	1.79	0.15	0.075	0.193	9.810	0.00060	0.0000011	4.454	0.018	0.079	161.59	598.47	1	8 site(F)	78.71	-	14.96	-	19.01% 1	9.01%	

Legend

d = pipe diameter, m

V = Velocity of flow calculated based on Colebrook-White Equation, m/s ADWF = Average Dry Weather Flow, m3/day

$$\label{eq:result} \begin{split} r &= \text{pipe radius } (m) = 0.5 d \\ s &= \text{slope of the total energy line} \\ k_s &= \text{hydraulic pipeline roughness, m} \end{split}$$

 $\begin{array}{l} Q_{c} = Flow Capacity (10\% sedimentation incorporated), m^{3}/s \\ P_{c} = Contributing Population = ADWF/0.27 \\ P = Peaking Factor (including stormwater allowance) \end{array}$

Remarks: (1) The value of k₂ = 0.6mm (for velocities greater than 1.2m/s, otherwise 3mm) is adopted for the calculation of slined clayware sewer, poor condition (based on Table 5: Recommended Roughness Values in Sewenage Manual) (2) The mean velocity is calculated using the Colebrook-White Equation. (3) The invert level of Pipes FWD1002244 (upstream & downstream) and FWD1019558 (downstream) are not found in the Drainage Services Department's drainage record plan. Interpolation is used to calculate the appropriate invert levels. (4) Since Catemator A is assumed as fully bonch, its estimated and dy weather flow in negligible for the accumulated ADWr.