GoldRich PLANNERS & SURVEYORS LTD.
金 潤 規 劃 測 量 師 行 有 限 公 司
[redacted]

Your Ref.: A/YL-KTS/1084 Our Ref.: P25012/TL26010 7 January 2026

The Secretary
Town Planning Board
15/F., North Point Government Offices
333 Java Road, North Point, Hong Kong

By E-mail
tpbpd@pland.gov.hk

Dear Sir,

Submission of Further Information (FI)

Proposed Temporary Warehouse (excluding Dangerous Goods Godown) With Ancillary Office and Associated Filling of Land for a Period of 3 Years in "Agriculture" Zone, Lots 1012 S.B, 1012 S.C, 1013, 1014 RP, 1015 S.A, 1015 S.B, 1015 RP, 1016 (Part), 1018, 1034 (Part) and 1035 in D.D.113, Kam Tin, Yuen Long, New Territories (Application No. A/YL-KTS/1084)

We write to submit a revised drainage proposal (Plans 6.1b & 6.2b) and hydraulic calculations for the captioned application.

Yours faithfully,
For and on behalf of
Goldrich Planners & Surveyors Ltd.

Francis Lau

Encl.

c.c.
DPO/FS&YLE, PlanD (Attn.: Mr. Thomas LAU)

N

CP1
G.L. 19.4
I.L. 18.13

CP2
G.L. 19.4
I.L. 18.06

G.L. 19.4
I.L. 18.65

G.L. 19.4
I.L. 18.27

Proposed 750UC
1:200

Proposed 750UC
1:200

CP7
G.L. 19.4
I.L. 18.49

Proposed 750UC
1:200

CP8
G.L. 19.4
I.L. 18.34

CP9
G.L. 19.4
I.L. 18.29

Proposed 750UC
1:200

Proposed 750UC
1:200

Application Site

G.L. 18.7
I.L. 17.88

G.L. 18.7
I.L. 17.83

CP6
G.L. 19.2
I.L. 17.74

Proposed 750UC
1:200

Proposed 750UC
1:200

Proposed 750UC
1:200

Existing underground 600 pipe 1:200

B

+19.5

B1

CP5
G.L. 19.2
I.L. 17.67

CP3
G.L. 19.3
I.L. 17.77

Proposed 750UC
1:200

Proposed 750UC
1:200

CP4
G.L. 19.3
I.L. 17.72

Proposed 750UC
1:200

Proposed 600 underground Pipe
1:200

Pipe outlet

②

①

CP14
G.L. 19.2
I.L. 17.64

CP13
G.L. 19.2
I.L. 17.65

Proposed 750UC
1:200

Proposed 750UC
1:200

Proposed 750UC
1:200

CP10
G.L. 19.3
I.L. 18.01

Proposed 750UC
1:200

Proposed 750UC
1:200

CP12
G.L. 19.3
I.L. 17.73

CP11
G.L. 19.3
I.L. 17.9

A1

泥路

Track

Track

TS

TS

TS

ET

376

+18.6

+17.4

+21.3

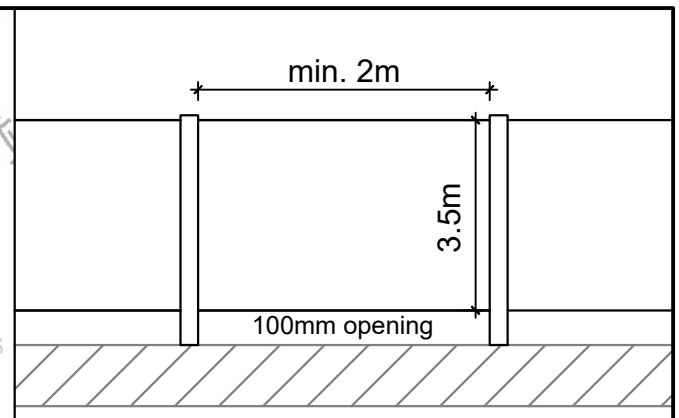
L

L

Legend

- Catch-pit
- Catch-pit with trap
- U-Channel
- U-Channel with C.I. cover
- Underground Pipe
- Vehicle Ingress / Egress
- Viewpoint of drainage Photograph

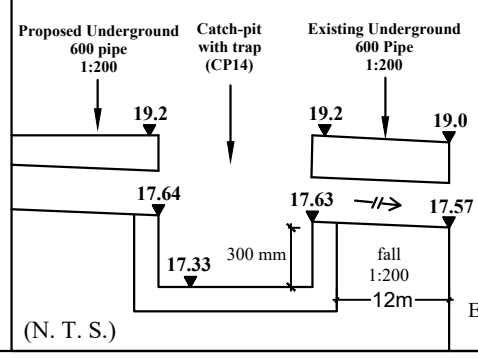
Site Area(about): 6,197m²



Details of hoarding with 100mm opening

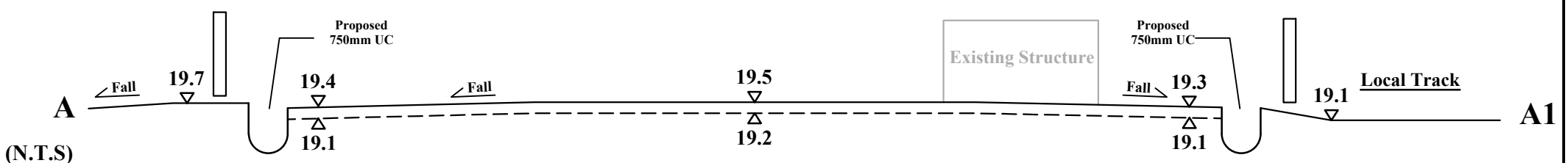
(N. T. S.)

Connection details of proposed outfall between CP14 and existing river

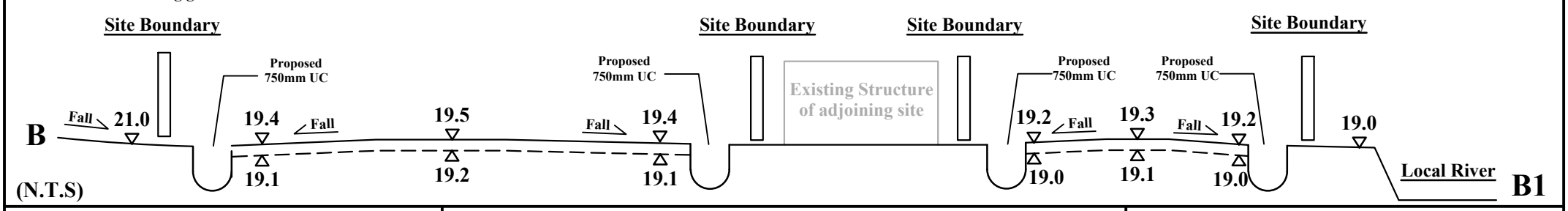


(N. T. S.)

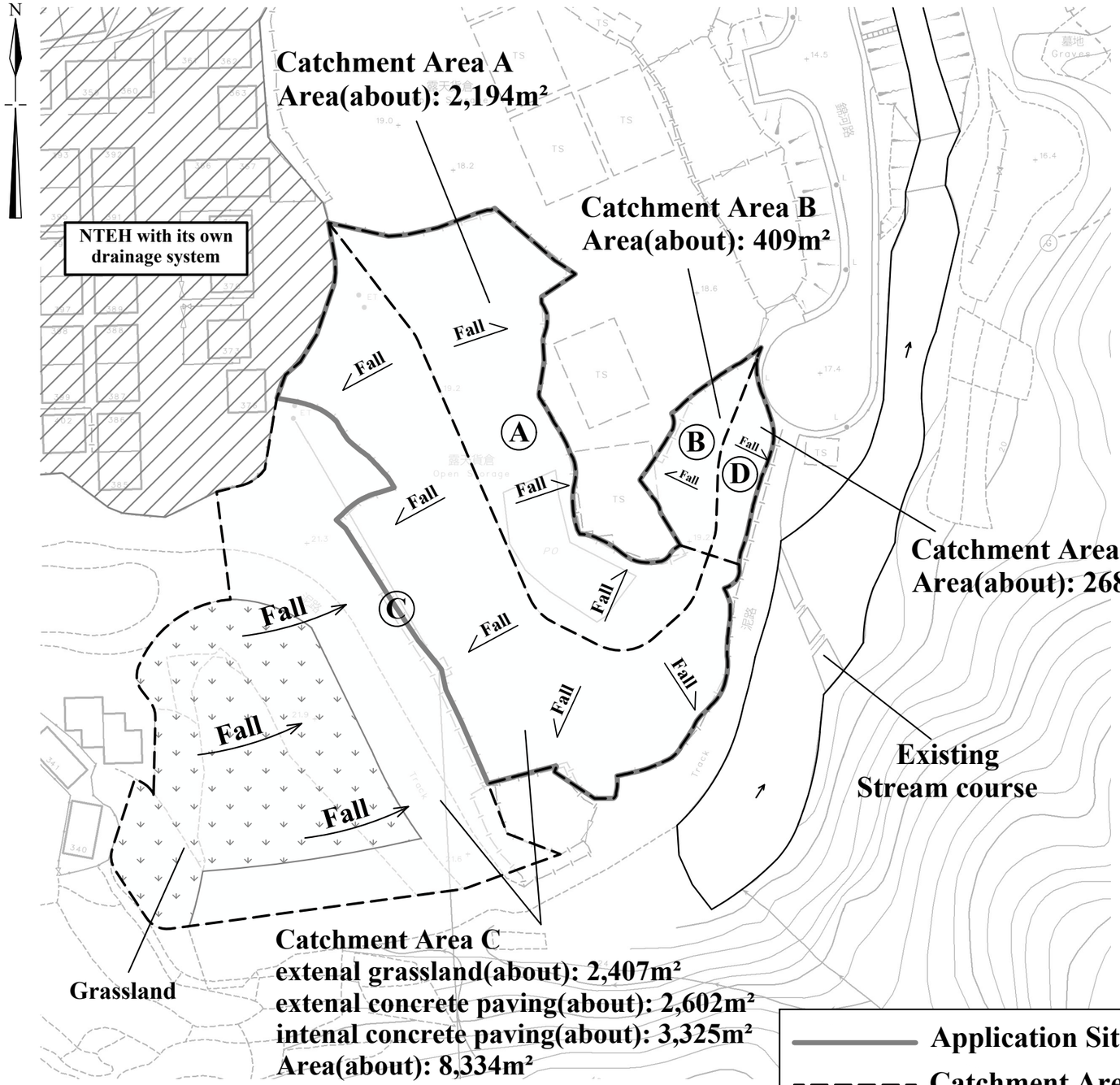
Proposed ground level
Existing ground level



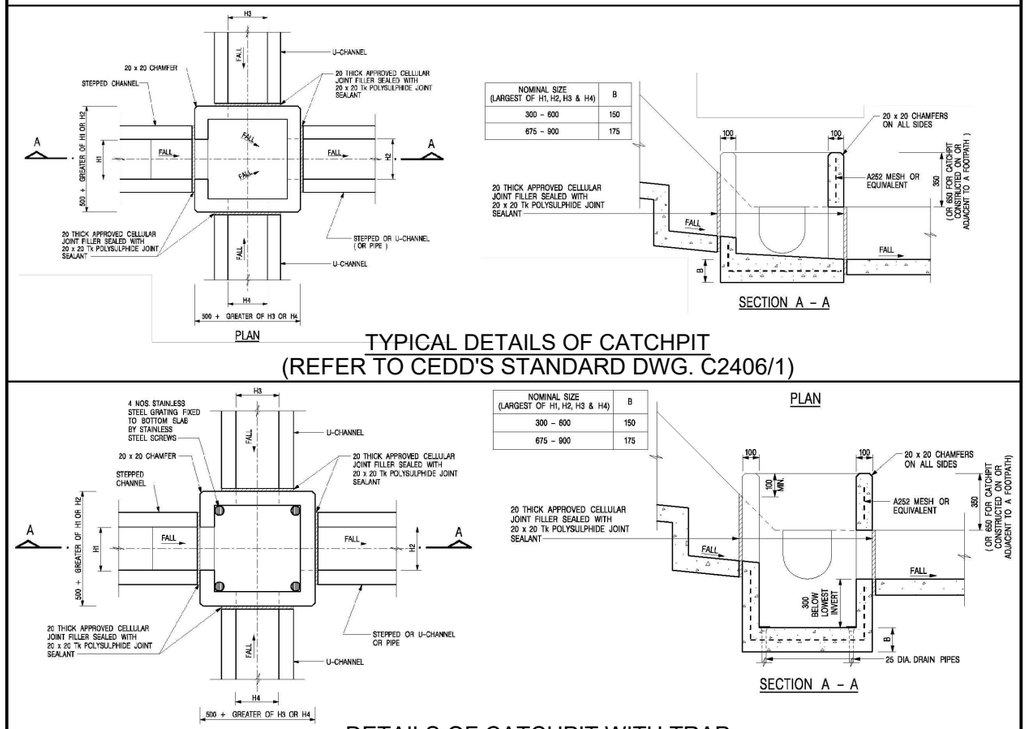
Proposed ground level
Existing ground level



1:500 (A3)	**Drainage Proposal**	Goldrich Planners & Surveyors Ltd.
January 2026	Lots 1012 S.B, 1012 S.C, 1013, 1014RP, 1015 S.A, 1015 S.B, 1015 RP, 1016(part), 1018, 1034(part) and 1035 in D.D. 113 Yuen Long, N.T.	Plan 6.1b (P 25012)

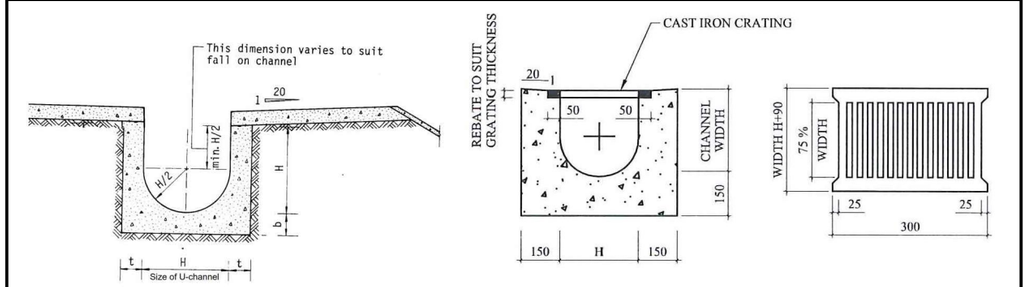


AREA OF CATCHMENT
(N.T.S)



TYPICAL DETAILS OF CATCHPIT
(REFER TO CEDD'S STANDARD DWG. C2406/1)

DETAILS OF CATCHPIT WITH TRAP
(REFER TO CEDD'S STANDARD DWG. C2406/1)



TYPICAL DETAILS OF U-CHANNEL
(Refer to DSD'S technical note to prepare a drainage submission)

TYPICAL SECTION OF U-CHANNEL WITH COVER
(N.T.S.)

CAST IRON CRATING
(HEAVY DUTY)

N.T.S	**Drainage Proposal** **Lots 1012 S.B, 1012 S.C, 1013, 1014RP, 1015 S.A, 1015 S.B, 1015 RP, 1016(part), 1018, 1034(part) and 1035 in D.D. 113 Yuen Long, N.T.**	**Goldrich Planners & Surveyors Ltd.**
January 2026		**Plan 6.2b (P 25012)**

Viewpoint Photo 1

(Photo taken on 7.1.2026)

Viewpoint Photo 2

(Photo taken on 7.1.2026)

1 For Catchment Area A

				Ref.
Area, A	=	2194	m^2	
Average slope, H	=	0.1	m per 100m	
Distance on the line of natural flow, L	=	22	m	
Time of concentraction, t_o	=	$0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (22) / (0.1^0.2*2194^0.1)		SDM 7.5.2 (d)
	=	2.3	min	

2 For Proposed UC in Catchment Area A

	From	To
Ground level (mPD)	19.40	19.20
Invert level (mPD)	18.27	17.67

Width of u-channel, w	=	750	mm
Length of u-channel, L_c	=	119.4	m
Depth of vertical part of u-channel, d	=	1155	mm
Gradient of u-channel, S_f	=	(18.27-17.67)/119.4 = 0.005	
Cross-Section Area, a	=	$0.5 \pi r^2 + w d$ = 0.5 x 3.14 x 375^2 + 750 x 1155	
	=	1.087	m^2
Wetted Perimeter, p	=	$\pi r + 2 d$ = 3.14 x 375 + 2 x 1155	
	=	3.488	m
Hydralic radius, R	=	a / p	SDM 8.2.1
	=	0.312	m

3 Use Manning Equation for estimating velocity of stormwater

Take n	=	0.016	for concrete lined channels:-	SDM Table 13
Allowable velocity, v	=	$R^{1/6} x (RS_f)^{1/2}/n$ = (0.312)^1/6 x (0.312 x 0.005)^1/2 / 0.016		SDM Table 12
	=	2.04	m/s	
Time of flow, t_f	=	1.0	min	

4 Use "Rational Method" for calculation of design flow

Design intensity, i	=	$a / (t_o + t_f + b)^c$		SDM 4.3.2
	=	505.5 / (2.3+1+3.29)^0.355	for return period T = 50 years	Corrigendum 1/2024
	=	259		SDM Table 3a

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A	SDM 7.5.2 (b)
Flat Glassland(heavy soil)	0.25	0.0	0.0	
Concrete Paving	0.95	2194.0	2084.3	
		SUM =	2084.3	

Upstream flow, Q_u	=	0	m^3/s	
Design flow, Q_d	=	$1.16 \times 0.278i \Sigma C_i A_i + Q_u$ where A_i is in km^2		SDM 7.5.2 (a)
	=	1.16 x 0.278 x 259 x 2084.3 / 1000000 + 0		Corrigendum 1/2022
	=	0.174	m^3/s	
Allowable flow, Q_a	=	a x v		
	=	1.087 x 2.04		
	=	2.214	m^3/s	
	>	Q_d (O.K.)		

Reference was made to Stormwater Drainage Manual (SDM) by DSD

Scale: NA	**Hydraulic Calculation**	Goldrich Planners & Surveyors Ltd.
January 2026	Lots 1012 S.B, 1012 S.C, 1013, 1014 RP, 1015 S.A, 1015 S.B, 1015 RP, 1016 (Part), 1018, 1034 (Part) and 1035 in D.D.113, Kam Tin, Yuen Long, New Territories	Page 1 (P25012)

1 For Catchment Area B

				Ref.
Area, A	=	409	m^2	
Average slope, H	=	0.1	m per 100m	
Distance on the line of natural flow, L	=	12	m	
Time of concentraction, t_o	=	$0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (12) / (0.1^0.2*409^0.1)		SDM 7.5.2 (d)
	=	1.5	min	

2 For Proposed UC in Catchment Area B

	From	To
Ground level (mPD)	18.70	19.20
Invert level (mPD)	17.88	17.67

Width of u-channel, w	=	750	mm	
Length of u-channel, L_c	=	42.5	m	
Depth of vertical part of u-channel, d	=	1155	mm	
Gradient of u-channel, S_f	=	(17.88-17.67)/42.5 = 0.005		
Cross-Section Area, a	=	$0.5 \pi r^2 + w d$ = 0.5 x 3.14 x 375^2 + 750 x 1155		
	=	1.087	m^2	
Wetted Perimeter, p	=	$\pi r + 2 d$ = 3.14 x 375 + 2 x 1155		
	=	3.488	m	
Hydralic radius, R	=	a / p		SDM 8.2.1
	=	0.312	m	

3 Use Manning Equation for estimating velocity of stormwater

Take n	=	0.016	for concrete lined channels:-	SDM Table 13
Allowable velocity, v	=	$R^{1/6} x (RS_f)^{1/2}/n$ = (0.312)^1/6 x (0.312 x 0.005)^1/2 / 0.016		SDM Table 12
	=	2.02	m/s	
Time of flow, t_f	=	0.4	min	

4 Use "Rational Method" for calculation of design flow

Design intensity, i	=	$a / (t_o + t_f + b)^c$		SDM 4.3.2
	=	505.5 / (1.5+0.4+3.29)^0.355 for return period T = 50 years		Corrigendum 1/2024
	=	283		SDM Table 3a

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A	SDM 7.5.2 (b)
Flat Glassland(heavy soil)	0.25	0.0	0.0	
Concrete Paving	0.95	409.0	388.6	
		SUM =	388.6	

Upstream flow, Q_u	=	0	m^3/s	
Design flow, Q_d	=	$0.278i \Sigma C_i A_i + Q_u$ where A_i is in km^2		SDM 7.5.2 (a)
	=	1.16 x 0.278 x 283 x 388.55 / 1000000 + 0		Corrigendum 1/2022
	=	0.035	m^3/s	
Allowable flow, Q_a	=	a x v		
	=	1.087 x 2.02		
	=	2.196	m^3/s	
	>	Q_d (O.K.)		

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Connection between CP5 and CP14

Ref.

Area, A = **0** m^2
Average slope, H = **0.1** m per 100m
Distance on the line of natural flow, L = **0** m

Time of concentration, t_o = $0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (0) / (0.1^0.2*0^0.1) — SDM 7.5.2 (d)
= 0.0 min

2 For Proposed Pipe after CP5

Size(Diameter) w = **600** mm
Length of Pipe = **6** m
Design the pipe to 9/10 full bore capactity, then
Area of ventilated portion = 0.1 of pipe area
$½ r^2 \theta - ½ r^2 \sin(\theta) = 0.1 \pi r^2$
$\theta - \sin(\theta) = 0.2 \pi$
θ = 1.63 rad = 93.4^O (By trial and error)

Area A = $0.9 \pi r^2$
= 0.9 x 3.14 x 600^2 — SDM 8.2.1
= 1017360 mm^2
= 1.017 m^2

Wetted Perimeter P = $2 \pi r - r \theta$ = 2792 mm
Hydralic radius R = A/P
364.4 mm

3 Use Manning Equation for estimating velocity of stormwater

Fall S = 1: **200**
Take n = 0.016 for concrete lined channels:- — SDM Table 13
Allowable velocity, v = $R^{1/6} x (RS_f)^{1/2}/n$ = (0.364)^1/6 * (0.364/200)^1/2 / 0.016 — SDM Table 12
= 2.25 m/s
Time of flow, t_f = 0.04 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = $a / (t_o + t_f + b)^c$ — SDM 4.3.2
= 505.5 / (0.0+0.04+3.29)^0.355 for return period T = 50 years — Corrigendum 1/2024
= 330 — SDM Table 3a

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	**0.0**	0.0
Concrete Paving	0.95	**0.0**	0.0
Macadam Roadways	0.425	**0.0**	0.0
Wooded Areas	0.105	**0.0**	0.0
		SUM =	0.0

SDM 7.5.2 (b)

Upstream flow, Q_u = **0.209** m^3/s

Design flow, Q_d = $0.278i \Sigma C_i A_i + Q_u$ where A_i is in km^2 — SDM 7.5.2 (a)
= 1.16 x 0.278 x 330 x 0 / 1000000 + 0.209 — Corrigendum 1/2022
= 0.209 m^3/s

Allowable flow, Q_a = a x v
= 1.02 x 2.25
= 2.294 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Catchment Area C

				Ref.
Area, A	=	8334	m^2	
Average slope, H	=	0.1	m per 100m	
Distance on the line of natural flow, L	=	35	m	
Time of concentraction, t_o	=	$0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (35) / (0.1^0.2*8334^0.1)		SDM 7.5.2 (d)
	=	3.3	min	

2 For Proposed UC in Catchment Area C

	From	To
Ground level (mPD)	19.40	19.20
Invert level (mPD)	18.65	17.64

Width of u-channel, w	=	750	mm	
Length of u-channel, L_c	=	203	m	
Depth of vertical part of u-channel, d	=	1185	mm	
Gradient of u-channel, S_f	=	(18.65-17.64)/203 = 0.005		
Cross-Section Area, a	=	$0.5\ \pi r^2 + w\ d$ = 0.5 x 3.14 x 375^2 + 750 x 1185		
	=	1.110	m^2	
Wetted Perimeter, p	=	π r + 2 d = 3.14 x 375 + 2 x 1185		
	=	3.548	m	
Hydralic radius, R	=	a / p		SDM 8.2.1
	=	0.313	m	

3 Use Manning Equation for estimating velocity of stormwater

Take n	=	0.016	for concrete lined channels:-	SDM Table 13
Allowable velocity, v	=	$R^{1/6} x (RS_f)^{1/2}/n$ = (0.313)^1/6 x (0.313 x 0.005)^1/2 / 0.016		SDM Table 12
	=	2.03	m/s	
Time of flow, t_f	=	1.7	min	

4 Use "Rational Method" for calculation of design flow

Design intensity, i	=	$a / (t_o + t_f + b)^c$		SDM 4.3.2
	=	505.5 / (3.3+1.7+3.29)^0.355 for return period T = 50 years		Corrigendum 1/2024
	=	239		SDM Table 3a

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A	SDM 7.5.2 (b)
Flat Glassland(heavy soil)	0.25	2407.0	601.8	
Concrete Paving	0.95	5927.0	5630.7	
		SUM =	6232.4	

Upstream flow, Q_u	=	0	m^3/s	
Design flow, Q_d	=	$0.278i \Sigma C_iA_i + Q_u$ where A_i is in km^2		SDM 7.5.2 (a)
	=	1.16 x 0.278 x 239 x 6232.4 / 1000000 + 0		Corrigendum 1/2022
	=	0.481	m^3/s	
Allowable flow, Q_a	=	a x v		
	=	1.11 x 2.03		
	=	2.254	m^3/s	
	>	Q_d (O.K.)		

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Catchment Area D

				Ref.
Area, A	=	268	m^2	
Average slope, H	=	0.1	m per 100m	
Distance on the line of natural flow, L	=	10	m	
Time of concentraction, t_o	=	$0.14465L / (H^{0.2}A^{0.1})$ = 0.14465 (10) / (0.1^0.2*268^0.1)		SDM 7.5.2 (d)
	=	1.3	min	

2 For Proposed UC in Catchment Area D

	From	To
Ground level (mPD)	18.70	19.20
Invert level (mPD)	17.83	17.64

Width of u-channel, w	=	750	mm
Length of u-channel, L_c	=	37.5	m
Depth of vertical part of u-channel, d	=	1185	mm
Gradient of u-channel, S_f	=	(17.83-17.64)/37.5 = 0.005	
Cross-Section Area, a	=	$0.5 \pi r^2 + w d$ = 0.5 x 3.14 x 375^2 + 750 x 1185	
	=	1.110	m^2
Wetted Perimeter, p	=	$\pi r + 2 d$ = 3.14 x 375 + 2 x 1185	
	=	3.548	m
Hydralic radius, R	=	a / p	SDM 8.2.1
	=	0.313	m

3 Use Manning Equation for estimating velocity of stormwater

Take n	=	0.016	for concrete lined channels:-	SDM Table 13
Allowable velocity, v	=	$R^{1/6} x (RS_f)^{1/2}/n$ = (0.313)^1/6 x (0.313 x 0.005)^1/2 / 0.016		SDM Table 12
	=	2.05	m/s	
Time of flow, t_f	=	0.3	min	

4 Use "Rational Method" for calculation of design flow

Design intensity, i	=	$a / (t_o + t_f + b)^c$		SDM 4.3.2
	=	505.5 / (1.3+0.3+3.29)^0.355 for return period T = 50 years		Corrigendum 1/2024
	=	287		SDM Table 3a

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A	SDM 7.5.2 (b)
Flat Glassland(heavy soil)	0.25	0.0	0.0	
Concrete Paving	0.95	268.0	254.6	
		SUM =	254.6	

Upstream flow, Q_u	=	0	m^3/s	
Design flow, Q_d	=	$0.278i \Sigma C_i A_i + Q_u$ where A_i is in km^2		SDM 7.5.2 (a)
	=	1.16 x 0.278 x 287 x 254.6 / 1000000 + 0		Corrigendum 1/2022
	=	0.024	m^3/s	
Allowable flow, Q_a	=	a x v		
	=	1.11 x 2.05		
	=	2.274	m^3/s	
	>	Q_d (O.K.)		

Reference was made to Stormwater Drainage Manual (SDM) by DSD

1 For Connection between CP14 to existing river

Ref.

Area, A = **0** m^2
Average slope, H = **0.1** m per 100m
Distance on the line of natural flow, L = **0** m

Time of concentration, t_o = 0.14465L / ($H^{0.2}A^{0.1}$) = 0.14465 (0) / (0.1^0.2*0^0.1) — SDM 7.5.2 (d)
= 0.0 min

2 For Pipe after Cp14

Size(Diameter) w = **600** mm
Length of Pipe = **12** m
Design the pipe to 9/10 full bore capactity, then
Area of ventilated portion = 0.1 of pipe area
$\frac{1}{2} r^2 \theta - \frac{1}{2} r^2 \sin(\theta) = 0.1 \pi r^2$
$\theta - \sin(\theta) = 0.2 \pi$
θ = 1.63 rad = 93.4^O (By trial and error)

Area A = $0.9 \pi r^2$
= 0.9 x 3.14 x 600^2 — SDM 8.2.1
= 1017360 mm^2
= 1.017 m^2

Wetted Perimeter P = $2 \pi r - r \theta$ = 2792 mm
Hydralic radius R = A/P
364.4 mm

3 Use Manning Equation for estimating velocity of stormwater

Fall S = 1: **200**
Take n = 0.016 for concrete lined channels:- — SDM Table 13
Allowable velocity, v = $R^{1/6} x (RS_f)^{1/2}/n$ = (0.364)^1/6 * (0.364/200)^1/2 / 0.016 — SDM Table 12
= 2.25 m/s
Time of flow, t_f = 0.089 min

4 Use "Rational Method" for calculation of design flow

Design intensity, i = $a / (t_o + t_f + b)^c$ — SDM 4.3.2
= 505.5 / (0.0+0.09+3.29)^0.355 for return period T = 50 years — Corrigendum 1/2024
= 328 — SDM Table 3a

Type of surface	Runoff Coefficient C	Catchment Area A (m^2)	C x A
Flat Glassland(heavy soil)	0.25	**0.0**	0.0
Concrete Paving	0.95	**0.0**	0.0
Macadam Roadways	0.425	**0.0**	0.0
Wooded Areas	0.105	**0.0**	0.0
		SUM =	0.0

SDM 7.5.2 (b)

Upstream flow, Q_u = **0.714** m^3/s

Design flow, Q_d = $0.278i \Sigma C_i A_i + Q_u$ where A_i is in km^2 — SDM 7.5.2 (a)
= 1.16 x 0.278 x 328 x 0 / 1000000 + 0.714 — Corrigendum 1/2022
= 0.714 m^3/s

Allowable flow, Q_a = a x v
= 1.02 x 2.25
= 2.294 m^3/s

> Q_d (O.K.)

Reference was made to Stormwater Drainage Manual (SDM) by DSD