

Appendix 1

Drainage Proposal

**Application at Lots 340 RP (Part),
341 RP (Part), 342 RP (Part),
343 RP, 344 (Part) in D.D. 87
and adjoining Government Land,
Kong Nga Po, Sheung Shui,
New Territories**

Drainage Proposal

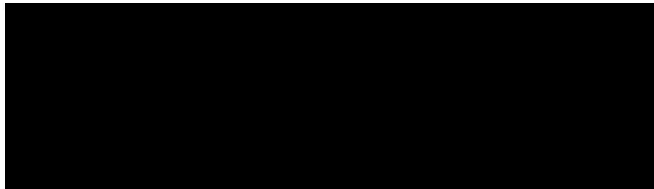
1st Submission

Prepared by:
Date:

Matthew Poon
30-December 2025



MAK KA YEUNG
MHKIE RPE (CVL.)



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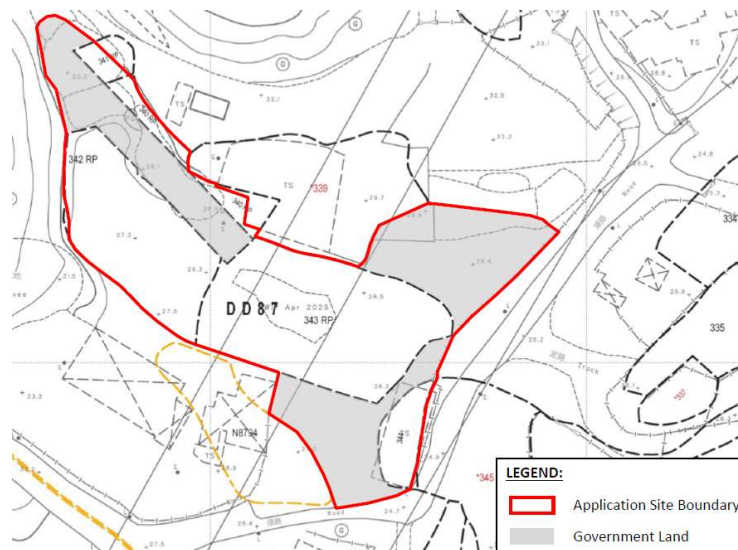
1. INTRODUCTION

- 1.1 The drainage proposal is under the application of Section 16 Planning Application at Lots 340 RP (Part), 341 RP (Part), 342 RP (Part), 343 RP, 344 (Part) in D.D. 87 and adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories. The proposed uses of the subject lots are temporary open storage of containers and vehicle maintenance workshop with ancillary facilities for 3 years. Levelling the land with filling up ponding areas is proposed.

Wings & Associates Consulting Engineers Limited is appointed to be the consultant to prepare for the Drainage Proposal in supporting the construction works for the proposed application.

2. SITE DESCRIPTION

- 2.1 The general views of the application area can be referred to the figures below. The combined parts of the lot cover an area of about 6214m². This area will be surrounded by fencing in the subject lots. The fencing will provide clearance above ground surface to allow the flow of storm water surface runoff.



Lot information of the Subject Site



Existing Pond

Existing Pond on Lot 343RP

2.2 The figure below shows the layout of proposed temporary logistic center development.
No permanent structures and buildings will be placed within the subject lots.

DEVELOPMENT PARAMETERS

APPLICATION SITE : 6,214 SQ.M. (ABOUT)
COVERED AREA : 919 SQ.M. (ABOUT)
UNCOVERED AREA : 5,295 SQ.M. (ABOUT)

PARKING AND LOADING/UNLOADING PROVISION

PARKING SPACE (PC) : 1 NOS. (5 M(L) X 3.5 M(W))
PARKING SPACE (HGV) : 1 NOS. (11 M(L) X 3.5 M(W))
L/U AREA : 1 NOS. (16 M(L) X 3 M(W))

LEGEND

- Application Site Boundary
- Proposed Fencing
- Proposed Structure

- A: Consolidation Area for Freight and Goods (GFA: about 299 sq.m. / 1 Storey)
- B: Vehicle Repair Workshop (GFA: about 273 sq.m. / 1 Storey)
- C: Ancillary Site Office/General Storage Uses (GFA: about 324 sq.m. / 2 Storey)
- D: Ancillary Site Office/General Storage Uses (GFA: about 324 sq.m. / 2 Storey)
- E: Guard Kiosk (GFA: about 15 sq.m. / 1 Storey)
- F: Meter Room (GFA: about 8 sq.m. / 1 Storey)

Open Storage Area: Container Stacking (About 1,440 sq.m.)

No-Built Zone (About 976 sq.m.)

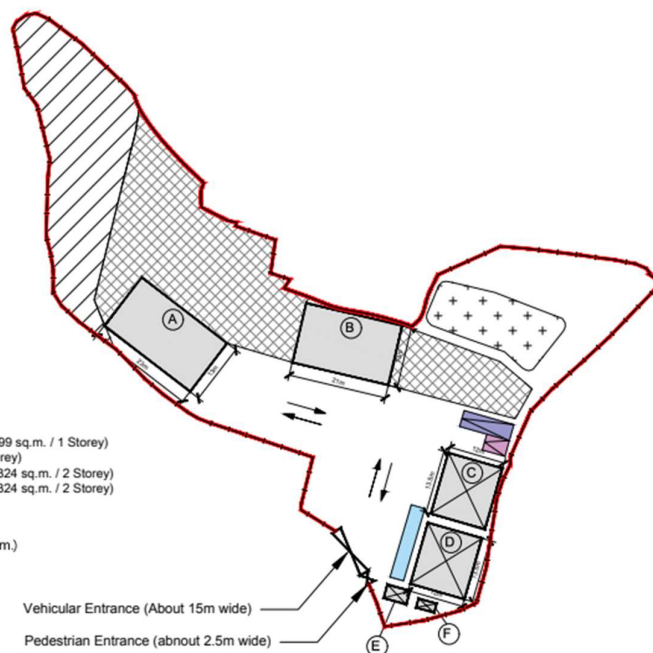
Proposed Pond (About 300 sq.m.)

Loading/Unloading Area

Parking Space (HGV)

Parking Space (PC)

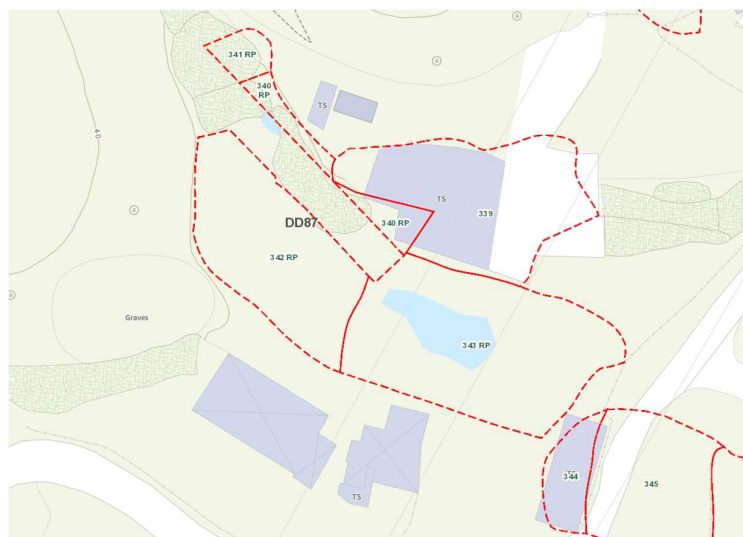
(For identification only)



Location of the parking area within the subject site

2.3 Referring to the actual site condition, there is an existing pond inside the subject lots.
The figure below shows the location of the existing pond. Photos showing the current

conditions can be referred to Appendix A. The pond will not be considered as part of the drainage system of the lot and will be filled and leveled to the proposed filling level.



Existing Pond at Lot 343 RP

2.4 The existing ground level of the subject lots range between +25mPD to +29mPD. With reference to the Stormwater Drainage Manual, the existing ground level of the site is significantly higher than sea level, as a result, the site will not be affected by tidal effects.

The information from the Observatory and the tables from the Stormwater Drainage Manual are shown below for reference.

Tai Po Kau

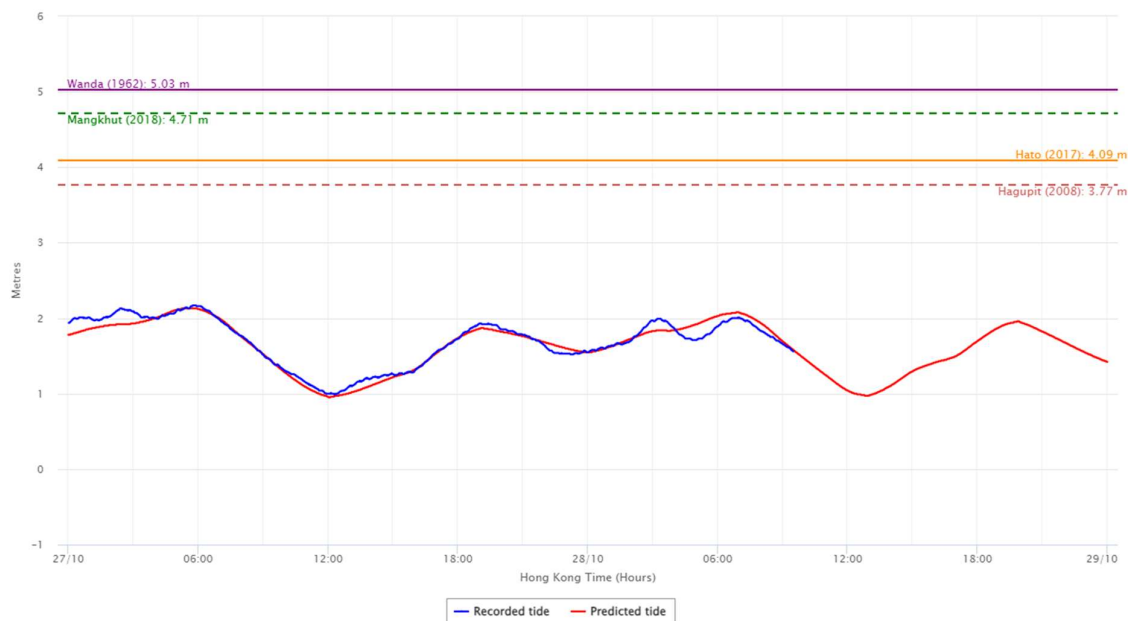


Table 8 – Design Extreme Sea Levels (in mPD)

Return Period (Years)	North Point/ Quarry Bay (1954-2017)	Tai Po Kau (1962-2017)	Tsim Bei Tsui (1974-2017)	Tai O (1985-2017)
2	2.73	2.91	3.07	2.87
5	2.94	3.20	3.31	3.16
10	3.09	3.45	3.51	3.36
20	3.24	3.73	3.74	3.57
50	3.45	4.19	4.09	3.84
100	3.63	4.60	4.40	4.06
200	3.81	5.10	4.77	4.28

Table 9 – Mean Higher High Water (MHHW) Levels (in mPD)

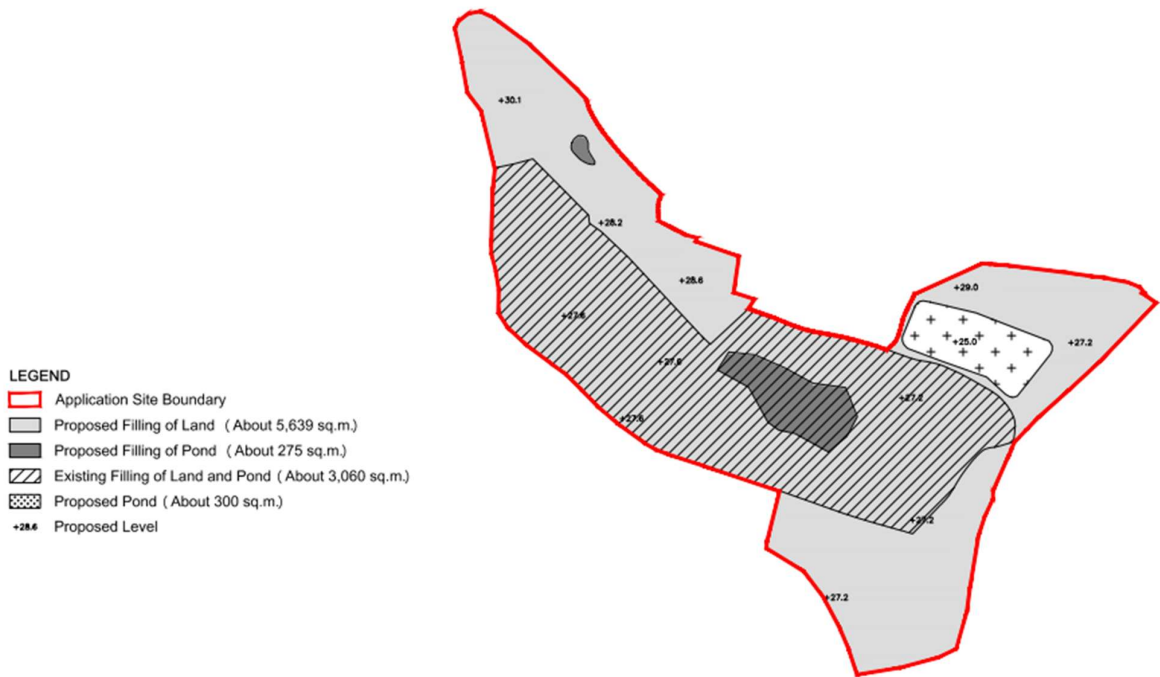
North Point/ Quarry Bay (1962-2017)	Tai Po Kau (1981-2017)	Tsim Bei Tsui (1983-2017)	Tai O (1985-2017)
2.01	2.02	2.32	2.13

4.1 General Planning

- Construction of new pond
- Construction of new surface channels and catchpits to divert the stormwater to the new pond
- Backfill and remove the existing pond (inside the subject lots)

4.2 Filling the subject site to rearrange cover level

The area inside the lot, together with the existing pond, will be filled up to form a flat surface for the proposed development. The proposed ground surface will be formed with fall gradient towards the proposed drainage system which is to collect surface runoff to the relocated pond.



Filling plan of the subject site

4.3 Design Assumption

The design adheres to the guidelines outlined in the Stormwater Drainage Manual.

Material Properties:

<i>Surface Characteristics</i>	<i>Runoff coefficient, C*</i>
Asphalt	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Grassland (heavy soil**)	
Flat	0.13 - 0.25
Steep	0.25 - 0.35
Grassland (sandy soil)	
Flat	0.05 - 0.15
Steep	0.15 - 0.20

Stormwater Drainage Manual 7.5.2

Rainfall Intensity

- Runoff Coefficient for grass = 0.20
- Runoff Coefficient for paved = 0.80

Storm Constants give,

- $a = 454.9$, $b = 3.44$, $c = 0.412$

(From SDM CORRIGENDUM No. 1/2024,

Table 3a – Storm Constants for Different Return Periods of HKO Headquarters)

4.4 Design of Channels and Catchpits

The proposed drainage system will collect the surface runoff from effective catchment area inside and outside the lot. Then, the surface runoff will be diverted to the adjacent site. We will keep liaison with the owner of the adjacent site.

The proposed drainage system to collect and divert the surface runoff from the designed catchment to the adjacent site has been checked. All surface channels are capable to divert the surface runoff from 10-year return period rainstorm. The detailed calculation and design drawings can be found in Appendix C & D.

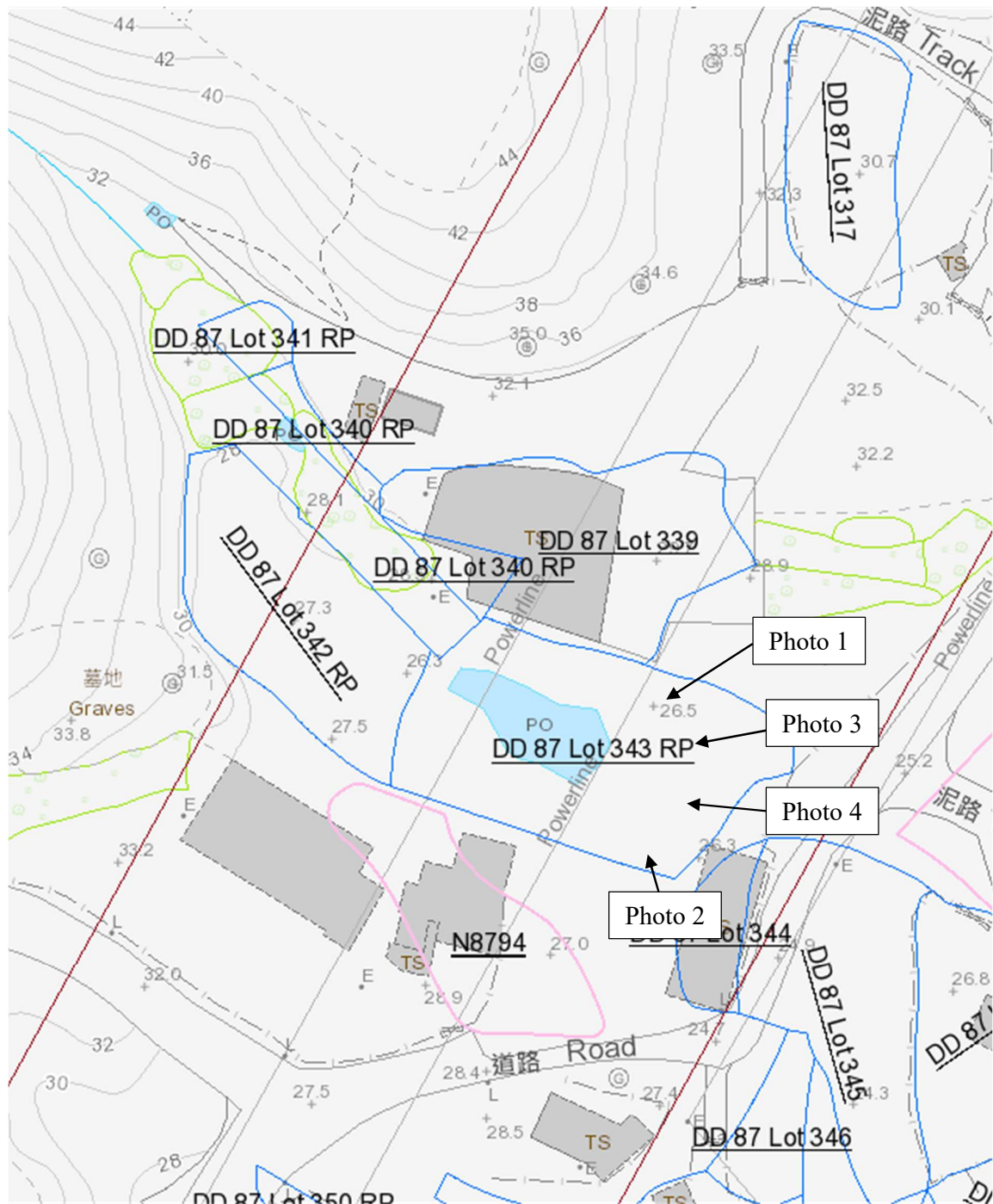
5. CONCLUSION

- 5.1 Having considered each branch of the proposed surface channel to handle the surface runoff from both catchment areas from uphill and the subject lots concurrently in the design checking (design calculation refers to Appendix C), the proposed surface channels and catchpits are capable of receiving potential surface runoff in calculating the rainfall intensity storm effect in approximate 10 years of return period. The collected stormwater will be discharged to an adjacent lot, which then drains to the nearby river.
- 5.2 Regular maintenance such as routine desilting will be carried out by the development owner for the drainage system (i.e. surface channel and catchpit) surrounding the site to avoid blockage and deterioration.
- 5.3 Openings on the bottom of fencing and walls will be provided surrounding the subject lots to avoid blockage and changing the flow path of the surface runoff.
- 5.4 The Lot owner is currently liaising with the owner (Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87) to seek their approval for the discharge connection.

END OF TEXT

APPENDIX A

Photo Record



Location Plan

Photo No. 1



Photo No. 2



Photo No. 3

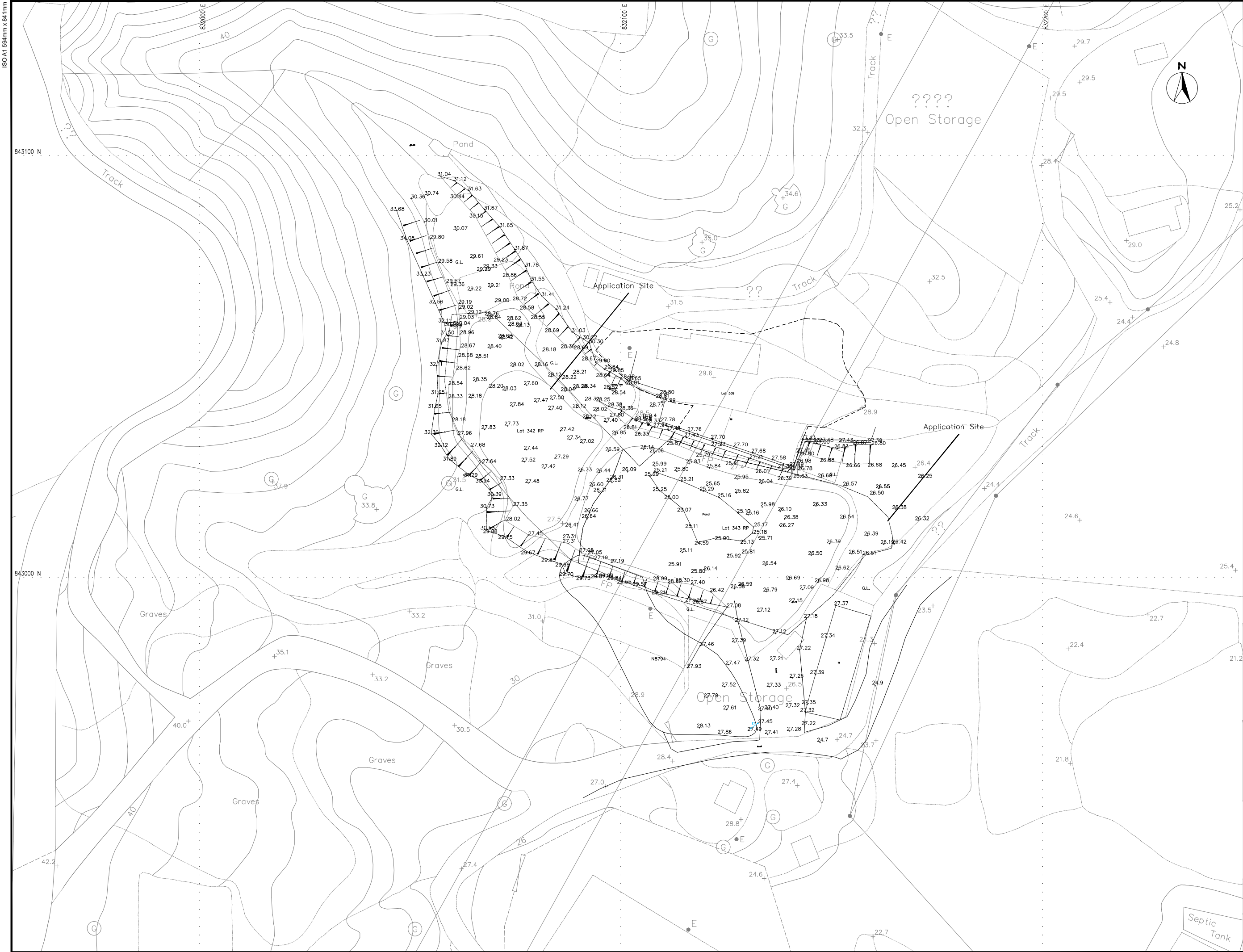


Photo No. 4



APPENDIX B

Topography Survey Record



B.D. REF.

F.S.D. REF.

REV

DATE

DESCRIPTION

DRAWN

CHECKED

APPROVED

ALL MEASUREMENTS MUST BE CHECKED AT THE SITE – DO NOT SCALE DRAWING.
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COMPLETION OF THE WORK – THIS DRAWING IS NOT VALID FOR FOR CONSTRUCTION
PURPOSES UNLESS EXPRESSLY CERTIFIED.

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:

24277

DRAWN BY:

WYM

10/24

DESIGNED BY:

SC

10/24

CHECKED BY:

RM

10/24

APPROVED BY:

VT

10/24

SCALE:

1:400 (A1)

CAD FILE:

WNG_24277_C_SK001

PROJECT:

DRAINAGE CONSULTANCY SERVICES FOR
S16 PLANNING APPLICATION AT LOT
NOS. 342 RP (PART) AND 343 RP IN
D.D. 87, NORTH NEW TERRITORIES,
HONG KONG

DRAWING TITLE:

LAYOUT PLAN

DRAWING NO:

WNG/24277/C/SK001

REV:

W

WING & ASSOCIATES
CONSULTING ENGINEERS LTD.

APPENDIX C

Drainage Design Calculation

Design Calculation of U-Channel

Project :		S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87									
Reference code:	Stormwater Drainage Manual 2018 & Geotechnical Manual for Slope										
Assumption:	Runoff Coefficient for grass 0.2 (Steep and sandy grassland)										
	Runoff Coefficient for concrete	1.0									
	Catchment 1	3508	m ²	(Effective catchment inside subject lots)		Rainfall Intensity =	271.8	mm/hr			
	Catchment 2	3727	m ²	(Effective catchment inside subject lots)		Rainfall Intensity =	250.1	mm/hr			
	Catchment 3	4706	m ²	(Effective catchment inside subject lots)		Rainfall Intensity =	258.9	mm/hr			
	Catchment 4	875.5	m ²	(Effective catchment outside subject lots)		Rainfall Intensity =	255.2	mm/hr			
	Catchment 5	842.1	m ²	(Effective catchment outside subject lots)		Rainfall Intensity =	255.2	mm/hr			
	Catchment 6	1663.8	m ²	(Effective catchment outside subject lots)		Rainfall Intensity =	215.8	mm/hr			
	Catchment 7	2832.7	m ²	(Effective catchment outside subject lots)		Rainfall Intensity =	239.5	mm/hr			
	Allowance	10.0	% reduction in flow area due to permissible degradation between desilting cycles								
Abbreviation and Terms:	USCP	Upstream Catchpit			RAINFALL INTENSITY	Rainfall Intensity, mm/hr					
	DSCP	Downstream Catchpit			RUNOFF COEF	Runoff Coefficient					
	USGL	Upstream Ground Level, mPD			CATCHMENT	Catchment Area, m ²					
	USIL	Upstream Invert Level, mPD			EFF. AREA	Effective Area, m ²					
	DSIL	Downstream Invert Level, mPD			CUM. AREA	Cumulative Effective Area, m ²					
	INVERT DIFF.	INVERT DIFFERENCE, m			DESIGN FLOW	Design Flow m ³ /s					
	LENGTH	Channel Length, m			SIZE	Channel Size, mm					
	SLOPE	Channel Gradient, 1 in			UC TYPE	Channel Type					
					VEL.	Velocity of Channel by Manning's Equation where n = 0.013					
					FLOW CAP.	Fullbore Capacity m ³ /s					
					SPARE CAP.	Spare Capacity m ³ /s					

Catchment		USGL	DSGL	USIL	DSIL	AVG. DEPTH	INVERT DIFF.	LENGTH	GRADIENT	RAINFALL INTENSITY	RUNOFF COEF.	CATCH MENT	Affected Area	EFF. AREA	DESIGN FLOW	CUM. DESIGN FLOW	SIZE	TYPE	VEL	ALLOWANCE (REDUCTION %)	FLOW CAP.	SPARE CAP.	UTILISATION	RESULT	A	P	R			
		mPD	mPD	mPD	mPD	m	m	m	1 in	mm/hr		m ²	(catchment	m ²	m ³ /s	m ³ /s	mm		m/s		m ³ /s	m ³ /s	%		(m ²)	(m)	(m)			
2	Branch 1 to CP1	30.44	28.50	29.60	28.00	0.50	1.60	61.9	39	250.1	0.2	3727	2	745.32	0.05183	0.05183	300	UC	2.3	10	0.288	0.236	18	OK	0.126	1.171	0.108			
4		30.44	28.50	29.60	28.00	0.50	1.60	61.9	39	255.2	1	876	4	875.5	0.06210	0.06210	300	UC	2.3	10	0.288	0.225	22	OK	0.126	1.171	0.108			
Resultant & Discharge															0.11393	0.11393	300	UC	2.3	10	0.288	0.174	40	OK	0.126	1.171	0.108			
															0.11393	0.11393	300	UC	2.3	10	0.288	0.174		5	OK	0.629	4.891	0.128		
3	CP1 to CP4	28.50	28.50	27.90	26.14	2.36	1.76	116.0	66	258.9	0.2	4706	3	941.1	0.06773	0.06773	300	UC	2.0	10	1.232	1.164		OK	0.629	4.891	0.128			
7		28.50	28.50	27.90	26.14	2.36	1.76	116.0	66	239.5	1	2833	7	2832.7	0.18860	0.18860	300	UC	2.0	10	1.232	1.043	15	OK	0.629	4.891	0.128			
2+4															0.11393	0.11393	300	UC												
Resultant & Discharge															0.37027	0.37027	300	UC	2.0	10	1.232	0.862	30	OK	0.629	4.891	0.128			
															0.37027	0.37027	300	UC	2.0	10	1.232	0.862		21	OK	0.099	0.971	0.102		
1	Branch 2 to CP6	30.44	28.00	29.60	27.60	0.40	2.00	59.0	30	271.8	0.2	3508	1	701.64	0.05301	0.05301	300	UC	2.5	10	0.250	0.197	21	OK	0.099	0.971	0.102			
5		30.44	28.00	29.60	27.60	0.40	2.00	59.0	30	255.2	1	842	5	842.1	0.05974	0.05974	300	UC	2.5	10	0.250	0.190	24	OK	0.099	0.971	0.102			
Resultant & Discharge															0.11275	0.11275	300	UC	2.5	10	0.250	0.137	45	OK	0.099	0.971	0.102			
															0.11275	0.11275	300	UC												
6	CP6 to CP4	28.00	27.20	27.60	26.10	1.10	1.50	119.0	79	215.8	1	1664	6	1663.8	0.09982	0.09982	300	UC	1.7	10	0.497	0.397	20	OK	0.288	2.371	0.122			
1+5															0.11275	0.11275	300	UC												
Resultant & Discharge															0.21257	0.21257	300	UC	1.7	10	0.497	0.284	43	OK	0.288	2.371	0.122			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP

Catchment Area : 1

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m²)

H = average fall (per 100m) from the summit of catchment to the point of design

L = length which water takes the longest time to reach the design section

= 3508.2 m²

= 19.8 m

= 87.2 m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$

= 3.07 min

say 3.07 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

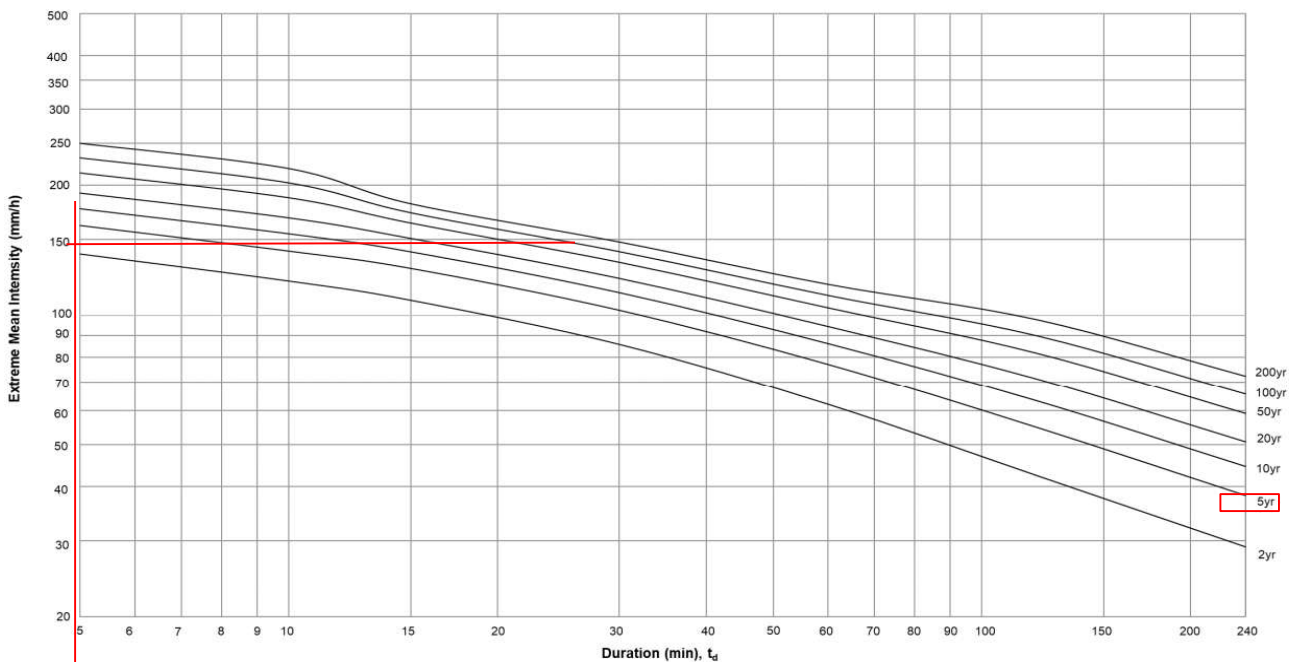


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i = designed mean intensity of rainfall (mm/hr)

Rainfall increased due to Climate Change (11.1%)

(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)

= 244.6 mm/hr

$i \times 1.111 = 271.8$ mm/hr

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

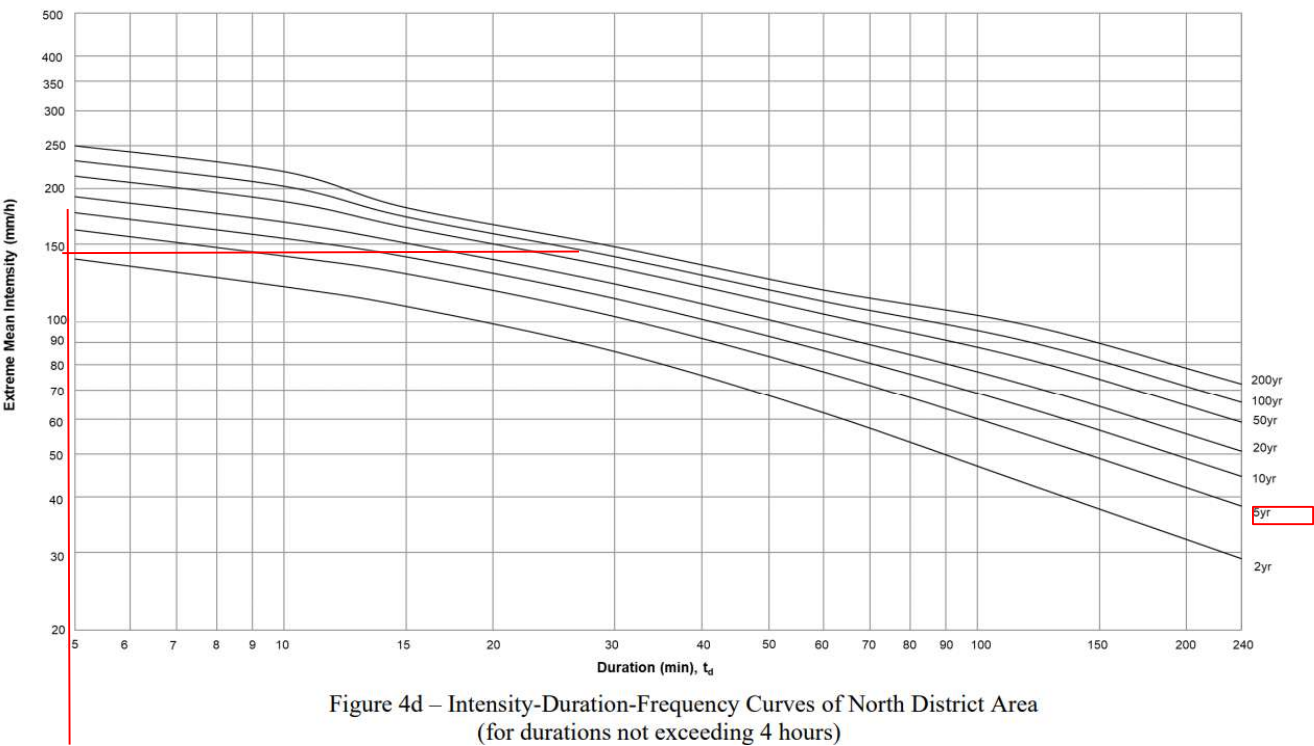
Catchment Area : B

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m²) = 3726.6 m²
H = average fall (per 100m) from the summit of catchment to the point of design = 11.40 m
L = length which water takes the longest time to reach the design section = 116.9 m

Time of concentration, t = 0.14456 x (L / (H^{0.2} x A^{0.1})) = 4.56 min say 4.56 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,



i = designed mean intensity of rainfall (mm/hr) = 225.1 mm/hr
Rainfall increased due to Climate Change (11.1%) i x 1.111 = 250.1 mm/hr
(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : C

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m²)

H = average fall (per 100m) from the summit of catchment to the point of design

L = length which water takes the longest time to reach the design section

= 4705.5 m²

= 15.60 m

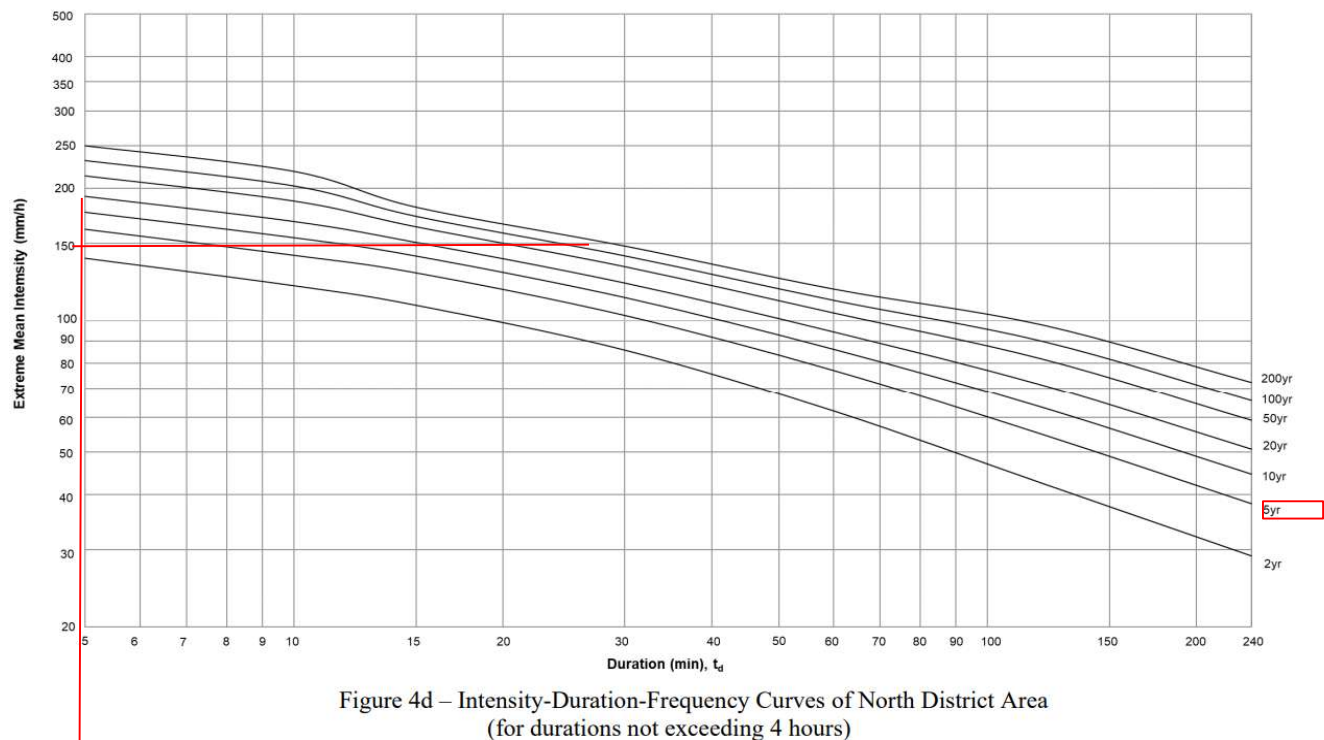
= 109.0 m

Time of concentration, t = 0.14456 x (L / (H^{0.2} x A^{0.1}))

= 3.90 min

say 3.90 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,



i = designed mean intensity of rainfall (mm/hr)

Rainfall increased due to Climate Change (11.1%)

(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)

= 233.0 mm/hr

i x 1.111 = 258.9 mm/hr

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : D

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m²)

H = average fall (per 100m) from the summit of catchment to the point of design

L = length which water takes the longest time to reach the design section

= 875.5 m²

= 3.37 m

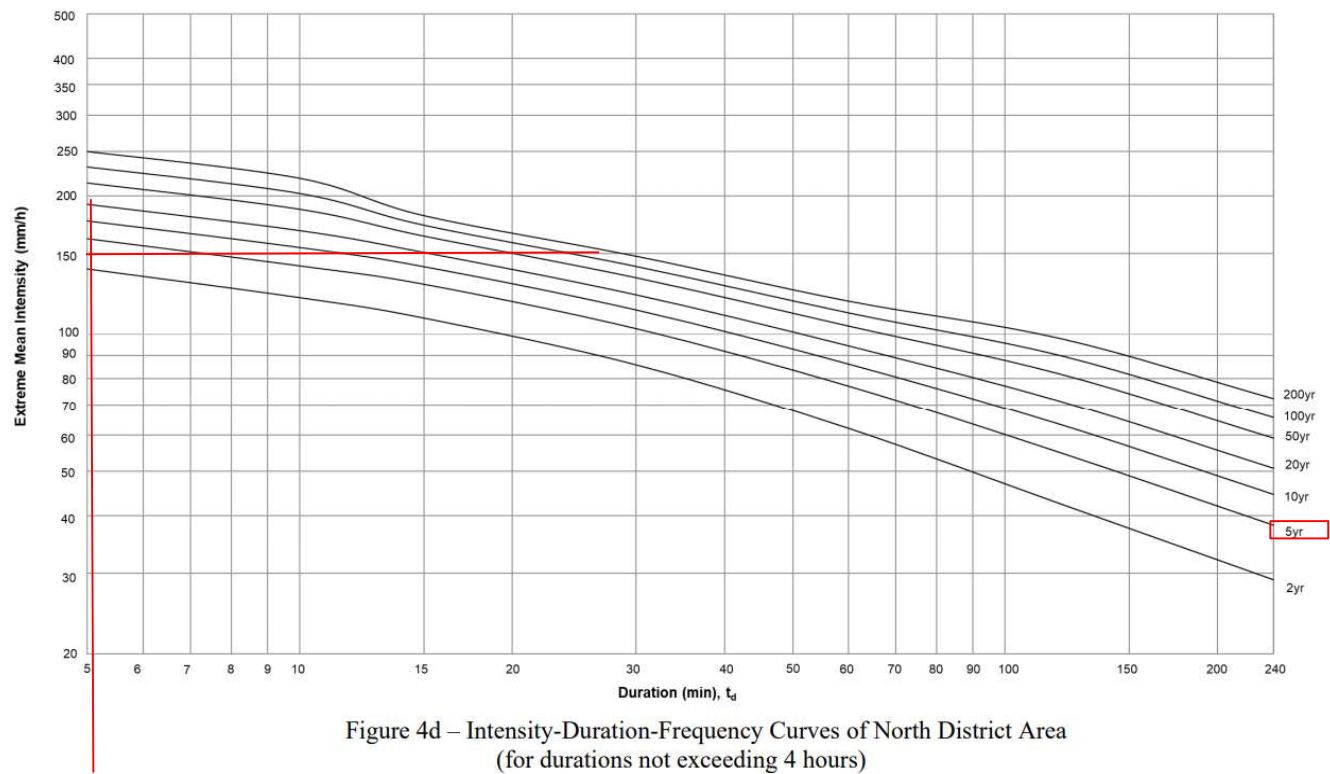
= 72.5 m

Time of concentration, t = 0.14456 x (L / (H^{0.2} x A^{0.1}))

= 4.17 min

say 4.17 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,



i = designed mean intensity of rainfall (mm/hr)

Rainfall increased due to Climate Change (11.1%)

(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)

= 229.7 mm/hr

i x 1.111 = 255.2 mm/hr

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : E

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m²)

H = average fall (per 100m) from the summit of catchment to the point of design

L = length which water takes the longest time to reach the design section

= 842.1 m²

= 3.37 m

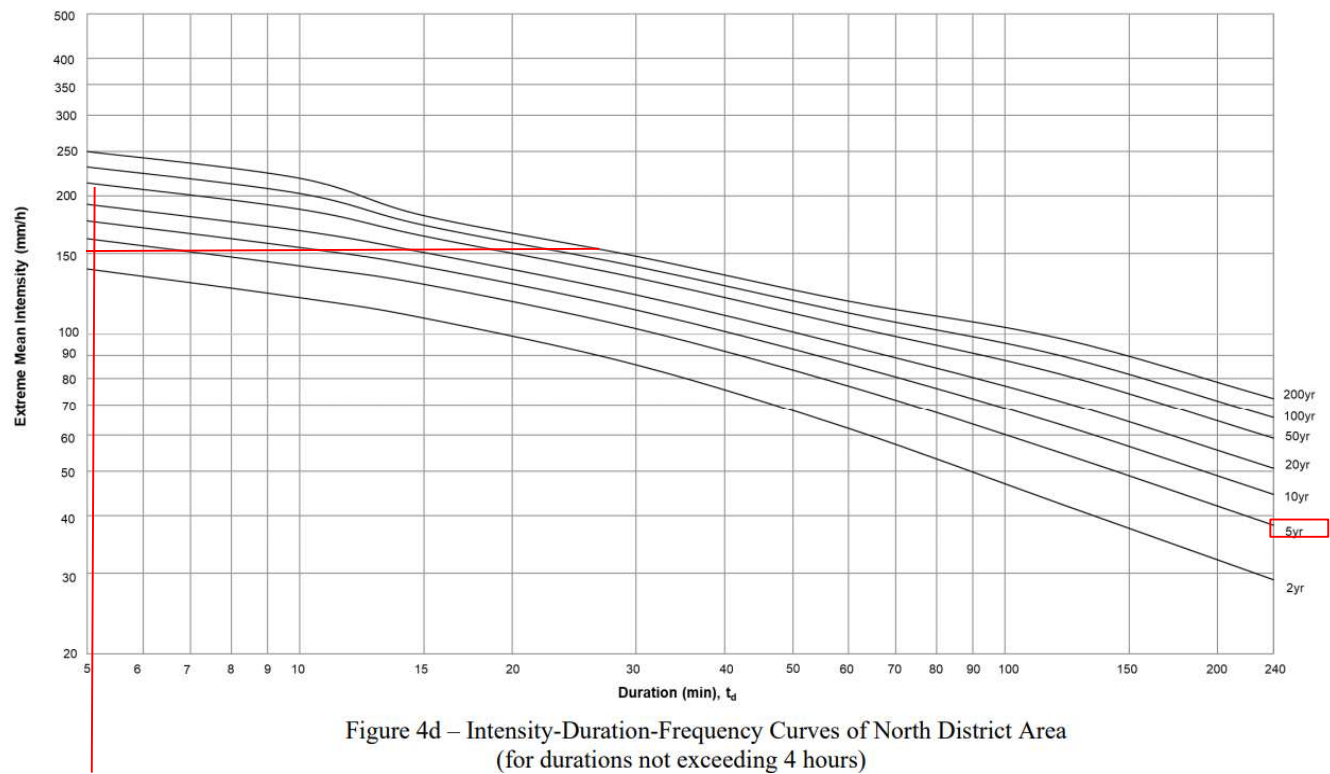
= 72.3 m

Time of concentration, t = 0.14456 x (L / (H^{0.2} x A^{0.1}))

= 4.18 min

say 4.18 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,



i = designed mean intensity of rainfall (mm/hr)

Rainfall increased due to Climate Change (11.1%)

(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)

= 229.6 mm/hr

i x 1.111 = 255.1 mm/hr

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : F

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m²)

H = average fall (per 100m) from the summit of catchment to the point of design

L = length which water takes the longest time to reach the design section

= 1663.8 m²

= 0.72 m

= 111.5 m

Time of concentration, t = 0.14456 x (L / (H^{0.2} x A^{0.1}))

= 8.21 min

say 8.21 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

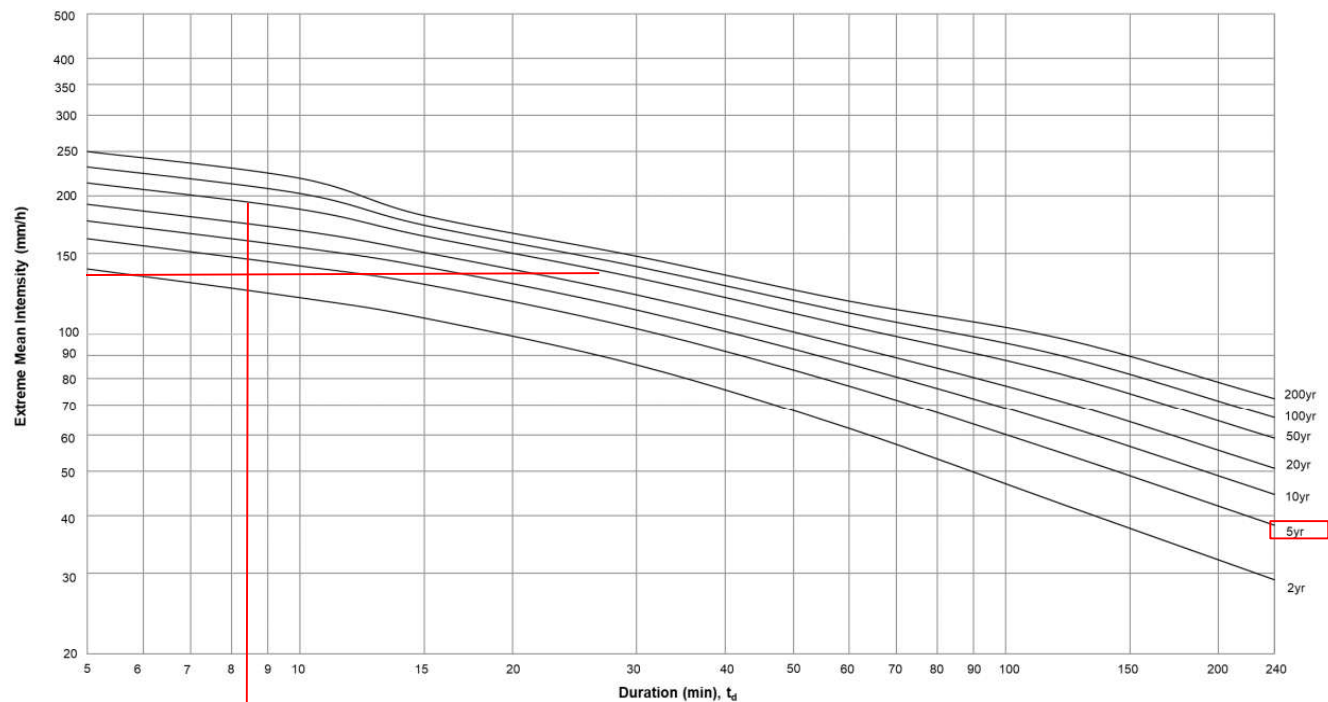


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i = designed mean intensity of rainfall (mm/hr)

Rainfall increased due to Climate Change (11.1%)

(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)

= 194.3 mm/hr

i x 1.111 = 215.8 mm/hr

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : G

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m²)

H = average fall (per 100m) from the summit of catchment to the point of design

L = length which water takes the longest time to reach the design section

= 2832.7 m²

= 1.16 m

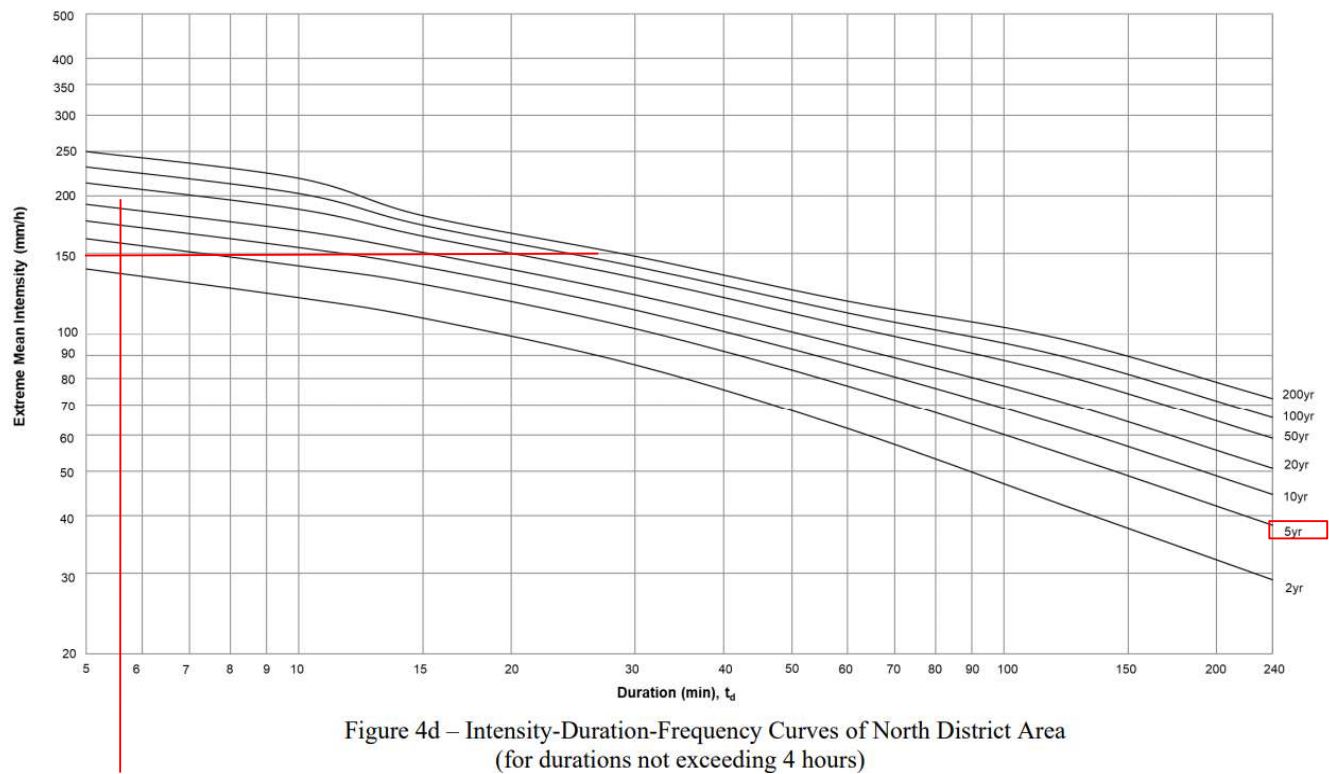
= 86.6 m

Time of concentration, t = 0.14456 x (L / (H^{0.2} x A^{0.1}))

= 5.49 min

say 5.49 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,



i = designed mean intensity of rainfall (mm/hr)

Rainfall increased due to Climate Change (11.1%)

(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)

= 215.6 mm/hr

i x 1.111 = 239.5 mm/hr

APPENDIX D

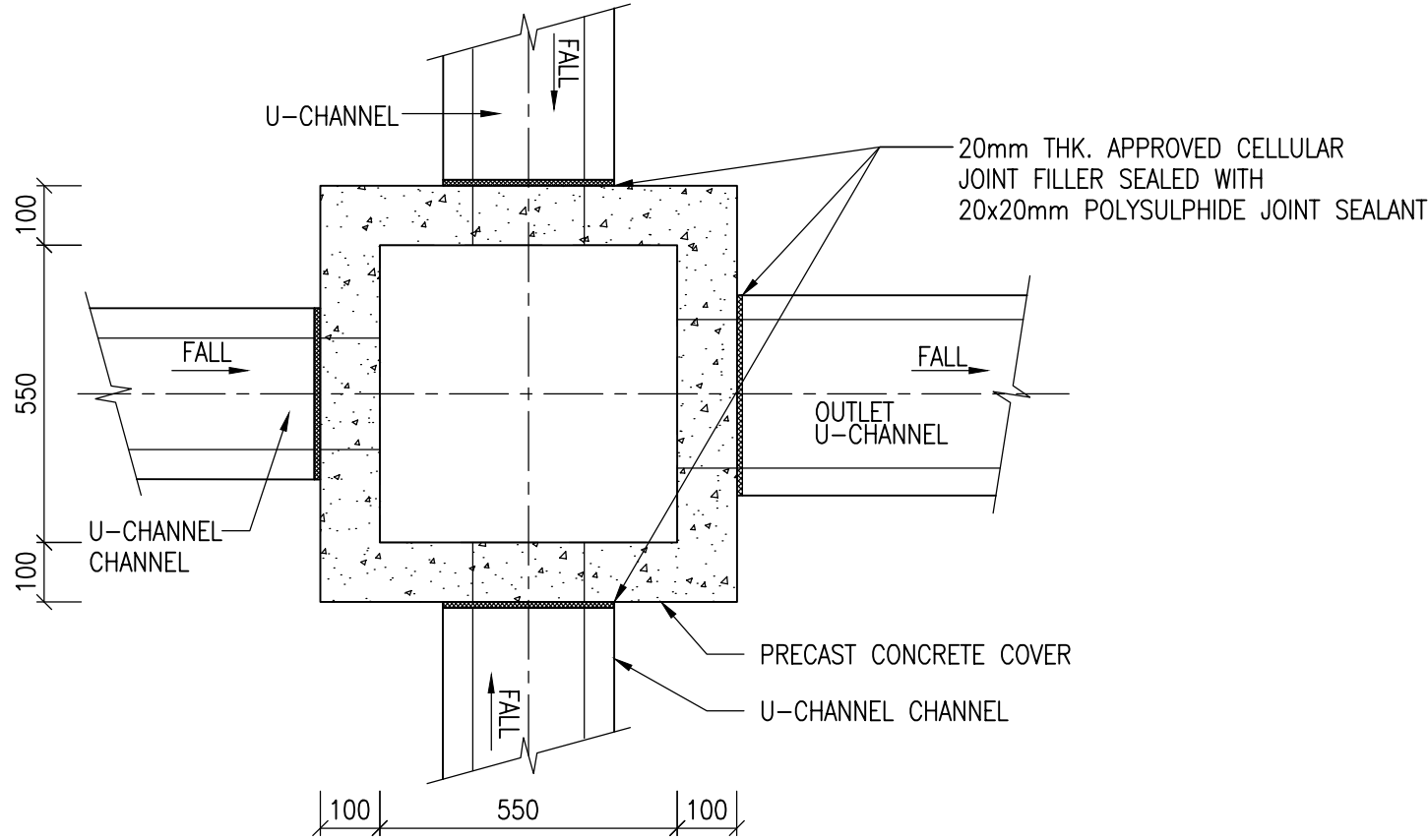
Construction Drawing

GENERAL NOTES

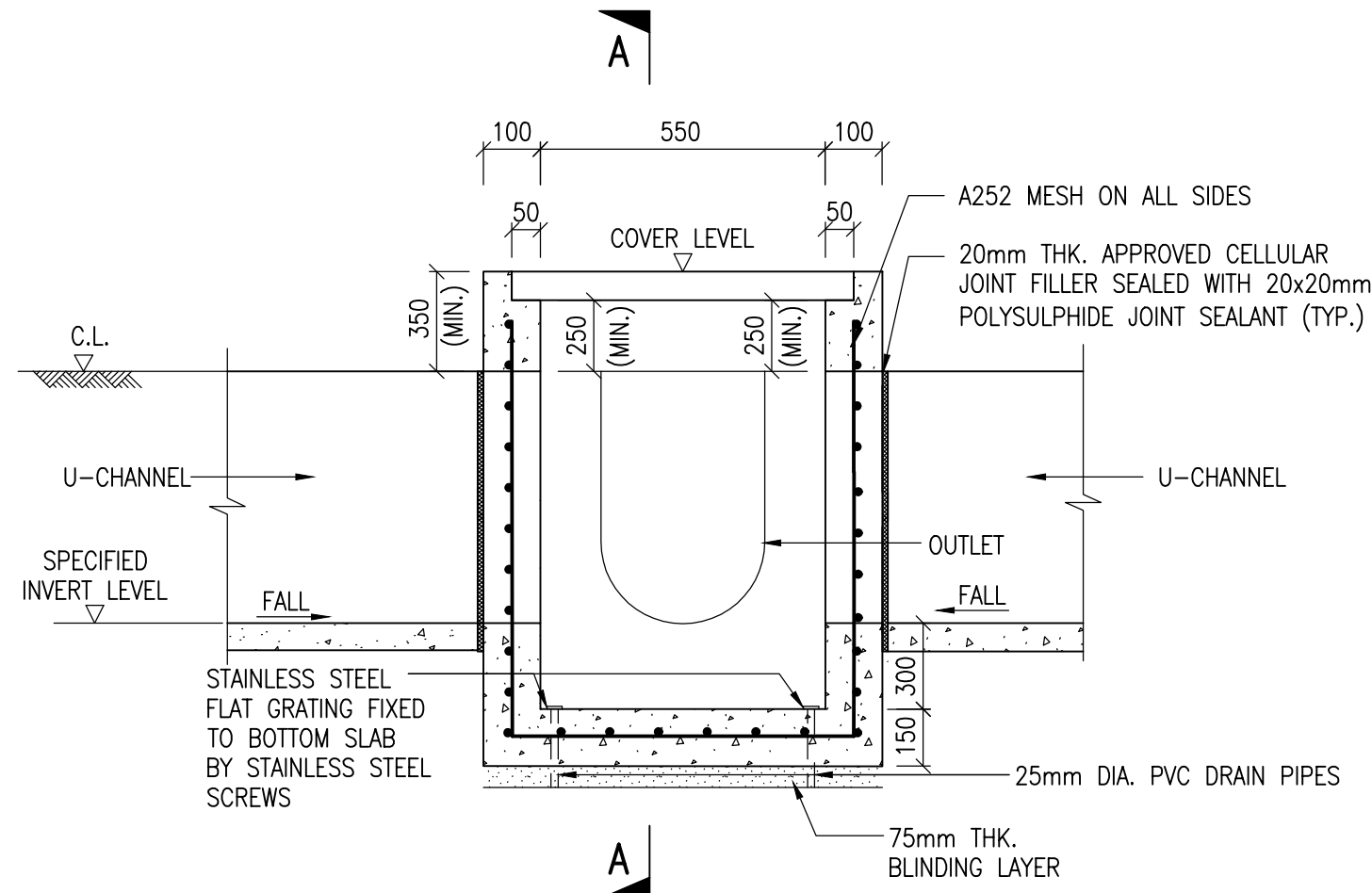
- GRADE 400 CONCRETE SHALL BE USED UNLESS OTHERWISE STATED.
- THE PROPOSED DRAINAGE WORKS, WHETHER WITHIN OR OUTSIDE THE LOT BOUNDARY, SHALL BE CONSTRUCTED AND MAINTAINED BY THE OWNER AT HIS OWN EXPENSE. FOR WORKS TO BE UNDERTAKEN OUTSIDE THE LOT BOUNDARY, PRIOR CONSENT FROM DLO AND/OR RELEVANT PRIVATE LOT OWNERS SHALL BE SOUGHT.
- ALL U-CHANNEL SHALL BE GRADIENT 1:100 UNLESS OTHERWISE STATED.
- GRATE COVERS SHALL BE PROVIDED FOR THE SECTION THAT VEHICLE MAY CROSS THE CHANNELS.

SCHEDULE OF CATCHPIT WITH SAND TRAP

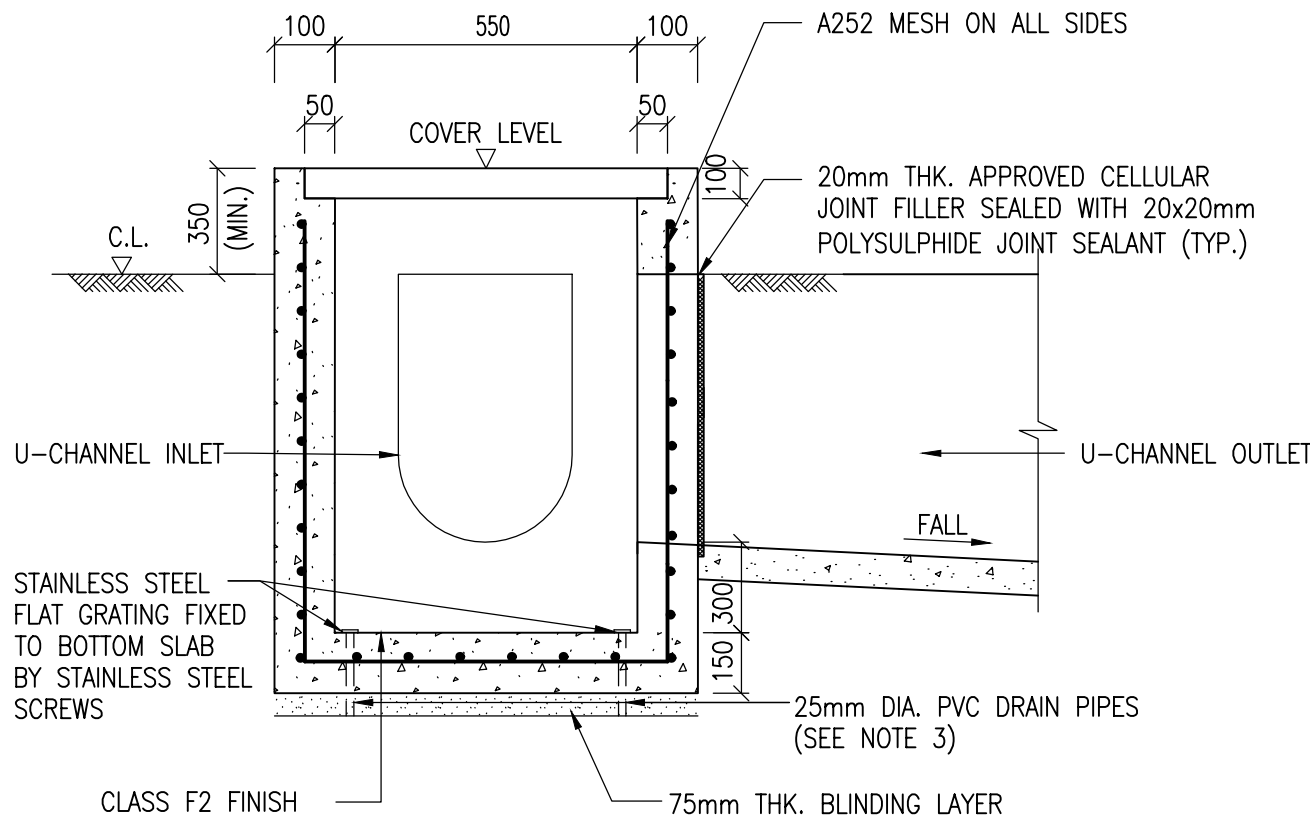
CATCHPIT NO.	CATCHPIT TYPE	COVER LEVEL (mPD)	BTM. LEVEL (mPD)	INLET LEVEL (mPD)	OUTLET LEVEL (mPD)
CP1	1	+28.50	+27.84	+28.00	+27.99
CP2	1	+28.00	+27.65	+27.81	+27.80
CP3	1	+27.00	+27.64	+26.70	+26.69
CP4	2	+27.20	+25.64	A: +26.14	+26.09
				B: +26.10	
CP5	1	+29.60	+29.39	+29.55	+29.54
CP6	1	+28.00	+27.44	+27.60	+27.59
CP7	1	+27.20	+26.76	+26.92	+26.91
CP8	1	+27.20	+26.54	+26.70	+26.69
CP9	1	+27.20	+26.19	+26.35	+26.34



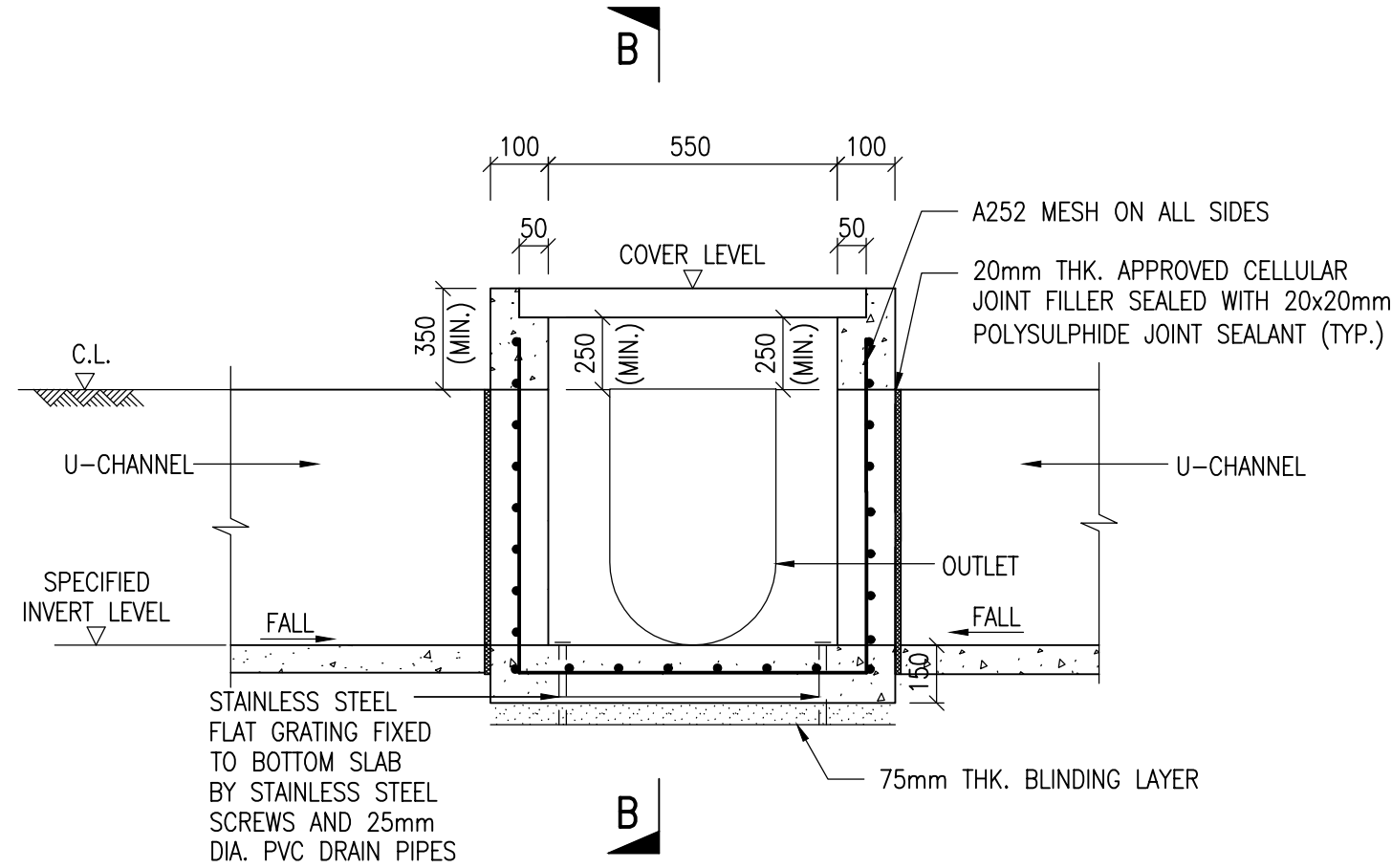
PLAN OF CATCHPIT (TYPE 1&2)
(REFERENCE: CEDD STANDARD DRAWING NO. IC2406_1&2)
N.T.S.



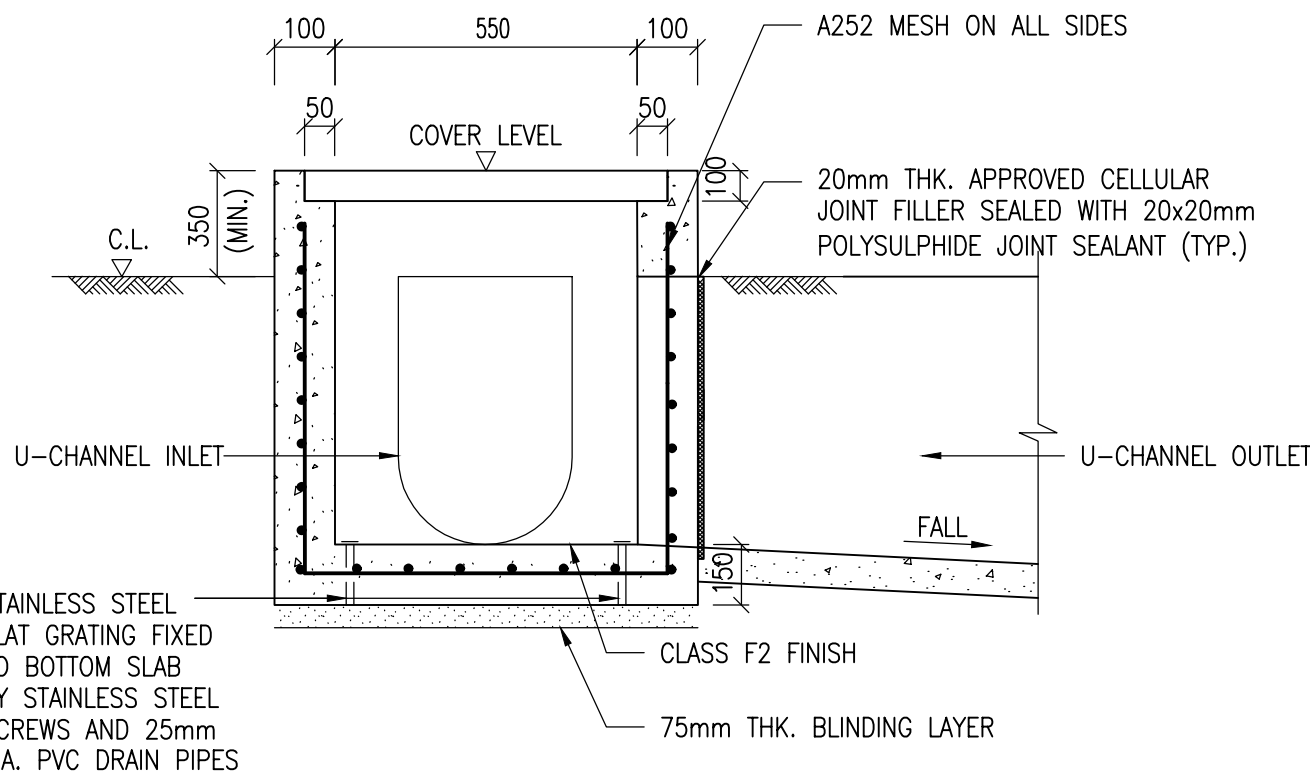
SECTION OF TYPE 2 CATCHPIT
SCALE 1:100



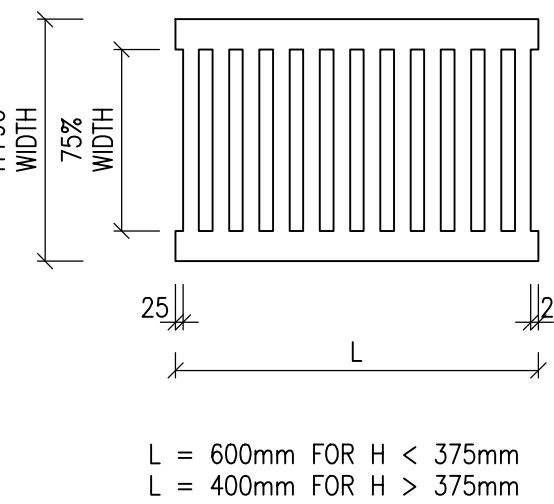
SECTION A-A
SCALE 1:100



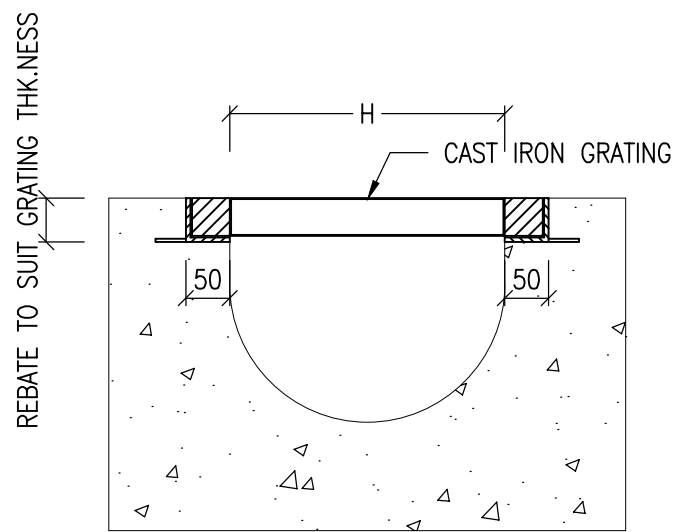
SECTION OF TYPE 1 CATCHPIT
SCALE 1:100



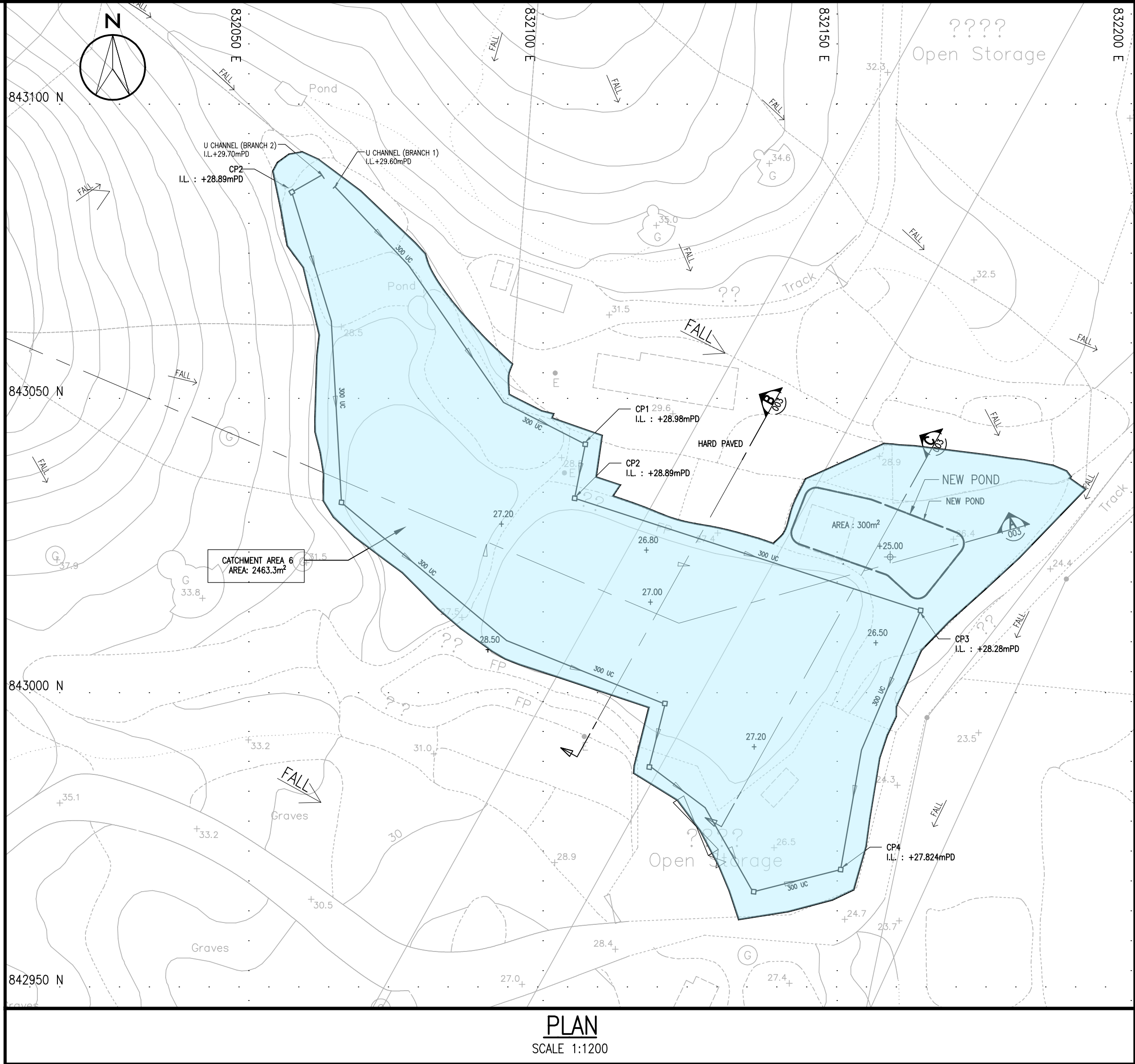
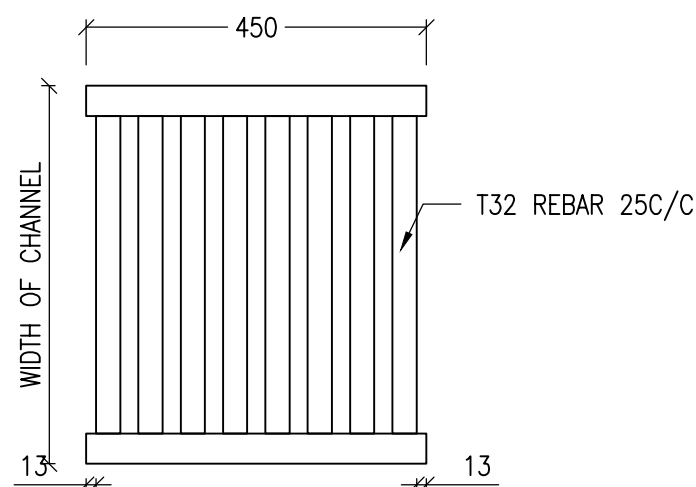
SECTION B-B
SCALE 1:100



CAST IRON GRATING FOR U-CHANNELS
(REFERENCE : CEDD DWG. NO. C2412D)
N.T.S.

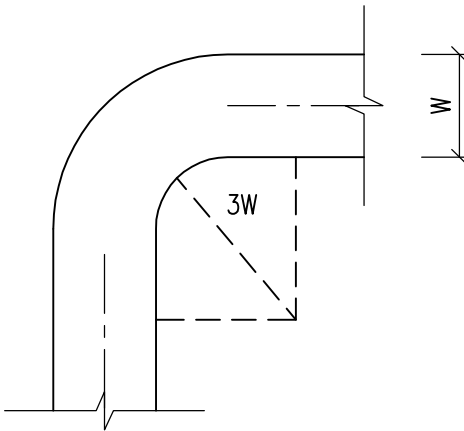


U-CHANNEL COVER GRATING (FOR HEAVY DUTY)
N.T.S.

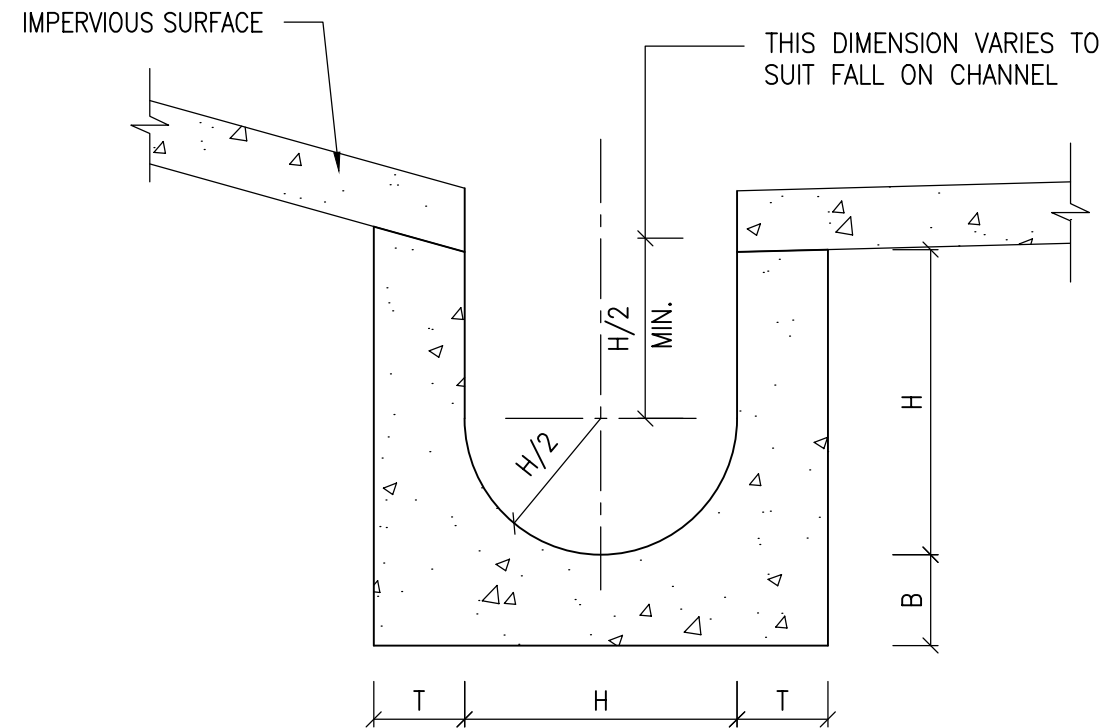


PLAN
SCALE 1:1200

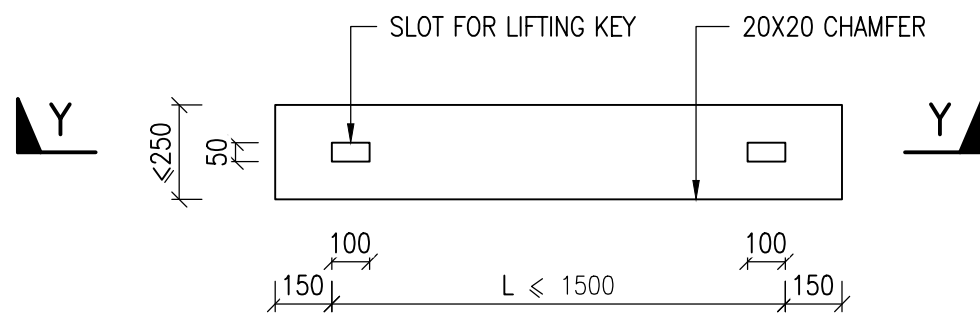
NOMINAL SIZE H	THICKNESS T	THICKNESS B
225-600	175	225
675-1200	175	225



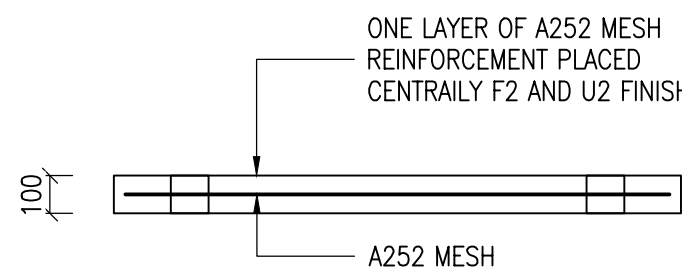
CHANNEL CHANGING DIRECTION THROUGH BENDS
(REFERENCE : PAGE 100 GEOTECHNICAL MANUAL FOR SLOPES)
N.T.S.



DETAILS OF U-CHANNEL
(REFERENCE : FIG. 8.11 OF GEOTECHNICAL MANUAL FOR SLOPES)
N.T.S.

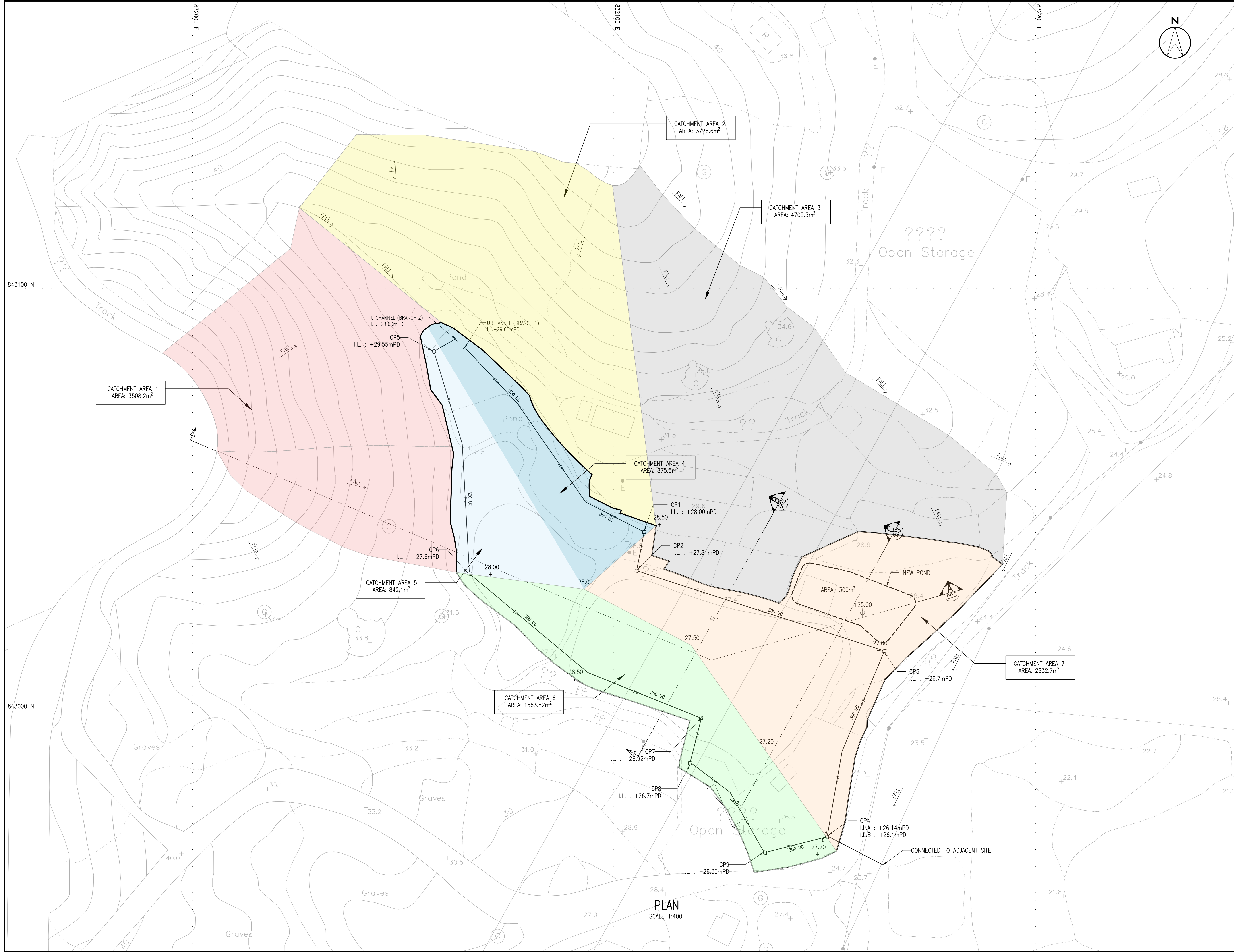


PLAN OF PRECAST CONCRETE COVERS
(REFERENCE : CEDD DWG. NO. C2407B)
N.T.S.



SECTION Y-Y
PRECAST CONCRETE COVERS FOR SAND TRAP AND CATCHPIT
(REFERENCE : CEDD DWG. NO. C2407B)
N.T.S.

B.D. REF.	
F.S.D. REF.	
LEGEND: --- BOUNDARY OF LOTS FOR THIS APPLICATION ← FLOW DIRECTION □ CP CATCH PIT	
REV DATE DESCRIPTION DRAWN CHECKED APPROVED	
ALL MEASUREMENTS MUST BE CHECKED AT THE SITE - DO NOT SCALE DRAWING - ALL DRAWING SPECIFICATIONS AND THEIR COPY RIGHT ARE THE PROPERTY OF ENGINEERS, ARCHITECTS, DESIGNERS AND SHALL BE RETURNED AT THE COMPLETION OF THE WORK - THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY CERTIFIED.	
SIGNATURE FOR SUBMISSION/ CONSTRUCTION	
PROJECT NO: 24277	
DRAWN BY:	JC 10/24
DESIGNED BY:	SL 10/24
CHECKED BY:	RM 10/24
APPROVED BY:	VT 10/24
SCALE:	AS SHOWN (A3)
CAD FILE:	WNG_24227_C_DRA_001a
PROJECT: DRAINAGE CONSULTANCY SERVICES FOR S16 PLANNING APPLICATION AT LOT NOS. 342 RP (PART) AND 343 RP IN D.D. 87, NORTH NEW TERRITORIES, HONG KONG	
DRAWING TITLE: GENERAL NOTES AND LAYOUT PLAN	
DRAWING NO: WNG/24227/C/DRA/001	REV: -



B.D. REF.

F.S.D. REF.

LEGEND:

BOUNDARY OF LOTS FOR THIS APPLICATION

≡

PROPOSED VEHICULAR ACCESS

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
ALL MEASUREMENTS MUST BE CHECKED AT THE SITE - DO NOT SCALE DRAWING ALL DRAWING SPECIFICATIONS AND THEIR COPY RIGHT ARE THE PROPERTY OF ENGINEERS, ARCHITECTS, DESIGNERS AND SHALL BE RETURNED AT THE COMPLETION OF THE WORK - THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS EXPRESSLY CERTIFIED.					
SIGNATURE FOR SUBMISSION/ CONSTRUCTION					

PROJECT NO:	24277		
DRAWN BY:	JC		10/24
DESIGNED BY:	SC		10/24
CHECKED BY:	RM		10/24
APPROVED BY:	VT		10/24
SCALE:	1:400 (A1)		
CAD FILE:	WNG_24277_C_DRA_002a		
PROJECT: DRAINAGE CONSULTANCY SERVICES FOR S16 PLANNING APPLICATION AT LOT NOS. 342 RP (PART) AND 343 RP IN D.D. 87, NORTH NEW TERRITORIES, HONG KONG			
DRAWING TITLE: PROPOSED EFFECTIVE CATCHMENT AREA FOR SURFACE RUNOFF AFFECTING SUBJECT LOTS			
DRAWING NO: WNG/24277/C/DRA/002		REV: -	

WING & ASSOCIATES
CONSULTING ENGINEERS LTD.