寄件者: Louis Tse [redacted]
寄件日期: 2025年11月21日星期五 16:27
收件者: tpbpd/PLAND
副本: Andrea Wing Yin YAN/PLAND; Ivan Sze Yuet FUNG/PLAND; Bon Tang; Matthew Ng; Christian Chim; Danny Ng; Grace Wong; Kevin Lam
主旨: [FI] S.16 Application No. A/YL-KTN/1136 - FI to address departmental comments
附件: FI2 for A_YL-KTN_1136 (20251121).pdf

類別: Internet Email

Dear Sir,

Attached herewith the further information to address departmental comments of the subject application.

Should you require more information, please do not hesitate to contact me. Thank you for your kind attention.

Kind Regards

Louis TSE | Town Planner
R-riches Group (HK) Limited

R-riches Property Consultants Limited | R-riches Planning Limited | R-riches Construction Limited
[redacted]

R-RICHES PLANNING LIMITED

盈卓規劃有限公司

Our Ref. : DD107 Lot 490 & VL
Your Ref. : TPB/A/YL-KTN/1136

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

By Email

21 November 2025

Dear Sir,

2nd Further Information

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years in "Agriculture" Zone,
Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, N.T.

(S.16 Planning Application No. A/YL-KTN/1136)

We are writing to submit further information to address departmental comments of the subject application (**Appendix I**).

Should you require more information regarding the application, please contact our Mr. Danny NG at [redacted] or the undersigned at your convenience. Thank you for your kind attention.

Yours faithfully,

For and on behalf of
R-riches Planning Limited

Louis TSE
Town Planner

cc DPO/FSYLE, PlanD (Attn.: Ms. Andrea YAN email: awyyan@pland.gov.hk)
(Attn.: Mr. Ivan FUNG email: isyfung@pland.gov.hk)

[redacted]

Response to Comment

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, N.T.

(Application No. A/YL-KTN/1136)

(i) A RtoC Table:

Departmental Comments		Applicant's Responses
1. Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD) (Contact Person: Ms. Jessica KWAN; Tel: 2300 1444)		
Comment received on 04.11.2025		
(a)	The applicant is reminded to re-submit satisfactory DIA reports or drainage proposals for the subject planning application as soon as possible. In order to facilitate the process, the applicant and his/her consultant are also welcome to contact us if they have enquiry on our drainage advice.	A drainage proposal is provided by the applicant to review the drainage arrangement for the proposed development (**Annex I**).
Comment received on 14.10.2025		
(a)	Condition of the Subject Site Plan and cross sections showing the proposed drainage facilities and the existing and proposed ground levels of the captioned site with respect to the adjacent areas should be given.	

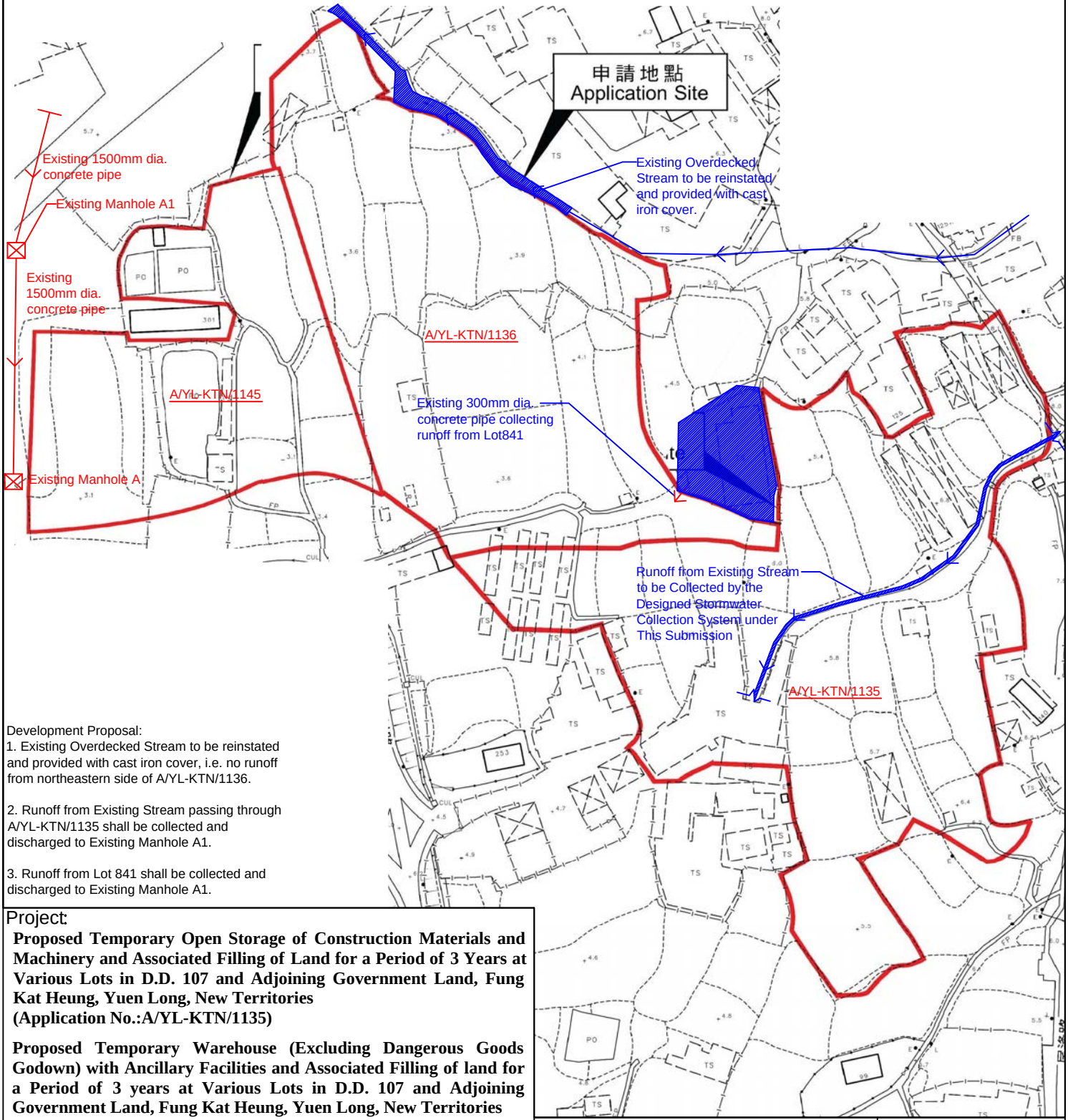
(b)	<u>Drainage Impact</u> 1. The proposal should indicate how the runoff (the flow direction) within the site and from the adjacent areas would be discharged to the proposed drainage system. 2. Peripheral surface channels shall be provided along the site boundary to collect the surface runoff accrued on the application site and to intercept the overland flow from the adjacent lands. It is noted that there is proposed land filling works for the development. Proper surface channel(s) should be provided at the lower platform and wall toe to collect the overland flow to/ from adjacent areas. 3. The applicant should clearly indicate the full alignment of the discharge path from the application site all the way down to the ultimate discharge point (e.g. a well-established stream course/public drainage system). 4. The applicant should demonstrate with hydraulic calculation that the proposed drainage facilities are adequate to collect, convey and discharge the surface runoff accrued on the application site and the overland flow intercepted from the adjacent lands. 5. Since there is no record of the said discharge path, the applicant should provide site photos of existing drainage facilities including the discharge point (e.g. existing local village drain mentioned in the proposal and its downstream drainage facilities) in order to demonstrate the presence and reflect condition of the existing drainage system.	

	6. The applicant should demonstrate the existing facilities to be discharged to have sufficient capacity to cater for any additional flow generated due to the subject application. 7. Where walls or hoarding are erected are laid along the site boundary, adequate openings should be provided to intercept the existing overland flow passing through the site. 8. The proposed development should neither obstruct overland flow nor adversely affect any existing natural streams, village drains, ditches and the adjacent areas, etc.	
(c)	<u>Responsibility of the Applicant</u> 1. he existing drainage facilities, to which the applicant proposed to discharge the stormwater from the application site was not maintained by this office. The applicant should identify the owner of the existing drainage facilities and seek agreement from the owner prior to commencement of the proposed works. In the case that it is a local village drains, DO/YL should be consulted. 2. The applicant is required to rectify the drainage system if they are found to be inadequate or ineffective during operation. The applicant shall also be liable for and shall indemnify claims and demands arising out of damage or nuisance caused by a failure of the drainage system. 3. The applicant should consult DLO/YL and seek consent from the relevant owners for any drainage works to be carried out outside his lot boundary before commencement of the drainage works.	

(d)	Details of Drainage Proposal 1. Standard details should be provided to indicate the sectional details of the proposed drainage facilities. 2. The cover levels and invert levels of the proposed and existing drainage facilities should be shown on the drainage plan. 3. Consideration should be given to provide grating for the surface channels. 4. Precast concrete pipe should generally be used for stormwater connection.	
Comments received on 10.9.2025		
(a)	The subject application is for the affected brownfield operations in HSK/HT NDA project is noted. Although the applicant would commence the construction works or operations, including site formation works, only after the DIA is considered accepted by DSD (as mentioned in the RtoC table, which should form one of the approval conditions), given there is complaint regarding illegal land filling and flooding, it appears that the applicant has not provided any substantive materials to justify that the proposed construction works and operations will not cause unacceptable drainage impacts to the surrounding areas. DSD cannot accept the application based on the sole fact that the applicant is affected brownfield operator under NDA projects, without considering the potential drainage impacts arising from the proposal. The applicant at least submit a drainage proposal, including proposed land formation levels, in the planning application stage to demonstrate how the	

	proposed construction works and operations will not result in unacceptable drainage impacts on the vicinity.	
2. Comments of the District Planning Officer/Fanling, Sheung Shui and Yuen Long East, Planning Department (DPO/FSYLE, PlanD) (Contact Person: Ms. Andrea YAN; Tel: 3168 4049)		
(a)	Please provide justification(s) on why the subject application is not submitted by the affected business operator i.e. Chun Sing Air-Sea Worldwide.	As Chun Sing Air Sea Worldwide, the affected business operator, is a logistics company that prefers to concentrate on running their business in Ha Tsuen and searching for a suitable site for relocation, it has authorized the applicant to facilitate the subject relocation application.

Annex I



Development Proposal:
1. Existing Overdecked Stream to be reinstated and provided with cast iron cover, i.e. no runoff from northeastern side of A/YL-KTN/1136.

2. Runoff from Existing Stream passing through A/YL-KTN/1135 shall be collected and discharged to Existing Manhole A1.

3. Runoff from Lot 841 shall be collected and discharged to Existing Manhole A1.

Project:

Proposed Temporary Open Storage of Construction Materials and Machinery and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories (Application No.:A/YL-KTN/1135)

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of land for a Period of 3 years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories (Application No.:A/YL-KTN/1136)

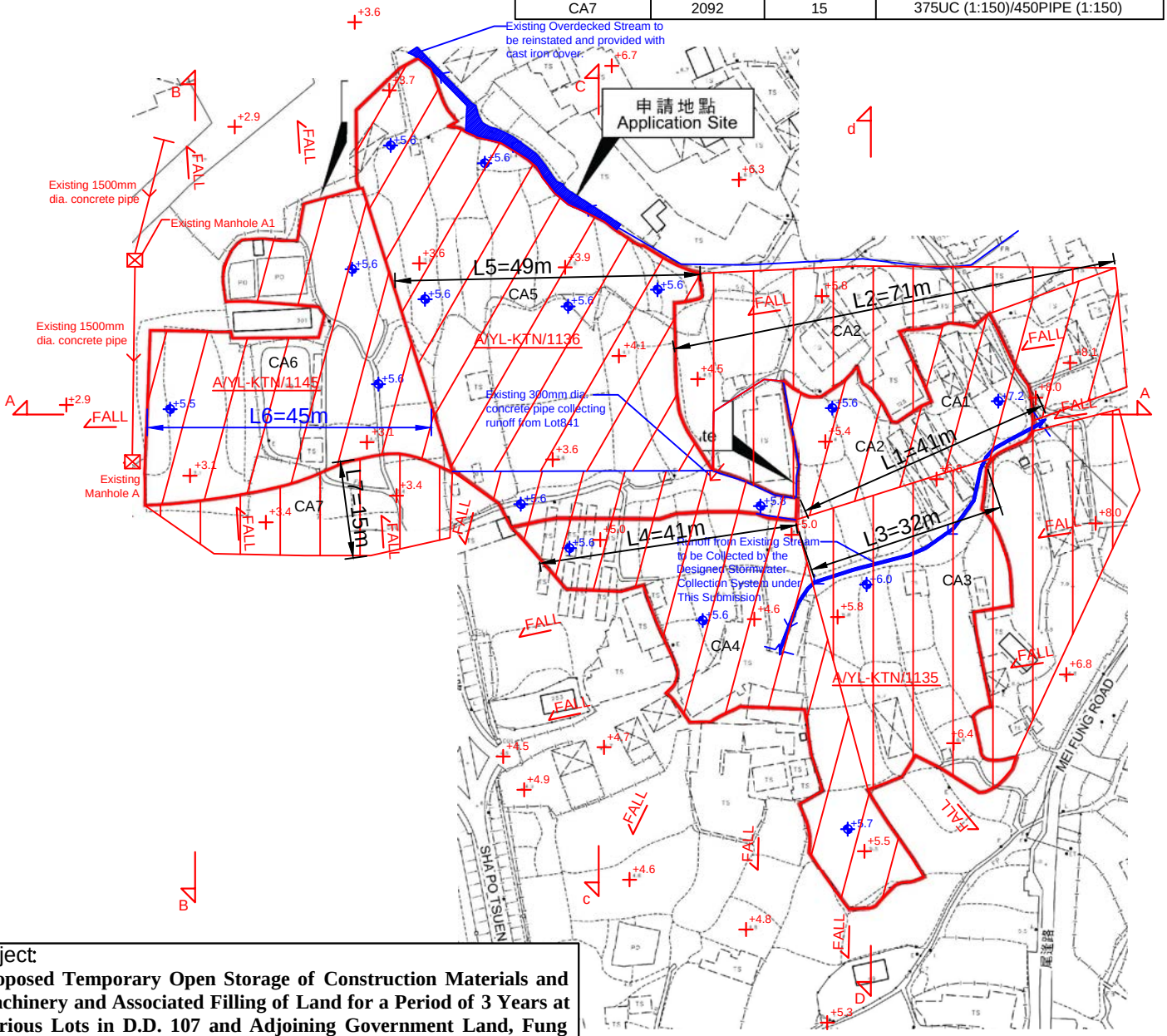
Proposed Temporary Open Storage of Construction Materials and Machineries and Associated Filling of Land and Pond for a Period of 3 Years at Various Lots in D.D. 107, Kam Tin, Yuen Long, New Territories (Application No.:A/YL-KTN/1145)

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT COMPANY

Title:	
Drainage Proposal - LAYOUT	D01
Drawn by: DM	Date: 20–11–2025
Check by: DM	Scale: ----

Catchment Area Summary Table			
Catchment Area	Area (sq.m)	L(m)	Design Drains
CA1	4113	41	525UC (1:150)
CA2	4636	71	525UC (1:150)/525PIPE (1:100)
CA3	8076	32	600UC (1:150)
CA4	6652	41	600UC (1:150)
CA5	8788	49	600UC (1:150)
CA6	5770	45	525UC (1:150)
CA7	2092	15	375UC (1:150)/450PIPE (1:150)



Project:

Proposed Temporary Open Storage of Construction Materials and Machinery and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories
(Application No.:A/YL-KTN/1135)

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of land for a Period of 3 years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories
(Application No.:A/YL-KTN/1136)
Proposed Temporary Open Storage of Construction Materials and Machineries and Associated Filling of Land and Pond for a Period of 3 Years at Various Lots in D.D. 107, Kam Tin, Yuen Long, New Territories
(Application No.:A/YL-KTN/1145)

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT COMPANY

Title:

Drainage Proposal
CATCHMENT AREA PLAN

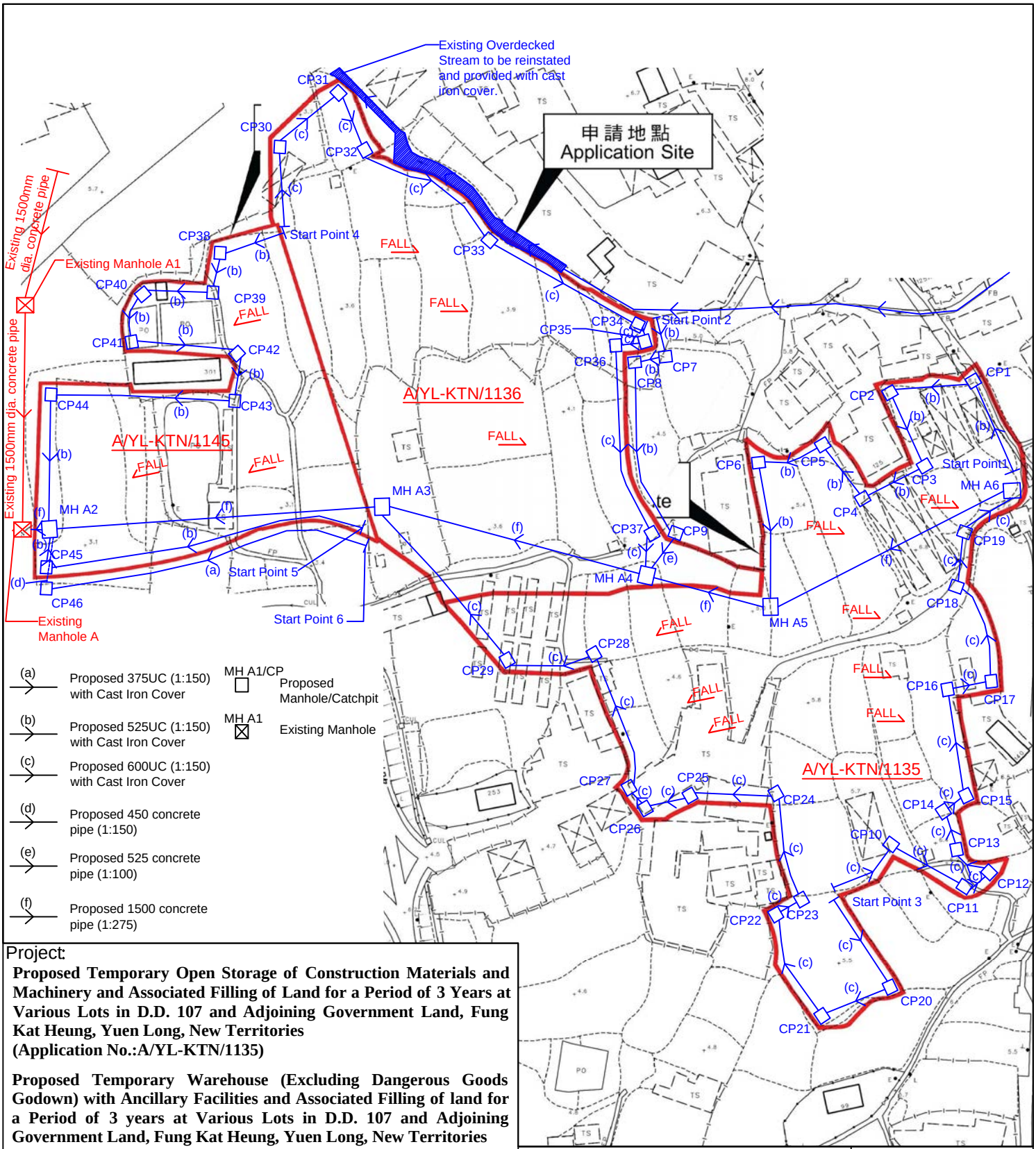
D02

Drawn by: DM

Date: 20-11-2025

Check by: DM

Scale: ----



Project:

Proposed Temporary Open Storage of Construction Materials and Machinery and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories (Application No.:A/YL-KTN/1135)

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of land for a Period of 3 years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories (Application No.:A/YL-KTN/1136)

Proposed Temporary Open Storage of Construction Materials and Machineries and Associated Filling of Land and Pond for a Period of 3 Years at Various Lots in D.D. 107, Kam Tin, Yuen Long, New Territories (Application No.:A/YL-KTN/1145)

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT COMPANY

Title: Drainage Proposal - LAYOUT

D03

Drawn by: DM

Date: 20-11-2025

Check by: DM

Scale: ----

Start Point

Start Point	C.L.	I.L.
Start Point 1	+7.20	+6.625
Start Point 2	+4.50	+3.925
Start Point 3	+5.70	+5.050
Start Point 4	+5.60	+4.950
Start Point 5	+5.60	+4.950
Start Point 6	+3.80	+3.375

Manhole Schedule

Manhole	C.L.	I.L.
Ex.MH A	+5.68	A1=+2.64, A2=+2.64, X1=+2.63
MH A2	+5.60	A1=+3.779, A2=+2.67, A3=+2.67, X1=+2.66
MH A3	+5.60	A1=+2.882, A2=+3.93, X1=+2.881
MH A4	+5.60	A1=+3.541, A2=+3.427, A3=+3.062, X1=+3.061
MH A5	+5.80	A1=+4.775, A2=+3.179, X1=+3.178
MH A6	+7.20	A1=+3.443 (Ex. Stream), X1=+3.442

Catchpit Schedule

Catchpit Number	C.L.	I.L.
CP1	+7.20	+6.546
CP2	+6.70	+6.125
CP3	+6.70	+5.992
CP4	+6.20	+5.625
CP5	+6.20	+5.518
CP6	+5.60	+5.025
CP7	+4.50	+3.859
CP8	+4.50	+3.824
CP9	+4.50	+3.498
CP10	+5.70	+4.917
CP11	+5.80	+4.780
CP12	+5.90	+4.741
CP13	+6.00	+4.682
CP14	+6.10	+4.628
CP15	+6.10	+4.597
CP16	+6.10	+4.416
CP17	+6.20	+4.352
CP18	+6.70	+4.173
CP19	+7.20	+4.070
CP20	+5.70	+5.464
CP21	+5.70	+5.345
CP22	+5.70	+5.151
CP23	+5.70	+5.116
CP24	+5.60	+4.929
CP25	+5.60	+4.784
CP26	+5.60	+4.716
CP27	+5.60	+4.689
CP28	+5.60	+4.437
CP29	+5.60	+4.284
CP30	+5.60	+4.810
CP31	+5.60	+4.678
CP32	+5.60	+4.581
CP33	+5.60	+4.298
CP34	+5.60	+3.996
CP35	+5.60	+3.981
CP36	+5.60	+3.947
CP37	+5.60	+3.598
CP38	+5.60	+4.832
CP39	+5.60	+4.780
CP40	+5.60	+4.666
CP41	+5.60	+4.590
CP42	+5.60	+4.407
CP43	+5.60	+4.336
CP44	+5.60	+4.007
CP45	+5.60	+4.345
CP46	+3.00	+2.726

Project:

Proposed Temporary Open Storage of Construction Materials and Machinery and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories
(Application No.:A/YL-KTN/1135)

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of land for a Period of 3 years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories
(Application No.:A/YL-KTN/1136)
Proposed Temporary Open Storage of Construction Materials and Machineries and Associated Filling of Land and Pond for a Period of 3 Years at Various Lots in D.D. 107, Kam Tin, Yuen Long, New Territories
(Application No.:A/YL-KTN/1145)

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT COMPANY

Title:

Drainage Proposal
Manhole and Catchpit Schedule

D04

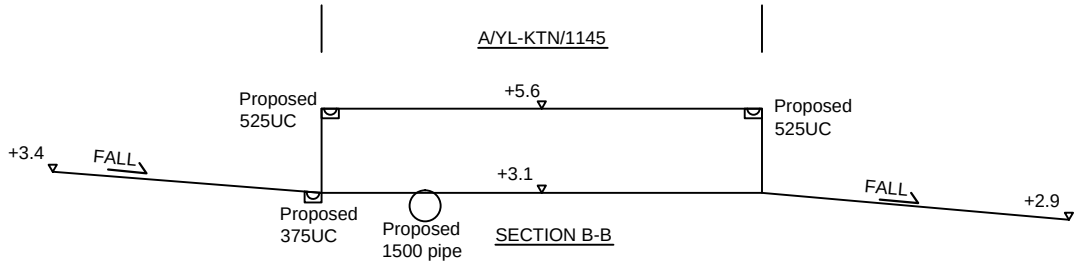
Drawn by: DM

Date: 20-11-2025

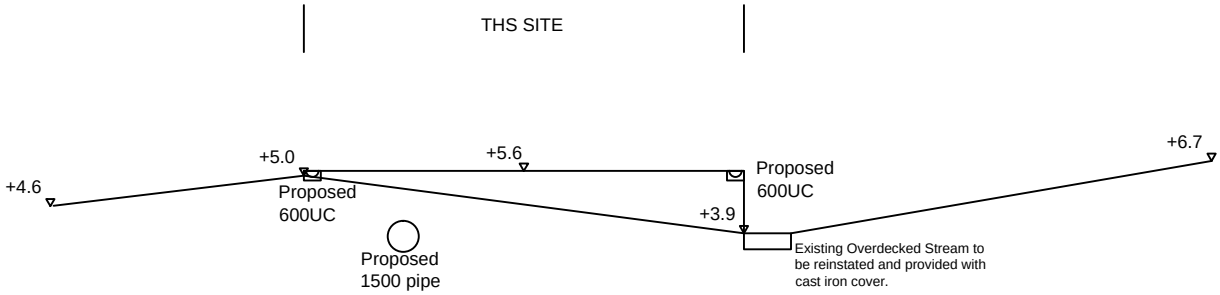
Check by: DM

Scale: ----

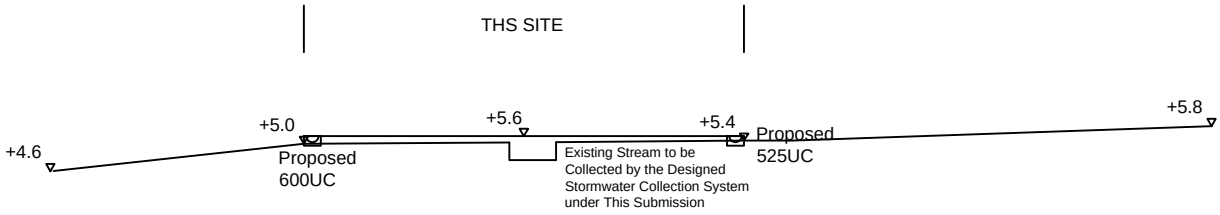
SECTION A-A



SECTION B-B



SECTION C-C

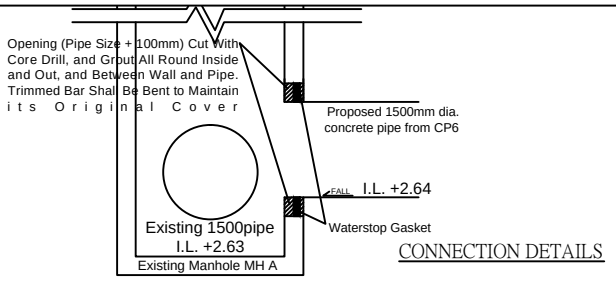


SECTION D-D

Proposed Temporary Open Storage of Construction Materials and Machinery and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories
(Application No.:A/YL-KTN/1135)

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of land for a Period of 3 years at Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long, New Territories
(Application No.:A/YL-KTN/1136)

Proposed Temporary Open Storage of Construction Materials and Machineries and Associated Filling of Land and Pond for a Period of 3 Years at Various Lots in D.D. 107, Kam Tin, Yuen Long, New Territories
(Application No.:A/YL-KTN/1145)



CONNECTION DETAILS

Title: Drainage Proposal - Section	D05
Drawn by: DM	Date: 20–11–2025
Check by: DM	Scale: ————

正宏工程顧問公司

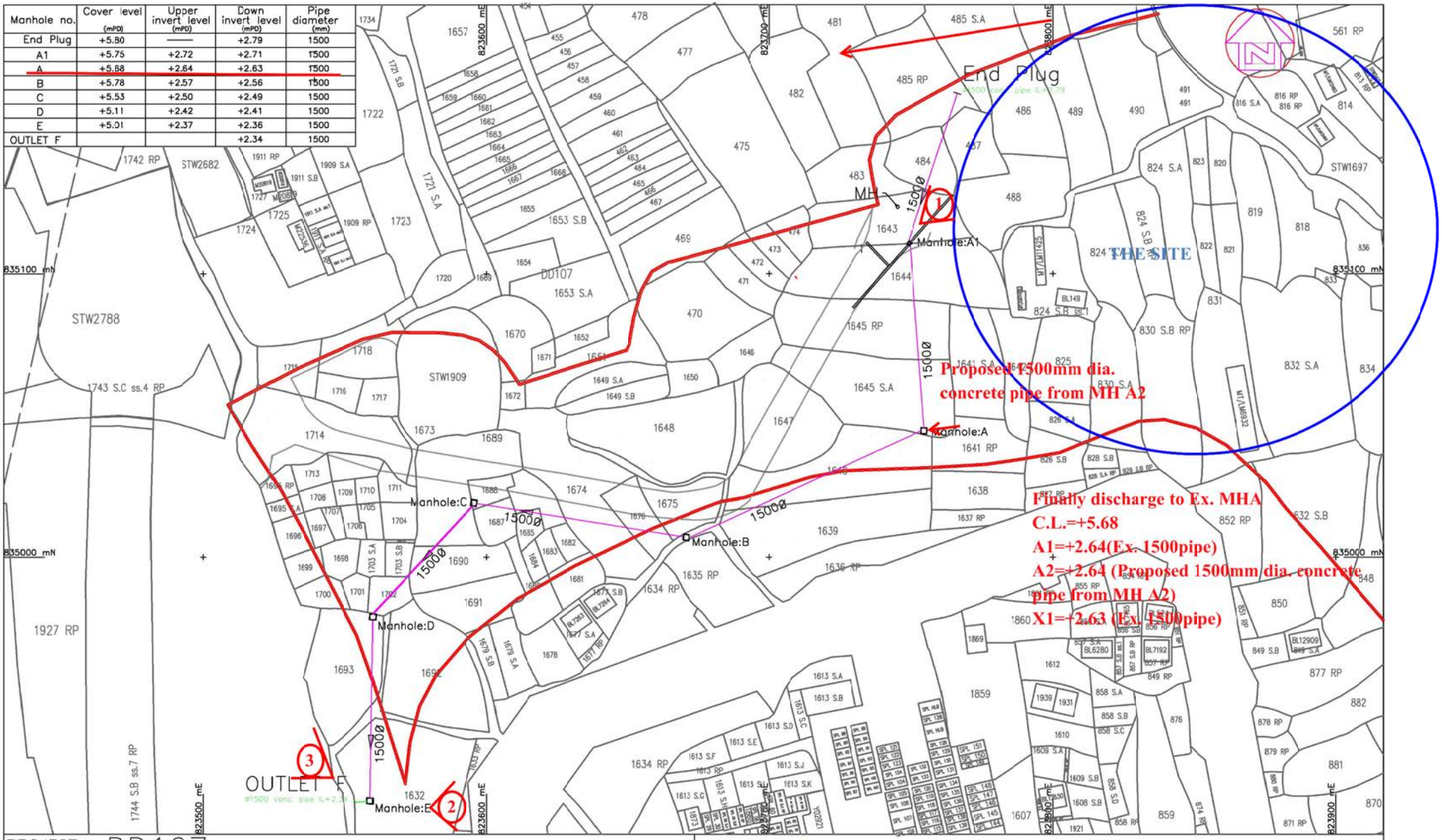
CHING WAN ENGINEERING CONSULTANT COMPANY

Photo 1 showing Ex. MH A1

Photo 2 showing the last Manhole MH E

Photo 3 showing the Ultimate Outfall

Manhole no.	Cover level (mPD)	Upper invert level (mPD)	Down invert level (mPD)	Pipe diameter (mm)
End Plug	+5.80	——	+2.79	1500
A1	+5.75	+2.72	+2.71	1500
A	+5.68	+2.64	+2.63	1500
B	+5.78	+2.57	+2.56	1500
C	+5.53	+2.50	+2.49	1500
D	+5.11	+2.42	+2.41	1500
E	+5.01	+2.37	+2.36	1500
OUTLET F			+2.34	1500



PROJECT: DD107

BF 大輝測量工程公司
BIG FAI SURVEYING & ENGINEERING CO.

DRAWING TITLE:

Dwg No : BF-20250809	Rev. A	Drawn By : LUNG
Design By :	Scale : 1:1250 (A3)	Date : 15-Oct-2025

CA 1 , Area	=	4113	m^2	(C=	0.95	)	L1=	41 m
CA 2 , Area	=	4636	m^2	(C=	0.95	)	L2=	71 m
CA 3, Area	=	8076	m^2	(C=	0.95	)	L3=	32 m
CA 4, Area	=	6652	m^2	(C=	0.95	)	L4=	41 m
CA 5, Area	=	8788	m^2	(C=	0.95	)	L5=	49 m
CA 6, Area	=	5770	m^2	(C=	0.95	)	L6=	45 m
CA 7, Area	=	2092	m^2	(C=	0.95	)	L7=	15 m

Calculation of Design Runoff of the Proposed Development.

For the design of drains from start point 1 to CP6, consider Catchment: CA 1

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

A	=	4113	m^2	
	=	4113		
	=	0.004113	km^2	
t	=	$0.14465\ L1/H^{0.2}A^{0.1}$		
	=	$0.14465*41/1^{0.2}*4113^{0.1}$		
	=	2.580	min	
i	=	$1.16*a/(t+b)^c$		(50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
	=	$1.16*505.5/(2.58+3.29)^{0.355}$		
	=	312.8	mm/hr	
Therefore, Q	=	0.278*0.95*312.8*0.004113		
	=	0.3398	m^3/sec	
	=	**20388**	lit/min	

Provide 525UC (1:150) is OK

For the design of drains from start point 2 to CP9, consider Catchment: CA 2

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

A	=	4636	m^2	
	=	4636		
	=	0.004636	km^2	
t	=	$0.14465\ L2/H^{0.2}A^{0.1}$		
	=	$0.14465*71/1^{0.2}*4636^{0.1}$		
	=	4.415	min	
i	=	$1.16*a/(t+b)^c$		(50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
	=	$1.16*505.5/(4.415+3.29)^{0.355}$		
	=	284.0	mm/hr	
Therefore, Q	=	0.278*0.95*284.0*0.004636		
	=	0.3478	m^3/sec	
	=	**20866**	lit/min	

Provide 525UC (1:150) / 525 concrete pipe (1:100) is OK

For the design of drains from start point 3 to CP19, consider Catchment: CA 3

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

A	=	8076	m^2	
	=	8076		
	=	0.008076	km^2	
t	=	$0.14465\ L3/H^{0.2}A^{0.1}$		
	=	$0.14465*32/1^{0.2}*8076^{0.1}$		
	=	1.883	min	
i	=	$1.16*a/(t+b)^c$		(50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
	=	$1.16*505.5/(1.883+3.29)^{0.355}$		
	=	327.2	mm/hr	
Therefore, Q	=	0.278*0.95*327.2*0.008076		
	=	0.6979	m^3/sec	
	=	**41873**	lit/min	

Provide 600UC (1:150) is OK

For the design of drains from start point 3 to CP29, consider Catchment: CA 4

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

	A	= 6652	m^2	
		= 6652		
		= 0.006652	km^2	
	t	= $0.14465\ L4/\ H^{0.2}A^{0.1}$		
		= $0.14465*41/1^{0.2}*6652^{0.1}$		
		= 2.459	min	
	i	= $1.16*a/(t+b)^c$		(50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
		= $1.16*505.5/(2.459+3.29)^{0.355}$		
		= 315.1	mm/hr	
Therefore,	Q	= 0.278*0.95*315.1*0.006652		
		= 0.5537	m^3/sec	
		= **33219**	lit/min	

Provide 600UC (1:150) is OK

For the design of drains from start point 4 to CP37, consider Catchment: CA 5

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

	A	= 8788	m^2	
		= 8788		
		= 0.008788	km^2	
	t	= $0.14465\ L5/\ H^{0.2}A^{0.1}$		
		= $0.14465*49/1^{0.2}*8788^{0.1}$		
		= 2.858	min	
	i	= $1.16*a/(t+b)^c$		(50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
		= $1.16*505.5/(2.858+3.29)^{0.355}$		
		= 307.7	mm/hr	
Therefore,	Q	= 0.278*0.95*307.7*0.008788		
		= 0.7142	m^3/sec	
		= **42853**	lit/min	

Provide 600UC (1:150) is OK

For the design of drains from start point 4 to CP44 and start point 5 to CP45, consider Catchment: CA 6

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

	A	= 5770	m^2	
		= 5770		
		= 0.00577	km^2	
	t	= $0.14465\ L6/\ H^{0.2}A^{0.1}$		
		= $0.14465*45/1^{0.2}*5770^{0.1}$		
		= 2.738	min	
	i	= $1.16*a/(t+b)^c$		(50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
		= $1.16*505.5/(2.738+3.29)^{0.355}$		
		= 309.9	mm/hr	
Therefore,	Q	= 0.278*0.95*309.9*0.005770		
		= 0.4722	m^3/sec	
		= **28335**	lit/min	

Provide 525UC (1:150) is OK

For the design of drains from start point 6 to CP46, consider Catchment: CA 7

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

	A	= 2092	m^2	
		= 2092		
		= 0.002092	km^2	
	t	= $0.14465\ L6/\ H^{0.2}A^{0.1}$		
		= $0.14465*15/1^{0.2}*2092^{0.1}$		
		= 1.010	min	
	i	= $1.16*a/(t+b)^c$		(50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
		= $1.16*505.5/(1.010+3.29)^{0.355}$		
		= 349.4	mm/hr	
Therefore,	Q	= 0.278*0.95*349.4*0.002092		
		= 0.1930	m^3/sec	
		= **11582**	lit/min	

Provide 375UC (1:150) / 450 concrete pipe (1:150) is OK

450 pipe for CA7

Check 450mm dia. Pipes by Colebrook-White Equation

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

where :

V	=			mean velocity (m/s)	
g	=	9.81	m/s2	gravitational acceleration (m/s2)	
D	=	0.45	m	internal pipe diameter (m)	
ks	=	0.00015	m	hydraulic pipeline roughness (m)	(Table14, from DSD SDM 2018, concrete pipe)
v	=	1.14E-06	m2/s	kinematic viscosity of fluid (m2/s)	
s	=	0.0066667		hydraulic gradient (1: 150)	

Therefore, design V of pipe capacity = 1.91 m/s

Q= 0.8VA (0.8 factor for sedimentation)
= 0.243 m3/s
= 14574 lit/min
> 11582 lit/min Ok

Check 525mm dia. Pipes by Colebrook-White Equation

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

where :

V	=			mean velocity (m/s)	
g	=	9.81	m/s2	gravitational acceleration (m/s2)	
D	=	0.525	m	internal pipe diameter (m)	
ks	=	0.00015	m	hydraulic pipeline roughness (m)	(Table14, from DSD SDM 2018, concrete pipe)
v	=	1.14E-06	m2/s	kinematic viscosity of fluid (m2/s)	
s	=	0.01		hydraulic gradient (1: 100)	

Therefore, design V of pipe capacity = 2.58 m/s

Q= 0.8VA			(0.8 factor for sedimentation)
= 0.448	m3/s		
= 26852	lit/min		
> 20866	lit/min	Ok	

GEO Technical Guidance Note No. 43 (TGN 43)
Guidelines on Hydraulic Design of U-shaped and Half-round Channels on Slopes

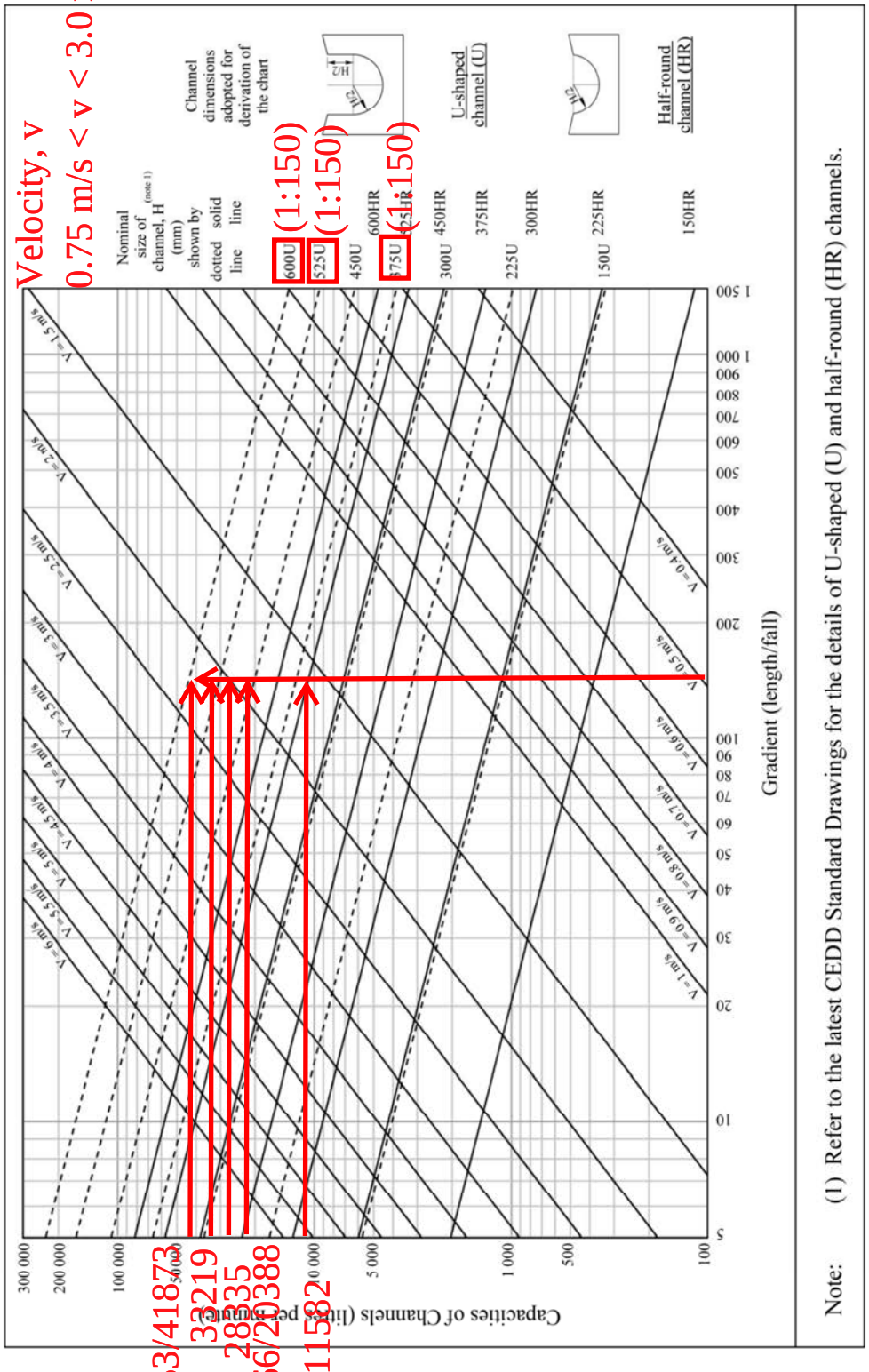


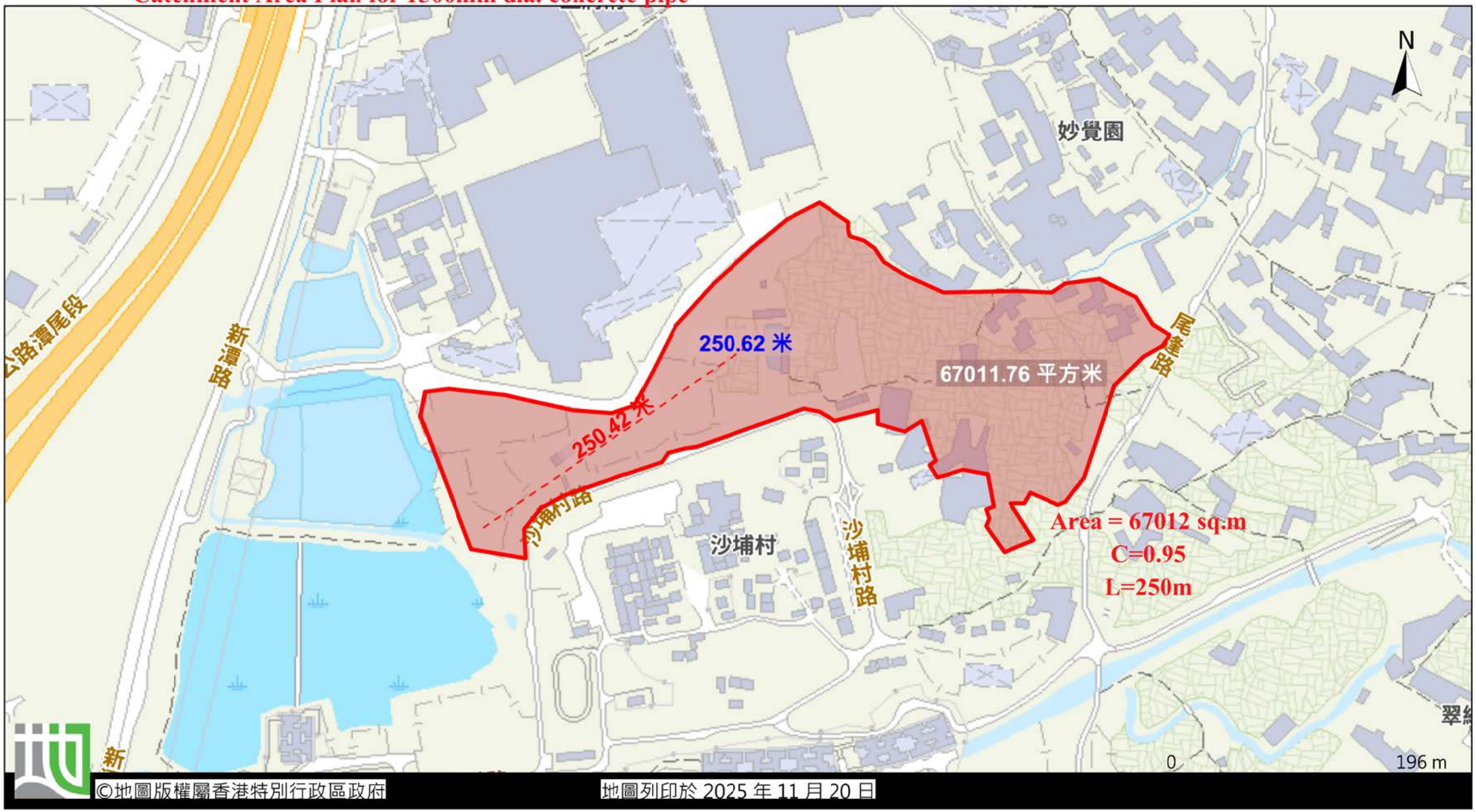
Figure 1 - Chart for the rapid design of U-shaped and half-round channels up to 600 mm

Note: (1) Refer to the latest CEDD Standard Drawings for the details of U-shaped (U) and half-round (HR) channels.

GEOINFO MAP
地理資訊地圖

前往地圖: https://www.map.gov.hk/gm/geo:22.4546,114.0555?z=4514

Catchment Area Plan for 1500mm dia. concrete pipe



地圖列印於 2025 年 11 月 20 日

Check 1500mm dia. Pipes by Colebrook-White Equation

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

where :

V	=			mean velocity (m/s)	
g	=	9.81	m/s2	gravitational acceleration (m/s2)	
D	=	1.5	m	internal pipe diameter (m)	
ks	=	0.00015	m	hydraulic pipeline roughness (m)	(Table14, from DSD SDM 2018, concrete pipe)
v	=	1.14E-06	m2/s	kinematic viscosity of fluid (m2/s)	
s	=	0.0036364		hydraulic gradient (1: 275)	

Therefore, design V of pipe capacity = 2.93 m/s

Q= 0.8VA (0.8 factor for sedimentation)
= 4.147 m3/s
= 248814 lit/min
> 237013 lit/min Ok

Outside Catchment Area 1 , Area = 67012 m^2 (C= 0.95) L1= 250 m

Calculation of Design Runoff of the Proposed Development,
For the design of drains for 1500mm dia. concrete pipe

$\Sigma Q = \Sigma 0.278\ C\ i\ A$

A = 67012 m^2
= 67012
= 0.067012 km^2

t = $0.14465\ L1/\ H^{0.2} A^{0.1}$
= $0.14465*49/1^{0.2}*67012^{0.1}$
= 11.903 min

i = $1.16*a/(t+b)^{c}$ (50 yrs return period, Table 3a, Corrigendum 2024, SDM) and (16% increase due to climate change)
= $1.16*505.5/(11.903+3.29)^{0.355}$
= 223.2 mm/hr

Therefore, Q = 0.278*0.95*223.2*0.067012
= 3.9502 m^3/sec
= **237013** lit/min

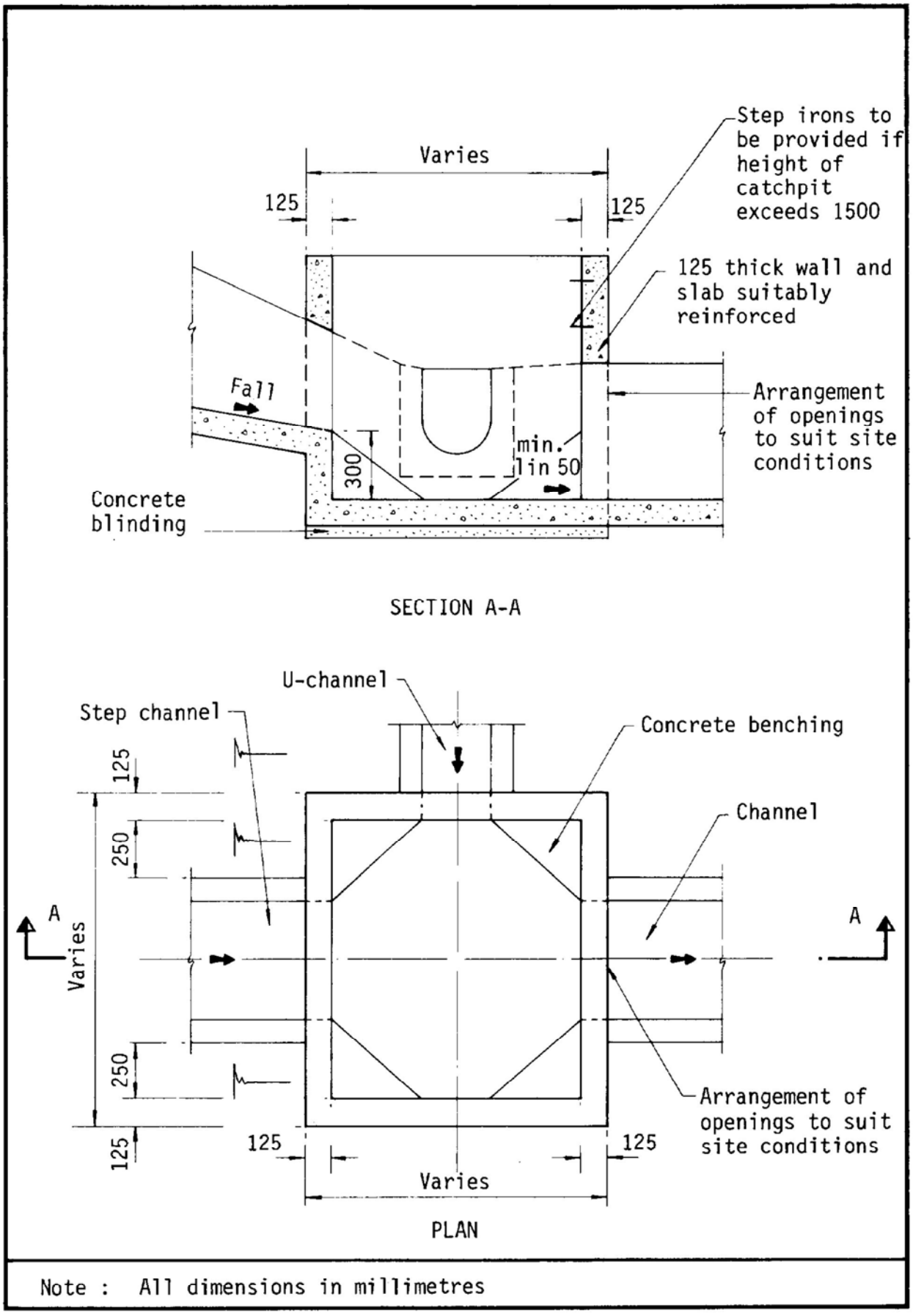
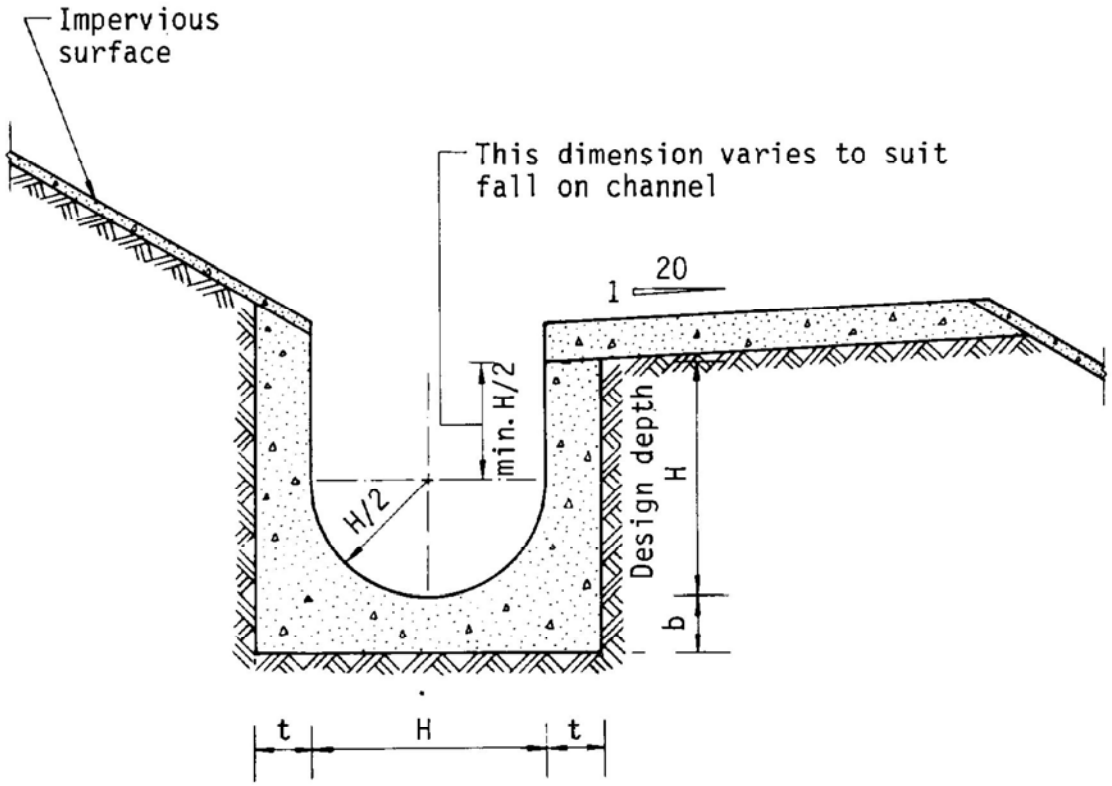


Figure 8.10 - Typical Details of Catchpits



Dimensions of U - channel		
Nominal size of channel H (mm)	Thickness t (mm)	Thickness b (mm)
225 to 600	150	150
675 to 1200	175	225

Figure 8.11 - Typical U-channel Details