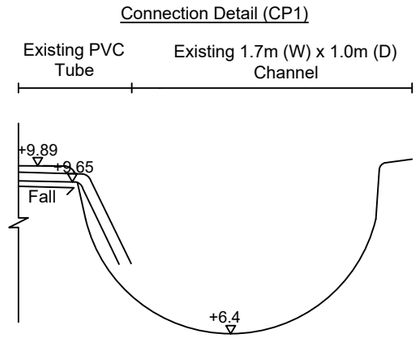
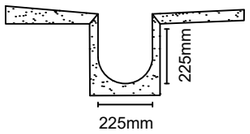
寄件者: [redacted]
寄件日期: 2025年09月01日星期一 16:48
收件者: tpbpd/PLAND
副本: [redacted]
主旨: S.16 Planning Application No. A/YL-KTN/1162 FSI Proposal and Drainage Proposal
附件: AYL-KTN 1162 20250901.pdf

To whom may concern,

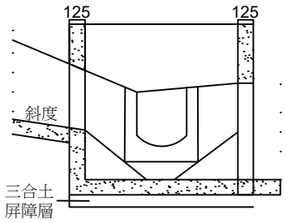
Please see the attachment for the Drainage proposal and Fire services installation proposal for the captioned application. Please contact Mr. Tang via email [redacted] if you have any questions regarding to the captioned application.

Yours faithfully,
Mr. Tang

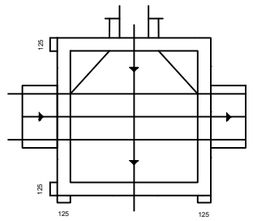




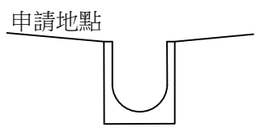
U型明渠切面圖



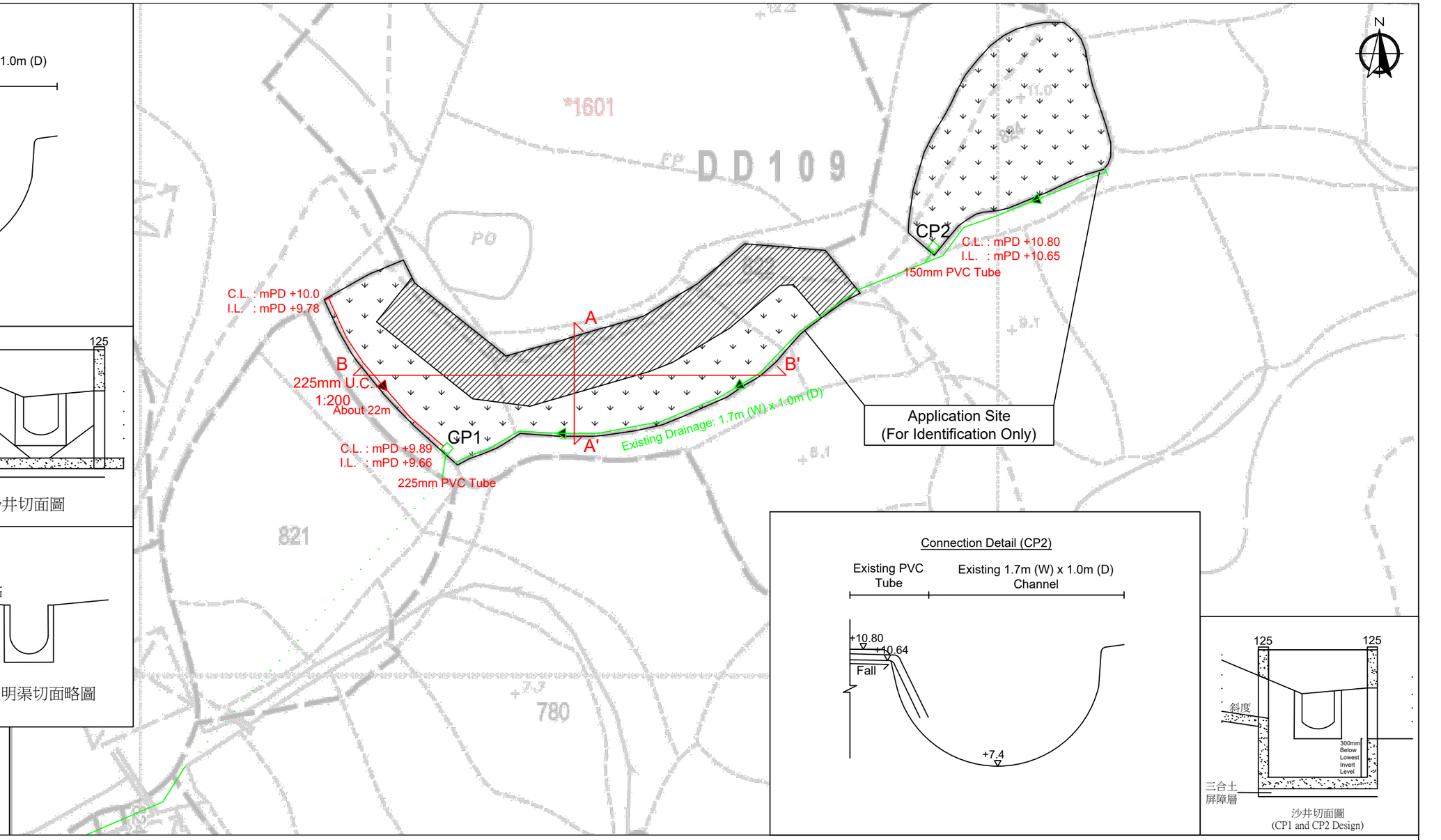
沙井切面圖



沙井俯視圖



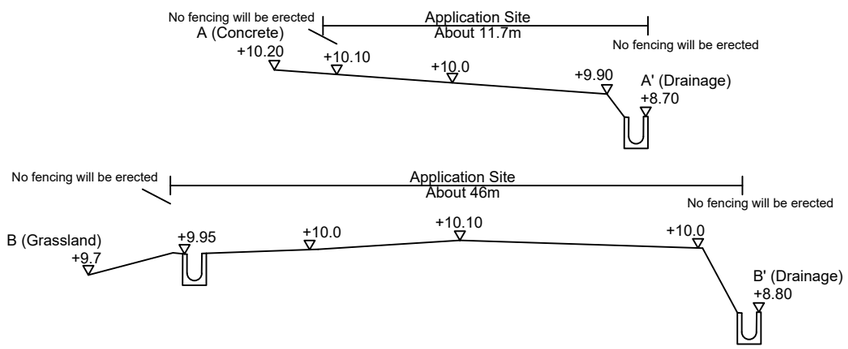
U型明渠切面略圖



沙井切面圖
(CP1 and CP2 Design)

Note:

1. Adequate opening will be provided around the application site.
2. Catchpit design shall follow CEDD standard drawing No. C2406I.
3. All proposed U-channel and Catchpit must maintain in good shape (i.e. Inspection and maintenance regularly).
4. Grating Cover is provided to reduce the irregular road surface from entering the site.

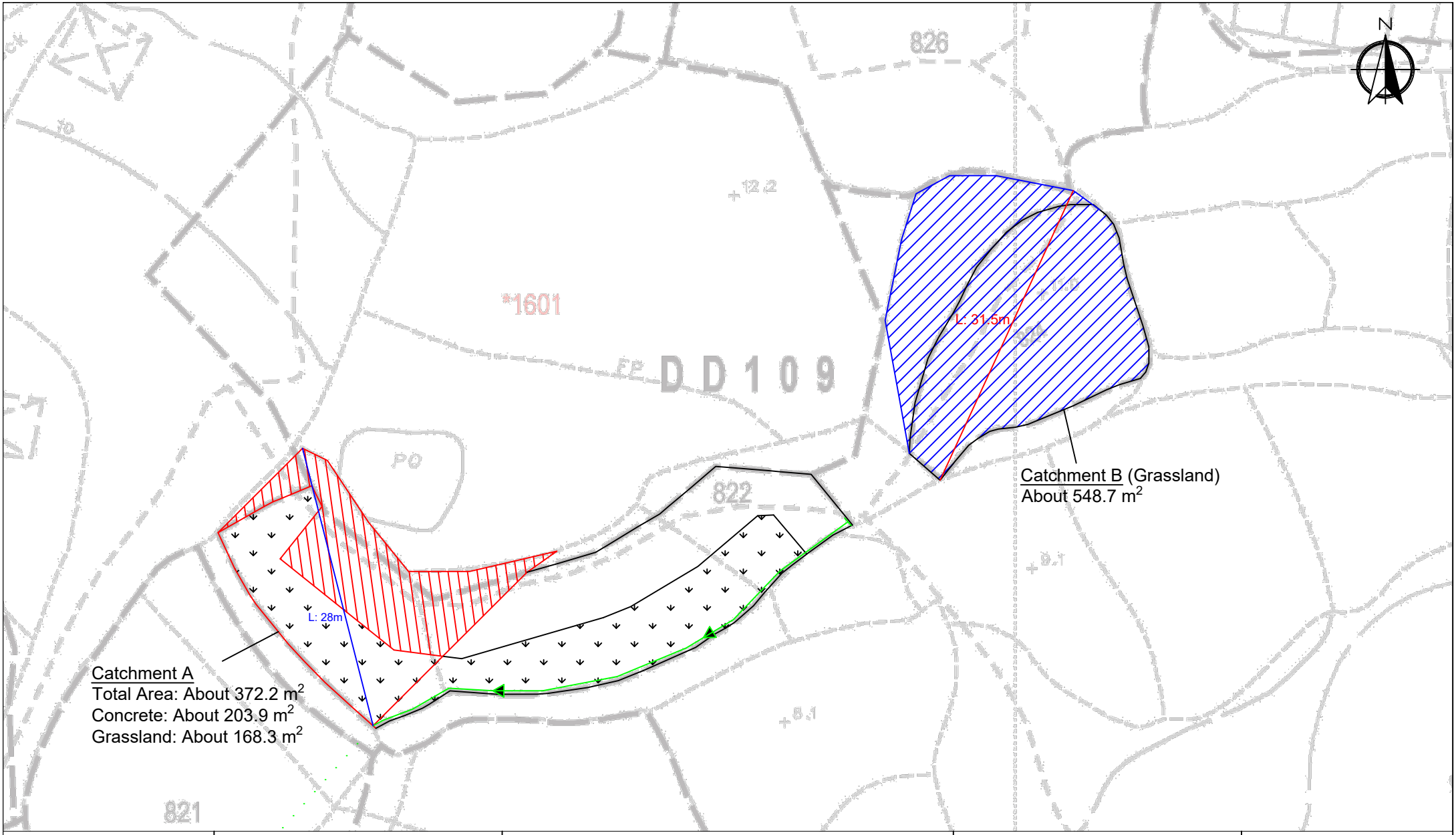


Legend:

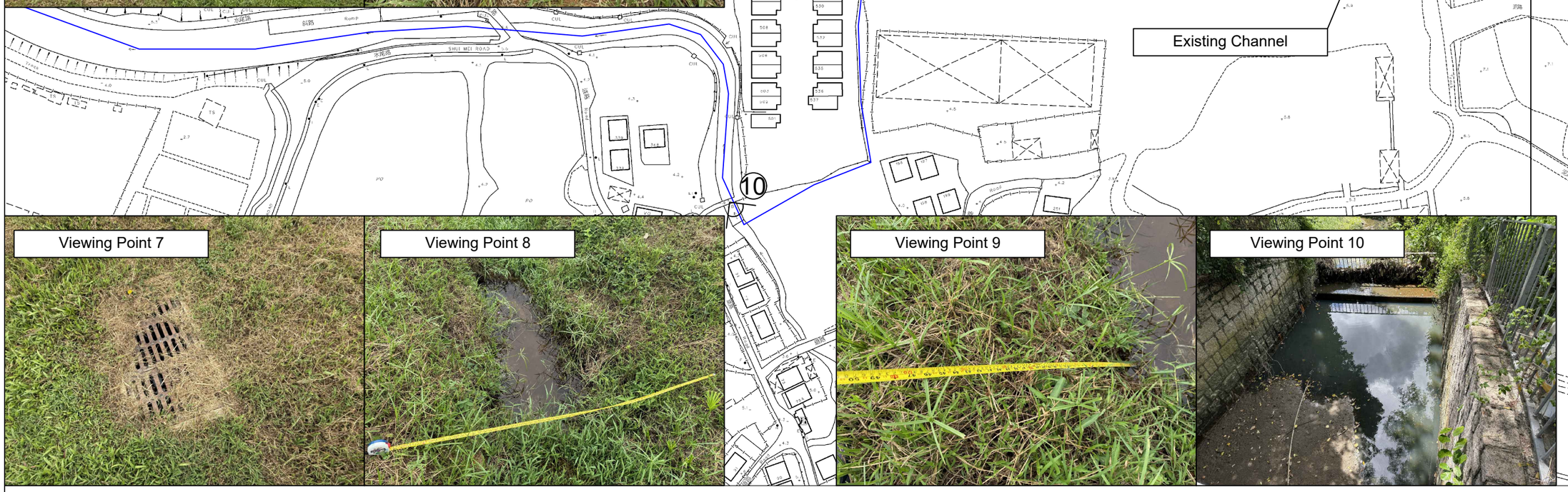
- Existing Catchpit
- Proposed U-Channel
- Existing Drainage
- Existing Underground drainage
- Water Flow

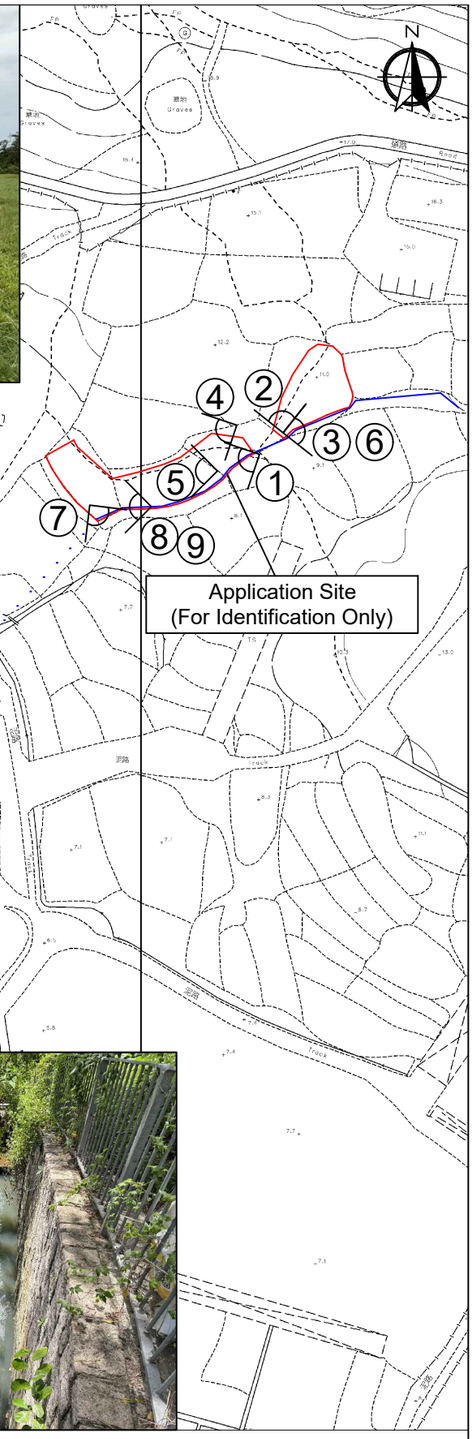
*Invert Level of Connection Point Should Be Verified On Site Before Construction.
*Cover Level Are Indicative Only Which Should Be Verified On Site.

Appendix 9	Location: DD 107 Lot 822, 824 App. No.: A/YL-KTN/1162 OZP: S/YL-KTN/11 District: Kam Tin North Zoning: Agriculture	Proposed Temporary Holiday Camp with Ancillary Facilities and Associated Filling of Lands For a Period of 3 Years	Proposed Drainage Plan and Cross Section	Scale: 1:500 @A4	Drawing No. 9-01 For Identification Only Date: 28 August 2025



Appendix 9.2 Catchment Area	Location: D.D. 107 Lot 822 and 824 OZP: S/YL-KTN/11 District: Kam Tin North Zoning: Agriculture	Proposed Temporary Holiday Camp with Ancillary Facilities and Associated Filling of Lands For a Period of 3 Years	Scale: 1:500 @A4	Drawing No.: 9.2-1 For Identification Only Date: 28/08/2025





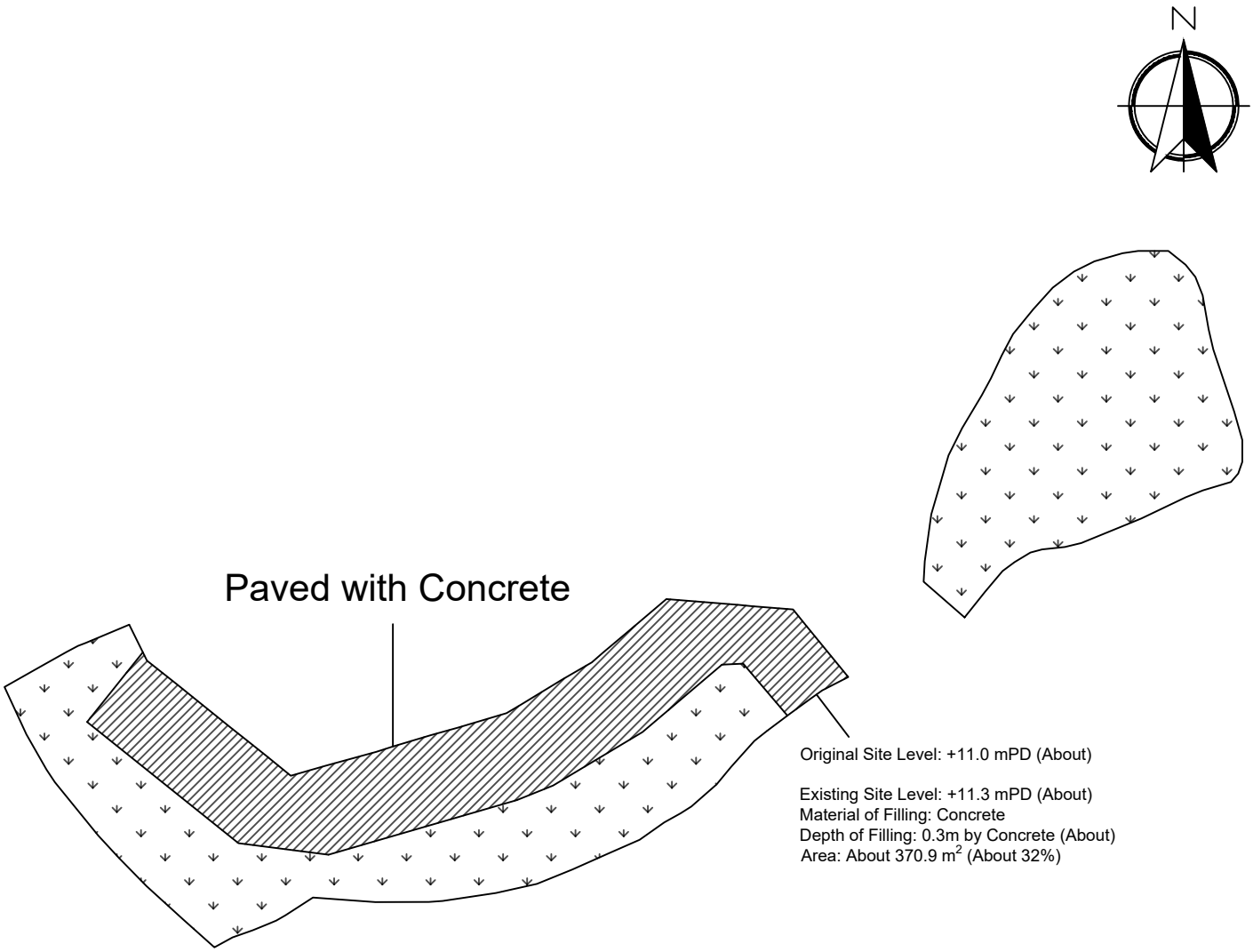
Legend:

Existing Channel

Application Site

Captured from hkmapservices iB5000 6-NE-7A and iB5000 6-NE-7B on 28th August 2025

Appendix 9.3	Location: DD 109 Lot 822 and 824 App. No.: A/YL-KTN/1162 OZP: S/YL-KTN/11 District: Kam Tin North Zoning: Agriculture	Proposed Temporary Holiday Camp with Ancillary Facilities and Associated Filling of Lands For a Period of 3 Years	Ultimate Discharge point and Photos Record of Surroundings and Viewing Point	Scale: Undefined @A4	Drawing No. 5.4-1 For Identification Only Date: 29 August 2025



Depth of Filling

About 0.3 m (With Concrete)

Paved Ratio

Non-Paved Area: About 780.3 m^2 (About 68%)

Paved Area: About 370.9 m^2 (About 32%)

* This Application is to regularize the filling of land.

Legend:

Paved Area 平整範圍

Non-Paved Area 不平整範圍

Appendix 4

Location: DD 109 Lot 822
DD 109 Lot 824

OZP: S/YL-KTN/11
District: Kam Tin North
Zoning: Agriculture

Paved Area
平整位置圖

擬議臨時度假營連附屬設施及相關填土工程(為期3年)

Proposed Temporary Holiday Camp with Ancillary Facilities and Associated Filling of Land For a Period of 3 Years

SCALE

1:500

@A4

For Identification Only

Drawing No.: 4-01

Date: 30 July 2025

Catchment Area (A)	=	203.9 m^2	(About)	C:	0.95 (Covered with Concrete)
	=	168.3 m^2	(About)	C:	0.25 (Covered with Grassland (heavy soil)
	=	372.2 m^2	(About)		
Catchment Area (B)	=	548.7 m^2	(About)	C:	0.95 (Covered with Concrete)

Calculation of Desgin Runoff of the Proposed Development,
For the design of drains inside the site, For Catchment A (Concrete)

$Q_p = 0.278C\ I\ A$

$A = 203.9\ m^2$
$= 203.9\ m^2$
$= 0.0002039\ km^2$

$t = 0.14465L/H^{0.2}A^{0.1}$
$= 0.14465*28/1.11^{0.2}*203.9^{0.1}$
$= 2.654$ min

$i = 1.111*a/(t+b)^c$
$= 1.111*505.5/(2.654+3.29)^{0.355}$
$= 298.29464$

(50 years return period, Table 3a, Corrigendum 2024, SDM) and (11.1% increase due to climate change)

$Q = 0.278*0.95*298*203.9/1000000$
$= 0.0160632\ m^3/sec$
$= 964$ lit/min

Catchment Area (A)	=	203.9 m^2	(About)	C:	0.95 (Covered with Concrete)
	=	168.3 m^2	(About)	C:	0.25 (Covered with Grassland (heavy soil)
	=	372.2 m^2	(About)		
Catchment Area (B)	=	548.7 m^2	(About)	C:	0.25 (Covered with Grassland (heavy soil)

Calculation of Desgin Runoff of the Proposed Development,

For the design of drains inside the site, For Grassland (Heavy Soil) (Catchment A)

$Q_p = 0.278C\ I\ A$

$A = 168.3\ m^2$

$= 168.3\ m^2$

$= 0.0001683\ km^2$

$t = 0.14465L/H^{0.2}A^{0.1}$

$= 0.14465*28/1.11^{0.2}*168.3^{0.1}$

$= 2.705$ min

$i = 1.111*a/(t+b)^c$ (50 years return period, Table 3a,

$= 1.111*505.5/(2.705+3.29)^{0.355}$ Corrigendum 2024, SDM) and

$= 297.38402$ (11.1% increase due to climate change)

$Q = 0.278*0.25*297*1328/1000000$

$= 0.0034785\ m^3/sec$

$= 209$ lit/min

Total Rainfall lit/min	=	964	+	209	lit/min
Catchment (A)	=	1173			lit/min

Provide 225mm dia. pipe (1:200) has enough capacity to accomend the runoff of the Catchment (A) area

Catchment Area (A)	=	203.9 m^2	(About)	C:	0.95 (Covered with Concrete)
	=	168.3 m^2	(About)	C:	0.25 (Covered with Grassland (heavy soil)
	=	372.2 m^2	(About)		
Catchment Area (B)	=	548.7 m^2	(About)	C:	0.25 (Covered with Grassland (heavy soil)

Calculation of Desgin Runoff of the Proposed Development,
For the design of drains inside the site, For Catchment B

$Q_p = 0.278C\ I\ A$

$A = 548.7\ m^2$
$= 548.7\ m^2$
$= 0.0005487\ km^2$

$t = 0.14465L/H^{0.2}A^{0.1}$
$= 0.14465*31.5/0.635^{0.2}*548.7^{0.1}$
$= 2.704$ min

$i = 1.111*a/(t+b)^c$
$= 1.111*505.5/(2.704+3.29)^{0.355}$
$= 297.40294$

(50 years return period, Table 3a, Corrigendum 2024, SDM) and (11.1% increase due to climate change)

$Q = 0.278*0.25*297*548.7/1000000$
$= 0.0113414\ m^3/sec$
$= 680$ lit/min

Provide 150mm dia. pipe (1:200) has enough capacity to accomend the runoff of the Catchment (B) area

Check 150mm dia. Pipes by Colebrook-White Equation

By Colebrook White Equation

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

where:	V	=	mean velocity (m/s)	
	g	=	gravitational acceleration (m/s^2)	
	D	=	internal pipe diameter (m)	
	k_s	=	hydraulic pipeline roughness (m)	(Table 14, from DSD SDM 2018, concrete pipe)
	v	=	kinematic viscosity of fluid (m^2/s)	(Transitional flow and water at 15 degree celcius)
	s	=	hydraulic gradient (energy loss per unit length due to friction)	

g	=	9.81	m/s^2
D	=	0.15	m
k_s	=	0.00015	m
v	=	1.14E-06	m/s^2
s	=	0.01	

Therefore, design V of pipe capacit	=	1.172914	m/s

Q	=	0.8VA	(0.8 factor for sedimentation)
	=	0.018847	m^3/s
	=	1130.824	lit/min
	>	680	lit/min

Provide 150mm dia. pipe (1:200) has enough capacity to accomend the runoff of the proposed development

Check 225mm dia. Pipes by Colebrook-White Equation

By Colebrook White Equation

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

where:	V	=	mean velocity (m/s)	
	g	=	gravitational acceleration (m/s^2)	
	D	=	internal pipe diameter (m)	
	k_s	=	hydraulic pipeline roughness (m)	(Table 14, from DSD SDM 2018, concrete pipe)
	v	=	kinematic viscosity of fluid (m^2/s)	(Transitional flow and water at 15 degree celcius)
	s	=	hydraulic gradient (energy loss per unit length due to friction)	

g	=	9.81	m/s^2
D	=	0.225	m
k_s	=	0.00015	m
v	=	1.14E-06	m/s^2
s	=	0.01	

Therefore, design V of pipe capacit = 1.520549 m/s

Q	=	0.8VA	(0.8 factor for sedimentation)
	=	0.054974	m^3/s
	=	3298.465	lit/min
	>	1173	lit/min

Provide 225mm dia. pipe (1:200) has enough capacity to accomend the runoff of the proposed development

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

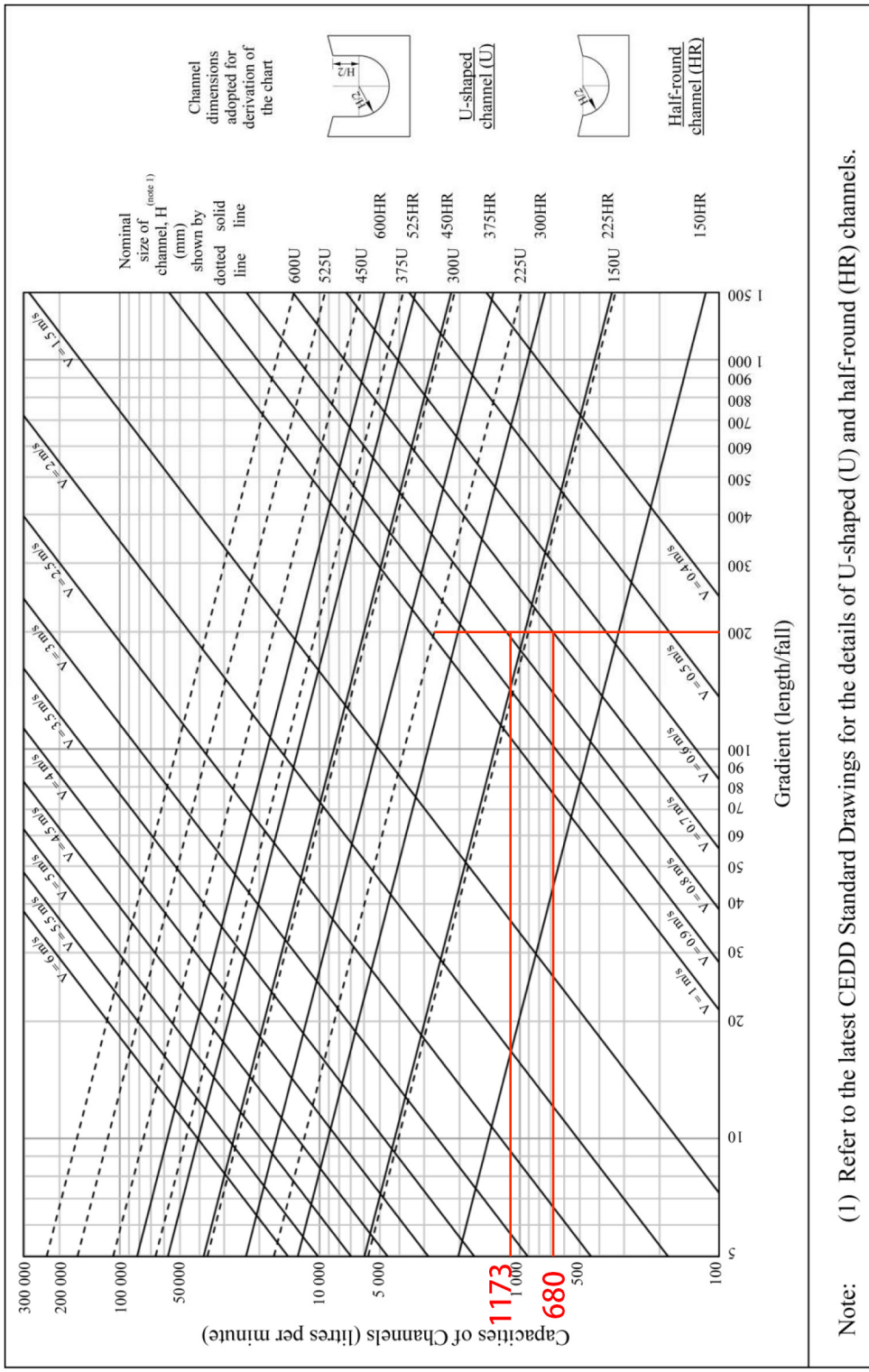
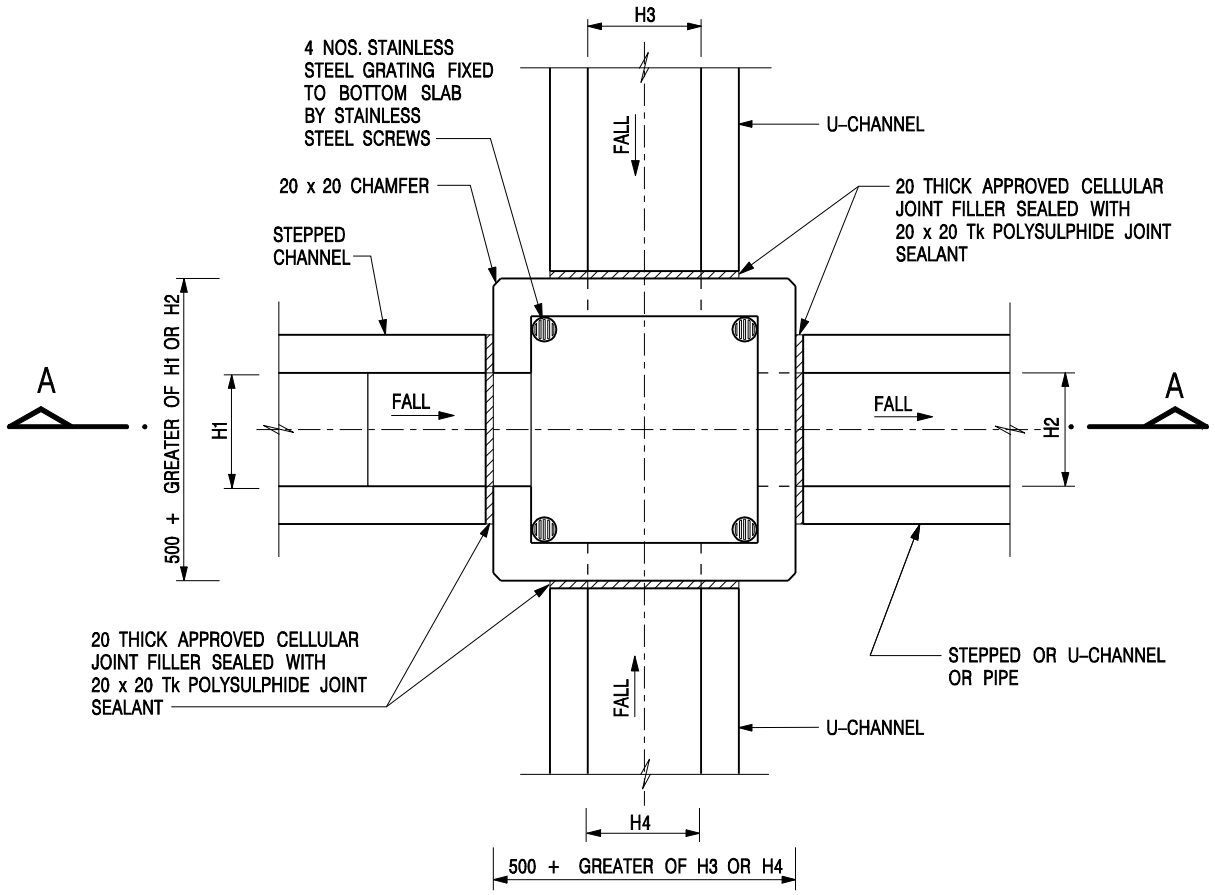


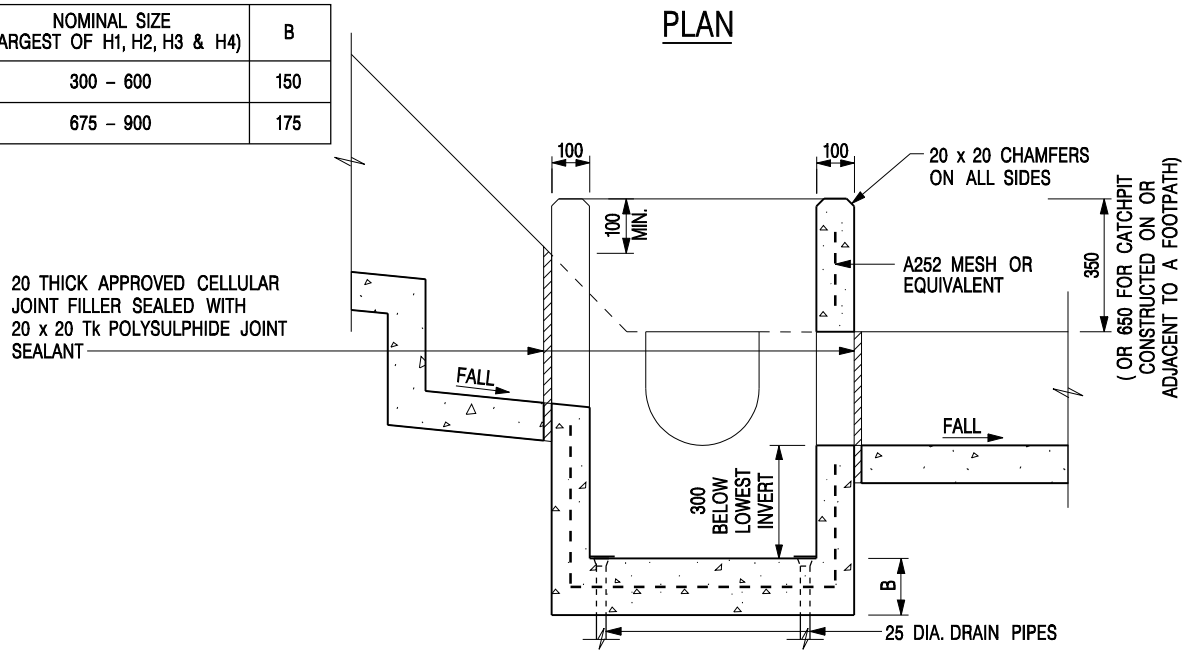
Figure 1 - Chart for the rapid design of U-shaped and half-round channels up to 600 mm

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



PLAN

NOMINAL SIZE (LARGEST OF H1, H2, H3 & H4)	B
300 – 600	150
675 – 900	175



SECTION A – A

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REFER TO SHEET 2 FOR OTHER NOTES.

REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG. NO. C2406J.	Original Signed	03.2015

CATCHPIT WITH TRAP

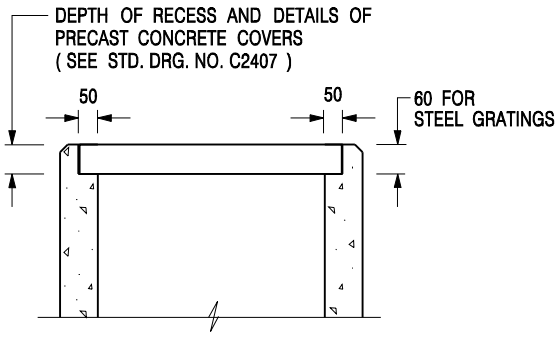
(SHEET 1 OF 2)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO. C2406 /1



ALTERNATIVE TOP SECTION
FOR PRECAST CONCRETE COVERS / GRATINGS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE SHALL BE GRADE 20 /20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2 OR F2 AS APPROPRIATE.
4. FOR DETAILS OF JOINT, REFER TO STD. DRG. NO. C2413.
5. CONCRETE TO BE COLOURED AS SPECIFIED.
6. UNLESS REQUESTED BY THE MAINTENANCE PARTY AND AS DIRECTED BY THE ENGINEER, CATCHPIT WITH TRAP IS NORMALLY NOT PREFERRED DUE TO PONDING PROBLEM.
7. UPON THE REQUEST FROM MAINTENANCE PARTY, DRAIN PIPES AT CATCHPIT BASE CAN BE USED BUT THIS IS FOR CATCHPITS LOCATED AT SLOPE TOE ONLY AND AS DIRECTED BY THE ENGINEER.
8. FOR CATCHPITS CONSTRUCTED ON OR ADJACENT TO A FOOTPATH, STEEL GRATINGS (SEE DETAIL 'A' ON STD. DRG. NO. C2405 /2) OR CONCRETE COVERS (SEE STD. DRG. NO. C2407) SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
9. IF INSTRUCTED BY THE ENGINEER, HANDRAILING (SEE DETAIL 'J' ON STD. DRG. NO. C2405 /5; EXCEPT ON THE UPSLOPE SIDE) IN LIEU OF STEEL GRATINGS OR CONCRETE COVERS CAN BE ACCEPTED AS AN ALTERNATIVE SAFETY MEASURE FOR CATCHPITS NOT ON A FOOTPATH NOR ADJACENT TO IT. TOP OF THE HANDRAILING SHALL BE 1 000 mm MIN. MEASURED FROM THE ADJACENT GROUND LEVEL.
10. MINIMUM INTERNAL CATCHPIT WIDTH SHALL BE 1 000 mm FOR CATCHPITS WITH A HEIGHT EXCEEDING 1 000 mm MEASURED FROM THE INVERT LEVEL TO THE ADJACENT GROUND LEVEL. AND, STEP IRONS (SEE DSD STD. DRG. NO. DS1043) AT 300 c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
11. FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'G' ON STD. DRG. NO. C2405 /4.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

REF.	REVISION	SIGNATURE	DATE
A	MINOR AMENDMENT.	Original Signed	04.2016
–	FORMER DRG. NO. C2406J.	Original Signed	03.2015

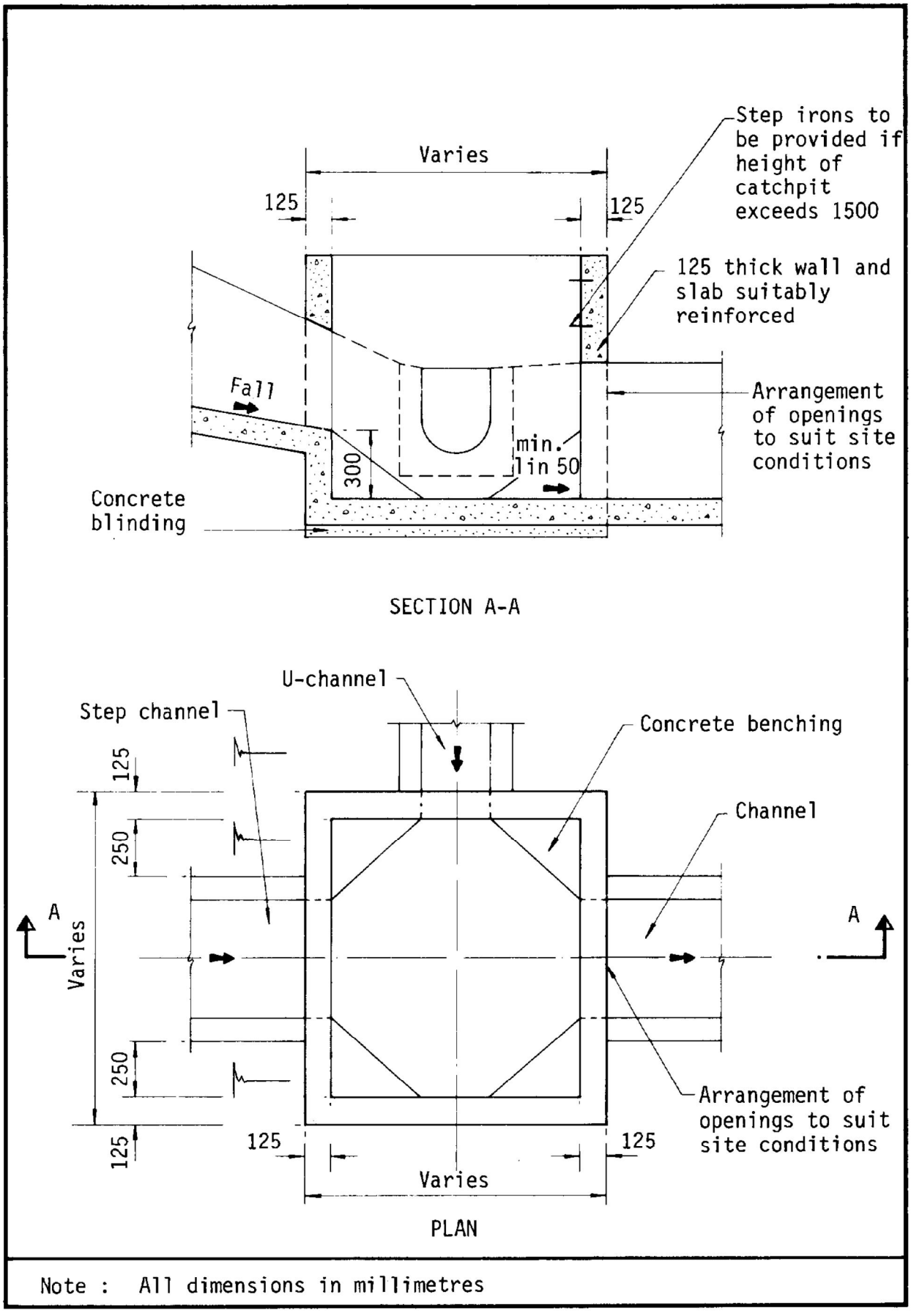
CATCHPIT WITH TRAP
(SHEET 2 OF 2)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

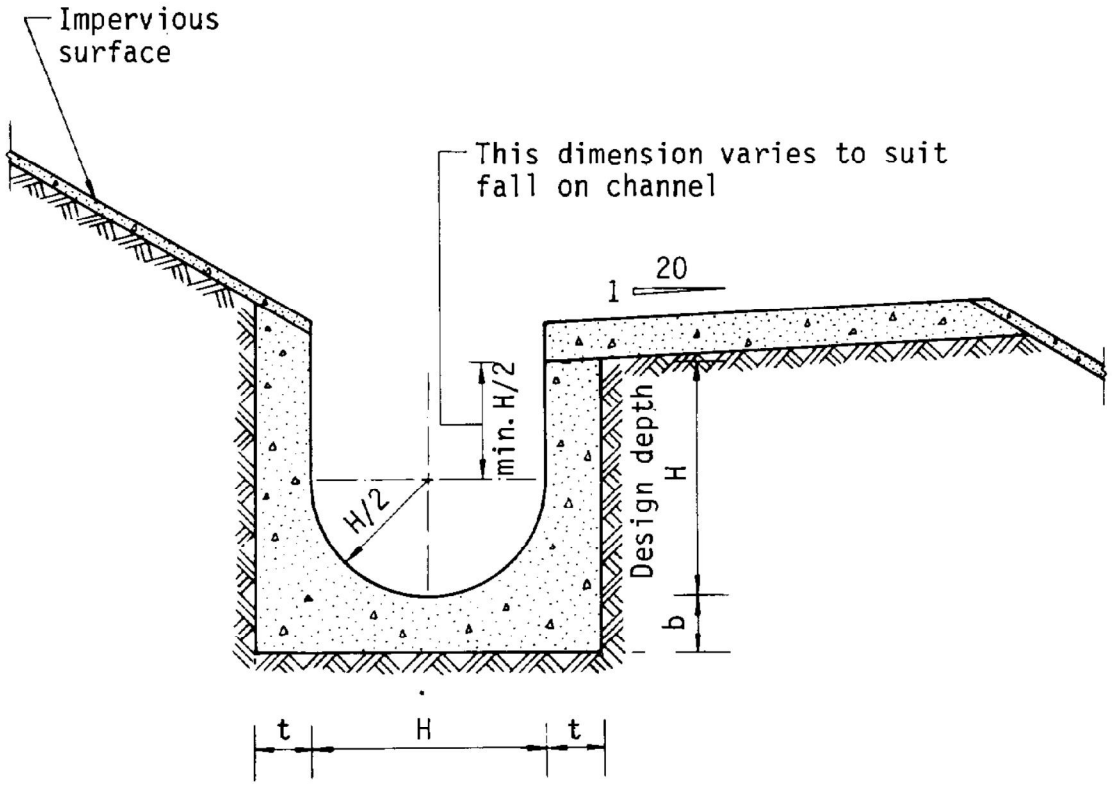
DATE JAN 1991

DRAWING NO. C2406 /2A



Note : All dimensions in millimetres

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

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

Return Period T (years)	2	5	10	20	50	100	200	500	1000
a	446.1	470.5	485.0	496.0	505.5	508.6	508.8	504.6	498.7
b	3.38	3.11	3.11	3.17	3.29	3.38	3.46	3.53	3.55
c	0.463	0.419	0.397	0.377	0.355	0.338	0.322	0.302	0.286

Table 3d – Storm Constants for Different Return Periods of North District Area

Return Period T (years)	2	5	10	20	50	100	200
a	439.1	448.1	454.9	462.3	474.6	486.6	501.4
b	4.10	3.67	3.44	3.21	2.90	2.67	2.45
c	0.484	0.437	0.412	0.392	0.371	0.358	0.348

Table 13 - Values of n to be used with the Manning equation

Source: Brater, E.F. & King, H.W. (1976)

Surface	**Best**	**Good**	**Fair**	**Bad**
Uncoated cast-iron pipe	0.012	0.013	0.014	0.015
Coated cast-iron pipe	0.011	0.012*	0.013*	
Commercial wrought-iron pipe, black	0.012	0.013	0.014	0.015
Commercial wrought-iron pipe, galvanized	0.013	0.014	0.015	0.017
Smooth brass and glass pipe	0.009	0.010	0.011	0.013
Smooth lockbar and welded “OD” pipe	0.010	0.011*	0.013*	
Riveted and spiral steel pipe	0.013	0.015*	0.017*	
Vitrified sewer pipe	0.010	0.013*	0.015	0.017
Common clay drainage tile	0.011	0.012*	0.014*	0.017
Glazed brickwork	0.011	0.012	0.013*	0.015
Brick in cement mortar; brick sewers	0.012	0.013	0.015*	0.017
Neat cement surfaces	0.010	0.011	0.012	0.013
Cement mortar surfaces	0.011	0.012	0.013*	0.015
Concrete pipe	0.012	0.013	0.015*	0.016
Wood stave pipe	0.010	0.011	0.012	0.013
Plank flumes - Planed	0.010	0.012*	0.013	0.014
- Unplaned	0.011	0.013*	0.014	0.015
- With battens	0.012	0.015*	0.016	
Concrete-lined channels	0.012	0.014*	0.016*	0.018
Cement-rubble surface	0.017	0.020	0.025	0.030
Dry-rubble surface	0.025	0.030	0.033	0.035
Dressed-ashlar surface	0.013	0.014	0.015	0.017
Semicircular metal flumes, smooth	0.011	0.012	0.013	0.015
Semicircular metal flumes, corrugated	0.0225	0.025	0.0275	0.030
Canals and ditches				
1. Earth, straight and uniform	0.017	0.020	0.0225*	0.025
2. Rock cuts, smooth and uniform	0.025	0.030	0.033*	0.035
3. Rock cuts, jagged and irregular	0.035	0.040	0.045	
4. Winding sluggish canals	0.0225	0.025*	0.0275	0.030
5. Dredged-earth channels	0.025	0.0275*	0.030	0.033
6. Canals with rough stony beds, weeds on earth banks	0.025	0.030	0.035*	0.040
7. Earth bottom, rubble sides	0.028	0.030*	0.033*	0.035
Natural-stream channels				
1. Clean, straight bank, full stage, no rifts or deep pools	0.025	0.0275	0.030	0.033
2. Same as (1) but some weeds and stones	0.030	0.033	0.035	0.040
3. Winding some pools and shoals, clean	0.033	0.035	0.040	0.045
4. Same as (3), lower stages, more ineffective slope and sections	0.040	0.045	0.050	0.055

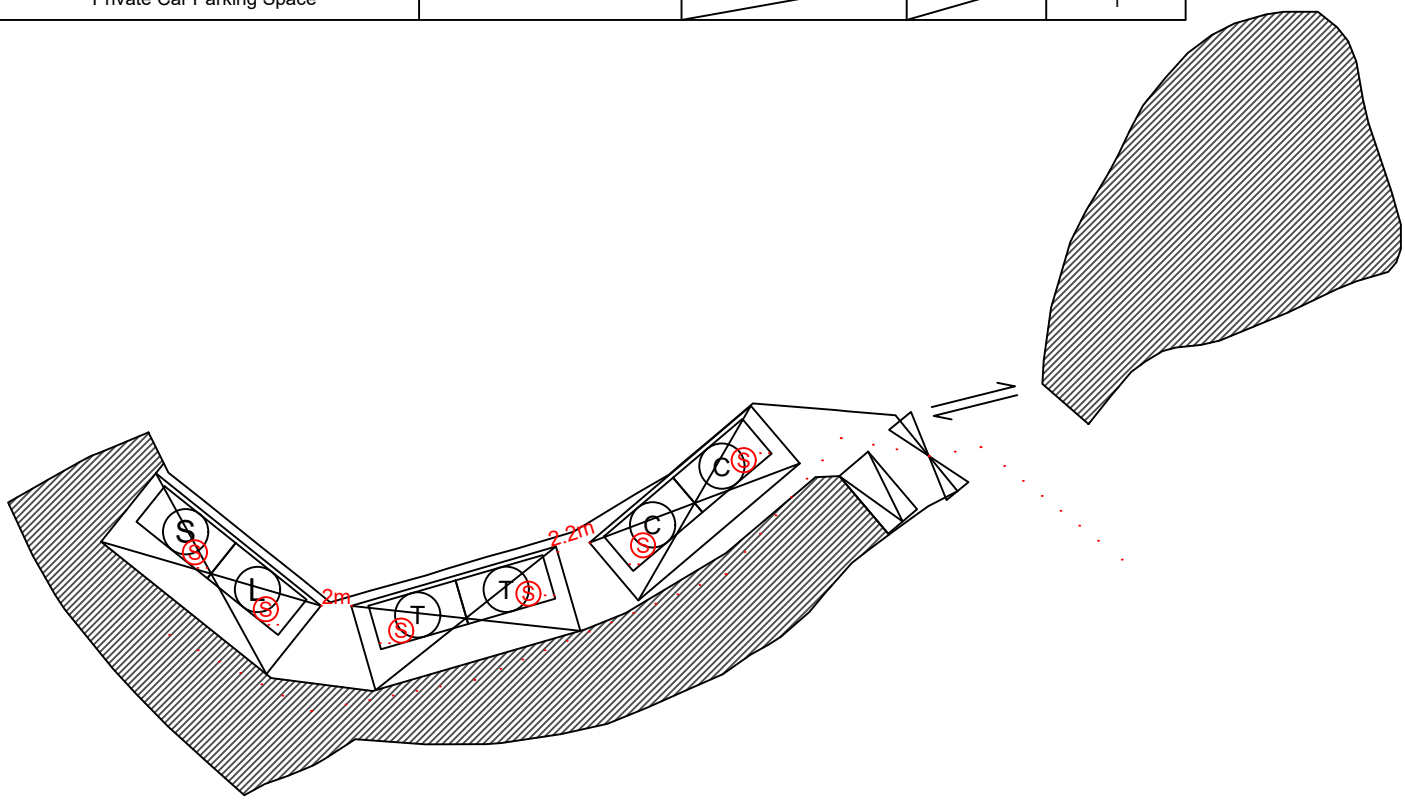
Table 13 (Cont'd)

Surface	Best	Good	Fair	Bad
5. Same as (3) some weeds and stones	0.035	0.040	0.045	0.050
6. Same as (4) stony sections	0.045	0.050	0.055	0.060
7. Sluggish river reach, rather weedy or with very deep pools	0.050	0.060	0.070	0.080
8. Very weedy reaches	0.075	0.100	0.125	0.150

Notes: *Values commonly used for design.

Proposed Structures Details

	Structures	Gross Floor Area (GFA)	Height (Not Exceeding)	Storey	Unit(s)
C	Changing room	About 6m x 3m = 18 m^2	4m	1-storey	2
L	Camping Lounge	About 6m x 3m = 18 m^2	4m	1-storey	1
S	Ancillary Storage	About 6m x 3m = 18 m^2	4m	1-storey	1
T	Toilet	About 6m x 3m = 18 m^2	4m	1-storey	2
	Rain Shelter (On top of S and L)	About 82 m^2	7m		1
	Rain Shelter (On top of T)	About 82 m^2	7m		1
	Rain Shelter (On top of C)	About 70 m^2	7m		1
		About 234 m^2			
	Private Car Parking Space				1



*All FSI (includes installation/maintenance/modification/repair work) will be completed by RFSIC.
For Emergency Vehicular Access, Please see Appendix 7.1
*All the enclosed structures are provided with access for emergency vehicles to reach within 30m travel distance from the structures.
* The areas separated by the double sided arrow can be easily accessed by any visitors and personnel of the Department.

Legend:

- ○ 3 kg Portable Dry Powder Type Fire Extinguisher (6 in Total)
- Ⓢ Stand-alone Fire Detector (Smoke Detector) (Stand-alone Fire Detector General Guidelines on Purchase, Installation & Maintenance [Sep 2021]) (6 in Total)
- · · · Emergency Vehicular Access
- ▭ LGV L/UL Space
- ⊠ Canopy
- ⇌ Public Road

Appendix 7

Location: DD 109 Lot 822
DD 109 Lot 824

OZP: S/YL-KTN/11
District: Kam Tin North
Zoning: Agriculture

Proposed Fire Service Installation Plan
擬議消防設備安裝計劃圖

擬議臨時度假營連附屬設施及相關填土工程(為期3年)

Proposed Temporary Holiday Camp with Ancillary Facilities and Associated Filling of Land For a Period of 3 Years

SCALE

1:500

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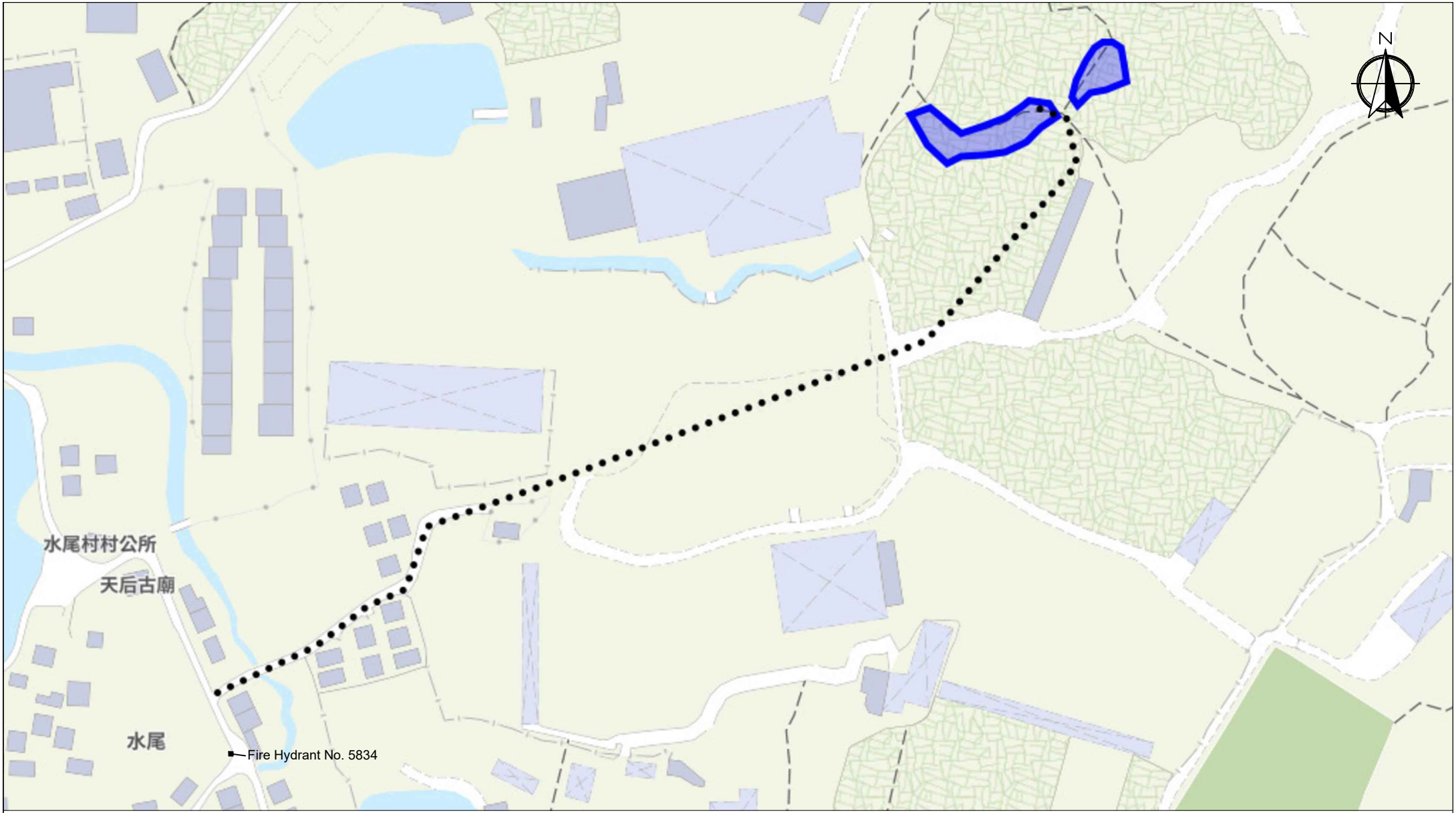
For Identification Only

Date: 28 August 2025

Drawing No.: 7-01



Scale: Undefined @A4

Captured from map.gov.hk on 30th July 2025

Appendix 7.1 Emergency Vehicular Access	Location: D.D. 109 Lot 822 and 824 OZP: S/YL-KTN/11 District: Kam Tin North Zoning: Agriculture	Proposed Temporary Holiday Camp with Ancillary Facilities and Associated Filling of Lands For a Period of 3 Years	Width of Shui Mei Road: 4-6m (About) with passing Space Map Legend: ●●●●● Road Path —— Site Boundary	Drawing No.: 7-02 For Identification Only Date: 28/08/2025