

**Temporary Open Storage of Construction Materials with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years
at
Lots 1551, 1552, 1556 (Part) & 1557 (Part) in D.D. 118, Yuen Long, New Territories**

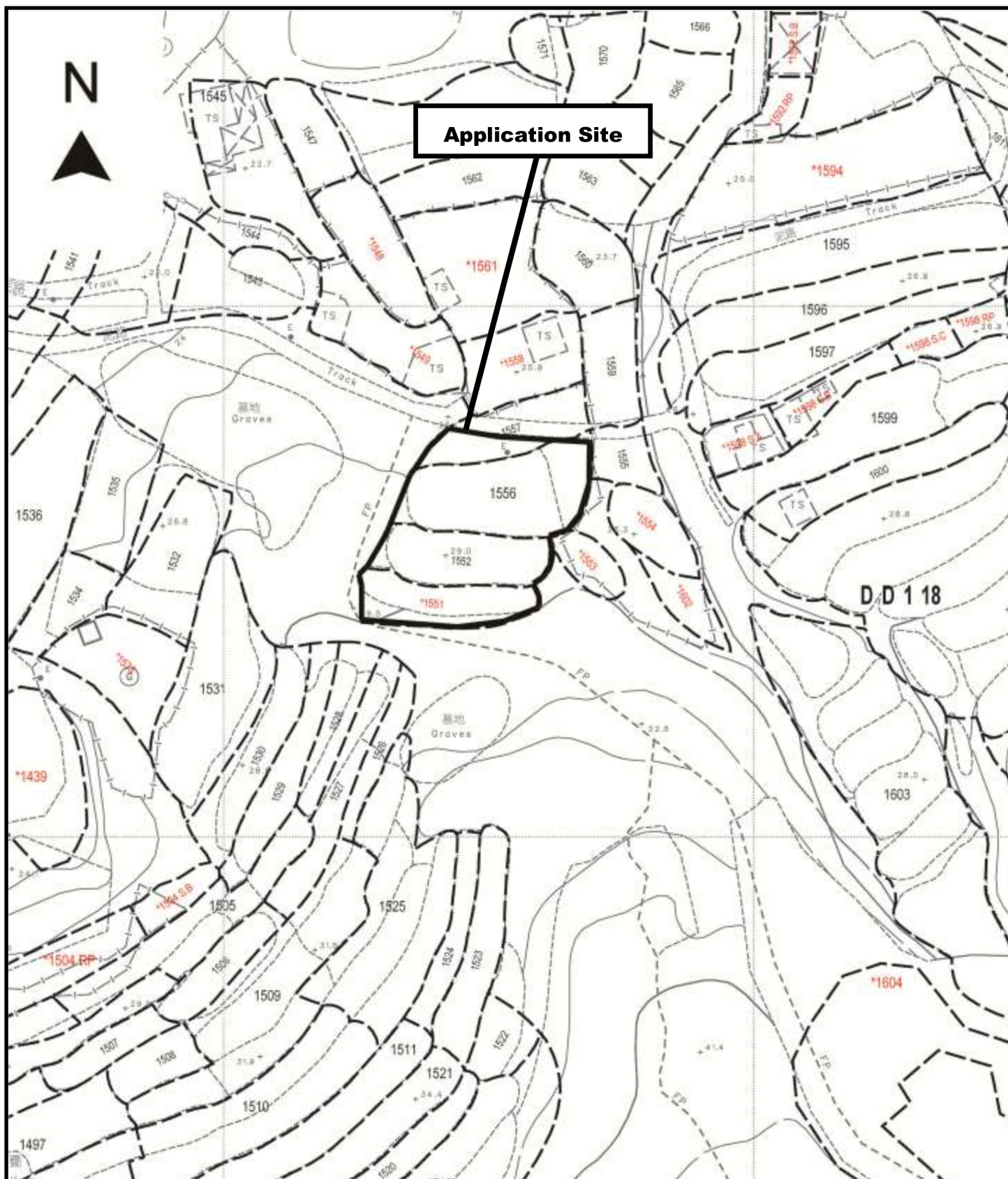
Annex 1 Estimated Traffic Generation

- 1.1 The application site is accessible via a vehicular track leading from Tai Shu Ha Road West. It is intended to serve the long term storage of mobile toilet at the site so that the traffic generated by the proposed development is insignificant.
- 1.2 The proposed parking space at the application site would only be opened to staff and no visitors is allowed to visit the proposed development.
- 1.3 There will be 1 parking space of 5m x 2.5m for private car and one loading/unloading bay for light goods vehicle not exceeding 5.5 tonnes. The estimated traffic generation/attraction rate is shown below:

Type of Vehicle	<u>Average</u> Traffic Generation Rate (pcu/hr)	<u>Average</u> Traffic Attraction Rate (pcu/hr)	Traffic Generation Rate at <u>Peak Hours</u> (pcu/hr)	Traffic Attraction Rate at <u>Peak Hours</u> (pcu/hr)
Private car	0.13	0.13	0	0
Light goods vehicle	0.19	0.19	0	0
Total	0.32	0.32	0	0

Note:

- The operation hours of the proposed development is from 9:00a.m. to 5:00p.m. from Mondays to Saturdays. No operation will be carried out on Sundays and public holidays.
 - The pcu of private car and light goods vehicle is taken as 1 and 1.5 respectively; &
 - Morning peak is defined as 7:00a.m. to 9:00a.m. whereas afternoon peak is defined as 5:00p.m. to 7:00p.m.
- 1.4 In association with the intended purpose, adequate space for manoeuvring would be provided within the application site. Sufficient space within the application site is provided so that no queueing up of vehicle would be occurred outside the application site.



Project 項目名稱:

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Drawing Title 圖目:

Site Plan

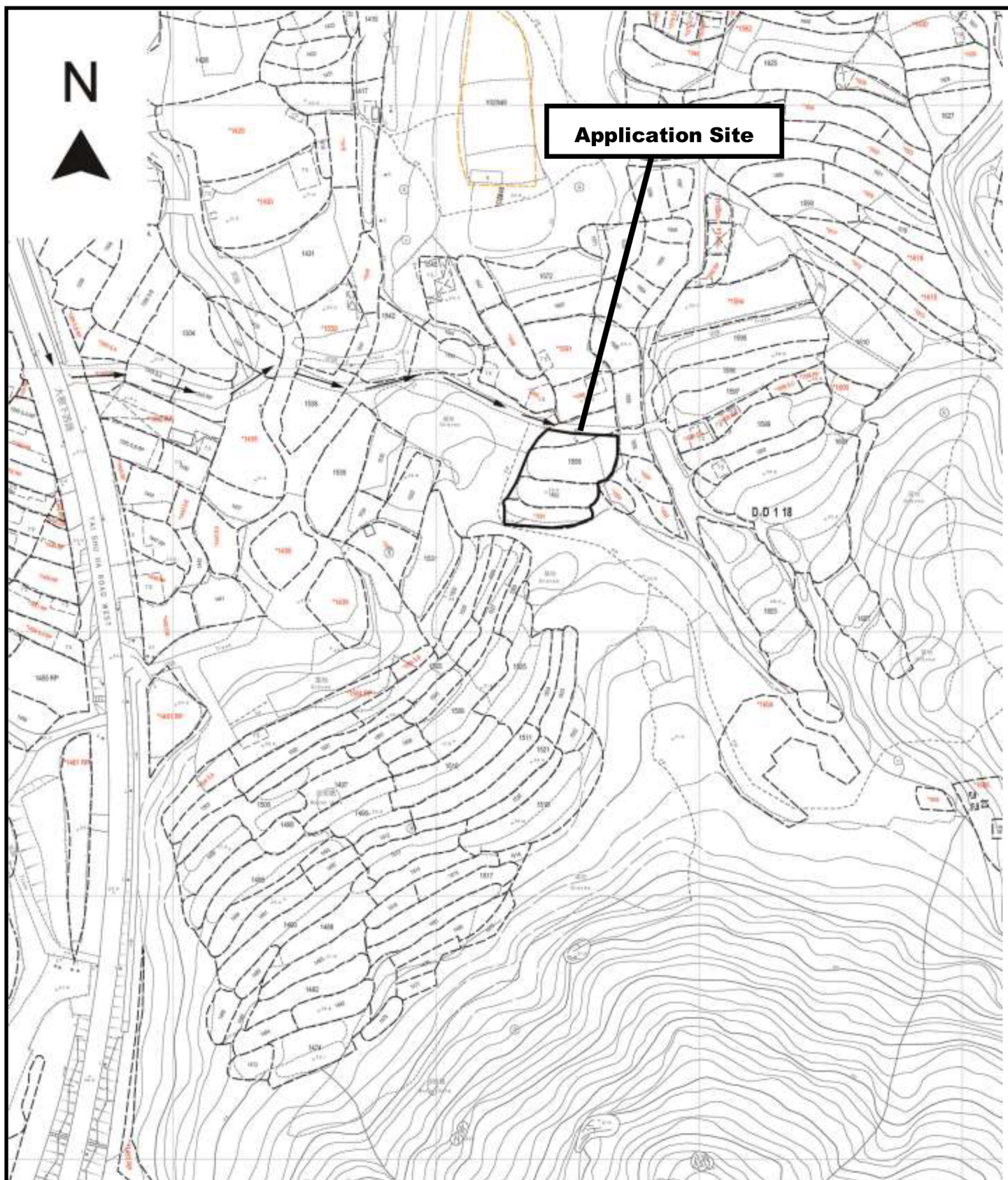
Drawing No. 圖號:

Figure 1

Remarks 備註:

Scale 比例:

1:1000



Project 項目名稱:

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Drawing Title 圖目:

Vehicular Access Plan

Drawing No. 圖號:

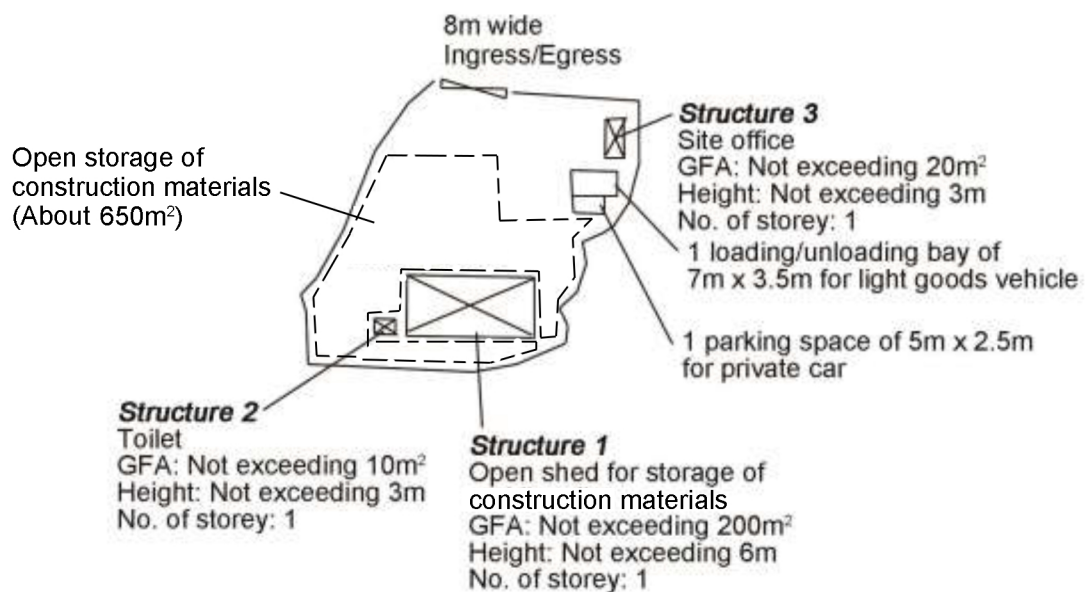
Figure 2

Remarks 備註:

→ Vehicular access leading from Tai Shu Ha Road West

Scale 比例:

1:2000



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Drawing Title 圖目:

Proposed Layout Plan

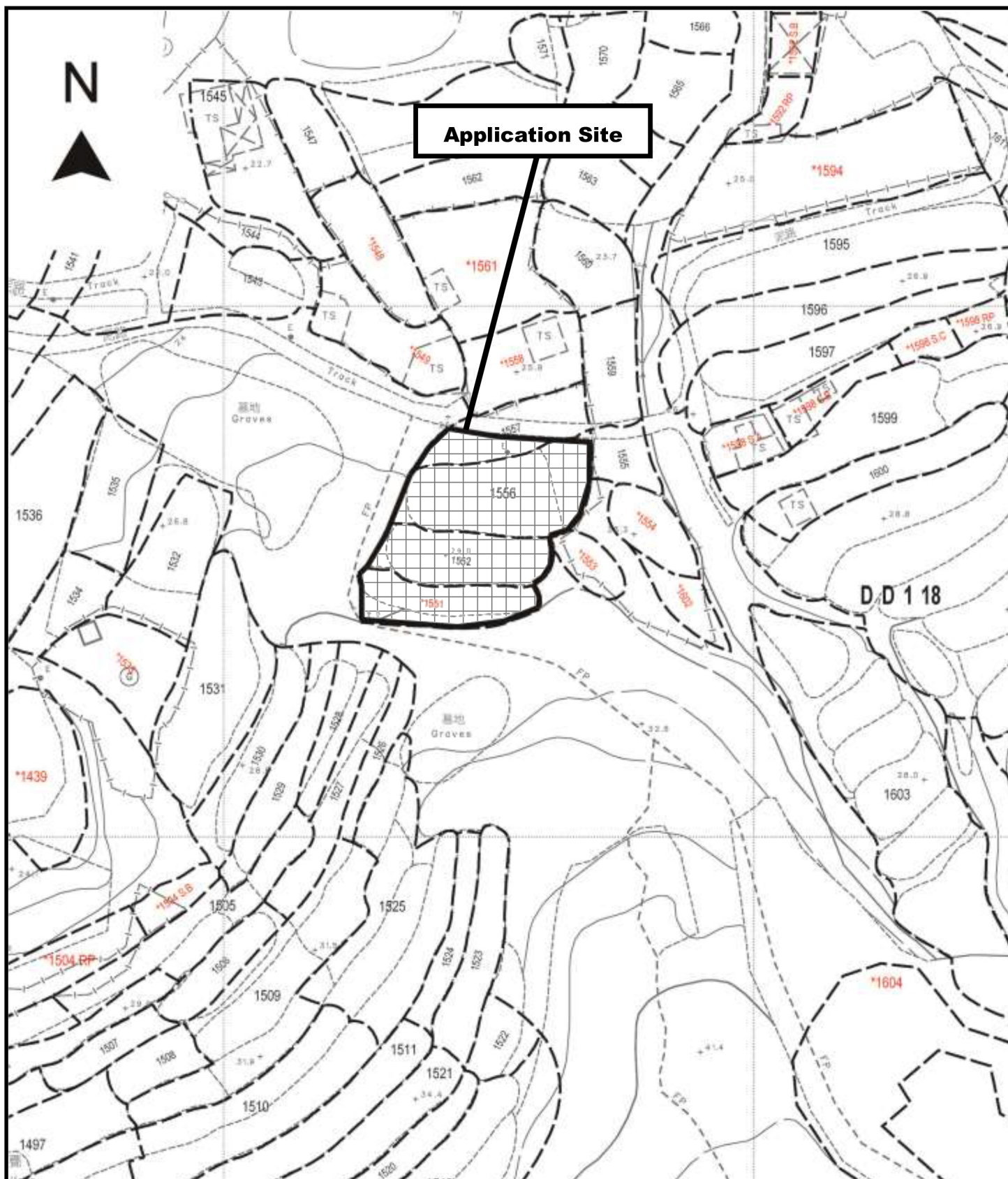
Drawing No. 圖號:

Figure 3

Remarks 備註:

Scale 比例:

1:1000



Project 項目名稱:

Temporary Open Storage of Construction Materials with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Lots 1551, 1552, 1556 (Part) & 1557 (Part) in D.D. 118, Yuen Long, New Territories

Drawing Title 圖目:

Land Filling Plan

Drawing No. 圖號:

Figure 4

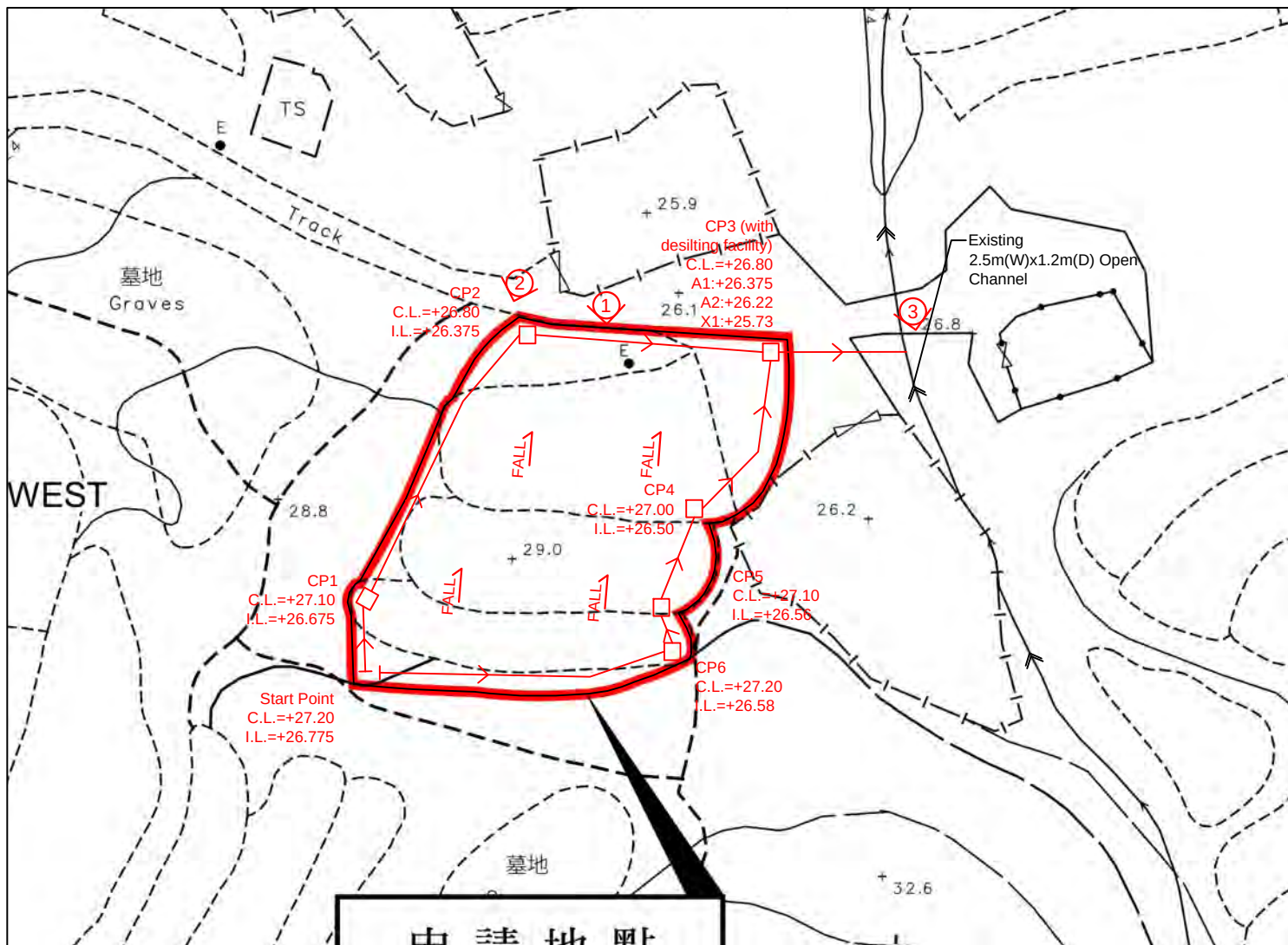
Remarks 備註:



Regularization of the filling of land by 0.2m concrete. The filling of land has been completed under last planning permission No. A/YL-TT/617

Scale 比例:

1:1000

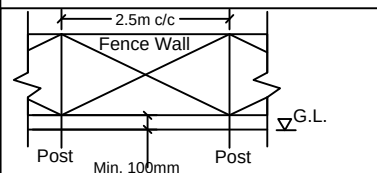


Note:

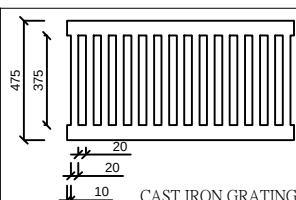
- Catchpits (CP3) with desilting facility shall follow CEDD standard drawing No. C24061.
- Catchpit and UC follows Typical Details of Geotechnical Manual for Slope Fig.8.10 and Fig.8.11 respectively.
- Open-bottom Fence Wall to be erected.
- Excavation works is completed for leveling the site.
- Debris and soil in the existing open channel shall be removed.

LEGEND

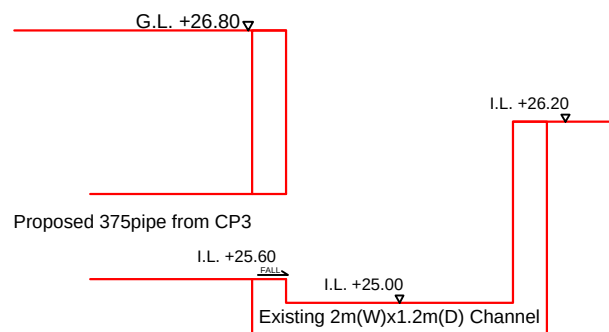
- CP Proposed CatchPit
- (a) Proposed 375UC (1:150) with Cast Iron Cover
- (b) Proposed 375mm dia. concrete pipe (1:100)
- ➔ Existing 2.5m(W)x1.2m(D) Open Channel
- ① Photo Viewport



TYPICAL DETAIL OF OPEN-BOTTOM TYPE FENCE WALL



CAST IRON GRATING



CONNECTION DETAILS

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT COMPANY

Project:

Proposed Temporary Open Storage of Mobile Toilet for a Period of 3 Years and Associated Filling of Land at Lots 1551, 1552, 1556 (Part) and 1557 (Part) in D.D. 118, Yuen Long, New Territories

(Application No.:A/YL-TT/617)

Title:

Drainage Proposal - LAYOUT

D01

Drawn by:

DM

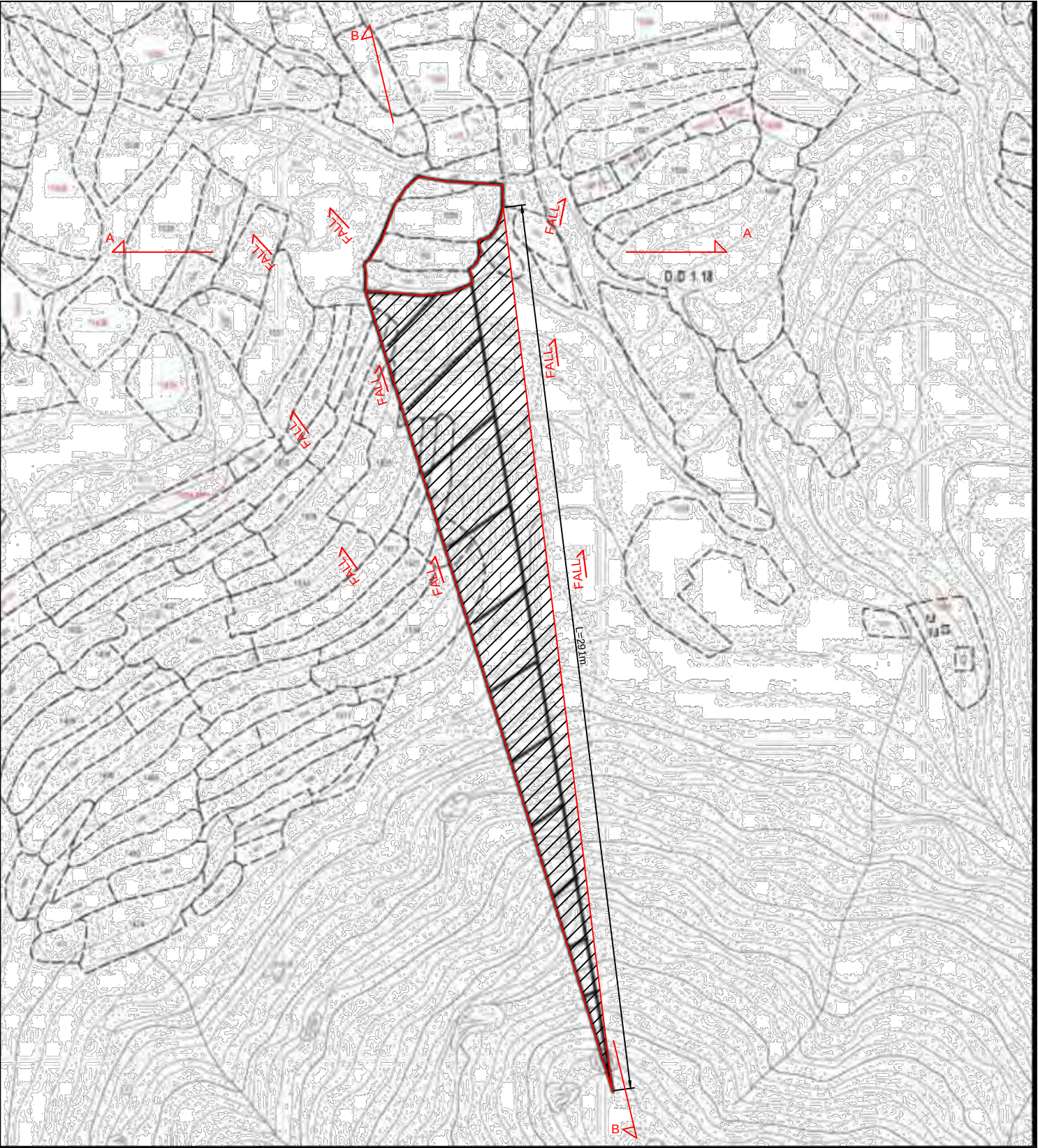
Date:

15-8-2025

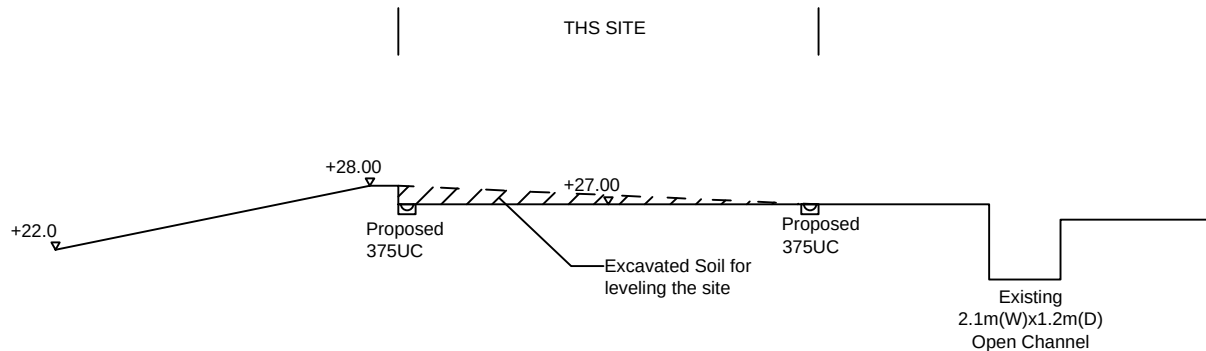
Check by:

DM

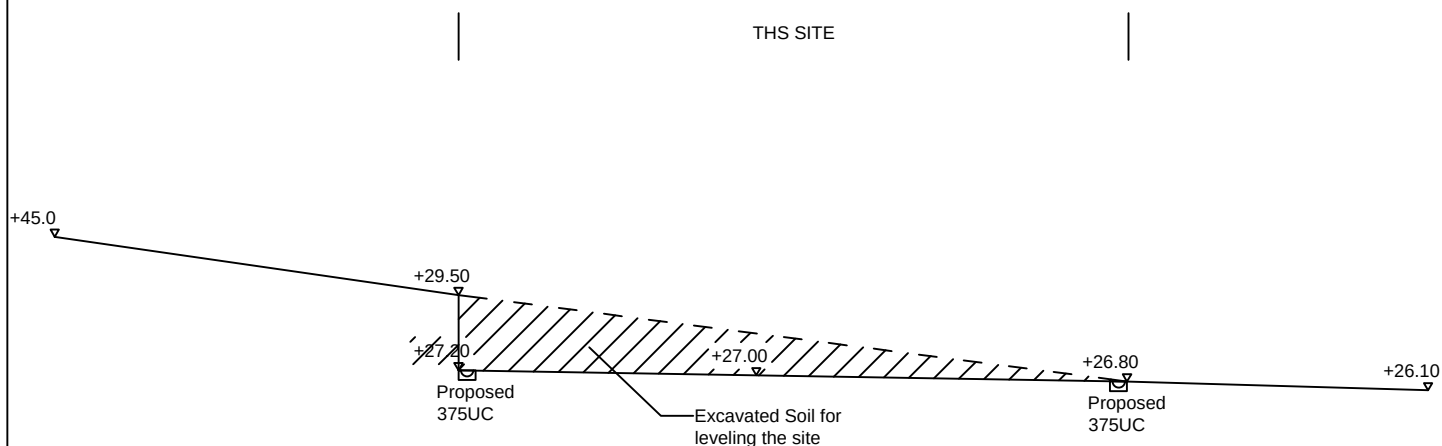
Scale:



正宏工程顧問公司 CHING WAN ENGINEERING CONSULTANT COMPANY		Title: Drainage Proposal - CATCHMENTN AREA PLAN	D02
Project Proposed Temporary Open Storage of Mobile Toilet for a Period of 3 Years and Associated Filling of Land at Lots 1551, 1552, 1556 (Part) and 1557 (Part) in D.D. 118, Yuen Long, New Territories (Application No.:A/YL-TT/617)	Drawn by: DM	Date: 15-8-2025	
	Check by: DM	Scale: ----	



SECTION A-A



SECTION B-B

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT COMPANY

Project:
Proposed Temporary Open Storage of Mobile Toilet for a Period of 3 Years and Associated Filling of Land at Lots 1551, 1552, 1556 (Part) and 1557 (Part) in D.D. 118, Yuen Long, New Territories

(Application No.:A/YL-TT/617)

Title:

Drainage Proposal -
 SECTIONS

D03

Drawn by:

DM

Date:

15-8-2025

Check by:

DM

Scale:

Photo 1



Photo 2



Photo 3



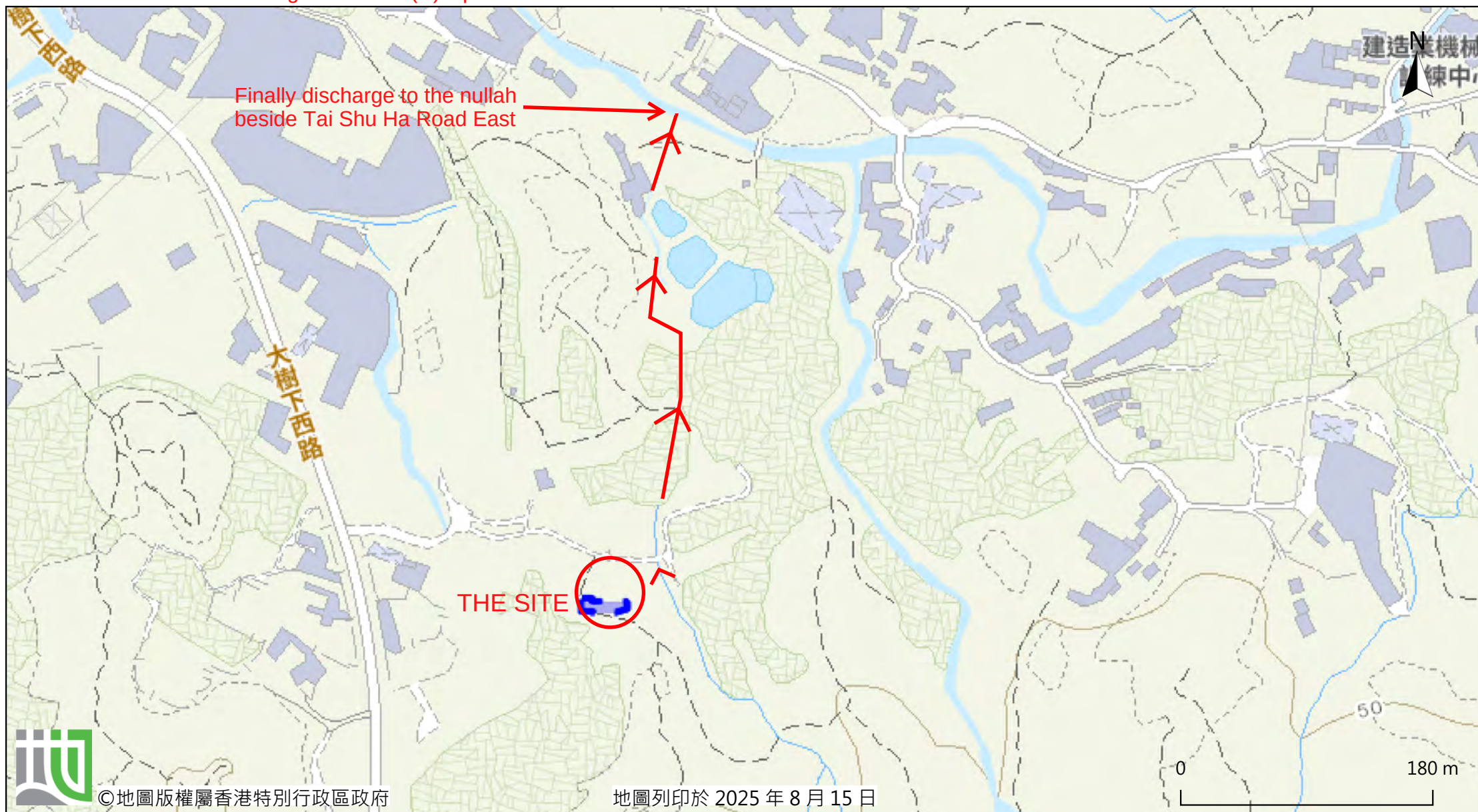
Debris and soil shall be removed

Photo 3a





Further downstream of Existing 2.5mx1.2m(D) Opn Channel



由「地理資訊地圖」網站提供: <https://www.map.gov.hk>

注意: 使用此地圖受「地理資訊地圖」的使用條款及條件以及知識產權告示約束。

Outside Catchment Area 1, Area = 6520 m² (C= 0.25)
 THE SITE, Area = 1250 m² (C= 0.95)

Calculation of Design Runoff of the Proposed Development,

For the design of drains within the site, Catchment Area 1 + The Site

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

$$\begin{aligned} A &= 6520+1250 \quad \text{m}^2 \\ &= 7770 \\ &= 0.00777 \quad \text{km}^2 \end{aligned}$$

$$\begin{aligned} t &= 0.14465 L/ H^{0.2} A^{0.1} \\ &= 0.14465*291/1^{0.2}*7770^{0.1} \\ &= 17.186 \quad \text{min} \end{aligned}$$

$$\begin{aligned} i &= 1.16*a/(t+b)^c \quad (50 \text{ yrs return period, Table 3a, Corrigendum 2024,} \\ &= 1.16*505.5/(17.186+3.29)^{0.355} \quad \text{SDM) and (16\% increase due to climate change)} \\ &= 200.8 \quad \text{mm/hr} \end{aligned}$$

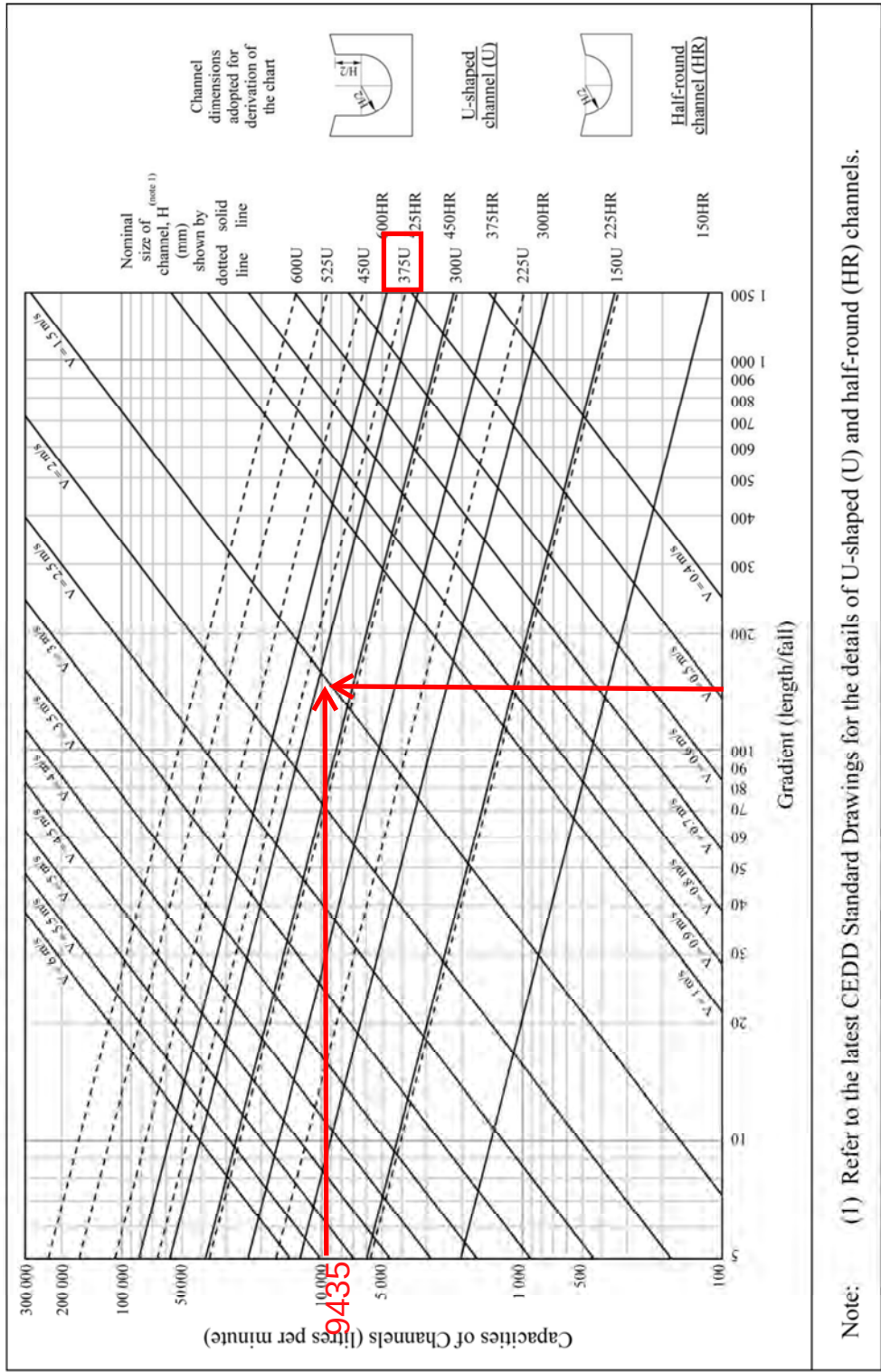
$$\begin{aligned} \text{Therefore, } Q &= 0.278*0.25*200.8*0.00652+0.278*0.95*200.8*0.00125 \\ &= 0.1573 \quad \text{m}^3/\text{sec} \\ &= \underline{9435} \quad \text{lit/min} \end{aligned}$$

Provide 375UC (1:150) is OK

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

Issue No.: 1 Revision: - Date: 05.06.2014 Page: 3 of 3

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



Check 375mm dia. Pipes by Colebrook-White Equation

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

where :

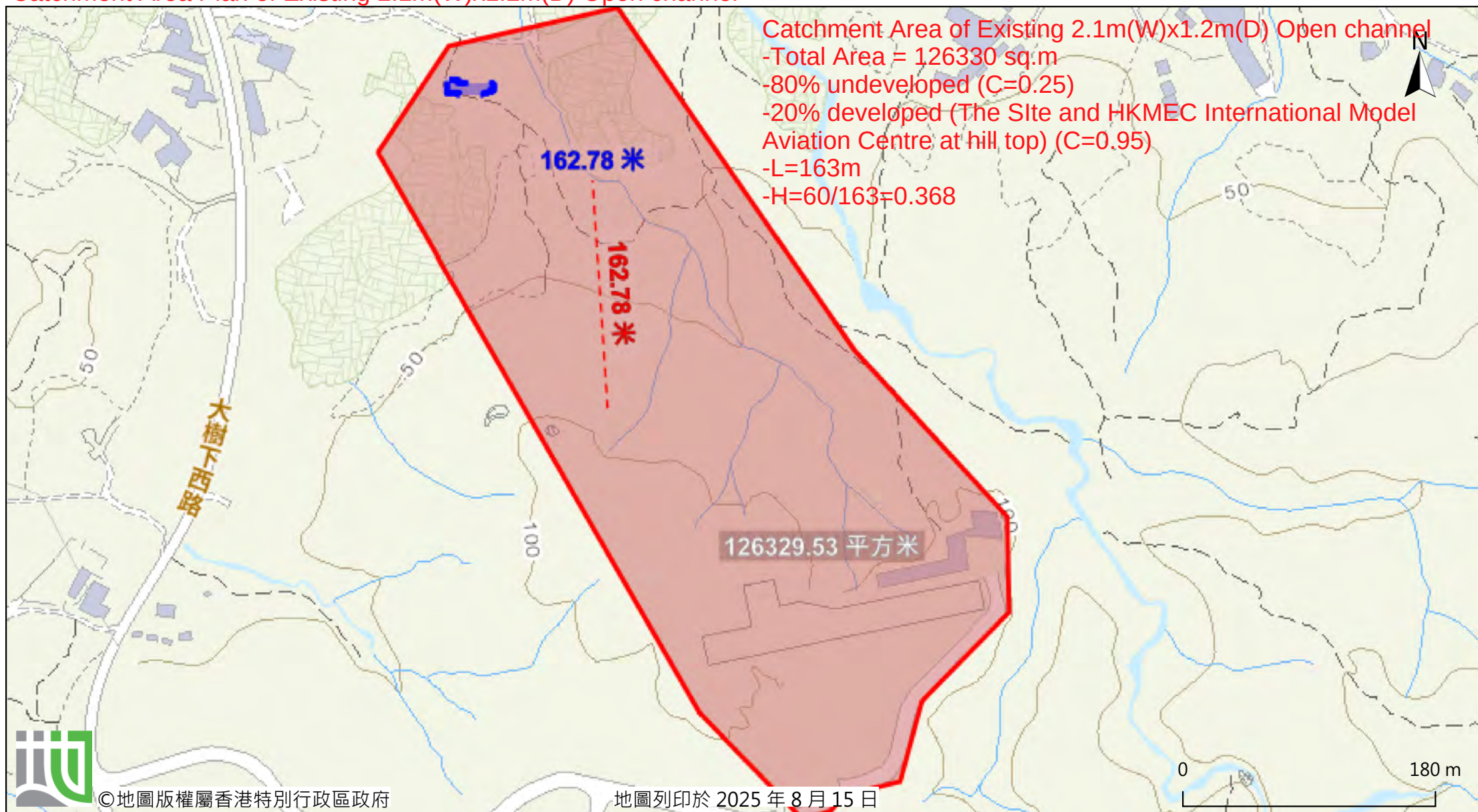
V	=		mean velocity (m/s)	
g	=	9.81	m/s ² gravitational acceleration (m/s ²)	
D	=	0.375	m internal pipe diameter (m)	
ks	=	0.00015	m hydraulic pipeline roughness (m)	(Table14, from DSD SDM 2018, concrete pipe)
v	=	1.14E-06	m ² /s kinematic viscosity of fluid (m ² /s)	
s	=	0.01	hydraulic gradient	

Therefore, design V of pipe capacity = 2.0971 m/s

Q= 0.8VA		(0.8 factor for sedimentation)
= 0.185	m ³ /s	
= 11118	lit/min	
> 9036	lit/min	Ok



Catchment Area Plan of Existing 2.1m(W)x1.2m(D) Open channel



由「地理資訊地圖」網站提供: <https://www.map.gov.hk>

注意: 使用此地圖受「地理資訊地圖」的使用條款及條件以及知識產權告示約束。

Undeveloped Area, Area	=	101064	m ²	(C= 0.25)
Developed Area, Area	=	25266	m ²	(C= 0.95)

Calculation of Design Runoff to Existing 2.1m(W)x1.2m(D) Open Channel,

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

$$\begin{aligned} A &= 101064+25266 \quad \text{m}^2 \\ &= 126330 \\ &= 0.12633 \quad \text{km}^2 \end{aligned}$$

$$\begin{aligned} t &= 0.14465 L/ H^{0.2} A^{0.1} \\ &= 0.14465*163/0.368^{0.2}*126330^{0.1} \\ &= 15.881 \quad \text{min} \end{aligned}$$

$$\begin{aligned} i &= 1.16*a/(t+b)^c \quad (50 \text{ yrs return period, Table 3a, Corrigendum 2024,} \\ &= 1.16*505.5/(15.881+3.29)^{0.355} \quad \text{SDM) and (16\% increase due to climate change)} \\ &= 205.5 \quad \text{mm/hr} \end{aligned}$$

$$\begin{aligned} \text{Therefore, } Q &= 0.278*0.25*205.5*0.101064+0.278*0.95*205.5*0.025266 \\ &= 2.8149 \quad \text{m}^3/\text{sec} \\ &= \underline{\underline{168892}} \quad \text{lit/min} \end{aligned}$$

Calculation Maximum Capacity of Existing 2.1m(W)x1.2m(D) Open Channel

$$\text{Manning Equation} \quad V = R^{2/3} * S_f^{0.5} / n$$

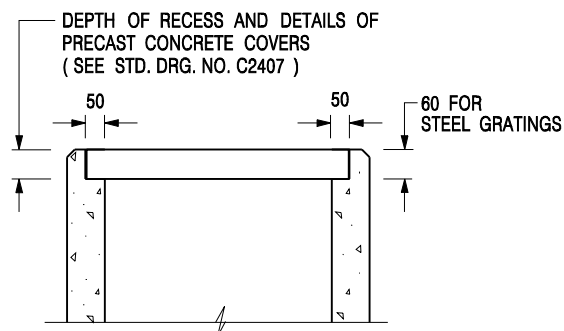
$$\begin{aligned} \text{where } R &= (WD)/(W+2D) \quad \begin{array}{l} W= 2.1 \text{ m} \\ D= 1 \text{ m} \end{array} \quad (200\text{mm freeboard considered}) \\ &= 0.512 \quad \text{m} \end{aligned}$$

$$n = 0.017 \quad \text{s/m}^{1/3} \quad (\text{Table 13 of Stormwater Drainage Manual})$$

$$S_f = 0.01$$

$$\begin{aligned} \text{Therefore, } V &= 0.512^{2/3} * 0.01^{0.5} / 0.017 \\ &= 3.7656623 \quad \text{m/sec} \end{aligned}$$

$$\begin{aligned} \text{Maximum Capacity (Q}_{\text{max}}) &= V * A \\ &= 3.013 \\ &= 180752 \quad \text{m}^3/\text{sec} \\ &> 168892 \quad \text{OK} \end{aligned}$$



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.

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

**CATCHPIT WITH TRAP
(SHEET 2 OF 2)**



**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2406 /2A

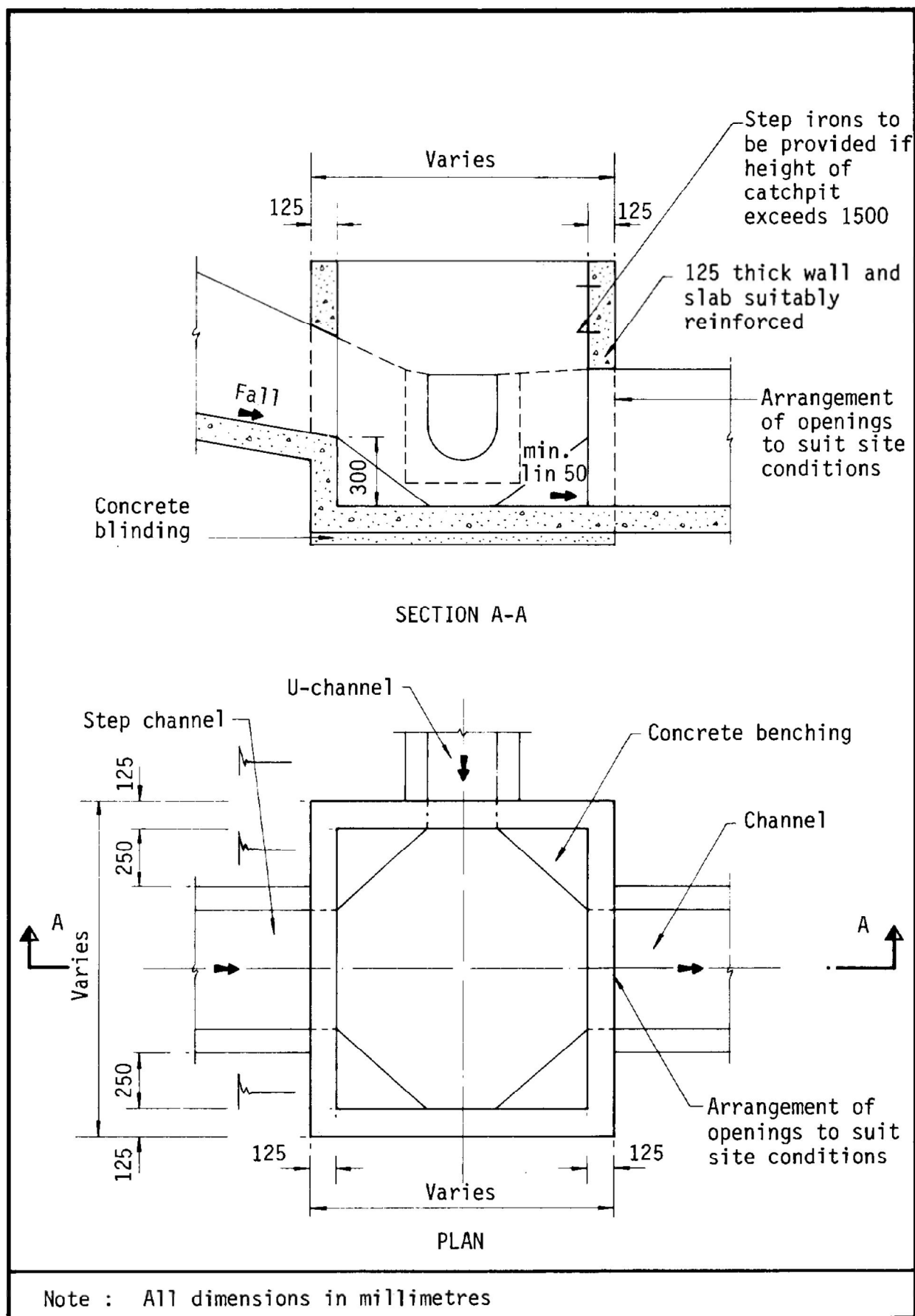
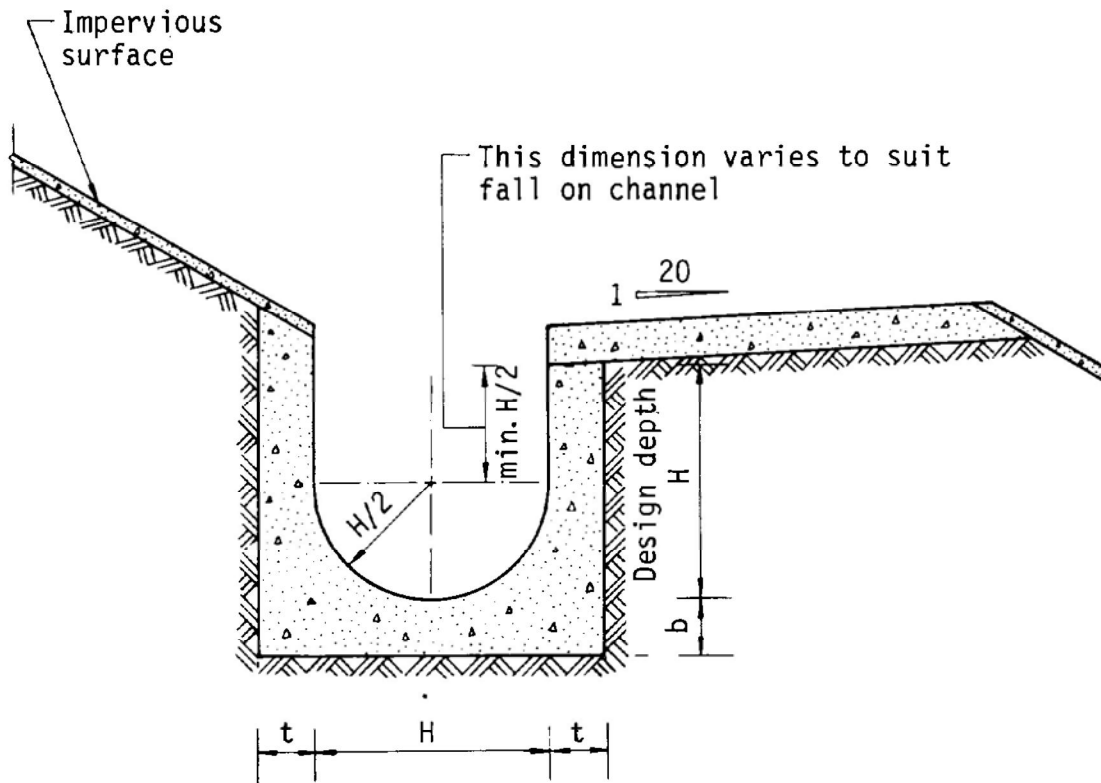


Figure 8.10 - Typical Details of Catchpits



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