

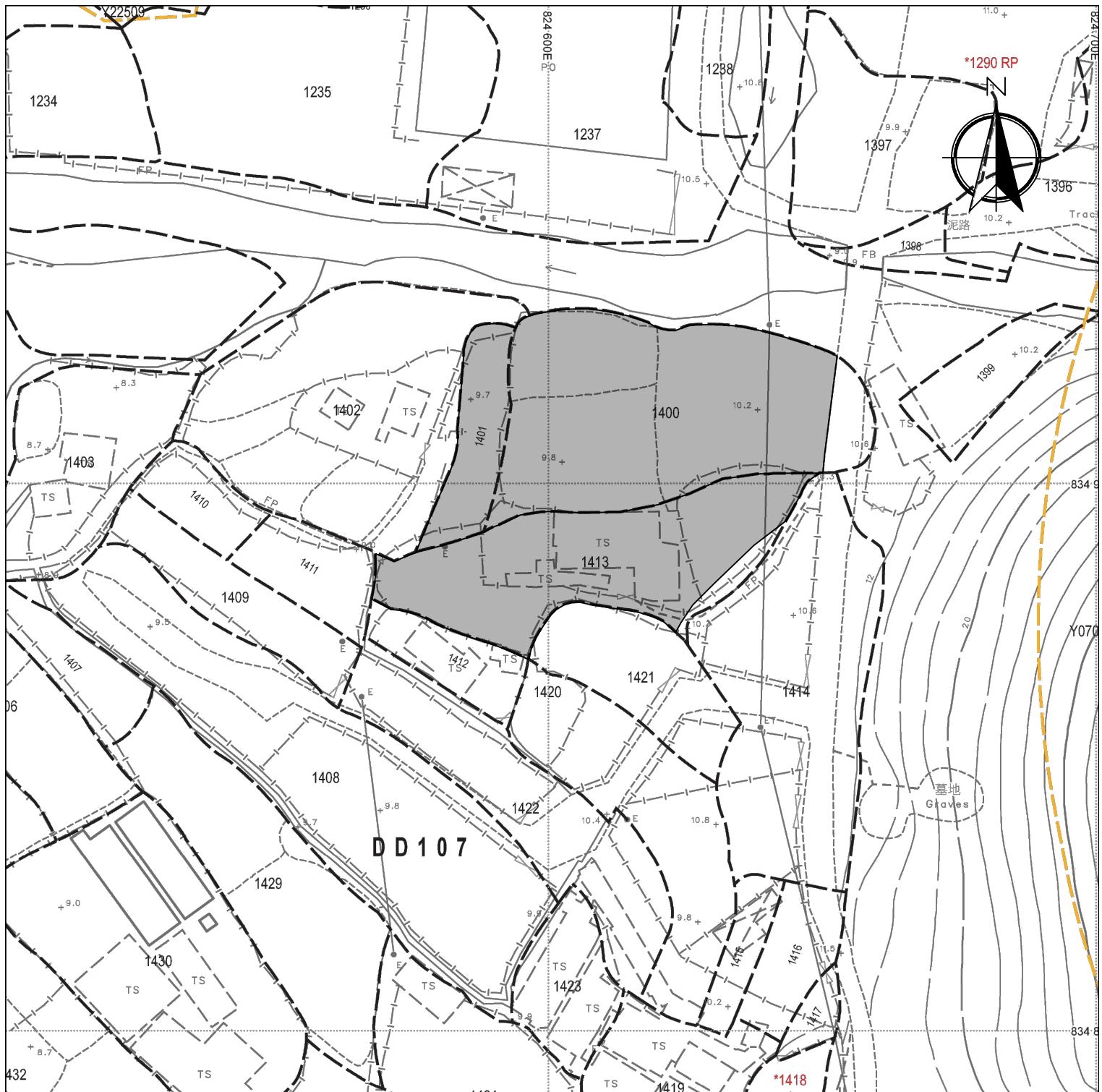
寄件日期: 2025年05月15日星期四 10:42  
收件者: tpbpd/PLAND  
副本:  
主旨:  
附件: AYL-KTN 1114 20250515.pdf

Please see the attachment for the updated version of the plan. Please contact Mr. Tang via email if you have any questions regarding the captioned application.



AYL-KTN 1114 20250515.pdf

Yours sincerely,  
Mr. Tang



#### Legend:



Application Site 申請範圍

#### Appendix 1

Location: DD 107 Lot 1400 (Part)  
DD 107 Lot 1401  
DD 107 Lot 1413 (Part)

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

Date: 14 May 2025

#### Location

位置圖

擬議臨時貨倉（危險品倉庫除外）  
連附屬設施及相關填土工程（為期3年）

Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years

#### SCALE

1:1000

@A4

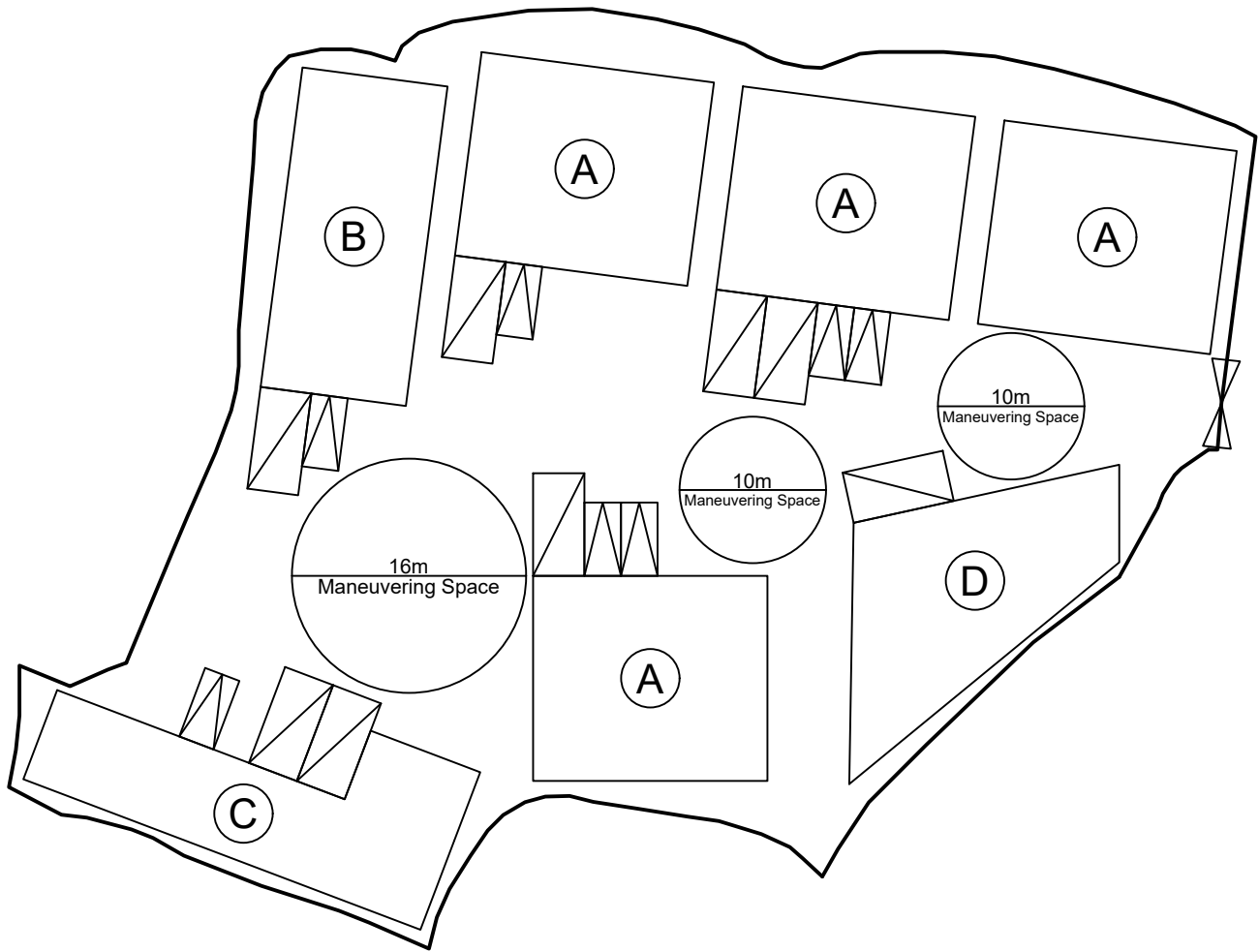
For Identification Only

Drawing No.:

1-01

## Proposed Structures Details

	Structures	Gross Floor Area (GFA)	Height (Not Exceeding)	No. of Storey	Unit(s)
A	Warehouse (Excluding D.G.G.) with Ancillary Office	About 224 m <sup>2</sup>	8m	1	4
B	Warehouse (Excluding D.G.G.) with Ancillary Office	About 220 m <sup>2</sup>	8m	1	1
C	Warehouse (Excluding D.G.G.) with Ancillary Office	About 228.5 m <sup>2</sup>	8m	1	1
D	Warehouse (Excluding D.G.G.) with Ancillary Office	About 222.6 m <sup>2</sup>	8m	1	1
	Total	About 1,567.1 m <sup>2</sup>			
	Private Car Parking Space	5m x 2.5m			7
	LGV L/UL Space	7m x 3.5m			8



### Legend:

- Ingress/egress (Width: about 5.5m)
- Proposed Structures
- Private Car Parking Space
- LGV L/UL Space

- (A) Warehouse with Ancillary Office
- (B) Warehouse with Ancillary Office
- (C) Warehouse with Ancillary Office
- (D) Warehouse with Ancillary Office

Total Area: 3,557.4 m<sup>2</sup> (About)

Covered Area: 1,567.1 m<sup>2</sup> (About)

Uncovered Area: 1,990.3 m<sup>2</sup> (About)

Non-Domestic GFA: 1,567.1 m<sup>2</sup> (About)

Nos. of Proposed Structures: 7

### Appendix 2

Location: DD 107 Lot 1400 (Part)  
DD 107 Lot 1401  
DD 107 Lot 1413 (Part)

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

Date: 13 May 2025

### Proposed Layout Plan

擬議佈局平面圖

擬議臨時貨倉（危險品倉庫除外）  
連附屬設施及相關填土工程（為期3年）

Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years

### SCALE

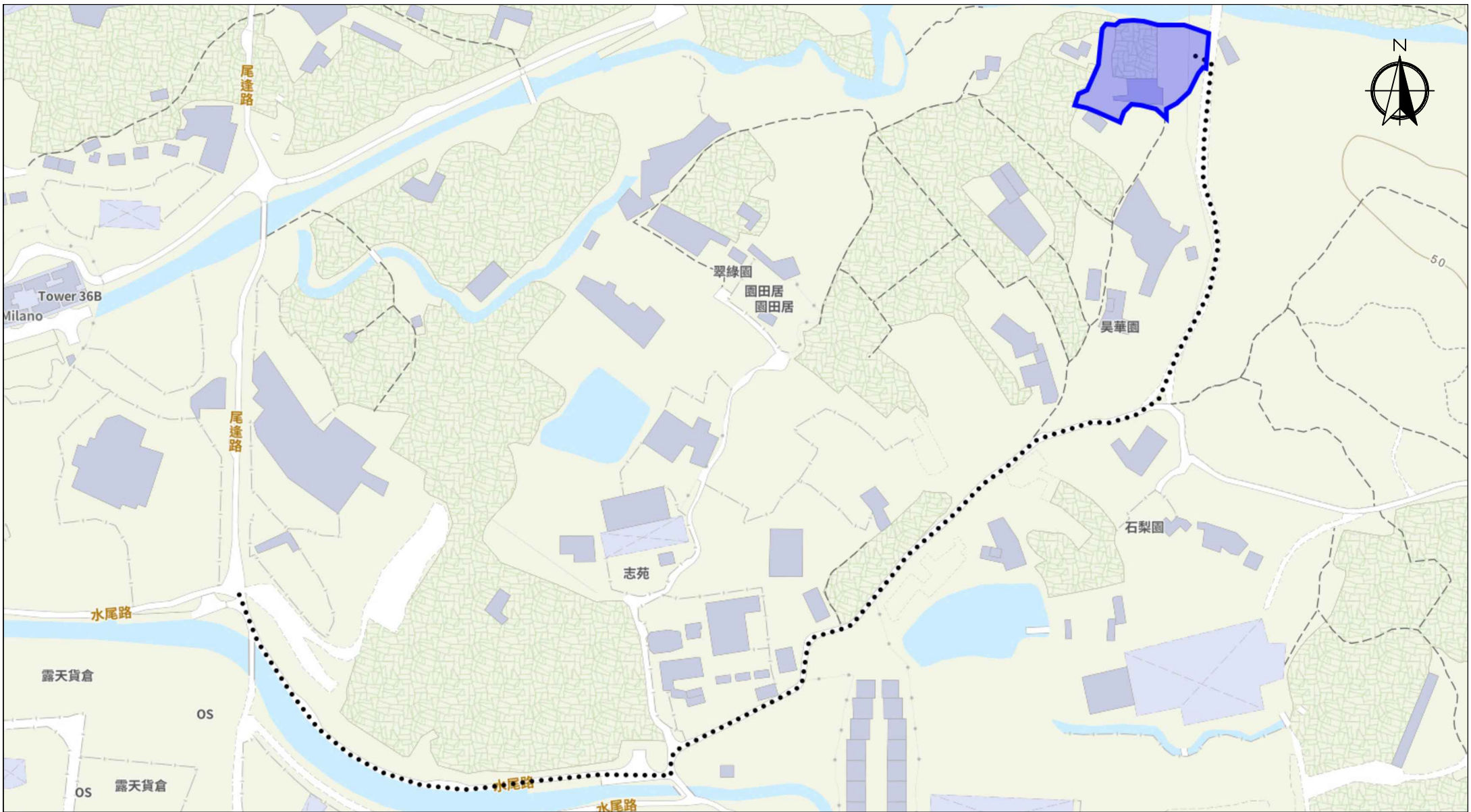
1:500

@A4

For Identification Only

Drawing No.:

2-01



Scale: Undefined @A4

Captured from map.gov.hk on 24<sup>th</sup> April 2025

<p><u>Appendix 3</u></p> <p>Existing Vehicular Access</p>	<p>Location: D.D. 107 Lot 1400 (Part), 1401, 1413 (Part)</p> <p>OZP: S/YL-KTN/11</p> <p>District: Kam Tin North</p> <p>Zoning: Agriculture</p>	<p>Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years</p>	<p>Width of Shui Mei Road: 3-4m (About) with passing space</p> <p>Map Legend:</p> <ul style="list-style-type: none"> <li>●●●● Road Path</li> <li>— Site Boundary</li> </ul>	<p>Drawing No.: 3-01</p> <p>For Identification Only</p> <p>Date: 14/05/2025</p>
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Original Site Level: +9.9 mPD (About)

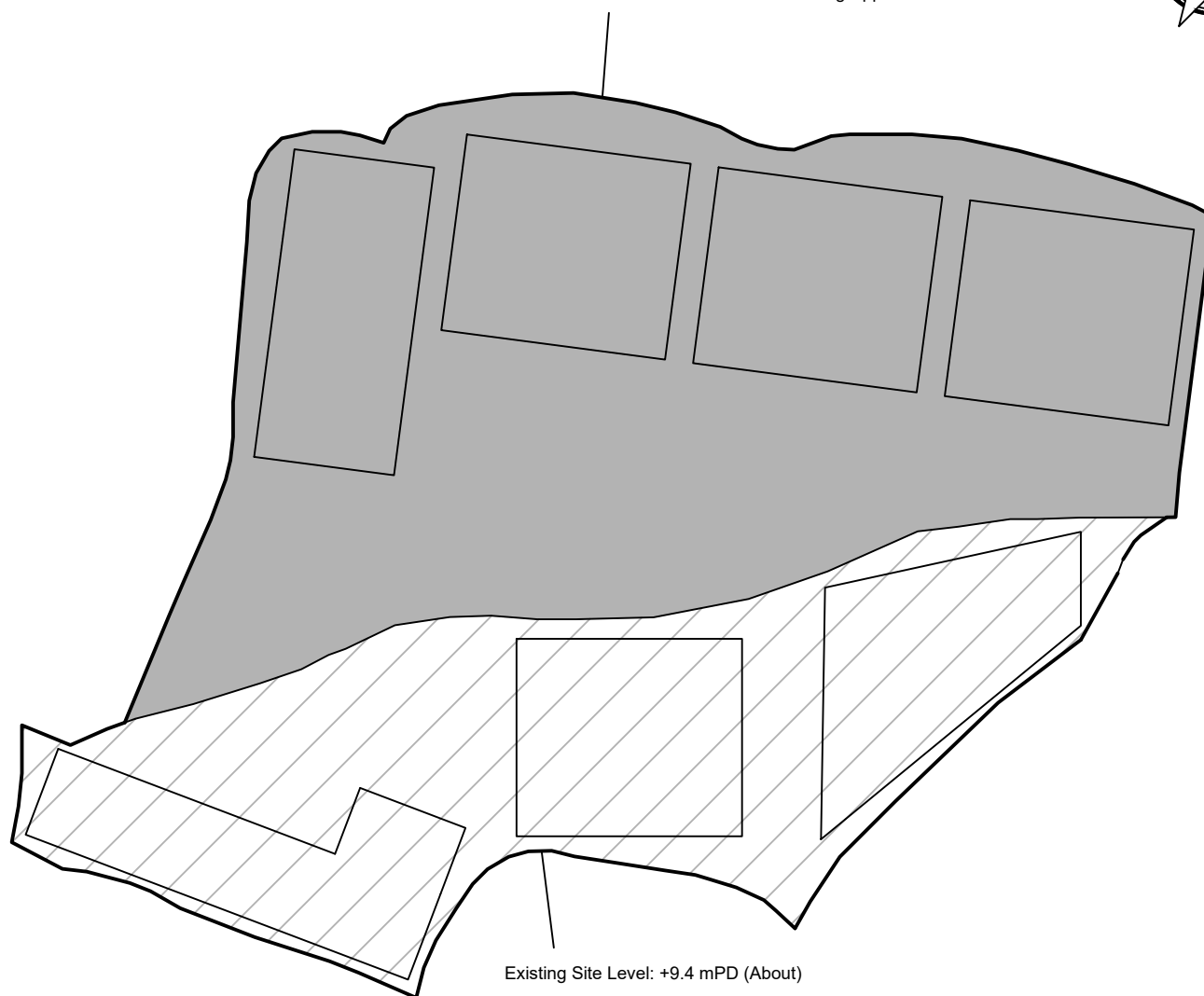
Existing Site Level: +10.2 mPD (About)

Material of Filling: Concrete

Depth of Filling: 0.3m by Concrete (About)

Area: About 2,237.5 m<sup>2</sup> (About 62.9%)

\* This area has been filled under Planning Application A/YL-KTN/975



Existing Site Level: +9.4 mPD (About)

Proposed Site Level: +10.2 mPD (About)

Material of Filling: Concrete

Depth of Filling: 0.5m by Soil and 0.3m by Concrete on top (About)

Area: About 1,319.9 m<sup>2</sup> (About 37.1%)

\* To regularized Filling of Land

Paved Area: About 3,557.4 m<sup>2</sup>

Legend:



Paved Area 平整範圍

#### Appendix 4

Location: DD 107 Lot 1400 (Part)  
DD 107 Lot 1401  
DD 107 Lot 1413 (Part)

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

Date: 14 May 2025

#### Paved Area

##### 平整位置圖

擬議臨時貨倉（危險品倉庫除外）  
連附屬設施及相關填土工程（為期3年）

Proposed Temporary Warehouse (excluding Dangerous  
Goods Godown) 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

## 申請理由

根據城市規劃條例第 16 條作出規劃許可申請

擬在新界元朗錦田丈量約份第 107 約地段第 1400 號(部分)、1401 號及 1413 號(部分)  
作臨時貨倉（危險品倉庫除外）連附屬設施及相關填土工程之用途（為期三年）

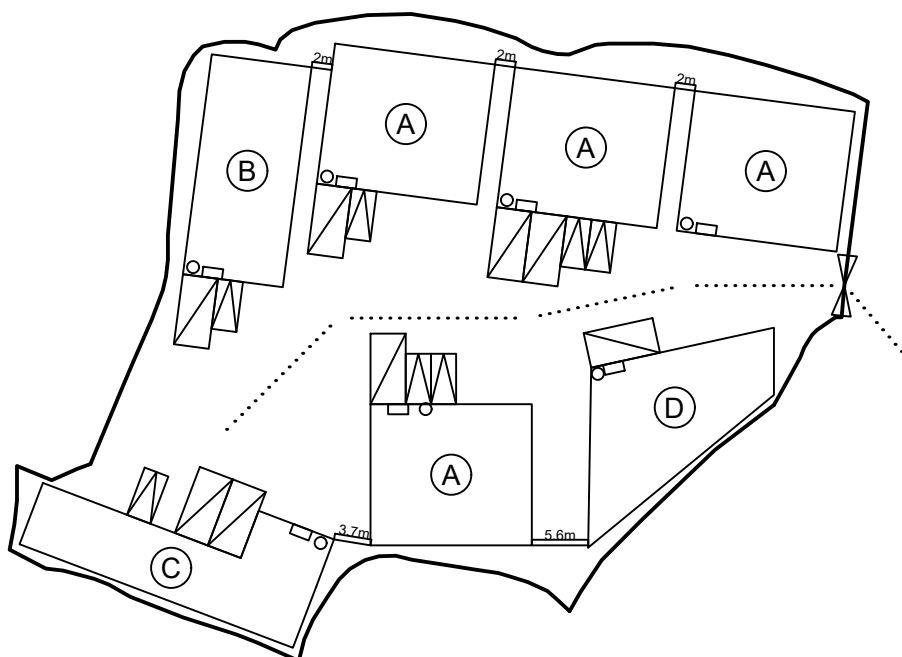
- 申請地點的面積約為 3,557.4 平方米，根據錦田北分區計劃大綱核准圖編號 S/YL-KTN/11，申請地點現時被規劃作「農業」地帶。
- 本擬議發展為臨時性質，因此不會影響申請地點長遠待規劃意向。根據租賃文件，該用地可作農業用，在未首先獲得批准的情況下，該地段不允許用於其他土地用途。因此，“貨倉（危險品倉庫除外）”開發申請仍然符合租約。
- 臨時貨倉計劃放置車輛、金屬、膠喉、機器、汽車零件及建築材料。不會用作存放危險品。
- 擬議申請的貨倉（危險品倉庫除外）在同一個「農業」地帶，城市規劃委員會曾批准相類似的貨倉（危險品倉庫除外），申請包括：A/YL-KTN/1005（2024 年 10 月 4 日獲批）及 A/YL-KTN/1004（2024 年 10 月 25 日獲批）。因此希望城市規劃委員會對本申請作出相同的對待。
- 申請地段將設 7 個擬議建築物，用作貨倉及附屬辦公室用途。本申請只作存放用途，不會進行任何作業。申請範圍內的露天空間會用作車輛停泊、上落貨物及車輛轉動空間。
- 城市高速發展及土地資源稀少的情況下，有大量用作工業及棕地的土地已改作其他發展或計劃用作其他發展，例如行洪水橋／厦村新發展區及錦田北分區計劃大綱核准圖編號 S/YL-KTN/11 內部份模範鄉至部份逢吉鄉由農業及工業用途外劃為住宅及政府、機構或社區」用途、洪水橋／厦村新發展區及鄰近元朗工業邨的棕地等。本人希望透過規劃申請，提供臨時土地收納及滿足需要搬遷的小型露天存放的巨大需求。
- 擬議用途的營業時間為星期一至星期六上午九時至下午七時，星期日及公眾假期休息。
- 申請地點有部分已根據 A/YL-KTN/975 進行填土及平整，約 2,237.5 平方米。其餘約 1,319.9 平方米會先採用泥土作平整基礎，完成泥土平整後再使用約 0.3 米厚的混凝土作地面物料，整個平整厚度（即泥土及混凝土總和）不超過 0.8 米，申請期限結束後會將申請地點還原。
- 申請用途的用途、形式及佈局與周遭環境並沒有不協調，亦會顧及自然特色。

- 當場地發展後，附帶條件的美化環境建議能加強申請地點及周圍的綠化效果，使整體視野變得美觀更令人舒服。渠務建議計劃及舒緩環境措施，也能令附近地區受惠，有效地加強該地區及附近範圍的環境保護，並能減少水浸可能。
  
- 根據以上各點，誠意懇求城市規劃委員會寬大批准新界元朗錦田丈量約份第 107 約地段第 1400 號(部分)、1401 號及 1413 號(部分)作臨時貨倉(危險品倉庫除外)連附屬設施及相關填土工程的用途（為期三年）。

## Proposed Structures Details



	Structures	Gross Floor Area (GFA)	Height (Not Exceeding)	No. of Storey	Unit(s)
A	Warehouse (Excluding D.G.G.) with Ancillary Office	About 224 m <sup>2</sup>	8m	1	4
B	Warehouse (Excluding D.G.G.) with Ancillary Office	About 220 m <sup>2</sup>	8m	1	1
C	Warehouse (Excluding D.G.G.) with Ancillary Office	About 228.5 m <sup>2</sup>	8m	1	1
D	Warehouse (Excluding D.G.G.) with Ancillary Office	About 222.6 m <sup>2</sup>	8m	1	1
	Total	About 1,567.1 m <sup>2</sup>			
	Private Car Parking Space	5m x 2.5m			7
	LGV L/UL Space	7m x 3.5m			8



\*All FSI (includes installation/maintenance/modification/repair work) will be completed by RFSIC.

For Emergency Vehicular Access, Please see Appendix 6.1

\*All the enclosed structures are provided with access for emergency vehicles to reach within 30m travel distance from the structures.

### Legend:

- 5 kg Portable Dry Powder Type Fire Extinguisher (7 in Total)
- Emergency Lighting (BS 5266-1:2016, BS EN 1838:2013 and the FSD Circular Letter No. 4/2021) (7 in Total)
- ... Emergency Vehicular Access
- ▢ Private Car Parking Space
- ▢ LGV L/UL Space
- Ⓐ Warehouse (Excluding D.G.G.) with Ancillary Office
- Ⓑ Warehouse (Excluding D.G.G.) with Ancillary Office
- ⒸⒹ Warehouse (Excluding D.G.G.) with Ancillary Office

### Appendix 6

Location: DD 107 Lot 1400 (Part)  
DD 107 Lot 1401  
DD 107 Lot 1413 (Part)

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

Date: 14 May 2025

### Proposed Fire Service Installation Plan

擬議消防設備安裝計劃圖

擬議臨時貨倉（危險品倉庫除外）  
連附屬設施及相關填土工程（為期3年）

Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years

### SCALE

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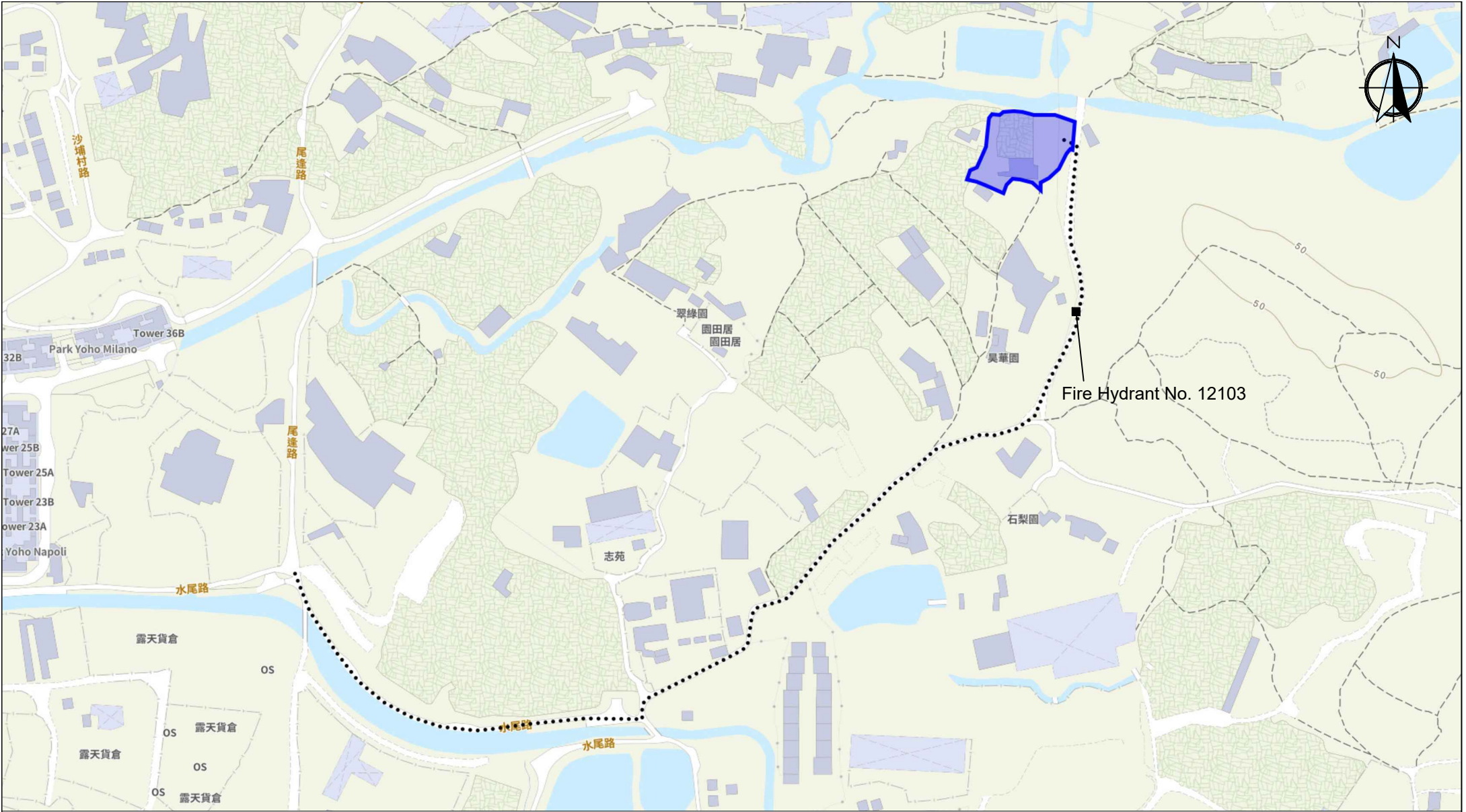
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For Identification Only

Drawing No.:

6-01





Scale: Undefined @A4

Captured from map.gov.hk on 24<sup>th</sup> April 2025

Appendix 6.1 Emergency Vehicular Access	Location: D.D. 107 Lot 1400 (Part), 1401, 1413 (Part) OZP: S/YL-KTN/11 District: Kam Tin North Zoning: Agriculture	Project: Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years	Width of Shui Mei Road: 3-5m (About) Map Legend: ●●●● Road Path — Site Boundary	Drawing No.: 6.1-1
				For Identification Only Date: 14/05/2025

渠務署及城市規劃委員會：

**A/YL-KTN/1114 的渠務報告詳細**

申請地點範圍有約 3,557.4 平方米，位於錦田北的鄉郊範圍。目前為空置。

申請地點附近有大量的臨時建築物及小徑。現有水平為約+10.2 mPD (此水平已完成填土及平整)。

有一條自然溪流位於申請地點的北面，並計劃將場內水流引導到該溪流。

申請範圍的東及南面水平比申請地點高，有機會有水流從這兩面流入。其他方向比申請範圍低，因此沒有流水從其他方向流入申請地點。

申請地點的擬議佈局平面圖請參考 Appendix 2。

申請地點範圍有約 3,557.4 平方米，全部將以混凝土作表面，在申請地點外有約 3,041.2 平方米，大多為道路及建築物。

擬議發展	
申請地點範圍 (約 m <sup>2</sup> )，全部已以混凝土平整	3,557.4
申請地點外集水區	
申請地點外南面集水區 (約 m <sup>2</sup> )，大多為道路及建築物，本報告將以全部為混凝土作評估	3,041.2

根據 STORMWATER DRAINAGE MANUAL (SDM) - Table 10 – Recommended Design Return Periods based on Flood Levels

Intensively Used Agricultural Land	2-5 years
Village Drainage including Internal Drainage System under a Polder Scheme	10 years
Main Rural Catchment Drainage Channels	50 years
Urban Drainage Trunk Systems	200 years
Urban Drainage Branch Systems	50 years

本報告將使用 Main Rural Catchment Drainage Channels, 1 in 50 years return period 作評估。

本渠道設計將參考由 貴署所編寫的 SDM 作基礎，以下為所採用的數據及計算方法。

1. Intensity-Duration-Frequency Relationship - The Recommended Intensity-Duration-Frequency relationship is used to estimate the intensity of rainfall. It can be expressed by the following algebraic equation.

$$i = \frac{a}{(t_d + b)^c}$$

The site is located within the HKO Headquarters Rainfall Zone. Therefore, for 50 years return period, the following values are adopted. (The latest figures are provided in Corrigendum No.1 2024 Stormwater Drainage Manual)

a = 505.5  
b = 3.29  
c = 0.355

2. The peak runoff is calculated by the Rational Method.

$$Q_p = 0.278 C i A$$

where V = peak runoff in m<sup>3</sup>/s  
C = runoff coefficient (dimensionless)  
i = rainfall intensity in mm/hr  
A = catchment area in km<sup>2</sup>

3. According to Section 7.5.2(b) of the Stormwater Drainage Manual (SDM), Fifth Edition January 2018

<u>Surface Characteristics</u>	<u>Runoff coefficient, C</u>
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

The run-off coefficient (C) of surface runoff area taken as follows:

- Concrete Area C = 0.95

4. Manning's Equation is used for calculation of velocity of flow inside the channels. It can be expressed by the following algebraic equation.

$$V = \frac{R^{1/6}}{n} \sqrt{RS_f}$$

- where V = Velocity of the pipe flow (m/s)  
 $S_f$  = Hydraulic gradient  
 n = manning's coefficient  
 R = Hydraulic radius (m)

5. Colebrook-White Equation is used for calculation of velocity of flow inside the pipes. It can be expressed by the following algebraic equation.

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

- where V = Velocity of the pipe flow (m/s)  
 g = gravitational acceleration (m/s<sup>2</sup>)  
 $k_s$  = hydraulic pipeline roughness (m)  
 v = kinematics viscosity of fluid (m<sup>2</sup>/s)  
 D = internal pipe diameter (m)  
 s = hydraulic gradient (energy loss per unit length due to friction)

申請範圍主要平坦，並緩緩斜向東面，渠道設計請參考 Appendix 5。

渠道容量計算請參考 Appendix – Calculation。



根據本報告，本臨時發展不會對附近的渠道有重大影響。

Check The Capacity of Existing Natural Stream

Manning Equation is used in hydraulic design and analysis. The cross-sectional mean velocity is given in the following expression:

$$V = \frac{R^{1/6}}{n} \sqrt{RS_f}$$

Where      R = hydraulic (m)  
               N = Manning coefficient (s/m<sup>1/3</sup>), refer Table 13 of SDM  
               Sf = friction gradient (dimensionless)

Using Manning's Equation

$$V = R^{2/3} * S_f^{0.5} / n$$

Where R	= A/P = 1.24 m	A = 13 m <sup>2</sup>
		P = 10.5 m
n	= 0.05 s/m <sup>1/3</sup>	(Table 13 of Stormwater Drainage Manual)
Sf	= 0.204	

Therefor V      = 1.24<sup>2/3</sup>\*0.204<sup>0.5</sup>/0.05  
                       = 10.42 m/sec

Maximum Capacity (Qmax)

= V\*A  
 = 135.5 m<sup>3</sup>/sec  
 > Q<sub>total</sub>

\*Allowed 10% for sedimentation.

**The Existing Natural Stream has enough capacity.**

Appendix – Calculation

Capacity Flows Estimation for Propose Catchments and Drainage System with 50 Year Return Period

A1. Calculation of On-Site Runoff (After Development)

Surface Type	Catchment Area (A), m²	Catchment Area (A), km²	Average slope (H), m/100m	Flow path length (L), m	Time of Concentration (t <sub>c</sub> ), min	a (50 year return period)	b (50 year return period)	c (50 year return period)	Runoff intensity (i) mm/hr	Runoff coefficient (C)	C x A	Peak runoff (Q <sub>p</sub> ), m³/s
100% Concrete	6,599	0.006599	0.977	133	8.02	505.5	3.29	0.355	237	0.95	0.006269	0.414
Runoff Intensity: 11.1% increase due to climate change											Total	0.414

A2. Calculation of the Capacity of Proposed Drainage (After Development)

Channel Type	Width, m	Depth, m	Slope	Length, m	Manning’s Roughness Coefficient	Cross Section Area, m2	Wetted Perimeter, m	Hydraulic radius, m	Mean Velocity, m/s	Capacity flow, m3/s	Catchment Served, km²	Runoff, m3/s	% of capacity flow	Sufficient Capacity (Y/N)
Concrete Channel	0.525	0.525	0.005	220	0.016	0.246	1.35	0.182	1.42	0.509	0.006599	0.414	81%	Y

\*Allowed 10% for sedimentation.

Note:

Runoff is calculated in accordance with DSD’s “Stormwater Drainage Manual – Planning, Design and Management” (SDM), fifth edition, January 2018.

Equation used:  $t_0 = \frac{0.14465L}{H^{0.2}A^{0.1}}$       $t_c = t_0 + t_f$       $i = \frac{a}{(t_d+b)^c}$       $Q_p = 0.278 C i A$       $V = \frac{R^{1/6}}{n} \sqrt{RS_f}$

B1. Calculation of the runoff of Existing Drainage System

Surface Type	Catchment Area (A), m²	Catchment Area (A), km²	Average slope (H), m/100m	Flow path length (L), m	Time of Concentration (t <sub>c</sub> ), min	a (50 year return period)	b (50 year return period)	c (50 year return period)	Runoff intensity (i) mm/hr	Runoff coefficient (C)	C x A	Peak runoff (Q <sub>p</sub> ), m³/s
5% Concrete +95% Grassland (Heavy soil) with steep surface	1,654,465	1.654465	20.44	2,224	42	505.5	3.29	0.355	117	0.38	0.628697	20.458
Total												20.458

B2. Adequacy Check for Existing Drainage System

Channel Type	Width, m	Depth, m	Slope	Length, m	Manning’s Roughness Coefficient	Cross Section Area, m2	Wetted Perimeter, m	Hydraulic radius, m	Mean Velocity, m/s	Capacity flow, m3/s	Catchment Served, km²	Runoff, m3/s	% of capacity flow	Sufficient Capacity (Y/N)
Natural-Stream (7)	6.5	2	0.204	1,810	0.05	13	10.5	1.24	10.42	135.5	1.654465	20.458	15%	Y

\*Allowed 10% for sedimentation.

The Application Site	=	3557.4 m <sup>2</sup> (About)	C:	0.95 (Covered with Concrete)
Outside Catchment Area	=	3,041.2 m <sup>2</sup> (About)	C:	0.95 (Covered with Concrete)
<b>Calculation of Desgin Runoff of the Proposed Development,</b> <b>For the design of drains inside the site, For Concrete</b>				
$Q_p = 0.278C I A$				
$A = 3,557.4 + 3041.2 \text{ m}^2$				
$= 6,598.6 \text{ m}^2$				
$= 0.0065986 \text{ km}^2$				
$t = 0.14465L/H^{0.2}A^{0.1}$				
$= 0.14465*133/0.001^{0.2}*6599^{0.1}$				
$= 8.021 \text{ min}$				
$i = 1.111*a/(t+b)^c$				
$= 1.111*505.5/(8.903+3.29)^{0.355}$				
$= 237.377$				
$Q = 0.278*0.95*271*1388.8/1000000$				
$= 0.4136997 \text{ m}^3/\text{sec}$				
$= 24822 \text{ lit/min}$				

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

Check 525mm 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 <sup>2</sup> )	
D	=	internal pipe diameter (m)	
k <sub>s</sub>	=	hydraulic pipeline roughness (m)	(Table 14, from DSD SDM 2018, concrete pipe)
v	=	kinematic viscosity of fluid (m <sup>2</sup> /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 <sup>2</sup>
D	=	0.525	m
k <sub>s</sub>	=	0.00015	m
v	=	1.14E-06	m/s <sup>2</sup>
s	=	0.01	

Therefore, design V of pipe capacit = 2.584201 m/s

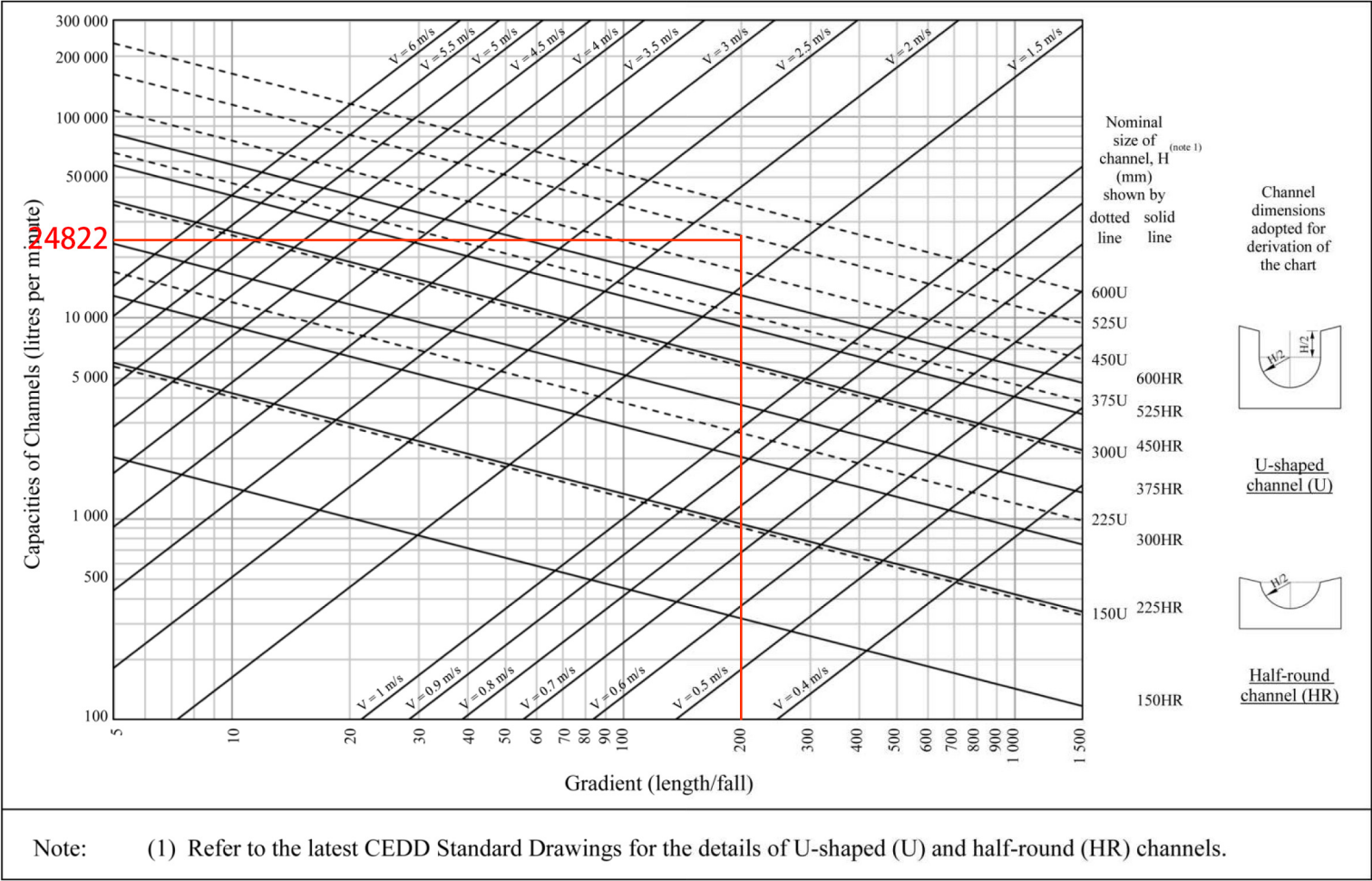
$$\begin{aligned} Q &= 0.8VA && (0.8 \text{ factor for sedimentation}) \\ &= 0.508675 \text{ m}^3/\text{s} \\ &= 30520.48 \text{ lit/min} \\ &> 24822 \text{ lit/min} \end{aligned}$$

Provide 525UC (1:200) has enough capacity to accomend the runoff of the proposed development

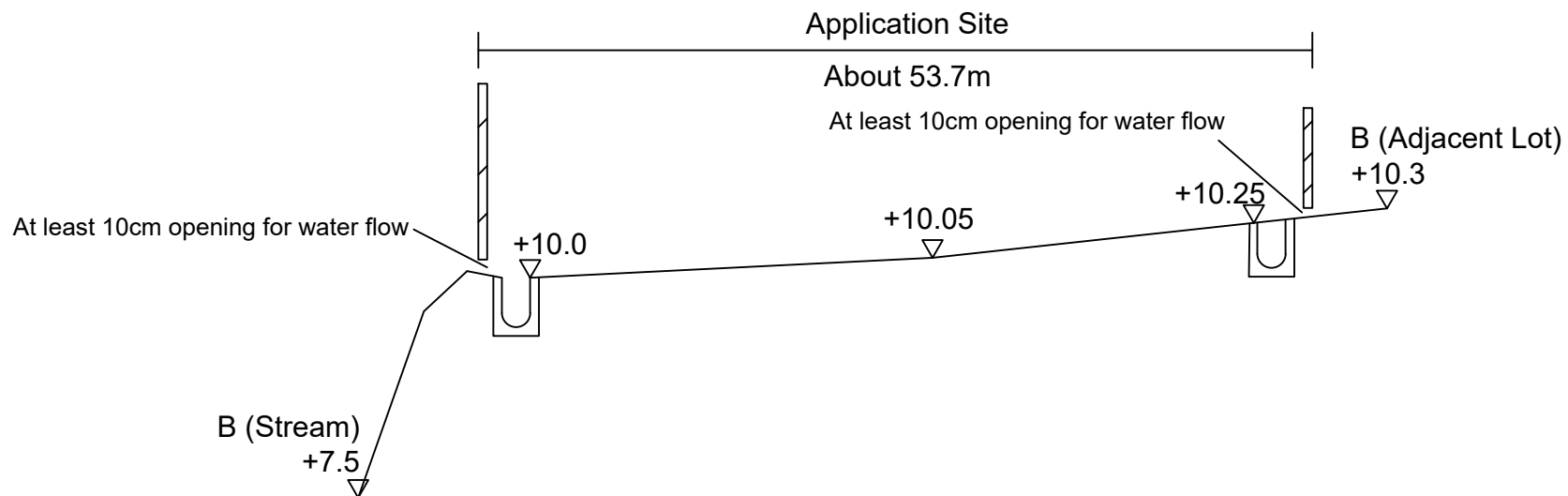
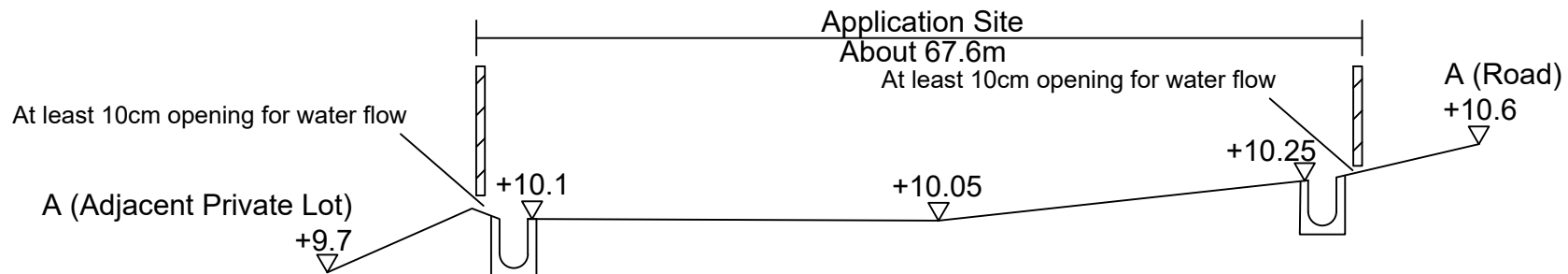


**GEO Technical Guidance Note No. 43 (TGN 43)**  
**Guidelines on Hydraulic Design of U-shaped and Half-round Channels on Slopes**

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



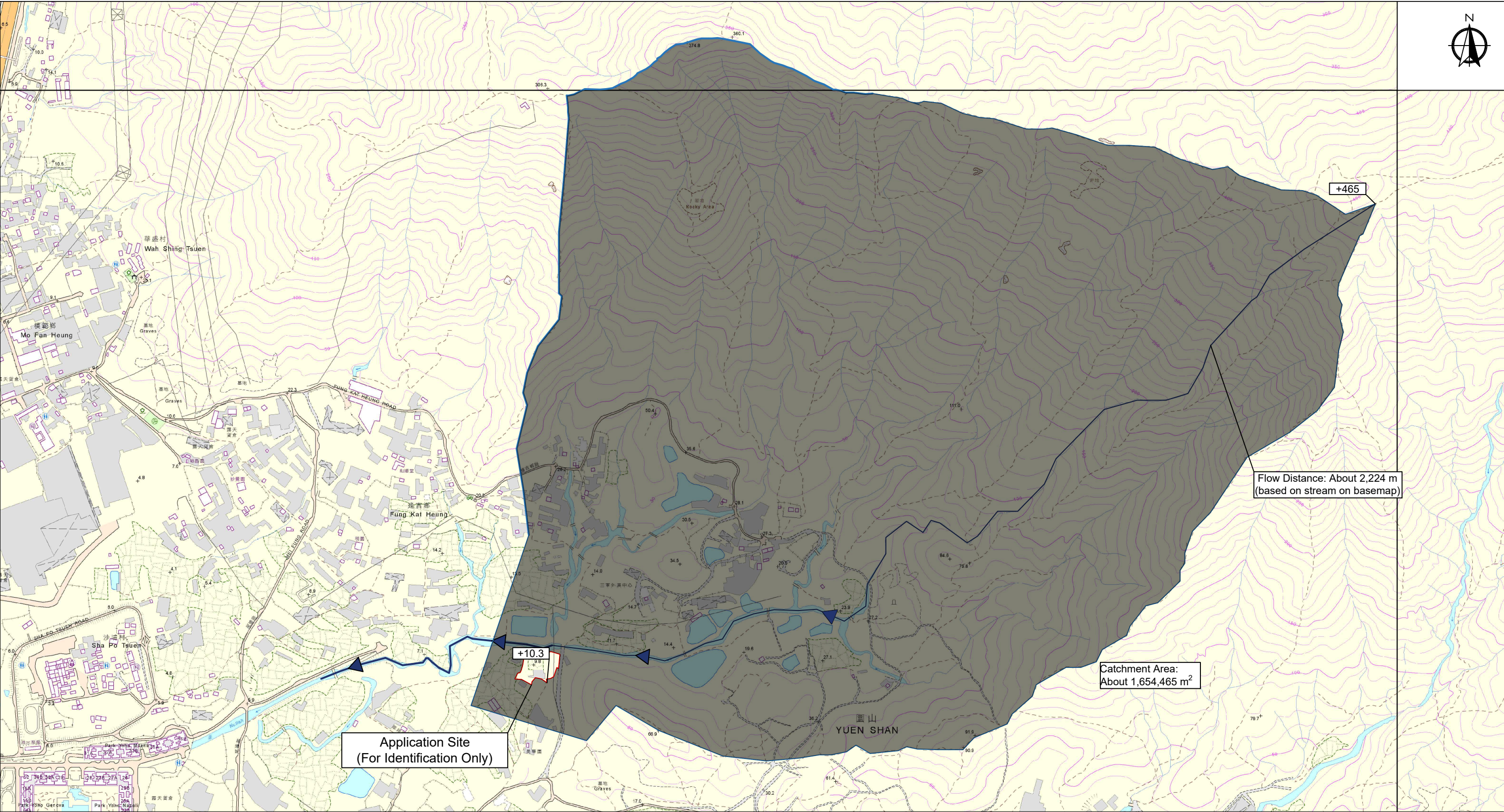




<p><u>Appendix 5.1</u></p> <p>Cross Section</p> <p>A-A</p> <p>B-B</p>	<p>Location: D.D. 107 Lot 1400 (Part), 1401, 1413 (Part)</p> <p>OZP: S/YL-KTN/11</p> <p>District: Kam Tin North</p> <p>Zoning: Agriculture</p>	<p>Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years</p>		<p>Drawing No.:</p> <p>5.1-1</p>
				<p>For Identification Only</p>
				<p>Date: 14/05/2025</p>





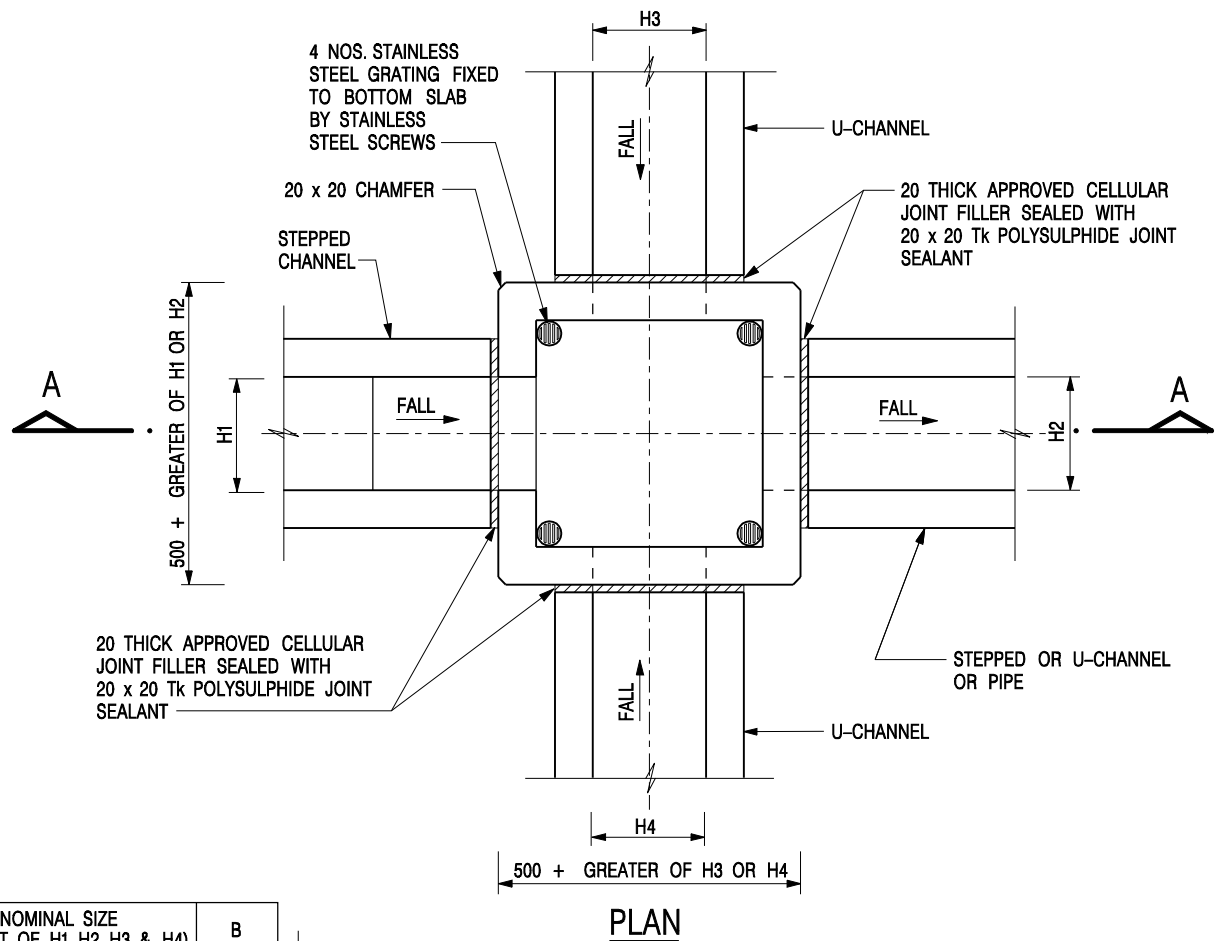


Captured from hkmapservices iB5000 2-SE-C, iB5000 6-NE-A and iB5000 6-NE-B on 6<sup>th</sup> July 2024  
Calculation Please refer to Appendix - Capacity

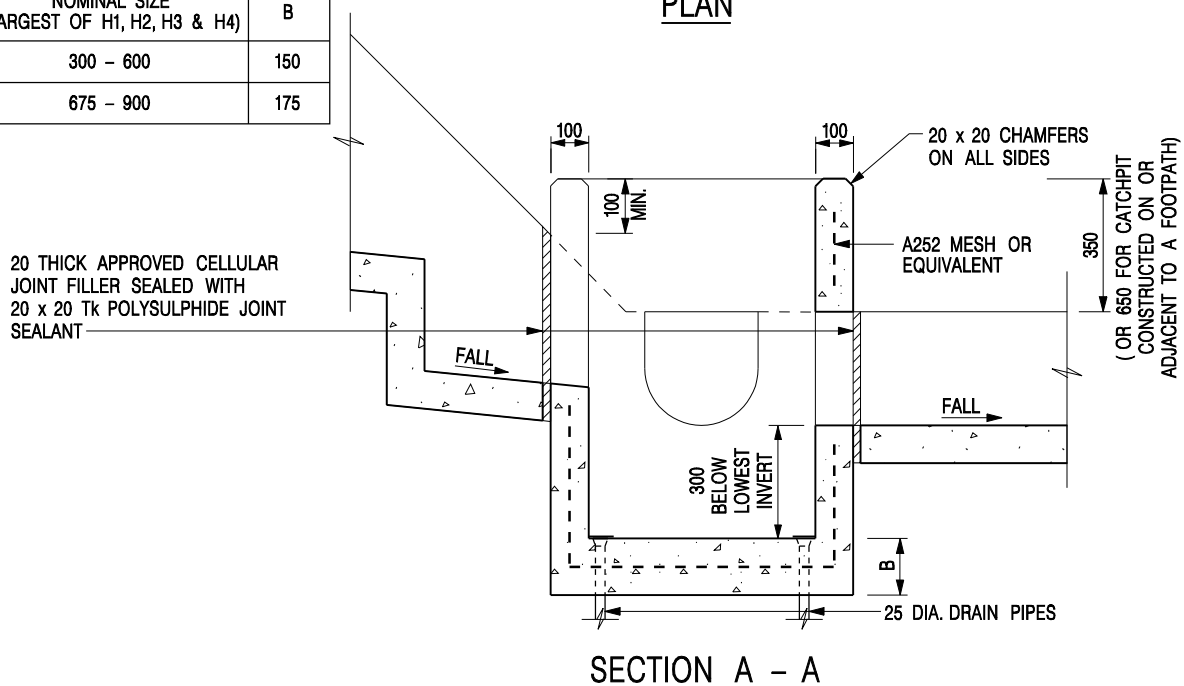
Legend:  
Catchment Area (A)  
Existing Channel  
Application Site

Appendix 5.3	Location: DD 107 Lot 1400 (Part), 1401, 1413 (Part) App. No.: A/YL-KTN/1114 OZP: S/YL-KTN/11 District: Kam Tin North Zoning: Agriculture	Project: Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years	Catchment Area of Existing Channel		Drawing No.
					5.1-1
					For Identification Only
					Date: 14 May 2025






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

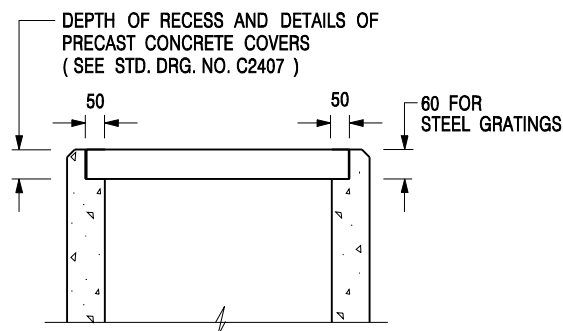


**NOTES:**

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

**CATCHPIT WITH TRAP**  
(SHEET 1 OF 2)

-	FORMER DRG. NO. C2406J.	Original Signed	03.2015
REF.	REVISION	SIGNATURE	DATE
 <b>CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT</b>		<b>SCALE</b> 1 : 20 <b>DATE</b> JAN 1991	
		<b>DRAWING NO.</b> <b>C2406 /1</b>	



### 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 ) 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 'G' ON STD. DRG. NO. C2405; 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 'F' ON STD. DRG. NO. C2405.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

-	FORMER DRG. NO. C2406J.	Original Signed	03.2015
<b>REF.</b>	<b>REVISION</b>	<b>SIGNATURE</b>	<b>DATE</b>

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



**CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT**

**SCALE** 1 : 20

**DATE** JAN 1991

**DRAWING NO.**

**C2406 /2**

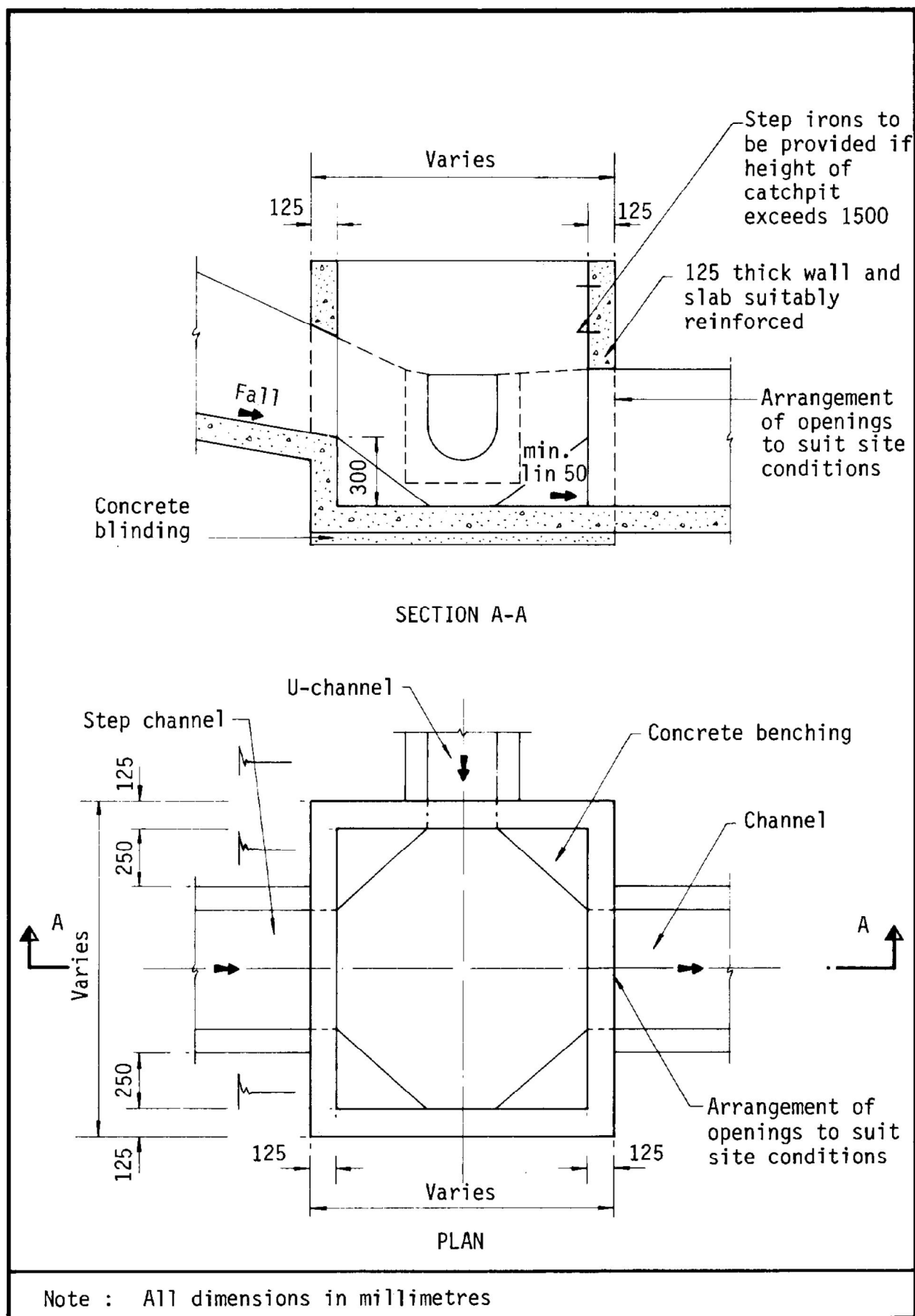
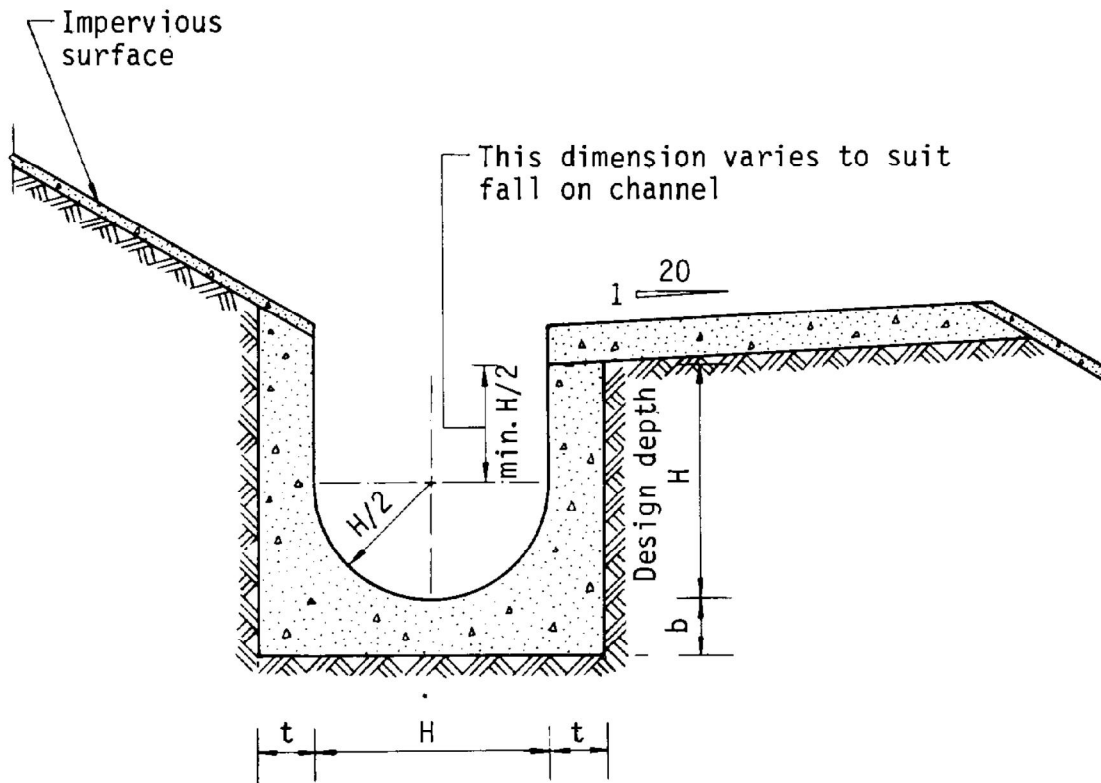


Figure 8.10 - Typical Details of Catchpits



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. &amp; 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)

<b>Surface</b>	<b>Best</b>	<b>Good</b>	<b>Fair</b>	<b>Bad</b>
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.