LIST OF APPENDICES

Appendix I

Summary of the affected business operators

Appendix I – Summary of the affected business premises

<table>
<tr><th colspan="11">Affected business premises</th></tr>
<tr><td>Tenant</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td><td>H</td><td rowspan="2">Road</td><td rowspan="2">Total</td></tr>
<tr><td>Name of tenant</td><td>Hunter Engineering Company</td><td>Zheng Ji Trading Limited</td><td>Sun Rich (China-Hong Kong) Transport Limited</td><td>Lightchin Development Limited</td><td>Fortune Logistics (HK) Company Limited</td><td>Fancy Spot Limited</td><td colspan="2">Hong Kong Multi Profit Development Limited</td></tr>
<tr><td rowspan="2">Location</td><td>Lots 360 (Part) and 444 (Part) in D.D. 52</td><td>Lots 351 (Part), 367 (Part), 368 RP (Part), 451 RP (Part), 452 (Part), 453 (Part), 454 S.A (Part) and 454 S.B RP in D.D. 52</td><td>Lots 351 (Part), 352 (Part), 364 (Part), 454 S.A (Part) in D.D. 52</td><td>Lots 356 (Part) and 357 (Part) in D.D. 52</td><td>Lots 352 (Part), 353 S.A (Part), 353 RP (Part), 354 (Part), 355 (Part), 357 (Part), 358 (Part), 362 (Part), 363 (Part), 370 (Part) and 1210 (Part) in D.D. 52</td><td>Lots 404 (Part), 429 (Part), 438 (Part), 439 (Part), 440 (Part), 441 (Part), 442 (Part) in D.D. 52</td><td>Lots 834 (Part), 835, 836, 837 and 838 in D.D. 105</td><td rowspan="2">Lots 362 RP (Part), 371 RP (Part) and 372 (Part) in D.D. 107</td><td rowspan="3">N/A</td><td rowspan="3">N/A</td></tr>
<tr><td colspan="6">Resumed by the Government in 2024</td><td>Resumed by the Government in 2025</td></tr>
<tr><td>Outline zoning plan (OZP)</td><td colspan="6">Approved Fanling North OZP No.: S/FLN/4</td><td>Draft San Tin Technopole OZP No.: S/STT/1</td><td>Approved Kam Tin North OZP No.: S/YL-KTN/11</td></tr>
<tr><td>Zoning</td><td>"Residential (Group B)"</td><td>"Residential (Group A)2", "Open Space" and area shown as 'Road'</td><td>"Residential (Group A)2" and area shown as 'Road'</td><td>"Residential (Group B)" and "Open Space"</td><td>"Residential (Group A)2", "Residential (Group B)" and "Open Space"</td><td>"Residential (Group B)"</td><td>"Other Specified Uses" annotated "Amenity Area" and "Open Space"</td><td>"Residential (Group A)" and "Government, Institution or Community"</td><td rowspan="4"></td><td rowspan="4"></td></tr>
<tr><td>Existing use</td><td>Vehicle Repair Workshop</td><td>Warehouse and Container Storage Yard</td><td>Logistics Centre</td><td>Warehouse and Open Storage</td><td>Logistics Centre and Container Storage Yard</td><td>Container Vehicle Park</td><td colspan="2">Warehouse and Open Storage</td></tr>
<tr><td>Existing premises area for each tenant</td><td>382 m^2 (about)</td><td>3,005 m^2 (about)</td><td>1,592 m^2 (about)</td><td>633 m^2 (about)</td><td>3,792 m^2 (about)</td><td>3,415 m^2 (about)</td><td>2,633 m^2 (about)</td><td>239 m^2 (about)</td><td>15,691 m^2 (about)</td></tr>
<tr><td colspan="11">Proposed relocation at the Site</td></tr>
<tr><td>Proposed premises area for each tenant</td><td>450 m^2 (about)</td><td>5,069 m^2 (about)</td><td>3,623 m^2 (about)</td><td>1,002 m^2 (about)</td><td>3,950 m^2 (about)</td><td>3,085 m^2 (about)</td><td colspan="2">2,943 m^2 (about)</td><td>3,041 m^2 (about)</td><td>23,163 m^2 (about)</td></tr>
<tr><td>No. of proposed structures</td><td>1</td><td>2</td><td>4</td><td>1</td><td>1</td><td rowspan="3">N/A</td><td colspan="2" rowspan="2">N/A</td><td rowspan="3">N/A</td><td>9</td></tr>
<tr><td>Gross floor area</td><td>108 m^2 (about)</td><td>440 m^2 (about)</td><td>880 m^2 (about)</td><td>100 m^2 (about)</td><td>72 m^2 (about)</td><td>1,600 m^2 (about)</td></tr>
<tr><td>Open storage area</td><td>N/A</td><td>2,503 m^2 (about)</td><td>466 m^2 (about)</td><td>240 m^2 (about)</td><td>2,747 m^2 (about)</td><td colspan="2">1,997 m^2 (about)</td><td>7,953 m^2 (about)</td></tr>
</table>

Appendix II

DIA report

accepted under the previous application

規 劃 署

沙田、大埔及北區規劃處
香港新界沙田上禾輋路一號
沙田政府合署
十三樓 1301-1314 室

Planning Department

Sha Tin, Tai Po & North
District Planning Office
Rooms 1301-1314, 13/F,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin ,
N.T., Hong Kong

來函檔號 Your Reference [redacted]
本署檔號 Our Reference ( ) in TPB/A/NE-HLH/77
電話號碼 Tel. No. : 2158 6220
傳真機號碼 Fax No. : 2691 2806

By Email and Fax [redacted]

[redacted]

19 February 2025

Dear Sir/Madam,

Proposed Temporary Container Storage Yard, Container Vehicle Park, Vehicle Repair Workshop, Logistics Centre, Warehouse and Open Storage of Miscellaneous Goods with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone, Various Lots in D.D. 87, Hung Lung Hang
(Compliance with Approval Condition (a) for Planning Application No. A/NE-HLH/77)

I refer to your submission received by this Office on 27.12.2024 and our interim reply dated 7.2.2025 for compliance with approval condition (a) in relation to the submission of a revised drainage impact assessment to the satisfaction of the Director of Drainage Services or of the Town Planning Board under the captioned planning application.

The Chief Engineer/Mainland North, Drainage Services Department (Contact person: Mr. WANG Xing, Samuel; Tel. No.: 2300 1135) has been consulted and considered approval condition (a) has been complied with. Her advisory comments are attached at **Appendix I**. Please proceed to implement the accepted flood mitigation measures and drainage facilities for compliance with approval condition (b).

Should you have any queries related to planning matters, please contact Ms. Shirley CHAN of this Office at 2158 6241.

Yours faithfully,

(Rico TSANG)
for Director of Planning

Appendix I

Comments of the Chief Engineer/Mainland North, Drainage Services Department (Contact person: Mr. WANG Xing, Samuel; Tel. No.: 2300 1135):

1. No works including landfilling and hard paving works which may induce adverse drainage impact should be carried out until completion of the proposed drainage facilities.

2. The applicant shall take all precautionary measures to prevent any disturbance, damage and pollution from the development to any parts of the existing drainage facilities, especially the Ping Yuen River, in the vicinity of the lots. In the event of any damage to the existing drainage facilities, the applicant shall be held responsible for the cost of all necessary repair works, compensation and any other consequences arising there from. The applicant shall place all the proposed works at least 3m away from the top of the bank of Ping Yuen River at all the time.

3. The proposed storage tank was not shown on Appendix C of the Drainage Impact Assessment. The development shall ensure the proposed storage tank is consistent with the proposed layout of the development.

4. The applicant is required to construct and maintain the proposed drainage works properly and rectify the drainage systems if they are found to be inadequate or ineffective during operation. Regular maintenance should be carried out by the applicant to avoid blockage of drain. 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 systems. For works undertaken outside the lot boundary, prior consent and agreement from District Lands Officer/North, Lands Department and/or relevant private lot owners should be sought.

5. The applicant is reminded that all existing flow paths as well as the run-off falling onto and passing through the site should be intercepted and disposed of via proper discharge points. The applicant shall also ensure that no works, including any site formation works, shall be carried out as may adversely interfere with the free flow condition of the existing drain, channels and watercourses on or in the vicinity of the subject site any time during or after the works.

6. No adverse drainage impact to the adjoining areas should be induced during the development/construction period, the applicant shall design and implement interim stage mitigation measures if deemed necessary.

7. The applicant shall allow all time free access for the Government and its agent to conduct site inspection on his completed drainage works.

8. The applicant should also be advised that the limited desk-top checking by the Government on the drainage impact assessment covers only the fundamental aspects of the drainage design which will by no means relieve his obligations to ensure that (i) the proposed drainage works will not cause any adverse drainage or environmental impacts in the vicinity; and (ii) the proposed drainage works and the downstream drainage systems have the adequate capacity and are in good conditions to receive the flows collected from the applicant's lots and all upstream catchments.

R-Riches
Property Consultants Ltd.

盈卓物業
顧問有限公司

Our Ref.: [redacted]
Your Ref.: TPB/A/NE-HLH/77

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

By Email

27 December 2024

Dear Sir,

Compliance with Approval Condition (a)

Proposed Temporary Container Storage Yard, Container Vehicle Park, Vehicle Repair Workshop, Logistics Centre, Warehouse and Open Storage of Miscellaneous Goods with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone,
Various Lots in D.D. 87 and Adjoining Government Land, Hung Lung Hang, New Territories

(S.16 Planning Application No. A/NE-HLH/77)

We write to submit a response-to-comment table and a revised drainage impact assessment (DIA) *(enclosed)* for compliance with approval condition (a) of the subject application, i.e. *the submission of a revised DIA*.

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

Yours faithfully,

For and on behalf of
R-riches Property Consultants Limited

[redacted]
Town Planner

cc DPO/STN, PlanD (Attn.: Ms. Shirley CHAN email: skkchan@pland.gov.hk)

Proposed Temporary Container Storage Yard, Container Vehicle Park, Vehicle Repair Workshop, Logistics Centre, Warehouse and Open Storage of Miscellaneous Goods with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land

DSD Comment on DIA Report

Item	Comments	Responses
1	Para. 3.1.3 (6): It appears that the 240 mins duration should be read as 120 mins.	Noted. Para.3.1.3 (6) is updated accordingly.
2	Figure 3 & Figure 5	
a	please advise the details at CP2.9 and clarify how the flow is distributed to the storage tank and downstream CP2.11;	The channel connecting from CP6.7 to storage tank is a overflow channel to allow more effective storage from channels to the tank. The channel invert level is added on Figure 3 for reference.
b	please advise the existing invert level of Ping Yuen River at the proposed discharge point;	Please note according to the CEDD, GEO Spatial Data, the invert level of Ping Yuen River at discharge point is about + 10.52 mPD.
c	please indicate the location of penstock at the plan view. A section view shall also be provided; and	Noted. Please refer to updated Figure 5 for location and section of penstock.
d	please review if the typical details in Appendix B can be applied to CP2.11, where the U-channel of 1050mm width will be connected to the catchpit; and	Note is added in Figure 3 “FOR CATCHPIT WITH CONNECTION CHANNEL LARGER THAN 900mm, THE STRUCTURAL DESIGN SHALL BE REVIEWED BY ENGINEER.“

3	as illustrated from Appendix D. there are existing operations and dwelling in the vicinity of the proposed development. The applicant shall ensure that the existing flow path/streamcourse related to the rainwater discharge of the existing operations should not be adversely impacted by the proposed development. Should there be existing streamcourse identified at the application site boundary, separate intake point should be reserved. Also, please advise if the existing water pond shown in the view 4 is within the application site area.	Noted. The water body in view 4 is part of the Ping Yuen River outside application site area. 

PROPOSED TEMPORARY OPEN STORAGE AND WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF YEARS AND ASSOCIATED FILLING OF LAND, VARIOUS LOTS IN D.D. 87, HUNG, LUNG HANG, TA KWU LING, NEW TERRITORIES

Drainage Impact Assessment Report

December 2024

Table of Content

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1. Introduction

1.1 Background

1.1.1 The applicant seeks planning permission from the Town Planning Board (the Board) under Section (S.) 16 of the Town Planning Ordinance (Cap. 131)(the Ordinance) to use Various Lots in D.D. 78 at Ta Kwu Ling, for 'Proposed Temporary Open Storage and Ware House (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of years and Associated Filling of Land, Various Lots in D.D. 87, Ta Kwu Ling, New Territories'.

1.1.2 This Drainage Impact Assessment aim to support the development in drainage aspect.

1.2 The Site

1.2.1 The Application Site situate between Ping Yuen River at the west and local village track at Ta Kwu Ling. It has an area of about 23,163 m^2. The site is partially hard-paved at the south-east corner and the remaining area is mainly covered by vegetation. The site location plan is shown in **Figure 1**.

1.2.2 The existing site ground levels is about +11.7 mPD at the north to +15.2 mPD at the south. The site is proposed to be filled to +11.9 mPD to + 15.4 mPD. The site is generally falling towards to the north and to the west to Ping Yuen River.

1.2.3 Ping Yuen River is beside the west of the site which flowing toward north. Existing Drainage Plan are shown in **Figure 2** for reference.

2. Development Proposal

2.1 The Proposed Development

2.1.1 The total site area is approximately 23,163 m^2. The indicative development schedule is summarized in **Table 1** below for technical assessment purpose. The catchment plan is shown in **Figure 4**.

Proposed Development	
Total Site Area (m^2)	23,163
Paved Area (m^2) Assume all proposed site area as paved area for assessment purpose	23,163

Table 1 - Key Development Parameters

3. Assessment Criteria

3.1.1 The Recommended Design Return Period based on Flood Level from SDM (Table 10) is adopted for this DIA. The recommendation is summarized in **Table 2** below.

Description	Design Return Periods
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 System	200 Years
Urban Drainage Branch System	50 Years

Table 2– Design Return Periods under SDM

3.1.2 The proposed drainage system intended to collect runoff from internal site and external catchment. 1 in 10 years return period is adopted for the drainage design.

3.1.3 Stormwater drainage design will be carried out in accordance with the criteria set out in the Stormwater Drainage Manual published by DSD. The proposed design criteria to be adopted for design of this stormwater drainage system and factors which have been considered are summarised below.

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 North District Zone. Therefore, for 10 years return period, the following values are adopted.

a	=	454.9
b	=	3.44
c	=	0.412

(Corrigendum No.1/2024)

2. The peak runoff is calculated by the Rational Method
   i.e. $Q_p = 0.278CiA$

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

3. The run-off coefficient (C) of surface runoff are taken as follows:

   1. Paved Area: C = 0.95
   2. Unpaved Area: C = 0.35

4. Manning's Equation is used for calculation of velocity of flow inside the channels:

Manning's Equation: $v = \frac{R^{\frac{1}{6}}}{n} R^{\frac{1}{2}} S_f^{\frac{1}{2}}$

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:

Colebrook-White Equation: $\underline{v} = -\sqrt{32gRS}\ log\ log\ (\frac{k_s}{14.8R} + \frac{1.255v}{R\sqrt{32gRS_f}})$

where,

V	=	velocity of the pipe flow (m/s)
S_f	=	hydraulic gradient
k_f	=	roughness value (m)
v	=	kinematics viscosity of fluid
D	=	pipe diameter (m)
R	=	hydraulic radius (m)

6. Volume of Drainage Storage Tank:

Extreme Rainfall intensity (1 in 10 yr) at North District Area for rainfall duration of 120 mins, I = 63.2 mm/hr

(Corrigendum_No.1/2024)

2 hours rainfall duration is adopted

4. Proposed Drainage System and Storage Tank

4.1. Proposed Storage Tank

4.1.1 The storage tank is proposed to collect the additional runoff for a 1 in 10 year rainfall event for 2 hours. As per the design for volume of storage tank shown in **Appendix A2**, the total storage volume of the storage tank is not less than 1,697 m^3. When the storage tank is full during rainfall event, the rainwater would be overflow to Ping Yuen River at the west.

4.1.2 During rainstorm event, runoff would be discharged to existing Ping Yuen River through 600 mm short pipe by orifices flow in which the flow rate would not be more than the existing flow. Please refer to the checking of existing flow and orifices flow in **Appendix A1** and **Appendix A3**. When the collected runoff built up water level above IL of the channel, which connect to proposed storage tank, the additional flow would be storage in the tank. The schematic discharge arrange of storage tank are shown in **Figure 3 and 5**.

4.1.3 The stored stormwater will be reused as far as practicable. An additional Channel UCB with penstock is proposed to connect from the storage tank to Ping Yuen River at invert level. The operation mode of penstock is as followings:-

I. The penstock to be closed and the storage tank to be emptied before rainfall event.

II. The penstock to be kept close during rainfall event.

III. Withing 8 hours after rainfall event, by opening the penstock, the water to be drained off to the Ping Yuen River by gravity. The penstock to be closed after drain off.

Hence, there is no additional flooding risk caused by the Proposed Development.

4.2. Proposed UChannel

4.1.4 Proposed U-channels are designed for collection of runoff within and near the Development Site. Please refer to the **Figure 4** for proposed catchment plan. The design calculations of proposed UChannels are shown in **Appendix A1**.

4.1.5 The alignment, size, gradient and details of the proposed drains are shown in **Figure 3**.

4.1.6 The reference standard drawings of drains are shown in **Appendix B**.

5. Conclusion

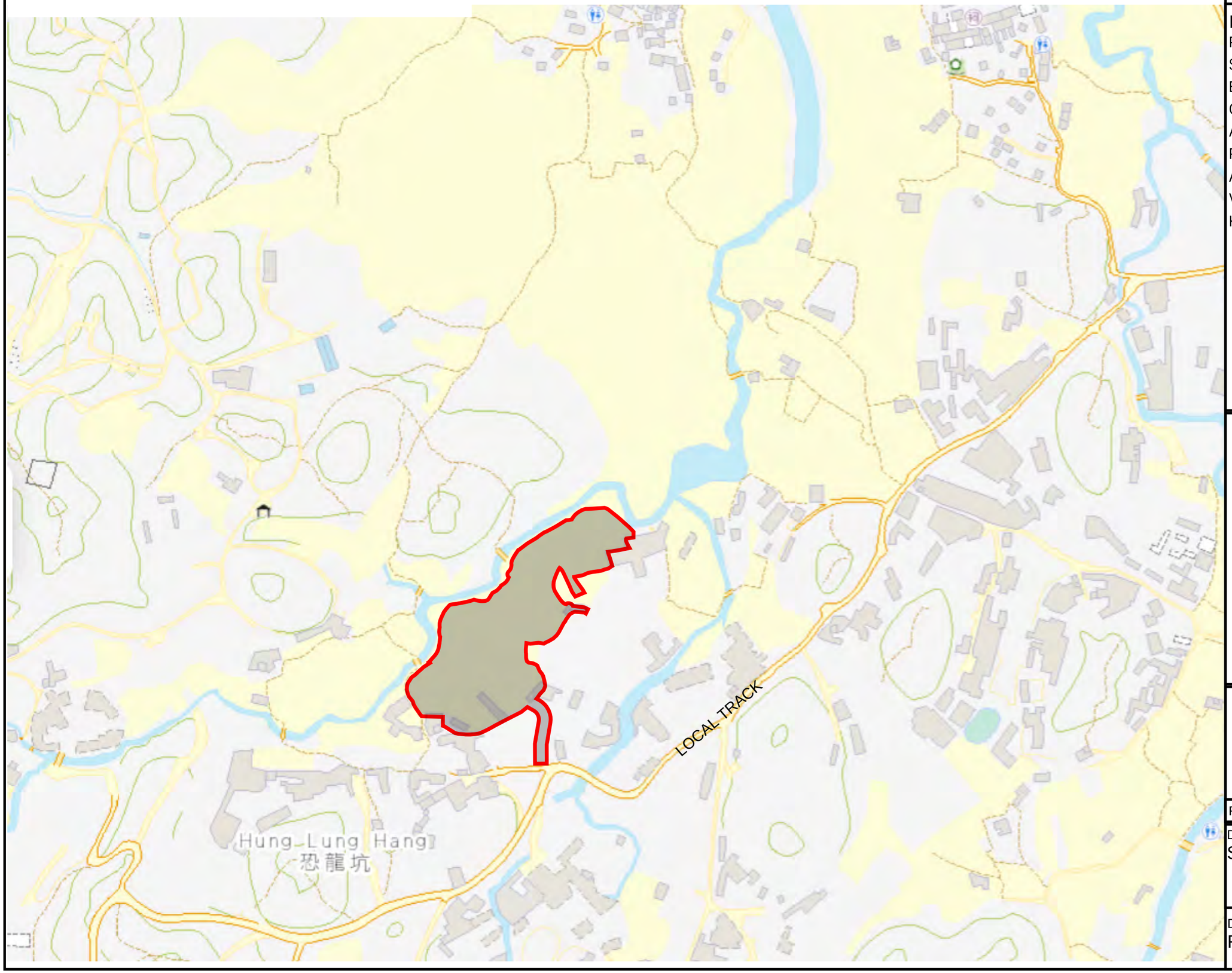
5.1.1 Drainage impact assessment has been conducted for the Proposed Development. With implementation of proposed drainage system and storage tank, no adverse drainage impact is anticipated.

- End of Text -

FIGURES

LEGEND:

APPLICATION SITE BOUNDARY
(FOR IDENTIFICATION PURPOSE ONLY)

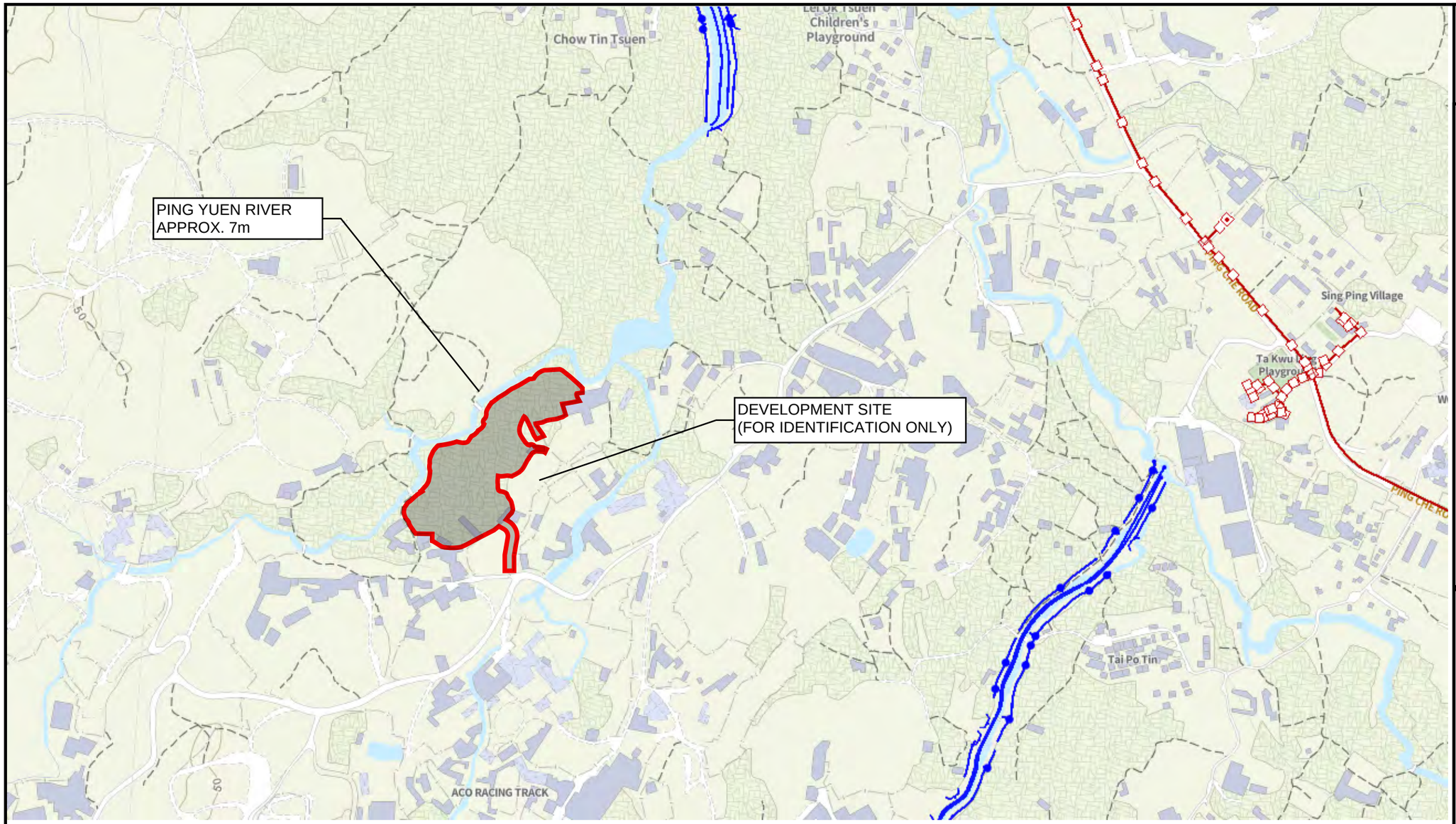


PROJECT:
PROPOSED TEMPORARY OPEN STORAGE AND WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF YEARS AND ASSOCIATED FILLING OF LAND, VARIOUS LOTS IN D.D. 87, TA KWU LING, NEW TERRITORIES

REV	DESCRIPTION	DATE

DRAWING TITLE
SITE LOCATION PLAN

DRAWING NUMBER
FIGURE 1



LEGEND:

Combined Manhole	Tapping Point (Sewer)	Tapping Point (Storm)	Tunnel Protection Zone (100m / 200m)	Pipe (Combined)	Sand Trap
Overflow (Combined)	Sewer Terminal Manhole	Storm Water Terminal Manhole	Tunnel Protection Zone (General Range)	Interface Valve Chamber	Pipe (Storm)
Pipe (Combined)	Catchpit	Tunnel Protection Zone (100m / 200m)	Tunnel / Box Culvert (Sewer)	Sewer Manhole	Outlet
Interface Valve Chamber	Inlet	Tunnel Protection Zone (General Range)	Tunnel / Box Culvert (Storm)	Oil / Petrol Interceptor	Storm Water Manhole
Sewer Manhole	Storm Water Manhole	Tunnel / Box Culvert (Sewer)		Overflow (Sewer)	Inlet
Oil / Petrol Interceptor	Outlet	Tunnel / Box Culvert (Storm)		Pipe (Sewer)	Tapping Point (Sewer)
Overflow (Sewer)	Pipe (Storm)			Tapping Point (Storm)	Sewer Terminal Manhole
Pipe (Sewer)	Sand Trap			Storm Water Terminal Manhole	Catchpit

APPLICATION SITE BOUNDARY
(FOR IDENTIFICATION PURPOSE ONLY)

PROJECT:
PROPOSED TEMPORARY OPEN STORAGE AND WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF YEARS AND ASSOCIATED FILLING OF LAND, VARIOUS LOTS IN D.D. 87, TA KWU LING, NEW TERRITORIES

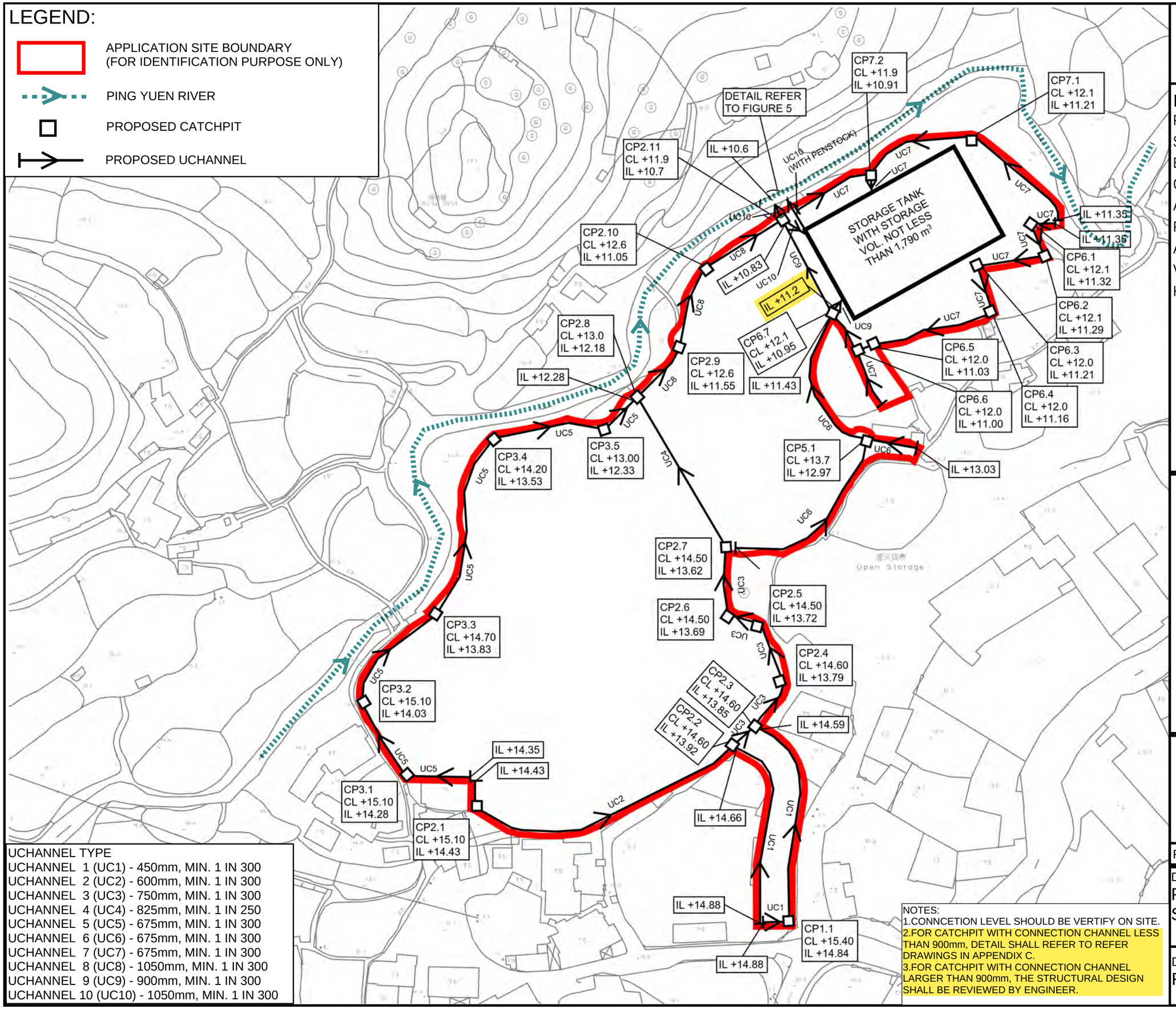
REV	DESCRIPTION	DATE

DRAWING TITLE
EXISTING DRAINAGE PLAN

DRAWING NUMBER
FIGURE 2

LEGEND:

- APPLICATION SITE BOUNDARY (FOR IDENTIFICATION PURPOSE ONLY)
- PING YUEN RIVER
- PROPOSED CATCHPIT
- PROPOSED UCHANNEL



UCHANNEL TYPE
UCHANNEL 1 (UC1) - 450mm, MIN. 1 IN 300
UCHANNEL 2 (UC2) - 600mm, MIN. 1 IN 300
UCHANNEL 3 (UC3) - 750mm, MIN. 1 IN 300
UCHANNEL 4 (UC4) - 825mm, MIN. 1 IN 250
UCHANNEL 5 (UC5) - 675mm, MIN. 1 IN 300
UCHANNEL 6 (UC6) - 675mm, MIN. 1 IN 300
UCHANNEL 7 (UC7) - 675mm, MIN. 1 IN 300
UCHANNEL 8 (UC8) - 1050mm, MIN. 1 IN 300
UCHANNEL 9 (UC9) - 900mm, MIN. 1 IN 300
UCHANNEL 10 (UC10) - 1050mm, MIN. 1 IN 300

NOTES:
1.CONNCETION LEVEL SHOULD BE VERTIFY ON SITE.
2.FOR CATCHPIT WITH CONNECTION CHANNEL LESS THAN 900mm, DETAIL SHALL REFER TO REFER DRAWINGS IN APPENDIX C.
3.FOR CATCHPIT WITH CONNECTION CHANNEL LARGER THAN 900mm, THE STRUCTURAL DESIGN SHALL BE REVIEWED BY ENGINEER.

PROJECT:
PROPOSED TEMPORARY OPEN STORAGE AND WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF YEARS AND ASSOCIATED FILLING OF LAND, VARIOUS LOTS IN D.D. 87, TA KWU LING, NEW TERRITORIES

REV	DESCRIPTION	DATE

DRAWING TITLE
PROPOSED DRAINAGE SYSTEM

DRAWING NUMBER
FIGURE 3

LEGEND:

APPLICATION SITE BOUNDARY
(FOR IDENTIFICATION PURPOSE ONLY)

FALL

+11.7 EXISTING GROUND LEVEL

+14.4 EXISTING GROUND LEVEL

ZONE B6
527 m²
(90% PAVED)

ZONE A4
4,611 m²

+12.5
+12.1

+12.0
+11.7

ZONE B5
4,646m²
(90% PAVED)

+14.4
+14.2

ZONE A3
4,979 m²

ZONE B4
3,390 m²
(90% PAVED)

+13.8
+14.0

ZONE A2a
6,014 m²

+14.5
+14.3

ZONE A2b
6,737 m²

ZONE B3
3,293 m²
(90% PAVED)

+14.4
+14.6

+14.9
+15.1

ZONE B2
1,538 m²
(100% PAVED)

ZONE B1b
5,132 m²
(100% PAVED)

ZONE A1
822 m²

ZONE B1a
782 m²
(100% PAVED)

NOTE:
1. CONNECTION LEVELSHOULD BE VERTIFIED ON SITE.

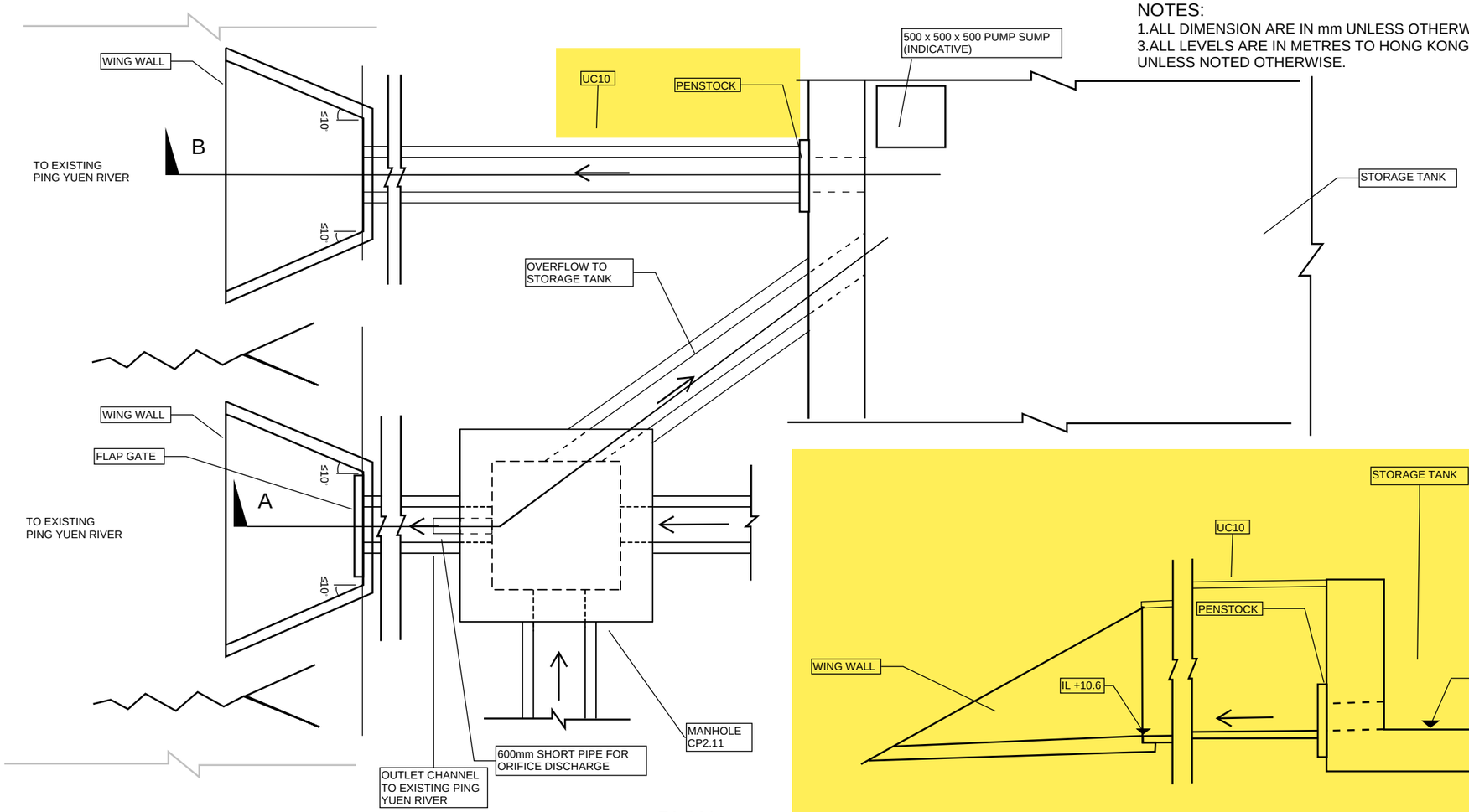
PROJECT:
PROPOSED TEMPORARY OPEN STORAGE AND WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF YEARS AND ASSOCIATED FILLING OF LAND, VARIOUS LOTS IN D.D. 87, TA KWU LING, NEW TERRITORIES

REV	DESCRIPTION	DATE

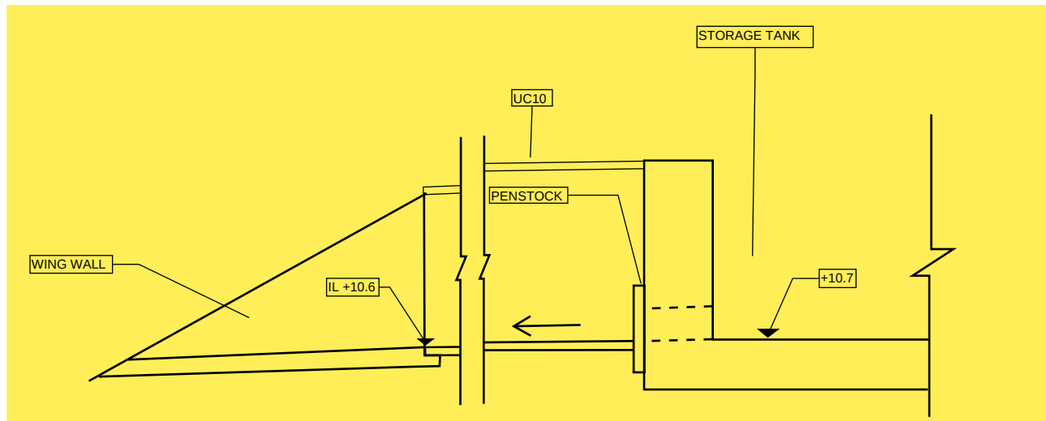
DRAWING TITLE
PROPOSED
CATCHMENT PLAN

DRAWING NUMBER
FIGURE 4

NOTES:
1.ALL DIMENSION ARE IN mm UNLESS OTHERWISE STATED.
3.ALL LEVELS ARE IN METRES TO HONG KONG PRINCIPAL DATUM (m.P.D.) UNLESS NOTED OTHERWISE.

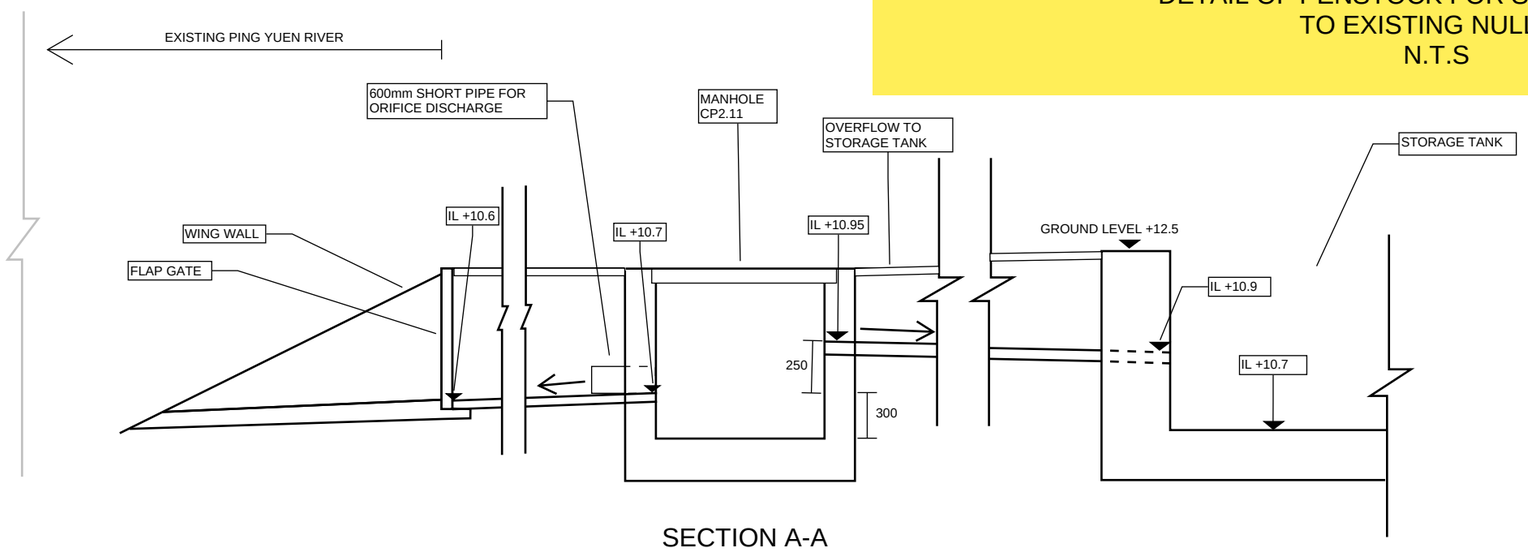


PLAN



SECTION B-B

DETAIL OF PENSTOCK FOR STORAGE TANK
TO EXISTING NULLAH
N.T.S



SECTION A-A

SCHEMATIC DISCHARGE PLAN AND SECTION BETWEEN CP2.11 AND
STROAGE TANK TO PING YUEN RIVER
N.T.S

PROJECT:
PROPOSED TEMPORARY OPEN STORAGE AND WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF YEARS AND ASSOCIATED FILLING OF LAND, VARIOUS LOTS IN D.D. 87, TA KWU LING, NEW TERRITORIES

REV	DESCRIPTION	DATE

DRAWING TITLE
SCHEMATIC DISCHARGE PLAN AND SECTION OF STROAGE TANK

DRAWING NUMBER
FIGURE 5

APPENDIX

Appendix A1 - Channel Design Calculation

(n = 0.016)

U Channel 1 (Zone A1 + B2)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	882 + 1538 x 1		2420	(m2)
Unpaved Area	1538 x 0 =		0	(m2)
Total Equivalent Area	2420 x 0.95 + 0 x 0.35 =		2299	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 2299 x 189 / 1000000 =		0.121	m3/s

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

U Channel				
Channel Size			450	(mm)
Gradient		1 in	300	
Area	π x 0.45^2 /8 + 0.45 x 0.45/2 =		0.181	(m2)
Wetted Perimeter	π x 0.45 / 2 + 0.45/2 x 2 =		1.157	(m)
R	0.181 / 1.157 =		0.234	(m)
Velocity			1.05	m/s
Capacity			0.189	m3/s

Utilization 0.121 / 0.189 = **63.80** % OK (less than 90%, for 10% siltation allowance)

U Channel 2 (Zone B1b)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	5132 =		5132	(m2)
Unpaved Area			0	(m2)
Total Equivalent Area	5132 x 0.95 + 0 x 0.35 =		4875	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 0 x 189 / 1000000 =		0.256	m3/s

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

U Channel				
Channel Size			600	(mm)
Gradient		1 in	300	
Area	π x 0.6^2 /8 + 0.6 x 0.6/2 =		0.321	(m2)
Wetted Perimeter	π x 0.6 / 2 + 0.6/2 x 2 =		1.542	(m)
R	0.321 / 1.542 =		0.208	(m)
Velocity			1.27	m/s
Capacity			0.408	m3/s

Utilization 0.256 / 0.408 = **62.82** % OK (less than 90%, for 10% siltation allowance)

U Channel 3 (Zone [A1 + B2] + B1b + B3)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	2420 + 5132 + 3293 x 0.9 =		10516	(m2)
Unpaved Area	3293 x 0.1 =		329	(m2)
Total Equivalent Area	10516 x 0.95 + 329 x 0.35 =		10105	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 10105 x 189 / 1000000 =		0.531	m3/s

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

U Channel				
Channel Size			750	(mm)
Gradient		1 in	300	
Area	π x 0.75^2 /8 + 0.75 x 0.75/2 =		0.502	(m2)
Wetted Perimeter	π x 0.75 / 2 + 0.75/2 x 2 =		1.928	(m)
R	0.502 / 1.928 =		0.260	(m)
Velocity			1.47	m/s
Capacity			0.739	m3/s

Utilization 0.531 / 0.739 = **71.82** % OK (less than 90%, for 10% siltation allowance)

U Channel 4 (Zone [A1 + B2 + B1b + B3] + A2b)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	10516 + 6737 x 1 =		17253	(m2)
Unpaved Area	329 =		329	(m2)
Total Equivalent Area	17253 x 0.95 + 329 x 0.35 =		16505	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 16505 x 189 / 1000000 =		0.867	m3/s

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

U Channel				
Channel Size			825	(mm)
Gradient		1 in	250	
Area	π x 0.83^2 /8 + 0.83 x 0.83/2 =		0.608	(m2)
Wetted Perimeter	π x 0.83 / 2 + 0.83/2 x 2 =		2.121	(m)
R	0.608 / 2.121 =		0.286	(m)
Velocity			1.72	m/s
Capacity			1.044	m3/s

Utilization 0.867 / 1.044 = **83.05** % OK (less than 90%, for 10% siltation allowance)

U Channel 5 (Zone A2a + B1a)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	6014 + 782 =		6796	(m2)
Unpaved Area			0	(m2)
Total Equivalent Area	6796 x 0.95 + 0 x 0.35 =		6456	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 6456 x 189 / 1000000 =		0.339	m3/s

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

U Channel				
Channel Size			675	(mm)
Gradient		1 in	300	
Area	π x 0.68^2 /8 + 0.68 x 0.68/2 =		0.407	(m2)
Wetted Perimeter	π x 0.68 / 2 + 0.68/2 x 2 =		1.735	(m)
R	0.407 / 1.735 =		0.234	(m)
Velocity			1.37	m/s
Capacity			0.558	m3/s

Utilization 0.339 / 0.558 = **60.77** % OK (less than 90%, for 10% siltation allowance)

U Channel 6 (Zone A3 + B4 + B6)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	4979 + 3390 x 0.9 + 527 x 0.9 =		8504	(m2)
Unpaved Area	0 + 3390 x 0.1 + 527 x 0.1 =		392	(m2)
Total Equivalent Area	8504 x 0.95 + 392 x 0.35 =		8216	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 8216 x 189 / 1000000 =		0.431	m3/s

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

U Channel				
Channel Size			675	(mm)
Gradient		1 in	300	
Area	π x 0.68^2 /8 + 0.68 x 0.68/2 =		0.407	(m2)
Wetted Perimeter	π x 0.68 / 2 + 0.68/2 x 2 =		1.735	(m)
R	0.407 / 1.735 =		0.234	(m)
Velocity			1.37	m/s
Capacity			0.558	m3/s

Utilization 0.431 / 0.558 = **77.34** % OK (less than 90%, for 10% siltation allowance)

U Channel 7 (Zone A4 + B5)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	4611 + 4646 x 0.9 =		8792	(m2)
Unpaved Area	0 + 4646 x 0.1 =		465	(m2)
Total Equivalent Area	8792 x 0.95 + 465 x 0.35 =		8515	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 8515 x 189 / 1000000 =		0.447	m3/s

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

U Channel				
Channel Size			675	(mm)
Gradient		1 in	300	
Area	π x 0.68^2 /8 + 0.68 x 0.68/2 =		0.407	(m2)
Wetted Perimeter	π x 0.68 / 2 + 0.68/2 x 2 =		1.735	(m)
R	0.407 / 1.735 =		0.234	(m)
Velocity			1.37	m/s
Capacity			0.558	m3/s

Utilization 0.447 / 0.558 = **80.15** % OK (less than 90%, for 10% siltation allowance)

U Channel 8 (Zone [A1 + B2 + B1b + B3 + A2b] + [A2a + B1a] + A3)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	17253 + 6796 + 4979 x 1=		29028	(m2)
Unpaved Area	329 + 0 + 4979 x 0=		329	(m2)
Total Equivalent Area	29028 x 0.95 + 329 x 0.35 =		27692	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 27692 x 189 / 1000000 =		1.454	m3/s

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

U Channel				
Channel Size			1050	(mm)
Gradient		1 in	300	
Area	π x 1.05^2 /8 + 1.05 x 1.05/2 =		0.984	(m2)
Wetted Perimeter	π x 1.05 / 2 + 1.05/2 x 2 =		2.699	(m)
R	0.984 / 2.699 =		0.365	(m)
Velocity			1.84	m/s
Capacity			1.813	m3/s

Utilization 1.454 / 1.813 = **80.24** % OK (less than 90%, for 10% siltation allowance)

U Channel 9 (Zone [A3 + B4 + B6] + [A4 + B5])

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	8504 + 8792 =		17297	(m2)
Unpaved Area	392 + 465 =		856	(m2)
Total Equivalent Area	17297 x 0.95 + 856 x 0.35 =		16732	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 16732 x 189 / 1000000 =		0.879	m3/s

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

U Channel				
Channel Size			900	(mm)
Gradient		1 in	300	
Area	π x 0.9^2 /8 + 0.9 x 0.9/2 =		0.723	(m2)
Wetted Perimeter	π x 0.9 / 2 + 0.9/2 x 2 =		2.314	(m)
R	0.723 / 2.314 =		0.313	(m)
Velocity			1.66	m/s
Capacity			1.202	m3/s

Utilization 0.879 / 1.202 = **73.13** % OK (less than 90%, for 10% siltation allowance)

U Channel 10 (Sum of catchment of U Channel 8 and 9 - Area A3) Remark: Area A3 double counted

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	29028 + 17297 - 4979 =		41345	(m2)
Unpaved Area	329 + 856 =		1186	(m2)
Total Equivalent Area	41345 x 0.95 + 1186 x 0.35 =		39693	(m2)
Time of Concentration			5	min
Rainfall Intensity, I *			189	mm/hr
Design Discharge Rate, Q	0.278 x 39693 x 189 / 1000000 =		2.085	m3/s

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

Refer to Appendix A3 : Orifice Flow + Overflow to Storage Tank > Post Development Flow of the Site OK

Flow Generated Before the Development

Runoff Estimation	***Before the Development (with External Catchment)***				
Design Return Period		1 in	10	years	
Paved Area	822 + 782 + 5132 + 1538 + (3293+3390+4646+527) x 0.9=		18944	(m2)	Catchment A1 (822m2) is paved before development
Unpaved Area	22341 + (3293+3390+4646+527) x 0.1=		23527	(m2)	Other Area (22341m2) is unpaved before the development
Total Equivalent Area	18944 x 0.95 + 23527 x 0.35 =		26231	(m2)	
Time of Concentration			5	min	
Rainfall Intensity, I *			189	mm/hr	
Design Discharge Rate, Q	0.278 x 26231 x 189 / 1000000 =		1.378	m3/s	

Appendix A2 - Volume Required for Stormwater Storage Tank

Area of Site	23,163	m^2		
Assume change of pavement ratio before and after development				(Catchment A1 is paved before Development, about 3.5% of site area)
From 3.5% to 100% Paved				
Rainfall intensity (1 in 10 yr) I =	63.2	mm/hr	With Reference to Table 2d of SDM 2018	(Corrigendum No.1/2024)
	2		hours rainfall duration is adopted	

Pre-Development Volume of Runoff in 2 hours

Paved Area	23163 x 0.04 =	810.705	m^2
Unpaved Area	23163 x (1 - 0.04) =	22352.3	m^2
Total Equivalent Area	811 x 0.95 + 22352 x 0.35=	8593.5	m^2
Rainfall Intensity, I		63.2	mm/hr
Design Discharge Rate, Q	0.278 x 8593 x 63 / 1000000 =	0.151	m^3/s
Volume of Runoff in 2 hours	0.151 x 2 x 60 x 60 =	1,087	m^3

Post-Development Volume of Runoff in 2 hours

Paved Area	(23163 -0) x 1 =	23163	m^2
Unpaved Area	23163 x (1 - 1) =	0	m^2
Total Equivalent Area	23163 x 0.95 + 0 x 0.35 + 0 x 0.65=	22004.9	m^2
Rainfall Intensity, I		63.2	mm/hr
Design Discharge Rate, Q	0.278 x 22005 x 63 / 1000000 =	0.387	m^3/s
Volume of Runoff in 2 hours	0.387 x 2 x 60 x 60 =	2,784	m^3

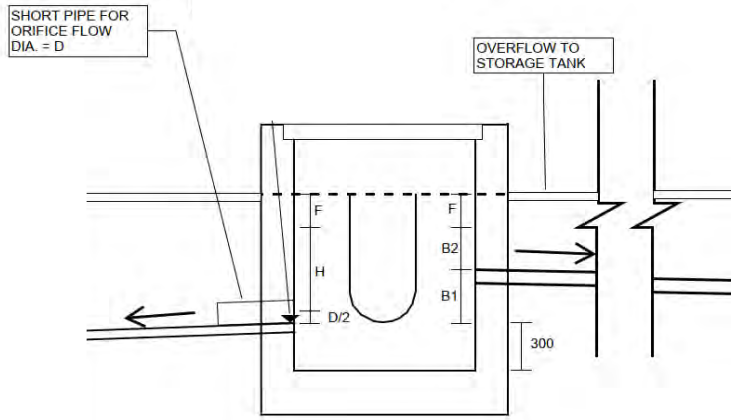
Increase in Runoff Volume (2 hours)	2784 - 1087 =	1,697	m^3

Proposed Storage Tank	Volume	1,700	m^3

Provide Storage Tank	Area	= 32 x 55 =	1,760	m^2
	Depth	=12.5-0.8-10.7	1.00	m (assume GL to soffit is 0.8m)
	Volume	=	1,760	m^3 (see Figure 3 and Figure 5)

Appendix A3 - Orifices Flow at CP2.11 to Existing Ping Yuen River

$$Q = C_d \times A \times \sqrt{2gH}$$



Given F + H +D/2 = 1.60 m

Calculated Orifice Flow Q	Coefficient of discharge Cd	Mean center line H	Diameter of the orifice D	Area of orifice A	Freebroad F
m3/s		m	mm	m2	m
1.027	0.820	1.000	600	0.283	0.30

Q <= Pre Development Flow (with external catchment) = 1.378 OK
See Appendix A1

OverFlow Channel to Storage Tank (UC10)		
Channel Size (B2)	Gradient	Design Capacity
mm	1 in	m3/s
1050	300	1.81

Post Development Flow of the Site
m3/s
2.085

(see Appendix A1)

Checking if [Orifices Flow + OverFlow to Strage Tank] >= Post Development Flow of the Site

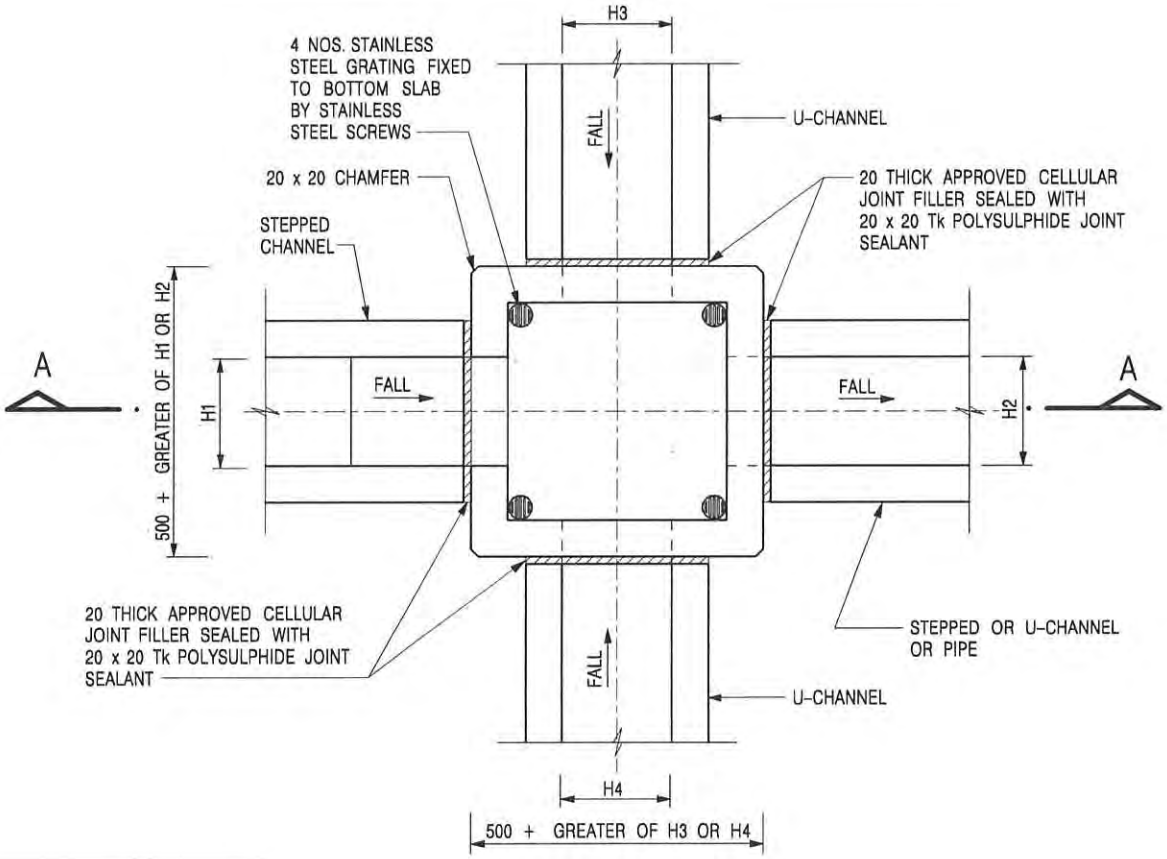
1.813 + 1.027 = 2.840 >= 2.085 OK

Flow/ Cap = 2.085 / 2.84 = 73%

B1 = H + D/2 - B2
= 250 mm

Provide **600** mm short pipe at outlet to Existing Ping Yuen River

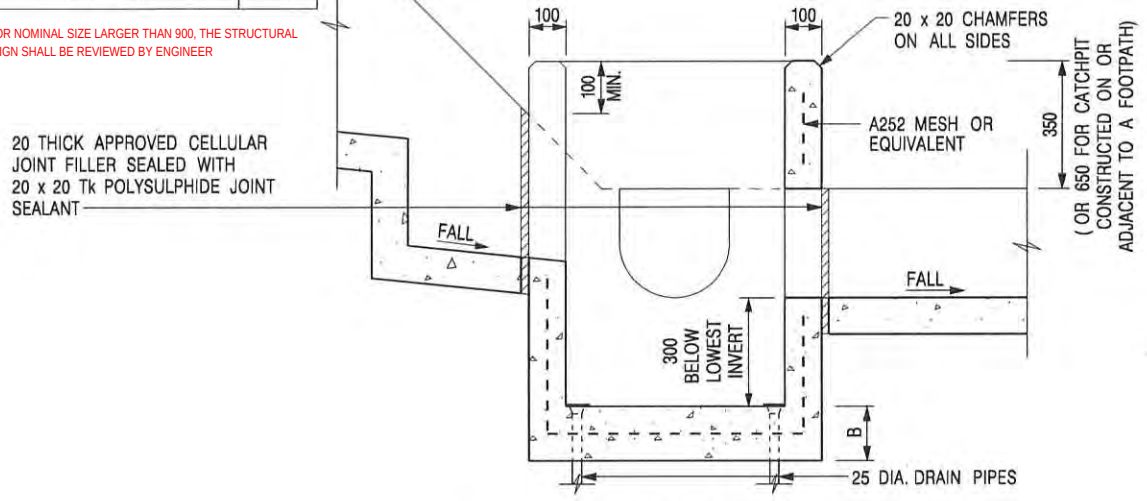
Appendix B - Reference Drawings



PLAN

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

* FOR NOMINAL SIZE LARGER THAN 900, THE STRUCTURAL DESIGN SHALL BE REVIEWED BY ENGINEER



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)

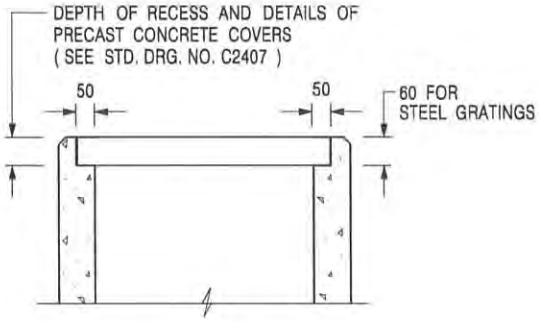
CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO. C2406 /1

卓越工程 建設香港 We Engineer Hong Kong's Development



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

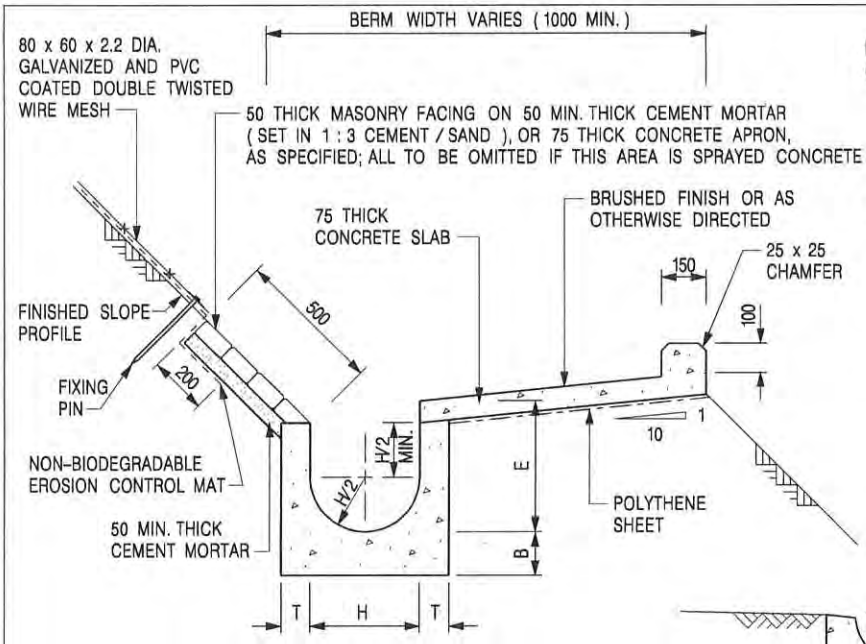
CATCHPIT WITH TRAP (SHEET 2 OF 2)

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

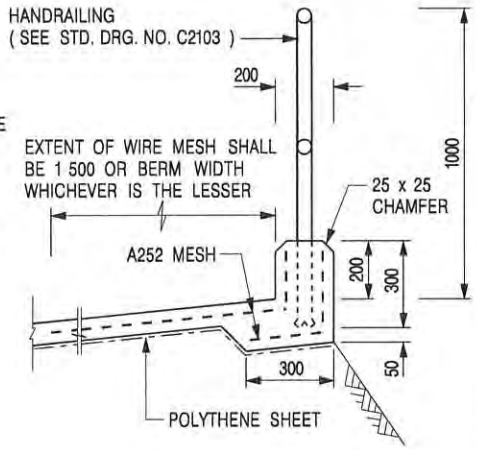
SCALE 1 : 20

DATE JAN 1991

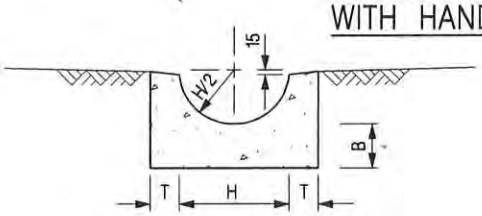
DRAWING NO. C2406 /2A



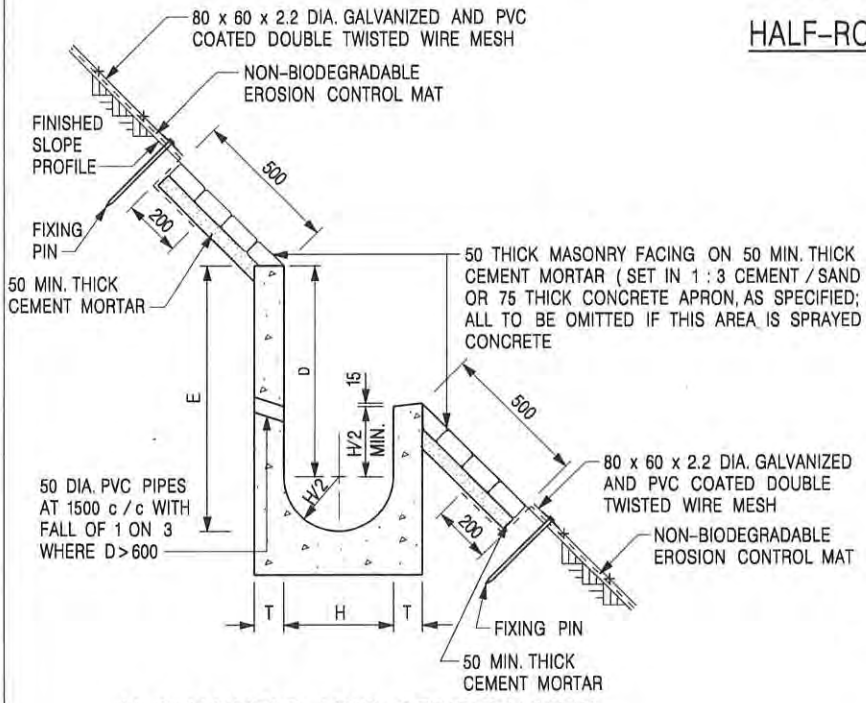
U-CHANNELS CONSTRUCTED ON BERM



DETAILS OF BERM WITH HANDRAILING



HALF-ROUND CHANNEL



U-CHANNELS NOT CONSTRUCTED ON BERM

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE TO BE GRADE 20 / 20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2, F2 OR BRUSHED FINISH AS DIRECTED.
4. SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM, SEE STD. DRG. NO. C2413 FOR DETAILS.
5. JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS, ETC. TO BE ON THE SAME ALIGNMENT.
6. FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
7. BIODEGRADABLE EROSION CONTROL MAT IF REQUIRED, SEE STD. DRG. NO. C2511/1E.
8. CONCRETE TO BE COLOURED AS SPECIFIED.
9. CONCRETE U-CHANNEL CAN BE CAST IN-SITU OR PRECAST CONCRETE SUBJECT TO THE ENGINEER'S AGREEMENT ON THE DETAILS.
10. DETAILS OF EROSION CONTROL MAT AND WESH MESH ON BERM. (SEE STD DRG. NO. C2511/1E)

NOMINAL SIZE H	T	B	REINFORCEMENT
300	80	100	A252 MESH PLACED CENTRALLY AND T=100 WHEN E>650
375 - 600	100	150	
675 - 900	125	175	A252 MESH PLACED CENTRALLY

REF.	REVISION	SIGNATURE	DATE
I	MINOR AMENDMENT.	Original Signed	07.2018
H	THICKNESS OF MASONRY FACING AMENDED.	Original Signed	01.2005
G	MINOR AMENDMENT.	Original Signed	01.2004
F	GENERAL REVISION.	Original Signed	12.2002
E	DRAWING TITLE AMENDED.	Original Signed	11.2001
D	MINOR AMENDMENT.	Original Signed	08.2001
C	150 x 100 UPSTAND ADDED AT BERM.	Original Signed	6.99
B	MINOR AMENDMENTS.	Original Signed	3.94

DETAILS OF HALF-ROUND AND U-CHANNELS (TYPE A - WITH MASONRY APRON)

CEDD **CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT**

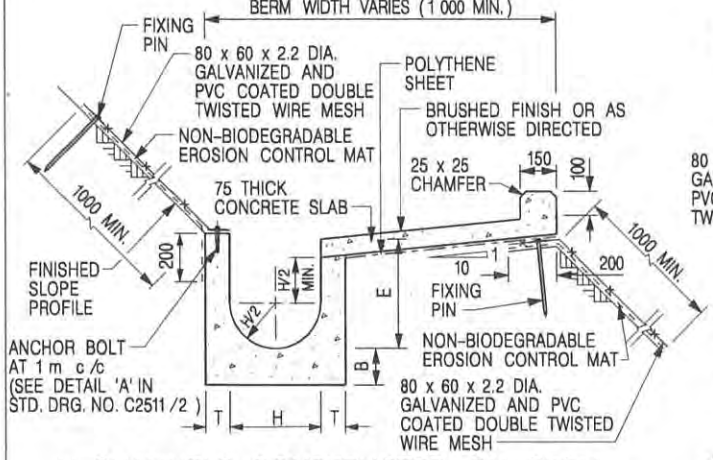
SCALE 1 : 25

DATE JAN 1991

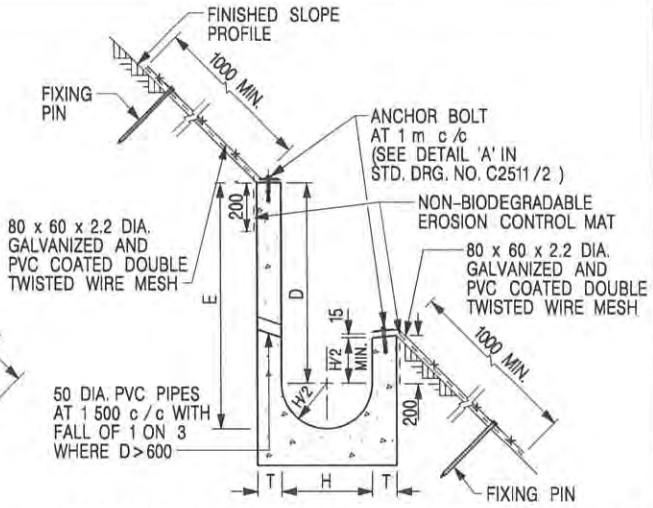
DRAWING NO. C2409I

卓越工程 建設香港

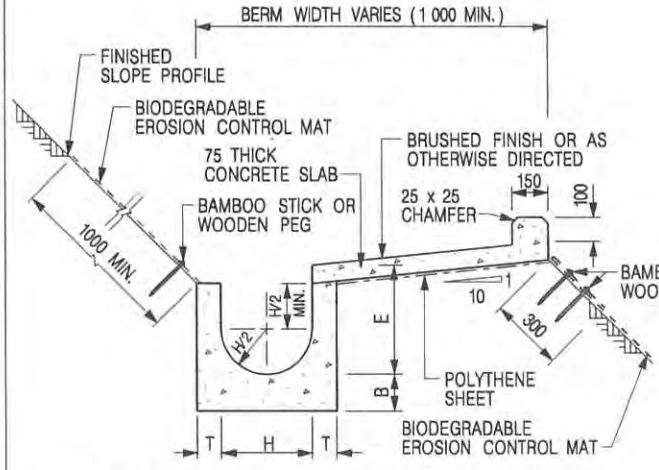
We Engineer Hong Kong's Development



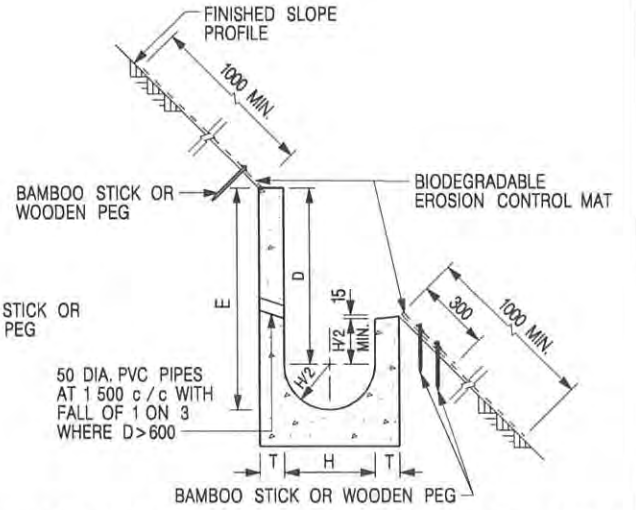
U-CHANNELS CONSTRUCTED ON BERM WITH NON-BIODEGRADABLE EROSION CONTROL MAT



U-CHANNELS NOT CONSTRUCTED ON BERM WITH NON-BIODEGRADABLE EROSION CONTROL MAT



U-CHANNELS CONSTRUCTED ON BERM WITH BIODEGRADABLE EROSION CONTROL MAT



U-CHANNELS NOT CONSTRUCTED ON BERM WITH BIODEGRADABLE EROSION CONTROL MAT

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE TO BE GRADE 20 /20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2, F2 OR BRUSHED FINISH AS DIRECTED.
4. SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM, SEE STD. DRG. NO. C2413 FOR DETAILS.
5. JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS, ETC. TO BE ON THE SAME ALIGNMENT.
6. FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
7. FOR TYPICAL FIXING PIN DETAILS, SEE STD. DRG. NO. C2511/2.
8. MINIMUM SIZE OF 25 x 50 x 300mm SHALL BE PROVIDED FOR WOODEN PEG.
9. MINIMUM SIZE OF 10mm DIAMETER WITH 200mm LONG SHALL BE PROVIDED FOR BAMBOO STICK.
10. THE FIXING DETAILS OF NON-BIODEGRADABLE AND BIODEGRADABLE EROSION CONTROL MATS ON EXISTING BERM SHALL REFER TO STD. DRG. NO. C2511/1.

NOMINAL SIZE H	T	B	REINFORCEMENT
300	80	100	A252 MESH PLACED CENTRALLY AND T=100 WHEN E>650
375 – 600	100	150	
675 – 900	125	175	A252 MESH PLACED CENTRALLY

REF.	REVISION	SIGNATURE	DATE
I	MINOR AMENDMENT.	Original Signed	07.2018
H	FIXING DETAILS OF BIODEGRADABLE EROSION CONTROL MAT ADDED.	Original Signed	12.2017
G	DIMENSION TABLE AMENDED.	Original Signed	01.2005
F	MINOR AMENDMENT.	Original Signed	01.2004
E	GENERAL REVISION.	Original Signed	12.2002
D	MINOR AMENDMENT.	Original Signed	08.2001
C	150 x 100 UPSTAND ADDED AT BERM.	Original Signed	6.99
B	MINOR AMENDMENT.	Original Signed	3.94
A	MINOR AMENDMENT.	Original Signed	10.92

DETAILS OF HALF-ROUND AND U-CHANNELS (TYPE B – WITH EROSION CONTROL MAT APRON)

CEDD **CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT**

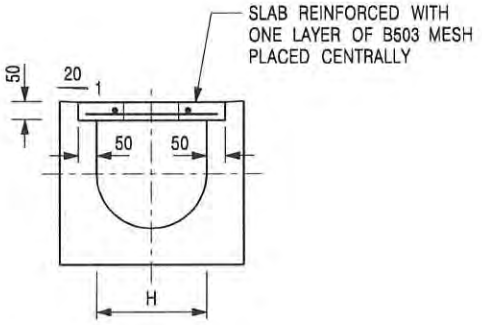
SCALE DIAGRAMMATIC

DATE JAN 1991

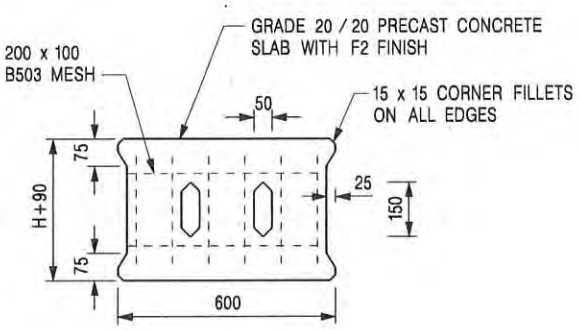
DRAWING NO. C2410I

卓越工程 建設香港

We Engineer Hong Kong's Development



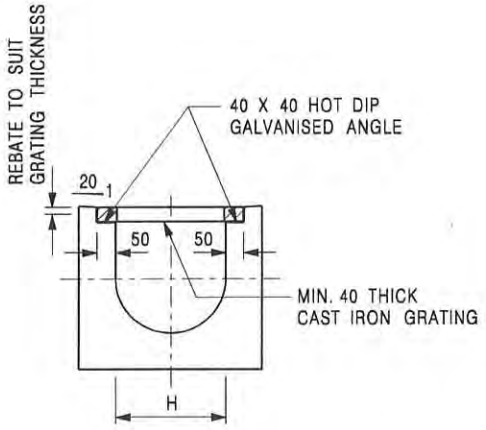
TYPICAL SECTION



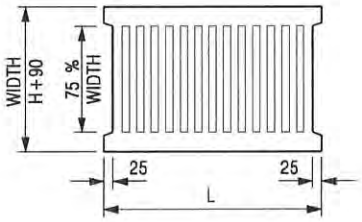
PLAN OF SLAB

U-CHANNELS WITH PRECAST CONCRETE SLABS

(UP TO H OF 525)



TYPICAL SECTION



L = 600mm FOR H ≤ 375mm
L = 400mm FOR H > 375mm

CAST IRON GRATING

(DIMENSIONS ARE FOR GUIDANCE ONLY, CONTRACTOR MAY SUBMIT EQUIVALENT TYPE)

U-CHANNEL WITH CAST IRON GRATING

(UP TO H OF 525)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. H = NOMINAL CHANNEL SIZE.
3. ALL CAST IRON FOR GRATINGS SHALL BE GRADE EN-GJL-150 COMPLYING WITH BS EN 1561.
4. FOR COVERED CHANNELS TO BE HANDED OVER TO HIGHWAYS DEPARTMENT FOR MAINTENANCE, THE GRATING DETAILS SHALL FOLLOW THOSE AS SHOWN ON HyD STD. DRG. NO. H3156.

REF.	REVISION	SIGNATURE	DATE
E	NOTES 3 & 4 AMENDED.	Original Signed	12.2014
D	NOTE 4 ADDED.	Original Signed	06.2008
C	MINOR AMENDMENT. NOTE 3 ADDED.	Original Signed	12.2005
B	NAME OF DEPARTMENT AMENDED.	Original Signed	01.2005
A	CAST IRON GRATING AMENDED.	Original Signed	12.2002

COVER SLAB AND CAST IRON GRATING FOR CHANNELS

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

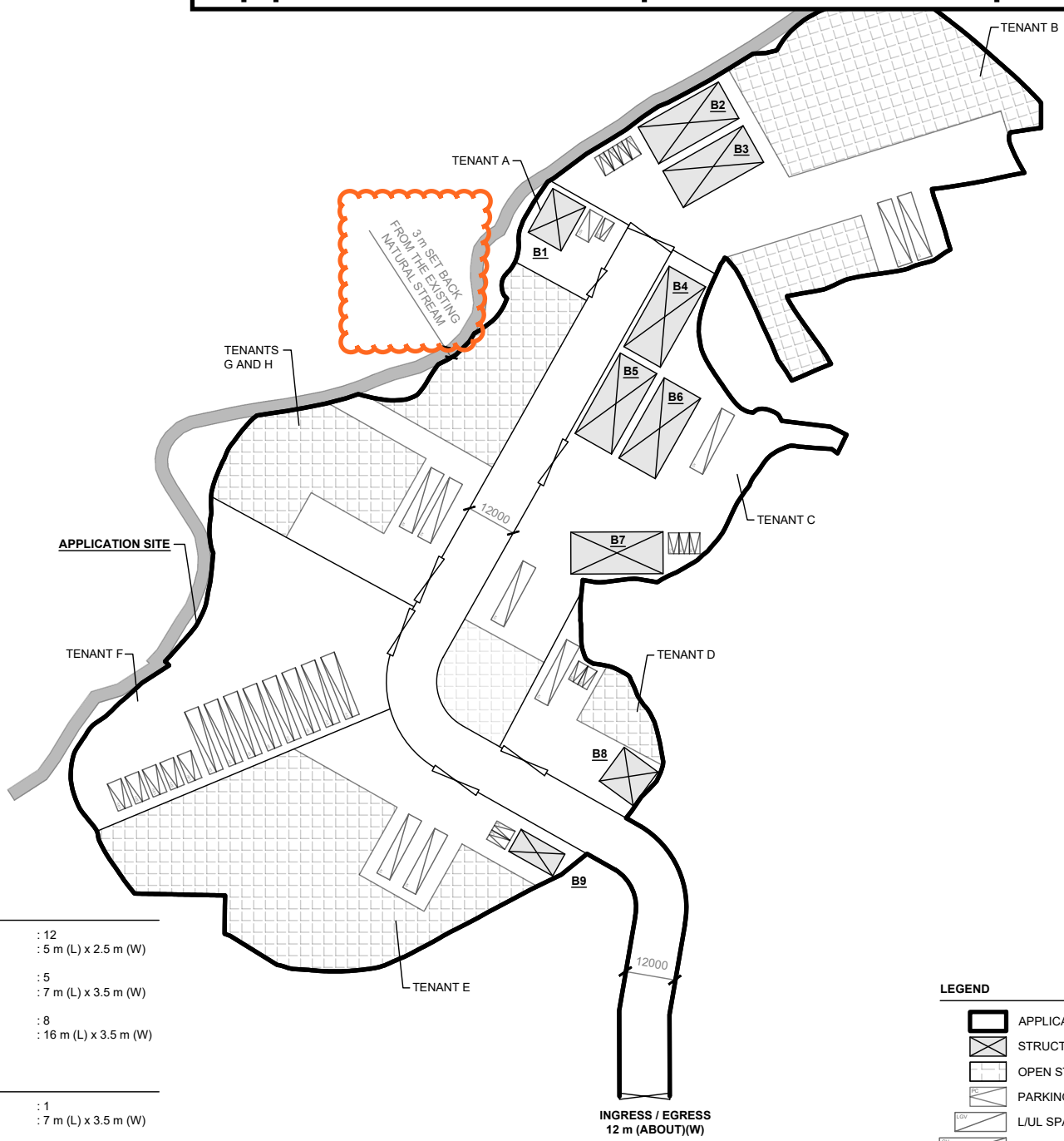
DATE JAN 1991

DRAWING NO. C2412E

Appendix C - Proposed Development Plan

DEVELOPMENT PARAMETERS

APPLICATION SITE AREA	: 23,163 m^2	(ABOUT)
COVERED AREA	: 1,600 m^2	(ABOUT)
UNCOVERED AREA	: 21,563 m^2	(ABOUT)
PLOT RATIO	: 0.07	
SITE COVERAGE	: 7%	
NO. OF STRUCTURE	: 9	
DOMESTIC GFA	: NOT APPLICABLE	
NON-DOMESTIC GFA	: 1,600 m^2	(ABOUT)
TOTAL GFA	: 1,600 m^2	(ABOUT)
BUILDING HEIGHT	: 3 m - 8.23 m	(ABOUT)
NO. OF STOREY	: 1	



PARKING PROVISIONS

NO. OF PRIVATE CAR PARKING SPACE	: 12
DIMENSION OF PARKING SPACE	: 5 m (L) x 2.5 m (W)
NO. OF LIGHT GOODS VEHICLE PARKING SPACE	: 5
DIMENSION OF PARKING SPACE	: 7 m (L) x 3.5 m (W)
NO. OF CONTAINER VEHICLE PARKING SPACE	: 8
DIMENSION OF PARKING SPACE	: 16 m (L) x 3.5 m (W)

LOADING / UNLOADING (L/UL) PROVISIONS

NO. OF L/UL SPACE FOR LIGHT GOODS VEHICLE	: 1
DIMENSION OF L/UL SPACE	: 7 m (L) x 3.5 m (W)
NO. OF L/UL SPACE FOR CONTAINER VEHICLE	: 9
DIMENSION OF L/UL SPACE	: 16 m (L) x 3.5 m (W)

LEGEND

- APPLICATION SITE
- STRUCTURE
- OPEN STORAGE AREA
- PARKING SPACE (PC)
- L/UL SPACE (LGV)
- L/UL SPACE (CV)
- INGRESS / EGRESS

W — E — S

PLANNING CONSULTANT

R-Riches Property Consultants Ltd.

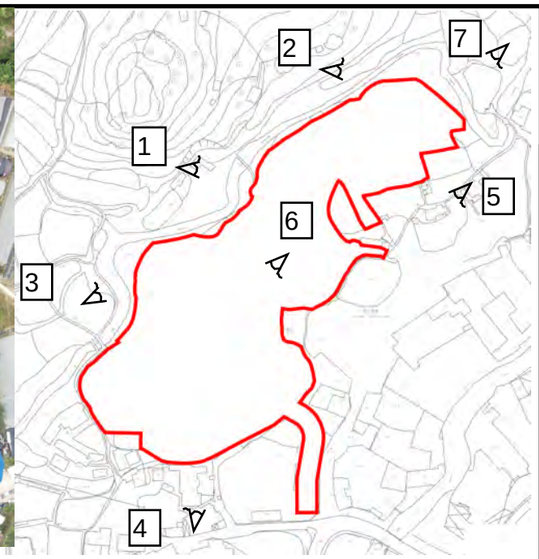
PROJECT

PROPOSED TEMPORARY CONTAINER STORAGE YARD, CONTAINER VEHICLE PARK, VEHICLE REPAIR WORKSHOP, LOGISTICS CENTRE, WAREHOUSE AND OPEN STORAGE OF MISCELLANEOUS GOODS WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND

SITE LOCATION

VARIOUS LOTS IN D.D.87, HUNG LUNG HANG, NEW TERRITORIES

SCALE	1 : 1500 @ A4
DRAWN BY	MN
DATE	5.8.2024
REVISED BY	
DATE	
APPROVED BY	
DATE	
DWG. TITLE	LAYOUT PLAN
DWG NO.	PLAN 12
VER.	001




VIEW 7

PROJECT:
PROPOSED TEMPORARY OPEN STORAGE AND WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF YEARS AND ASSOCIATED FILLING OF LAND, VARIOUS LOTS IN D.D. 87, TA KWU LING, NEW TERRITORIES

REV	DESCRIPTION	DATE

PHOTO OF SURROUNDINGS

APPENDIX D

Appendix III

Traffic management measures

implemented and accepted under the previous application

規 劃 署

沙田、大埔及北區規劃處
香港新界沙田上禾輋路一號
沙田政府合署
十三樓 1301-1314 室

Planning Department

Sha Tin, Tai Po & North
District Planning Office
Rooms 1301-1314, 13/F,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin ,
N.T., Hong Kong

來函檔號 Your Reference [redacted]

本署檔號 Our Reference ( ) in TPB/A/NE-HLH/77

電話號碼 Tel. No. : 2158 6220

傳真機號碼 Fax No. : 2691 2806

By Email

[redacted]

30 March 2026

[redacted]

Dear Sir/Madam,

Proposed Temporary Container Storage Yard, Container Vehicle Park, Vehicle Repair Workshop, Logistics Centre, Warehouse and Open Storage of Miscellaneous Goods with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone, Various Lots in D.D. 87, Hung Lung Hang
(Compliance with Approval Condition (d) for Planning Application No. A/NE-HLH/77)

I refer to your submission dated 13.3.2026 for compliance with approval condition (d) in relation to the implementation of the traffic management measures, as proposed by you, to the satisfaction of the Commissioner for Transport (C for T) or of the Town Planning Board under the captioned planning application.

The C for T (Contact person: Mr. LAM Hung Wai Ray; Tel. No.: 2399 2405) has been consulted and considered that approval condition (d) has been complied with.

Should you have any queries related to planning matters, please contact Ms. Shirley CHAN of this Office at 2158 6241.

Yours faithfully,

(Rico TSANG)
for Director of Planning

R-Riches
Property Consultants Ltd.

盈卓物業
顧問有限公司

Our Ref.: [redacted]
Your Ref.: TPB/A/NE-HLH/77

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

By Email

13 March 2026

Dear Sir,

Compliance with Planning Condition (d)

Proposed Temporary Container Storage Yard, Container Vehicle Park, Vehicle Repair Workshop, Logistics Centre, Warehouse and Open Storage of Miscellaneous Goods with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone,
Various Lots in D.D. 87 and Adjoining Government Land, Hung Lung Hang, New Territories

(S.16 Planning Application No. A/NE-HLH/77)

We write make submission *(enclosed)* for compliance with planning condition (d) of the captioned application, i.e. *the implementation of the traffic management measures*.

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

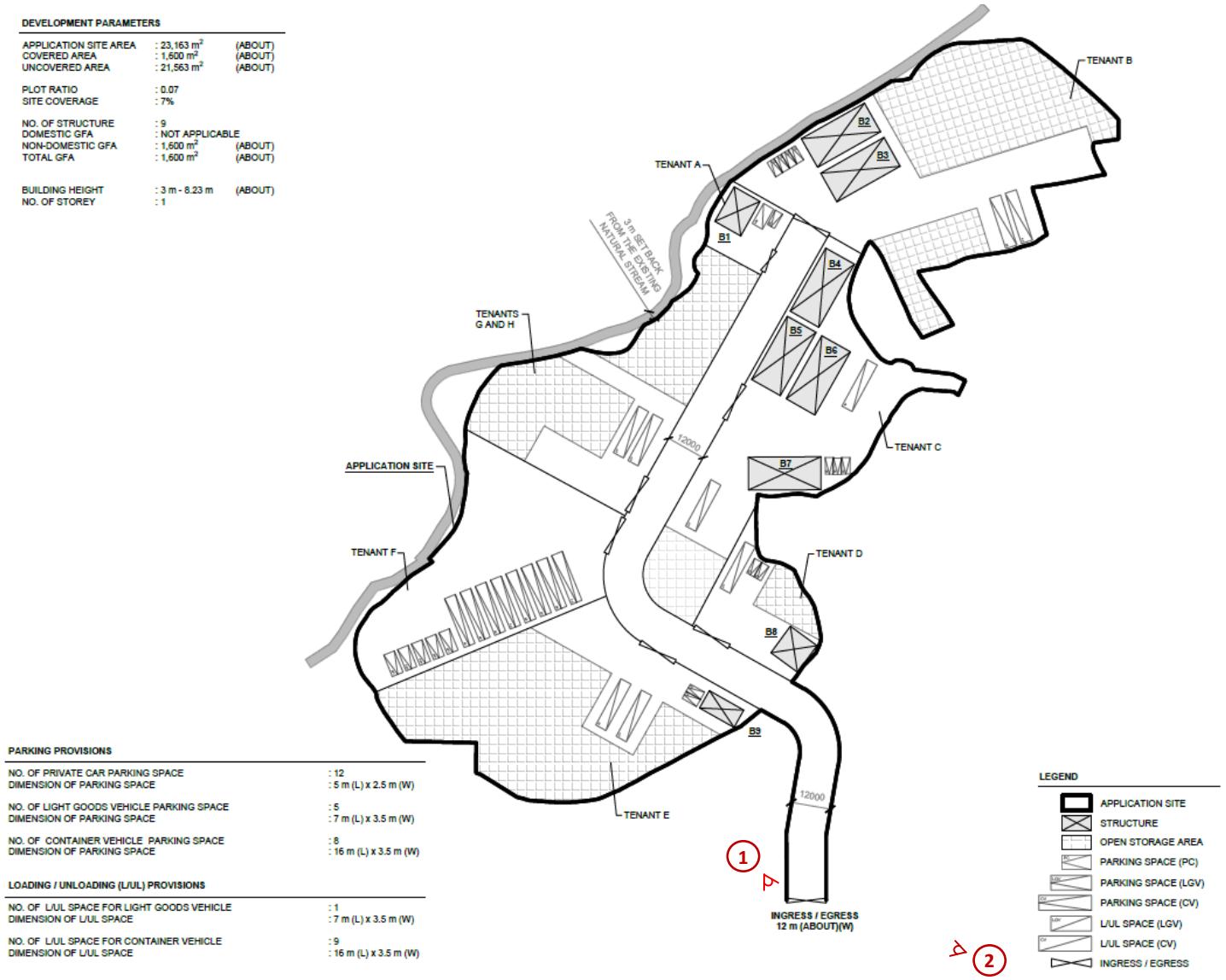
Yours faithfully,

For and on behalf of
R-riches Property Consultants Limited

[redacted]
Town Planner

cc DPO/STN, PlanD (Attn.: Ms. Shirley CHAN email: skkchan@pland.gov.hk)

Annex 1 – Photographic records of the implemented traffic management measures



Viewpoint 1

Viewpoint 2

Appendix IV

Provision of fire extinguishers and FSIs proposal

accepted under the previous application

規劃署

沙田、大埔及北區規劃處
香港新界沙田上禾輋路一號
沙田政府合署
十三樓 1301-1314 室

Planning Department

Sha Tin, Tai Po & North
District Planning Office
Rooms 1301-1314, 13/F,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin,
N.T., Hong Kong

來函檔號 Your Reference [redacted]
本署檔號 Our Reference ( ) in TPB/A/NE-HLH/77
電話號碼 Tel. No.: 2158 6220
傳真機號碼 Fax No.: 2691 2806

By Post and Fax [redacted]
24 December 2024

[redacted]

Dear Sir/Madam,

Proposed Temporary Container Storage Yard, Container Vehicle Park, Vehicle Repair Workshop, Logistics Centre, Warehouse and Open Storage of Miscellaneous Goods with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone, Various Lots in D.D. 87, Hung Lung Hang (Compliance with Approval Condition (f) for Planning Application No. A/NE-HLH/77)

I refer to your submission dated 5.12.2024 for compliance with approval condition (f) in relation to the provision of fire extinguisher(s) to the satisfaction of the Director of Fire Services (D of FS) or of the Town Planning Board under the captioned planning application.

The D of FS (Contact person: Mr. WAH Herbert Chi-lut; Tel.: 2733 5844) has been consulted and considered the approval condition (f) has been complied with.

Should you have any queries related to planning matters, please contact Ms. Shirley CHAN of this department at 2158 6241.

Yours faithfully,

(Rico TSANG)
for Director of Planning

規 劃 署

沙田、大埔及北區規劃處
香港新界沙田上禾輋路一號
沙田政府合署
十三樓 1301-1314 室

Planning Department

Sha Tin, Tai Po & North
District Planning Office
Rooms 1301-1314, 13/F,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin ,
N.T., Hong Kong

來函檔號 Your Reference [redacted]
本署檔號 Our Reference ( ) in TPB/A/NE-HLH/77
電話號碼 Tel. No. : 2158 6220
傳真機號碼 Fax No. : 2691 2806

By Email and Fax [redacted]

[redacted]

14 February 2025

Dear Sir/Madam,

Proposed Temporary Container Storage Yard, Container Vehicle Park, Vehicle Repair Workshop, Logistics Centre, Warehouse and Open Storage of Miscellaneous Goods with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone, Various Lots in D.D. 87, Hung Lung Hang
(Compliance with Approval Condition (g) for Planning Application No. A/NE-HLH/77)

I refer to your submission received by this Office on 3.1.2025 for compliance with approval condition (g) in relation to the submission of a fire service installations (FSIs) proposal to the satisfaction of the Director of Fire Services (D of FS) or of the Town Planning Board under the captioned planning application.

The D of FS (Contact person: Mr. LI Chi Fung; Tel. No.: 2733 5844) has been consulted and advised that approval condition (g) has been complied with. Please proceed to implement the accepted FSIs proposal for compliance with approval condition (h). You are advised to submit a full set of Certificate of FSI and Equipment (FS 251) incorporated with all FSIs proposed in the accepted FSIs proposal under approval condition (h) for further arrangement of FSI acceptance inspection.

Should you have any queries related to planning matters, please contact Ms. Shirley CHAN of this Office at 2158 6241.

Yours faithfully,

(Rico TSANG)
for Director of Planning

R-Riches
Property Consultants Ltd.

盈卓物業
顧問有限公司

Our Ref.: [redacted]
Your Ref.: TPB/A/NE-HLH/77

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

By Email

3 January 2025

Dear Sir,

Compliance with Approval Condition (g)

Proposed Temporary Container Storage Yard, Container Vehicle Park, Vehicle Repair Workshop, Logistics Centre, Warehouse and Open Storage of Miscellaneous Goods with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land in "Agriculture" Zone, Various Lots in D.D. 87 and Adjoining Government Land, Hung Lung Hang, New Territories

(S.16 Planning Application No. A/NE-HLH/77)

We are writing to submit a revised fire service installations (FSIs) proposal for compliance with approval condition (g) of the subject application, i.e. *the submission of a FSIs proposal* (**Appendix I**).

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

Yours faithfully,

For and on behalf of
R-riches Property Consultants Limited

[redacted]
Planning and Development Manager

cc DPO/STN, PlanD (Attn.: Ms. Shirley Chan email: skkchan@pland.gov.hk)
(Attn.: Ms. Katie Leung email: kyyleung@pland.gov.hk)

[redacted]

DEVELOPMENT PARAMETERS

APPLICATION SITE AREA	: 23,163 m^2	(ABOUT)
COVERED AREA	: 1,600 m^2	(ABOUT)
UNCOVERED AREA	: 21,563 m^2	(ABOUT)
PLOT RATIO	: 0.07	
SITE COVERAGE	: 7%	
NO. OF STRUCTURE	: 9	
DOMESTIC GFA	: NOT APPLICABLE	
NON-DOMESTIC GFA	: 1,600 m^2	(ABOUT)
TOTAL GFA	: 1,600 m^2	(ABOUT)
BUILDING HEIGHT	: 3 m - 8.23 m	(ABOUT)
NO. OF STOREY	: 1	

DETAILS OF TENANTS

AREA OF TENANT A	: 450 m^2	(ABOUT)
AREA OF TENANT B	: 5,069 m^2	(ABOUT)
AREA OF TENANT C	: 3,623 m^2	(ABOUT)
AREA OF TENANT D	: 1,002 m^2	(ABOUT)
AREA OF TENANT E	: 3,950 m^2	(ABOUT)
AREA OF TENANT F	: 3,085 m^2	(ABOUT)
AREA OF TENANT G & H	: 2,943 m^2	(ABOUT)
RESERVED AS ROAD	: 3,041 m^2	(ABOUT)

STRUCTURE	USE	COVERED AREA	GFA	BUILDING HEIGHT
TENANT A				
B1	VEHICLE REPAIR WORKSHOP	108 m^2 (ABOUT)	108 m^2 (ABOUT)	4 m (ABOUT)(1-STOREY)
TENANT B				
B2	WAREHOUSE (EXCLUDING D.D.G.)	220 m^2 (ABOUT)	220 m^2 (ABOUT)	8.23 m (ABOUT)(1-STOREY)
B3	WAREHOUSE (EXCLUDING D.D.G.), OFFICE	220 m^2 (ABOUT)	220 m^2 (ABOUT)	8.23 m (ABOUT)(1-STOREY)
TENANT C				
B4	LOGISTICS CENTRE	220 m^2 (ABOUT)	220 m^2 (ABOUT)	8.23 m (ABOUT)(1-STOREY)
B5	LOGISTICS CENTRE	220 m^2 (ABOUT)	220 m^2 (ABOUT)	8.23 m (ABOUT)(1-STOREY)
B6	LOGISTICS CENTRE	220 m^2 (ABOUT)	220 m^2 (ABOUT)	8.23 m (ABOUT)(1-STOREY)
B7	LOGISTICS CENTRE, OFFICE	220 m^2 (ABOUT)	220 m^2 (ABOUT)	8.23 m (ABOUT)(1-STOREY)
TENANT D				
B8	OFFICE	100 m^2 (ABOUT)	100 m^2 (ABOUT)	3 m (ABOUT)(1-STOREY)
TENANT E				
B9	OFFICE	72 m^2 (ABOUT)	72 m^2 (ABOUT)	3 m (ABOUT)(1-STOREY)
	TOTAL	**1,600 m^2 (ABOUT)**	**1,600 m^2 (ABOUT)**	

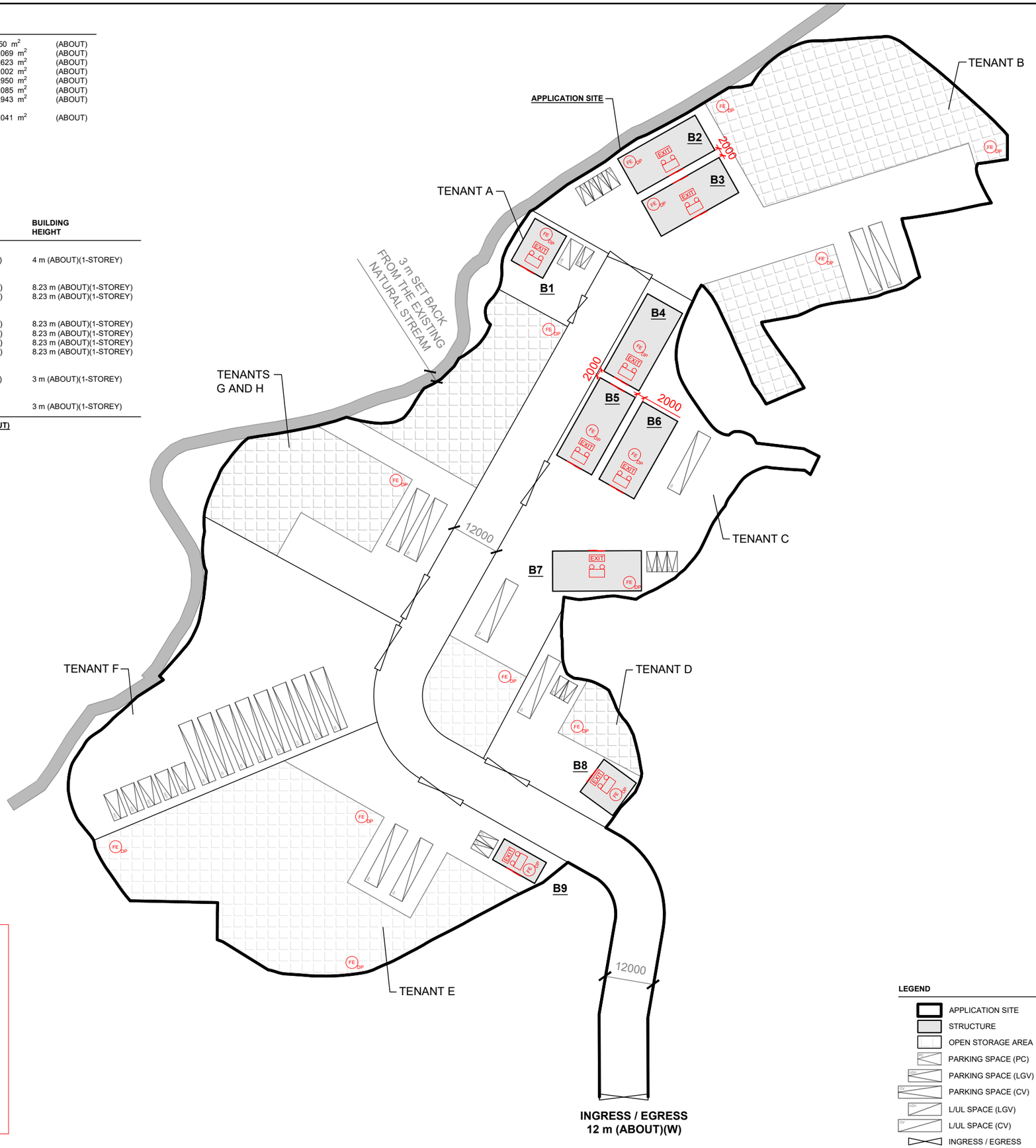
D.G.G. - DANGEROUS GOODS GODOWN

PARKING PROVISIONS

NO. OF PRIVATE CAR PARKING SPACE	: 12
DIMENSION OF PARKING SPACE	: 5 m (L) x 2.5 m (W)
NO. OF LIGHT GOODS VEHICLE PARKING SPACE	: 5
DIMENSION OF PARKING SPACE	: 7 m (L) x 3.5 m (W)
NO. OF CONTAINER VEHICLE PARKING SPACE	: 8
DIMENSION OF PARKING SPACE	: 16 m (L) x 3.5 m (W)

LOADING / UNLOADING (L/UL) PROVISIONS

NO. OF L/UL SPACE FOR LIGHT GOODS VEHICLE	: 1
DIMENSION OF L/UL SPACE	: 7 m (L) x 3.5 m (W)
NO. OF L/UL SPACE FOR CONTAINER VEHICLE	: 9
DIMENSION OF L/UL SPACE	: 16 m (L) x 3.5 m (W)



FIRE SERVICE INSTALLATIONS

- EXIT SIGN
- EMERGENCY LIGHT
- 4 KG DRY POWDER FIRE EXTINGUISHER

FS NOTES:

1. SUFFICIENT EMERGENCY LIGHTING SHALL BE PROVIDED THROUGHOUT THE ENTIRE BUILDING IN ACCORDANCE WITH BS5266-1:2016, BS EN1838:2013 AND FSD CIRCULAR LATTER NO.4/2021;
2. SUFFICIENT DIRECTIONAL AND EXIT SIGN SHALL BE PROVIDED IN ACCORDANCE WITH BS5266-1:2016 AND THE FSD CIRCULAR LETTER 5/2008.
3. PORTABLE HAND-OPERATED APPROVED APPLIANCE SHALL BE PROVIDED AS REQUIRED BY OCCUPANCY.
4. ACCESS IS PROVIDED FOR EMERGENCY VEHICLE TO REACH 30m OF ALL PART OF STRUCTURES.

LEGEND

- APPLICATION SITE
- STRUCTURE
- OPEN STORAGE AREA
- PARKING SPACE (PC)
- PARKING SPACE (LGV)
- PARKING SPACE (CV)
- L/UL SPACE (LGV)
- L/UL SPACE (CV)
- INGRESS / EGRESS

NORTH
W E
S

PLANNING CONSULTANT
R-Riches Property Consultants Ltd.

PROJECT
PROPOSED TEMPORARY CONTAINER STORAGE YARD, CONTAINER VEHICLE PARK, VEHICLE REPAIR WORKSHOP, LOGISTICS CENTRE, WAREHOUSE AND OPEN STORAGE OF MISCELLANEOUS GOODS WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND

SITE LOCATION
VARIOUS LOTS IN D.D.87, HUNG LUNG HANG, NEW TERRITORIES

SCALE	1 : 1000 @ A3
DRAWN BY	MN
DATE	3.1.2025
REVISED BY	
DATE	
APPROVED BY	
DATE	
DWG. TITLE	FSIs PROPOSAL
DWG NO.	APPENDIX I
VER.	002