

Our Ref. : DD 109 Lot 348 & VL
Your Ref. : TPB/A/YL-KTS/1088

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

By E-mail

14 November 2025

Dear Sir,

3rd Further Information

**Proposed Temporary Shop and Services, Eating Place and Public Vehicle Park
(Excluding Container Vehicle) for a Period of 5 Years in “Residential (Group C)” Zone,
Lots 347 S.B (Part), 347 S.D (Part) and 348 (Part) in D.D. 109, Kam Tin, Yuen Long, New Territories**

(S.16 Planning Application No. A/YL-KTS/1088)

We write to submit Further Information in response to departmental comments on the captioned application (**Appendix I**).

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

Yours faithfully,

For and on behalf of
R-riches Planning Limited



Christian CHIM
Town Planner

cc DPO/FSYLE, PlanD

(Attn.: Mr. Ajyum CHAN
(Attn.: Ms. Anna TONG
(Attn.: Mr. Thomas LAU

email: adchan@pland.gov.hk)
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Response-to-Comment (RtC)

**Proposed Temporary Shop and Services, Eating Place and Public Vehicle Park
(Excluding Container Vehicle) for a Period of 5 Years in “Residential (Group C)” Zone,
Lots 347 S.B (Part), 347 S.D (Part) and 348 (Part) in D.D. 109, Kam Tin, Yuen Long, New Territories**

(S.16 Planning Application No. A/YL-KTS/1088)

(i) A RtC table:

Departmental Comments		Applicant's Responses
1. Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)		
(a)	The size and gradient of the proposed/existing drainage facilities to be discharged from the site and/or the overland flow intercepted from the adjacent lands should be indicated in the drainage plan. The applicant should check and ensure the hydraulic capacity of the existing drainage facilities would not be adversely affected by the captioned development.	Noted. Drainage plan is updated and shown in <i>Figure 3</i> of Annex I . The hydraulic capacity is shown in <i>Appendix A</i> for your perusal (Annex I).
(b)	Please provide catchpit at the turning points of the channel.	Noted.
(c)	Where walls or hoarding are erected or laid along the site boundary, adequate opening should be provided to intercept the existing overland flow passing through the site.	Noted. 100mm opening from ground level along wall/ hoarding or equivalent to be provided where it is erected.
(d)	Standard details should be provided to indicate the sectional details of the proposed u-channel and the catchpit/sand trap.	Noted. Please find the standard details of channel in <i>Appendix C</i> for your perusal (Annex I).
(e)	The development should neither obstruct overland flow nor adversely affect existing natural streams, village drains, ditches and the adjacent areas, etc.	Noted.
(f)	The existing drainage channel of the proposed discharge point is not maintained by this Department. The applicant shall resolve any conflict/disagreement with relevant lot owner(s) and seek LandsD's permission for laying new	Noted.

	drains/channels and/or modifying/upgrading existing ones in other private lots or on Government land outside the application site.	
(g)	Connection details at discharge point (including cross section) with C.L., I.L and catchpit/channel B.L. should be shown in the drawing.	Noted. Please refer to <i>Detail A</i> and <i>Photo A</i> in updated <i>Figure 3</i> for your perusal (Annex I).
(h)	Please include the existing planter details in section A-A.	Noted. Please refer to updated <i>Figure 5</i> (Annex I). Please kindly note that the existing planter level is about the same level of existing paved area. Overland flow would not be obstructed by existing planter.
(i)	Colour photos to indicate the current conditions of the existing drainage-facilities should be included in the submission. The photos taken locations and angles should be shown on the layout plan.	Noted. Please refer to updated <i>Appendix D</i> (Annex I).

- (ii) Noting that the surface runoff is proposed to be discharged to Kam Tin River via a section of the existing drainage channel within a fenced-off area under MTRC management, the applicant has submitted an enquiry to seek comments from MTRC on 12.11.2025, which is still pending reply as of today.

**Proposed Temporary Shop and Services, Eating Place
and Public Vehicle Park (Excluding Container Vehicle)
for a Period of 5 Years in “Residential (Group C)”
Zone, Various Lots in D.D. 109, Kam Tin, Yuen Long,
New Territories**

Drainage Proposal

Oct 2025

Table of Contents

1	Introduction	1
1.1	Background	1
1.2	Application Site	1
2	Development Proposal.....	2
2.1	The Proposed Development	2
3	Assessment Criteria.....	2
4	Proposed Drainage System	5
4.1.	Proposed Channels	5
5	Conclusion	5

List of Table

Table 1 - Key Development Parameters	2
Table 2– Design Return Periods under SDM	2

List of Figure

Figure 1 – Site Location Plan
Figure 2 - Existing Drainage Plan
Figure 3– Proposed Drainage System
Figure 4 – Catchment Plan
Figure 5 - Sections

List of Appendix

Appendix A – Design Calculation
Appendix B - Development Layout Plan
Appendix C – Reference Drawings
Appendix D – Site Photo

1 Introduction

1.1 Background

- 1.1.1 The applicant seeks planning permission from the Town Planning Board (the Board) to use Lots 347 S.B (Part), 347 S.D (Part) and 348 (Part) in D.D. 109, Kam Tin, Yuen Long, New Territories (the Site) for ‘Proposed Temporary Shop and Services, Eating Place and Public Vehicle Park (Excluding Container Vehicle) for a Period of 5 Years’.
- 1.1.2 This report aims to support the development in drainage aspect.

1.2 Application Site

- 1.2.1 The application site is situated beside Kat Hing Garden, south of Kam Sheung Road. It has an area of approx. 1,210 m². The site location is shown in **Figure 1**.
- 1.2.2 The existing site is mostly paved. The existing site levels are approx. + 5.50mPD. No major site formation works for the application site is anticipated.
- 1.2.3 There is an existing minimum 375mm channel by the west boundary of the application site. There is also an existing 525mm channel which would discharge to existing watercourse and eventually discharge to Kam Tin River. **Figure 2** indicate the existing drainage system of the area.

2 Development Proposal

2.1 The Proposed Development

- 2.1.1 The total site area is approximately 1,210 m². The existing planter at the west portion of the site would be maintained. The catchment plan is shown in **Figure 4**.

Proposed Development Area (Approx.)	
Total Site Area (m ²)	1,210
Planter Area before Development (m ²)	223
Planter Area after Development (m ²)	140
Paved Area after Development (m ²)	1,070

Table 1 – Site Development Area

3 Assessment Criteria

- 3.1.1 The Recommended Design Return Period based on Flood Level from SDM (Table 10) is adopted for this report. 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 50 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 HKO Zone. Therefore, for 50 years return period, the following values are adopted.

a	=	505.5
b	=	3.29
c	=	0.355

(Corrigendum No.1/2024)

The development is proposed for temporary use for a period of 5 years. 11.1% rainfall increase due to climate change is considered.

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:

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

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:

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

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)

4 Proposed Drainage System

4.1. Proposed Channels

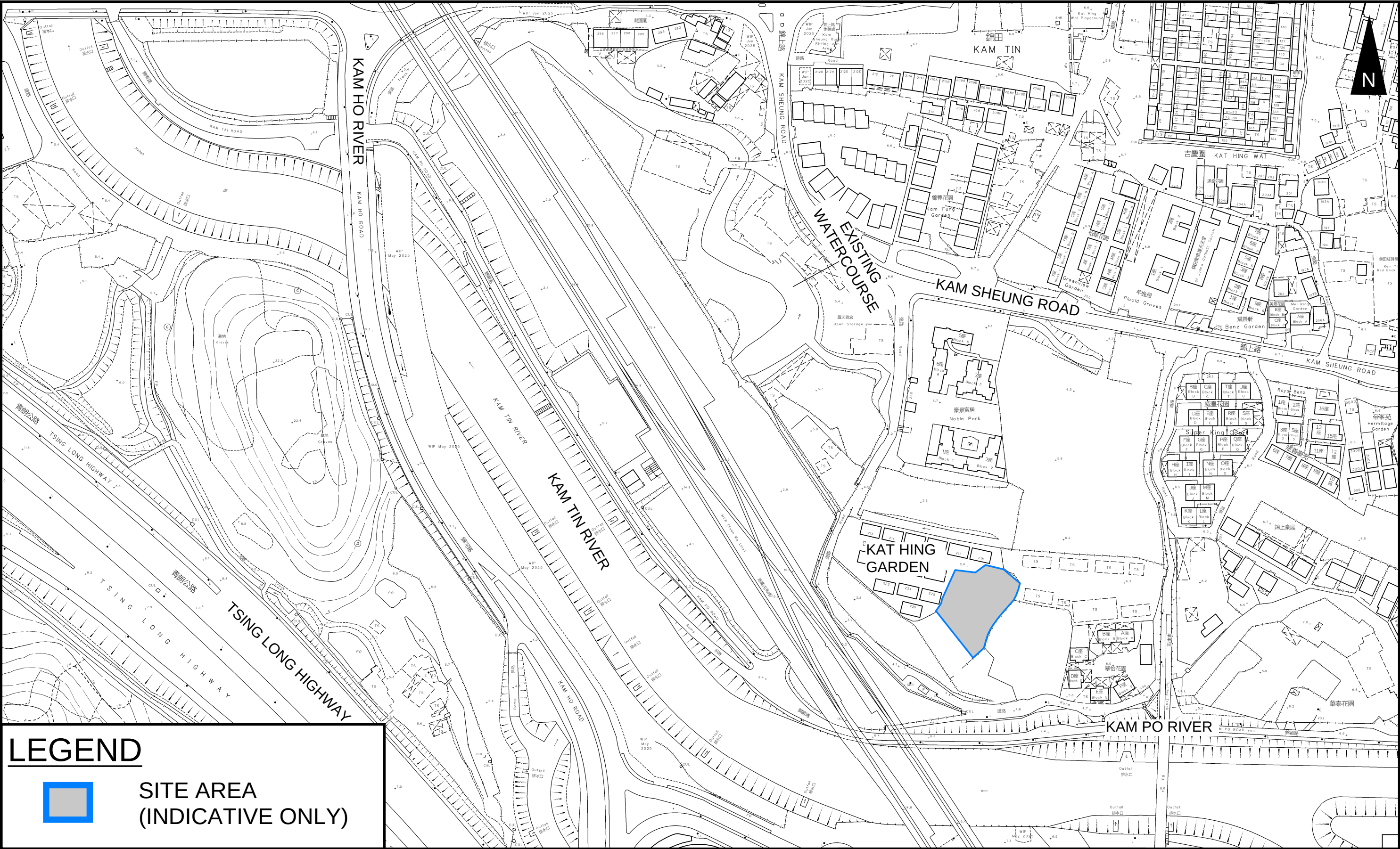
- 4.1.1 Proposed Channels are designed for collection of runoff for internal catchment. They are proposed to discharge to existing channel and watercourse which will eventually discharge to Kam Tin River. As the change in equivalent area is only 49.8 m², the increase of flow due to change of equivalent to existing water course is only 0.1%. The existing channels and watercourse checking are shown in **Appendix A**. They have enough capacity.
- 4.1.2 The design calculations of proposed UChannel are shown in **Appendix A**.
- 4.1.3 The alignment, size, gradient and details of the proposed drains are shown in **Figure 3**. The catchment plan is shown in **Figure 4**.
- 4.1.5 A section of existing min. 375 mm channel downstream to CP1.03 to be reconstructed, if it cannot match with invert of CP1.03. Detail see **Figure 3**.
- 4.1.6 Reference Drawings are shown in **Appendix C** for reference.

5 Conclusion

- 5.1.1 Drainage review has been conducted for the Proposed Development. The surface runoff will be collected by the proposed drains and discharged to existing drainage system. With implementation of the above drainage system, no unacceptable drainage impact is anticipated.

- End of Text -

FIGURES



LEGEND



SITE AREA
(INDICATIVE ONLY)

PROJECT:

Proposed Temporary Shop and Services, Eating Place and Public Vehicle Park (Excluding Container Vehicle) for a Period of 5 Years in “Residential (Group C)” Zone

TITLE

SITE LOCATION PLAN

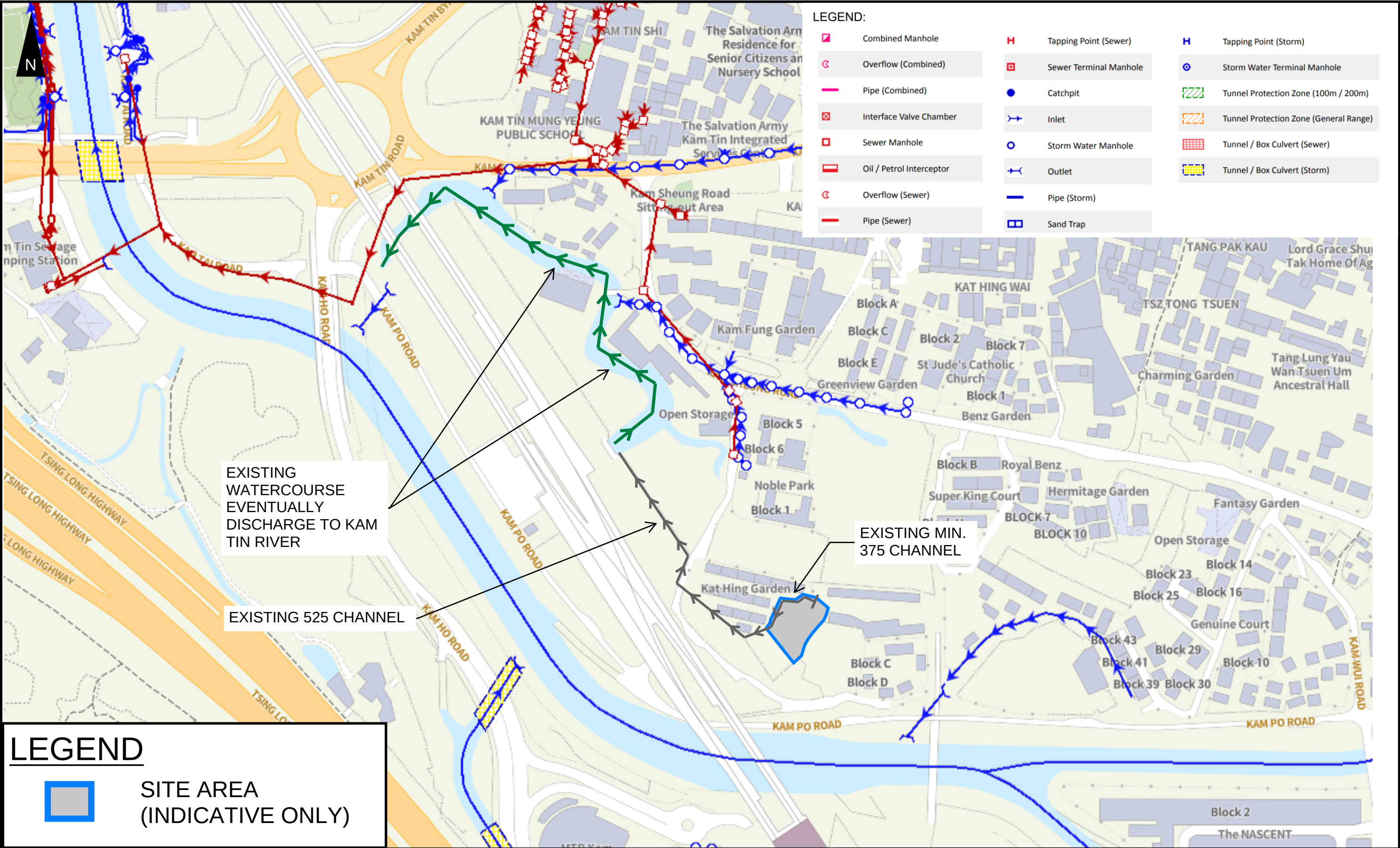
FIGURE NUMBER

FIGURE 1

LOCATION:

Various Lots in D.D. 109, Kam Tin, Yuen Long, New Territories

VER	DESCRIPTION	DATE
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LEGEND

 SITE AREA
(INDICATIVE ONLY)

PROJECT:
Proposed Temporary Shop and Services, Eating Place and Public Vehicle Park (Excluding Container Vehicle) for a Period of 5 Years in “Residential (Group C)” Zone

LOCATION:
Various Lots in D.D. 109, Kam Tin, Yuen Long, New Territories

TITLE
EXISTING DRAINAGE PLAN

FIGURE NUMBER
FIGURE 2

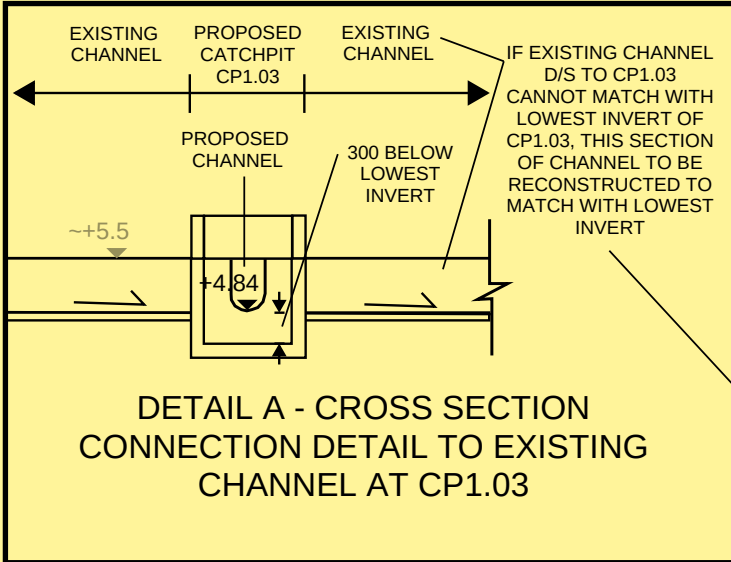
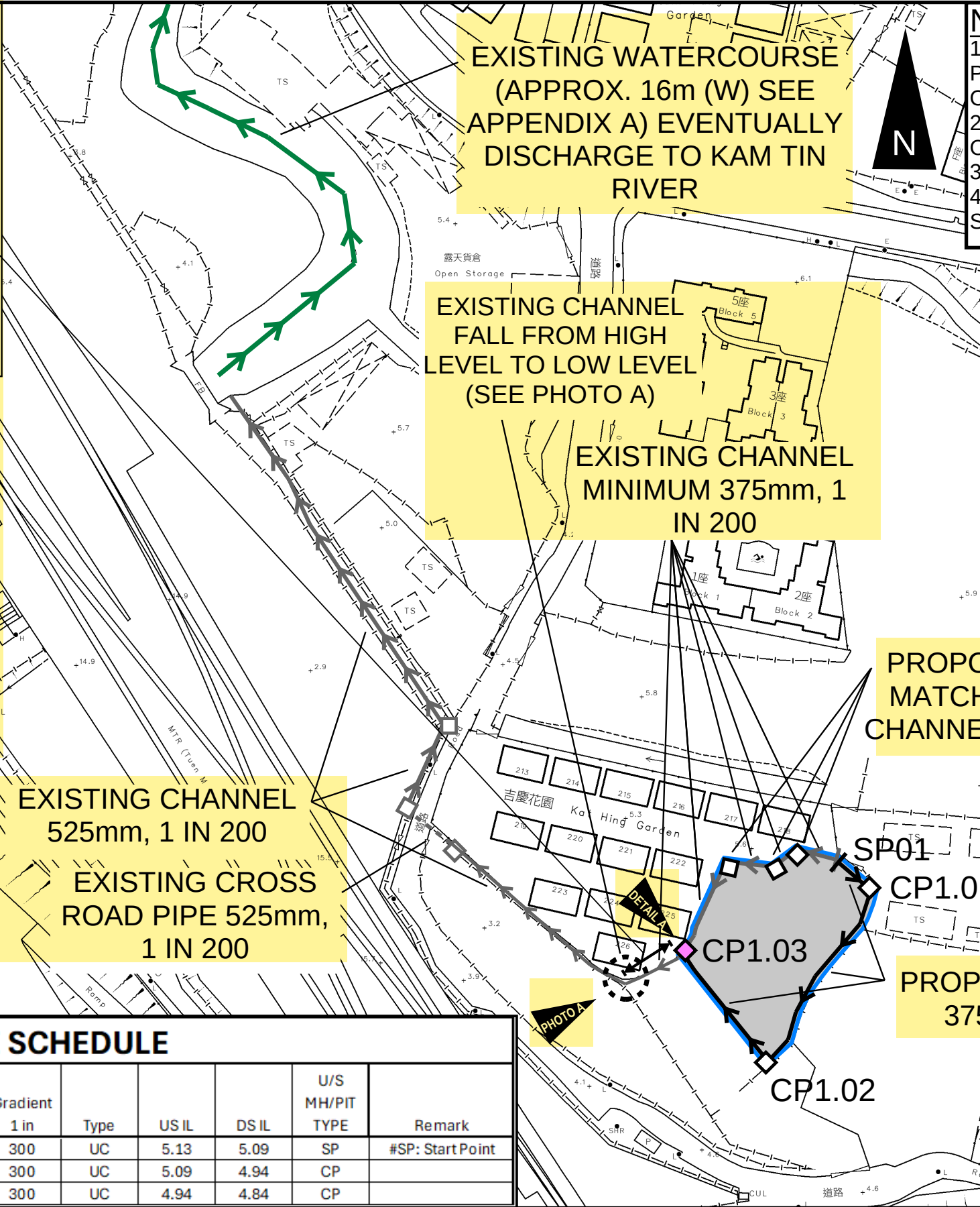
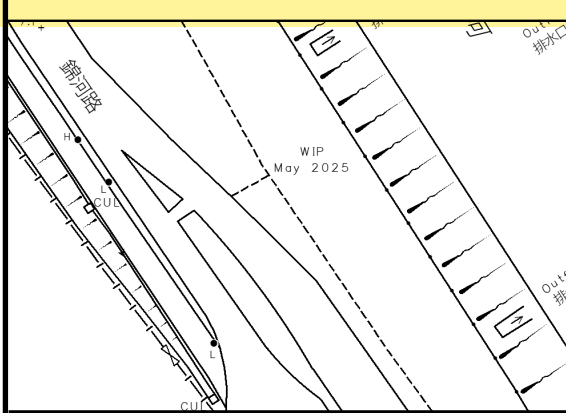


PHOTO A - EXISTING CHANNEL FALL FROM HIGH LEVEL TO LOW LEVEL



NOTES:

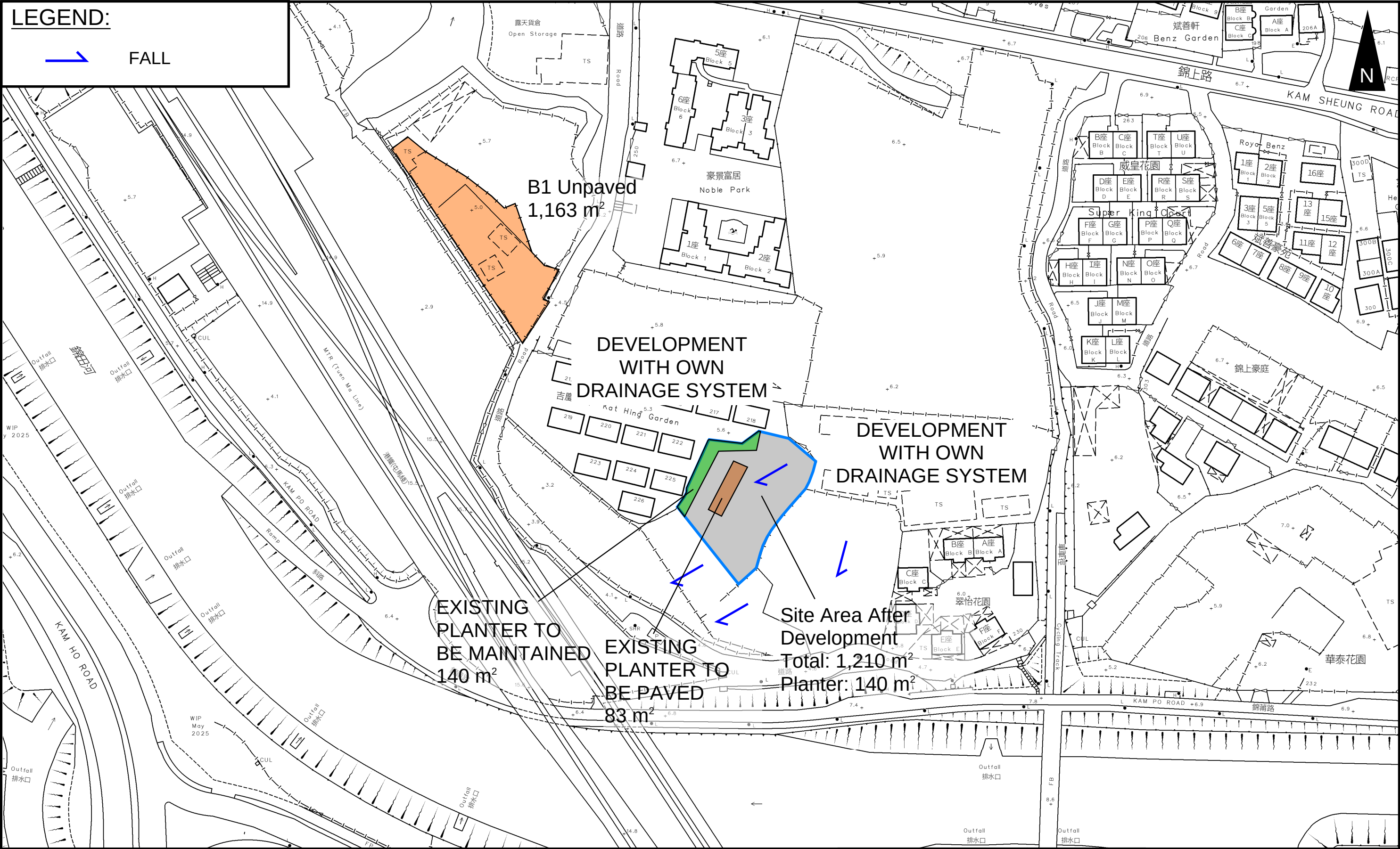
- 1.ALL LEVELS ARE IN METRES TO HONG KONG PRINCIPAL DATUM (m.P.D.) UNLESS NOTED OTHERWISE.
- 2.ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- 3.LOCATION OF CATCHPITS ARE APPROX. ONLY.
- 4.CONNECTION LEVELS ARE APPROX. ONLY AND SHALL BE VERFIED ON SITE.

LEGEND

- SITE AREA (INDICATIVE ONLY)
- PROPOSED CHANNEL
- PROPOSED CATCHPIT
- PROPOSED CATCHPIT w/TRAP
- EXISTING DRAIN
- EXISTING CHANNEL

DRINAGE SCHEDULE									
US MH/PIT	DSMH/PIT	US GL	DS GL	Size mm	Gradient 1 in	Type	US IL	DS IL	U/S MH/PIT TYPE Remark
SP01	CP1.01	5.5	5.5	375	300	UC	5.13	5.09	SP #SP: Start Point
CP1.01	CP1.02	5.5	5.5	375	300	UC	5.09	4.94	
CP1.02	CP1.03	5.5	5.5	375	300	UC	4.94	4.84	

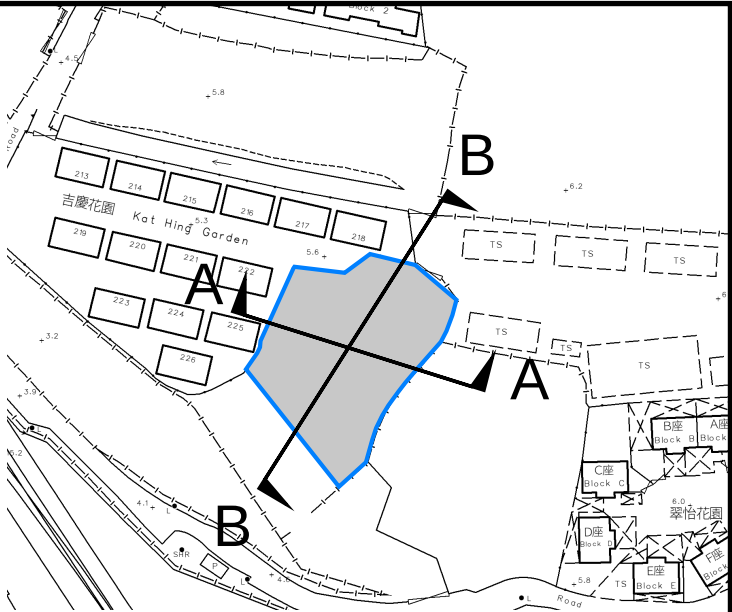
PROJECT: Proposed Temporary Warehouse (excl. D.G.G.) with Ancillary Facilities and Associate Filling of Land for a Period of 3 Years in “Agriculture” Zone	TITLE PROPOSED DRAINAGE SYSTEM	FIGURE NUMBER FIGURE 3		
		VER	DESCRIPTION	DATE



PROJECT: Proposed Temporary Shop and Services, Eating Place and Public Vehicle Park (Excluding Container Vehicle) for a Period of 5 Years in “Residential (Group C)” Zone	TITLE CATCHMENT PLAN	FIGURE NUMBER FIGURE 4		
		VER	DESCRIPTION	DATE

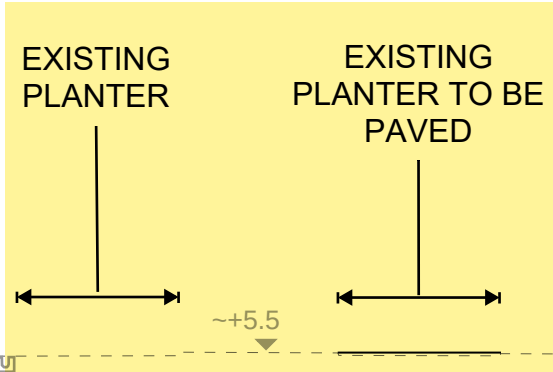
LEGEND

SITE AREA
(INDICATIVE ONLY)



EXISTING FENCE BY OTHERS

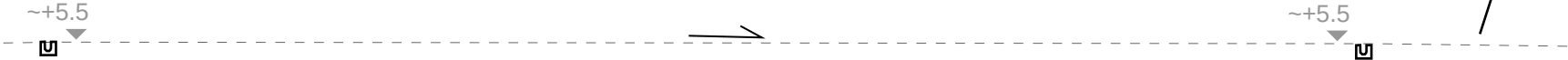
DEVELOPMENT SITE



EXISTING GROUND LEVEL

N.T.S.
SECTION A-A

DEVELOPMENT SITE



EXISTING GROUND LEVEL

N.T.S.
SECTION B-B

PROJECT:
Proposed Temporary Shop and Services, Eating Place and Public Vehicle Park (Excluding Container Vehicle) for a Period of 5 Years in “Residential (Group C)” Zone

TITLE
SECTIONS

FIGURE NUMBER
FIGURE 5

LOCATION:
Various Lots in D.D. 109, Kam Tin, Yuen Long, New Territories

VER	DESCRIPTION	DATE
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APPENDIX

Appendix A: Design Calculation

Zone

HKO

Return Period	1 in	50	years
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n	0.014
Ks	0.15
Viscosity	0.000001

Storm Constant	HKO a	505.5
	HKO b	3.29
	HKO c	0.355

Catchment Area Table (Area in m²)

Catchment	A1	B1	Site Area Before Development	Change of Equivalent Area														
Total Area	1210	1163	1210	-														
Hard Paved Area	1070	0	987	-														
Unpaved Area	140	1163	223	-														
Equival. Area	1065.5	407.05	1015.7	49.8														

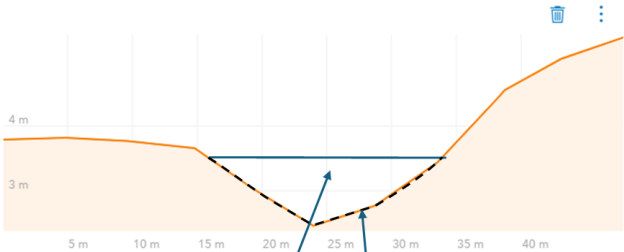
Pavement Type	Hard Paved	Unpaved
Runoff Coefficient	0.95	0.35

Calculation Table of Drainage System

US MH/PIT	DS MH/PIT	US GL	DS GL	Size mm	Gradient 1 in	Type	US IL	DS IL	U/S MH/PIT TYPE	Length m	V m/s ^{##}	Capacity m ³ /s	Catchments	Total Equivalent Area m ²	ToC min	Intensity mm/hr ^{##}	Total Discharge m ³ /s	Utilitizatio n	Remark
SP01	CP1.01	5.50	5.50	375	300	UC	5.13	5.09	SP	9.5	1.06	0.13	A1	1065.50	0.40	353	0.10	78.7%	
CP1.01	CP1.02	5.50	5.50	375	300	UC	5.09	4.94	CP	45	1.06	0.13	A1	1065.50	0.55	348	0.10	77.6%	
CP1.02	CP1.03	5.50	5.50	375	300	UC	4.94	4.84	CP	29.9	1.06	0.13	A1	1065.50	1.26	328	0.10	73.1%	
CP1.03	Existing 525 channel			525	100	UC					2.30	0.57	A1,B1	1472.55	1.73	317	0.13	22.9%	
Checking of Existing min. 375 channel				375	200	UC					1.30	0.16	A1	1065.50	0.40	353	0.10	64.2%	
Checking of Existing 525 cross road pipe				525	200	PIPE					1.82	0.39	A1,B1	1472.55	1.73	317	0.13	32.9%	
Flow due to change of Equivalent Area														Change of Equivalent Area	49.80	1.73	317	0.004	

#SP: Start Point
: With 11.1% rainfall increase as per Table 28 of SDM Corrigendum No. 1/2022.

Capacity Checking of Existing Watercourse against Flow from Development



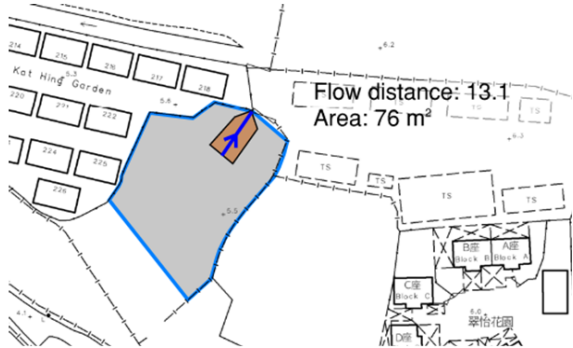
Assumed Water Depth	Freeboard	Base Width	Width of Water Surface	Flow Area	Wetted Perimeter	Hydraulic Radius	Manning's Roughness	Gradient	Velocity	Capacity
m	m	m	m	m ²	m	m		1 in	m/s	m ³ /s
0.70	0.50	-	16.80	6.20	16.87	0.37	0.035	200	1.04	6.43

Total Flow from Site = 0.12 m³/s See Appendix A
Utilization Rate = 1.9%
Total flow from Development Site only occupy 1.9% of nearby Watercourse.

Flow due to change of Equivalent Area = 0.004 m³/s See Appendix A
Utilization Rate = 0.1%
Flow due to change of equivalent area only occupy 0.1% of nearby Watercourse.

Time of Concentration Checking

Catchment	Flow Distance	Highest Level	Lowest Level	Gradient (per 100m) = (H1-H2)/L x 100	to (min) = 0.14465L/ (H ^{0.2} A ^{0.1})	tc = to + tf
A	L	H1	H2		(min)	(min)
(m2)	(m)	(mPD)	(mPD)			
76	13.1	72	15	435.115	0.4	0.4

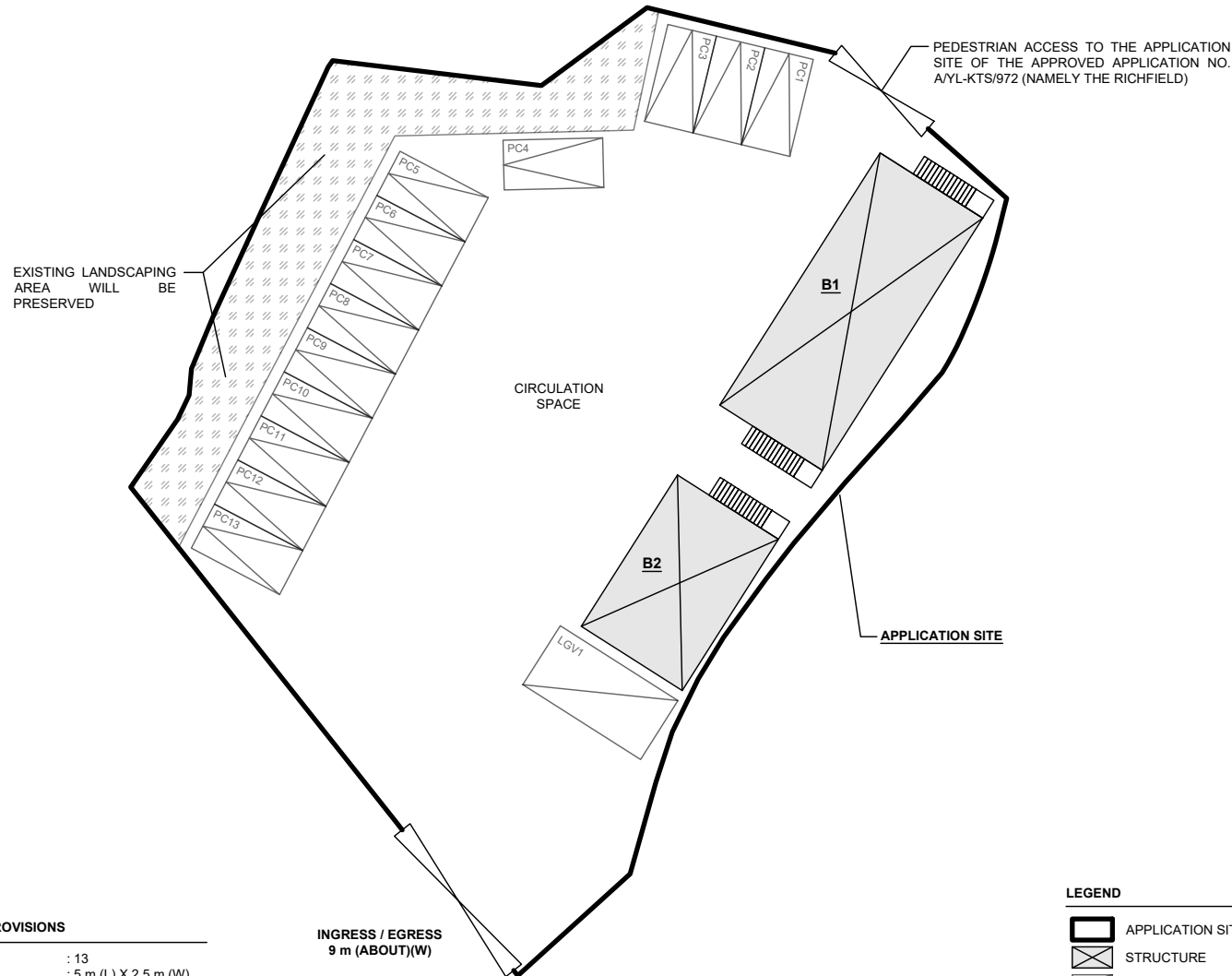
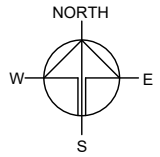


APPENDIX B - PROPOSED SITE LAYOUT PLAN

DEVELOPMENT PARAMETERS

APPLICATION SITE AREA	: 1,210 m ²	(ABOUT)
COVERED AREA	: 158 m ²	(ABOUT)
UNCOVERED AREA	: 1,052 m ²	(ABOUT)
PLOT RATIO	: 0.25	(ABOUT)
SITE COVERAGE	: 13 %	(ABOUT)
NO. OF STRUCTURE	: 2	
DOMESTIC GFA	: NOT APPLICABLE	
NON-DOMESTIC GFA	: 304 m ²	(ABOUT)
TOTAL GFA	: 304 m ²	(ABOUT)
BUILDING HEIGHT	: 7.2 m	(ABOUT)
NO. OF STOREY	: 2	

STRUCTURE	USE	COVERED AREA	GROSS FLOOR AREA	BUILDING HEIGHT
B1	SHOP AND SERVICES / EATING PLACE	100 m ² (ABOUT)	192 m ² (ABOUT)*	7.2 m (ABOUT)(2-STOREY)
B2	SHOP AND SERVICES / EATING PLACE	58 m ² (ABOUT)	112 m ² (ABOUT)#	7.2 m (ABOUT)(2-STOREY)
TOTAL		158 m ² (ABOUT)	304 m ² (ABOUT)	
* GFA OF 1/F		: 92 m ² (ABOUT)	# GFA OF 1/F	: 54 m ² (ABOUT)
GFA OF G/F		: 92 m ² (ABOUT)	GFA OF G/F	: 54 m ² (ABOUT)
COVERED AREA OF STAIRCASE		: 8 m ² (ABOUT)	COVERED AREA OF STAIRCASE	: 4 m ² (ABOUT)
TOTAL GFA		: 192 m ² (ABOUT)	TOTAL GFA	: 112 m ² (ABOUT)



PARKING AND LOADING / UNLOADING (L/UL) PROVISIONS

NO. OF PRIVATE CAR PARKING SPACE	: 13
DIMENSIONS OF PARKING SPACE	: 5 m (L) X 2.5 m (W)
NO. OF L/UL SPACE FOR LIGHT GOODS VEHICLE	: 1
DIMENSIONS OF PARKING SPACE	: 7 m (L) X 3.5 m (W)

LEGEND

	APPLICATION SITE
	STRUCTURE
	PARKING SPACE (PRIVATE CAR)
	L/UL SPACE (LIGHT GOODS VEHICLE)
	INGRESS / EGRESS

PLANNING CONSULTANT



PROJECT

PROPOSED TEMPORARY SHOP AND SERVICES, EATING PLACE AND PUBLIC VEHICLE PARK (EXCLUDING CONTAINER VEHICLE) FOR A PERIOD OF 5 YEARS

SITE LOCATION

VARIOUS LOTS IN D.D. 109, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE

1 : 350 @ A4

DRAWN BY MN DATE 18.7.2025

CHECKED BY DATE

APPROVED BY DATE

DWG. TITLE

LAYOUT PLAN

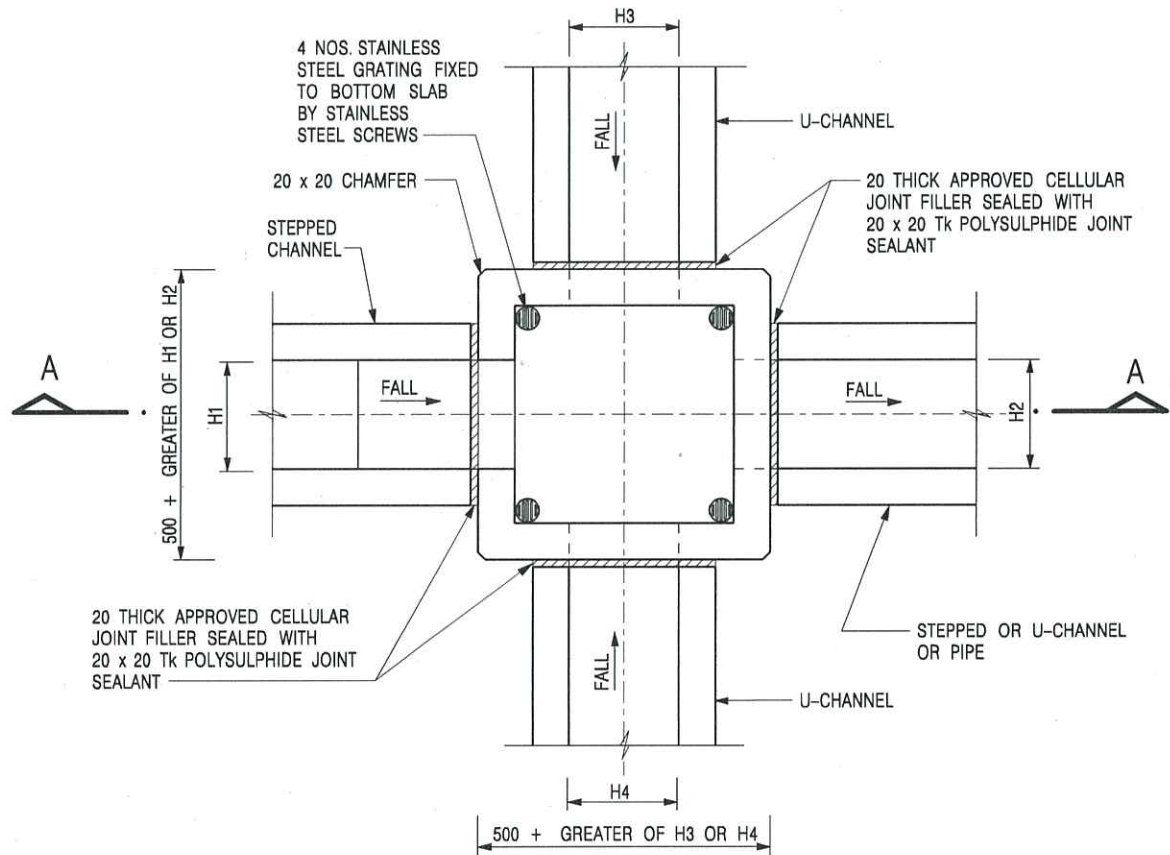
DWG. NO.

PLAN 4

VER.

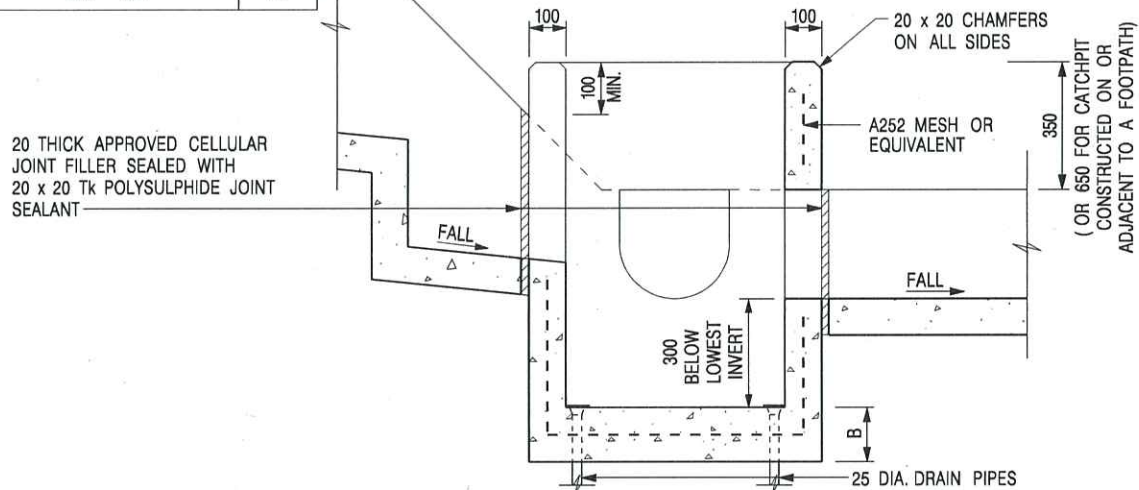
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Appendix C - Reference Drawings



PLAN

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



SECTION A - A

NOTES:

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

CATCHPIT WITH TRAP
(SHEET 1 OF 2)

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



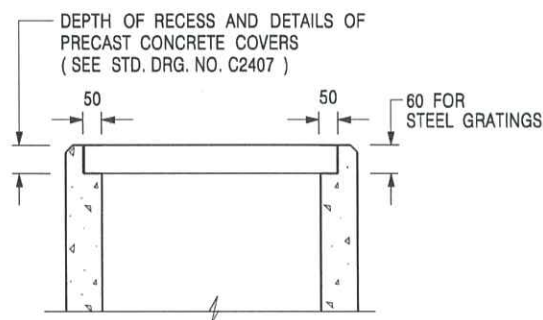
CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2406 /1



**ALTERNATIVE TOP SECTION
FOR PRECAST CONCRETE COVERS / GRATINGS**

NOTES:

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

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)**



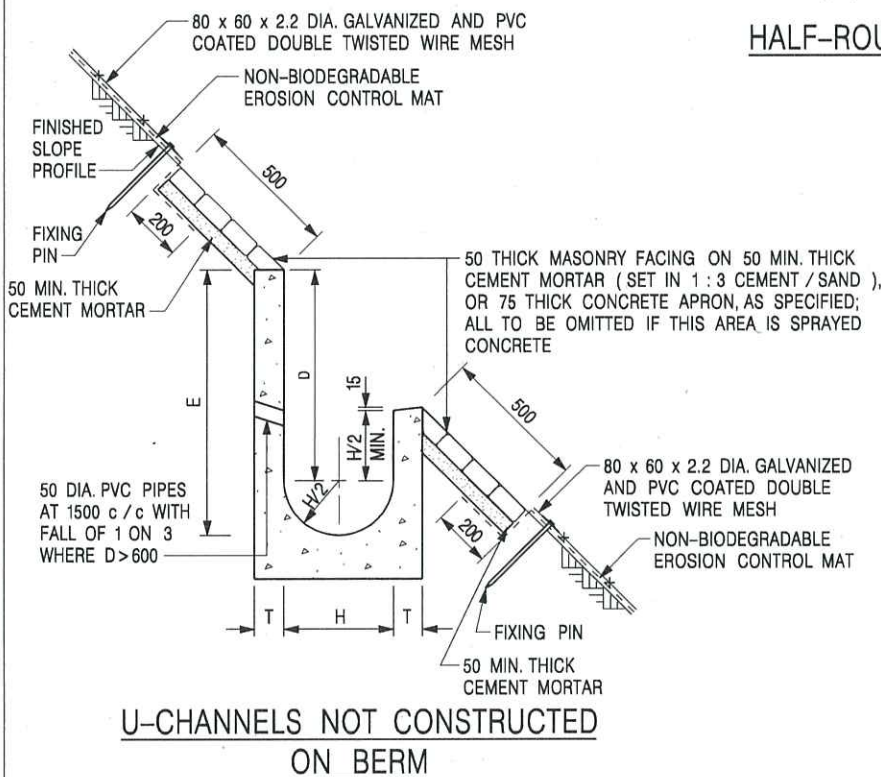
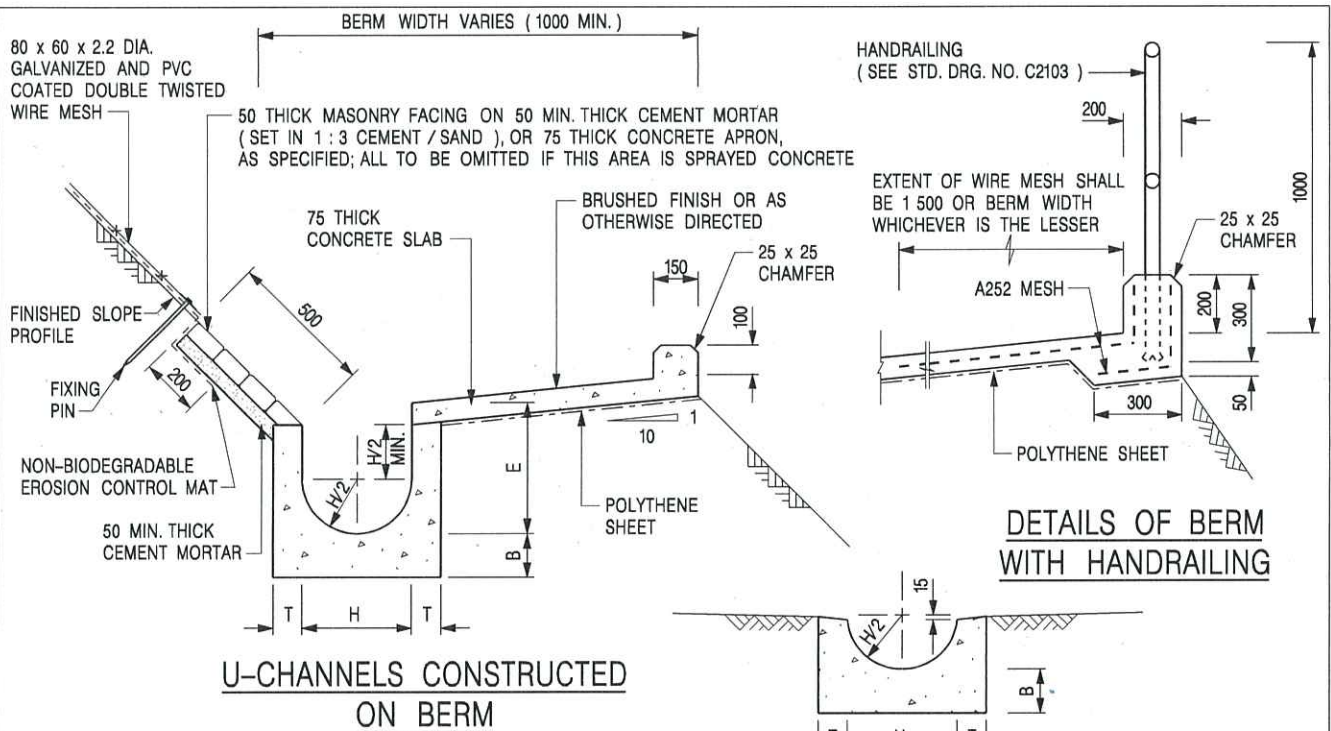
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DRAWING NO.

DATE JAN 1991

C2406 /2A



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/E.
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/E)

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

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
REF.	REVISION	SIGNATURE	DATE

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



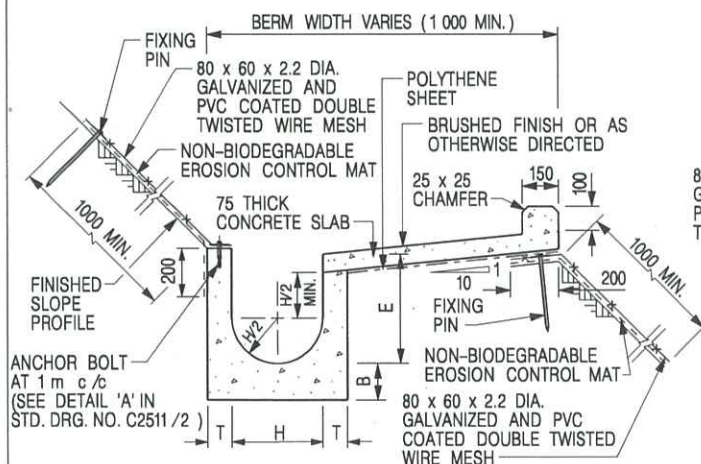
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 25

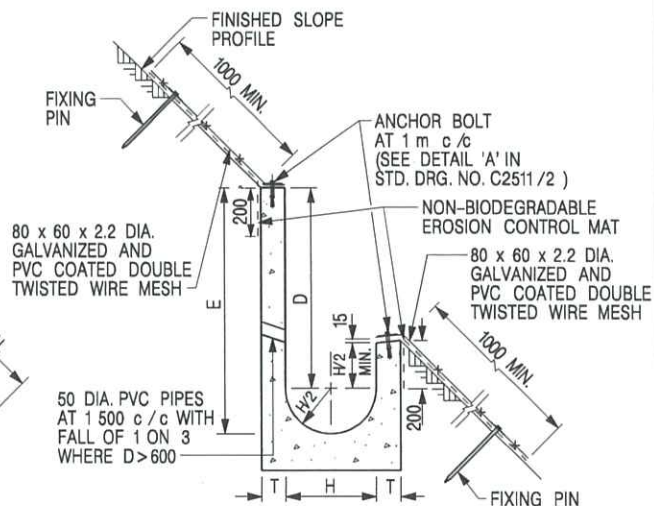
DRAWING NO.

DATE JAN 1991

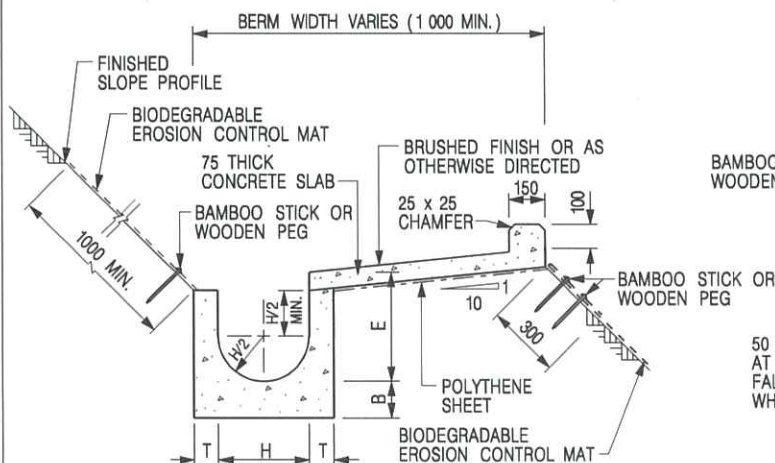
C2409I



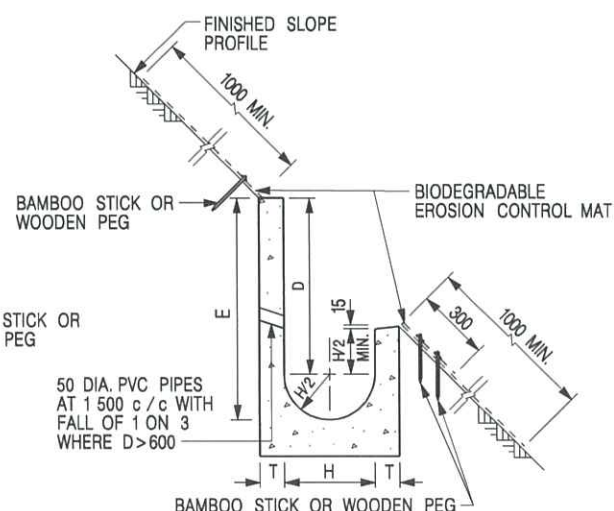
**U-CHANNELS CONSTRUCTED ON BERM
WITH NON-BIODEGRADABLE
EROSION CONTROL MAT**



**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:

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



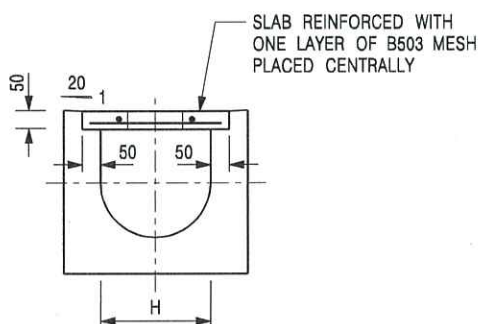
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE DIAGRAMMATIC

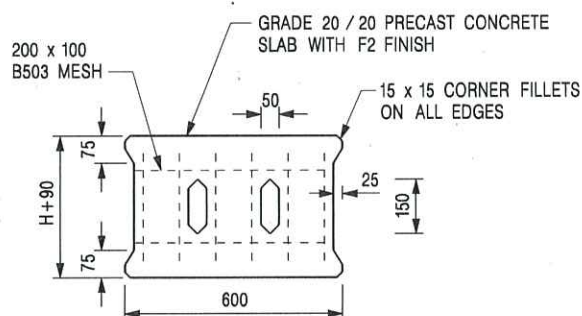
DRAWING NO.

DATE JAN 1991

C24101



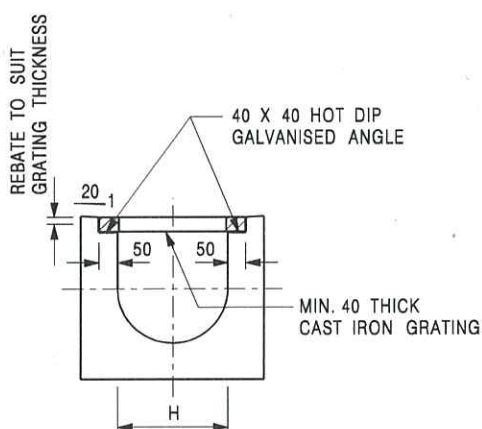
TYPICAL SECTION



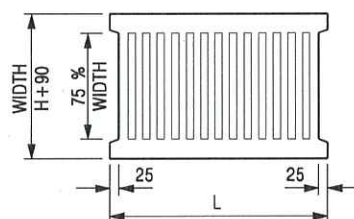
PLAN OF SLAB

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.

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
REF.	REVISION	SIGNATURE	DATE

COVER SLAB AND CAST IRON
GRATING FOR CHANNELS



**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2412E



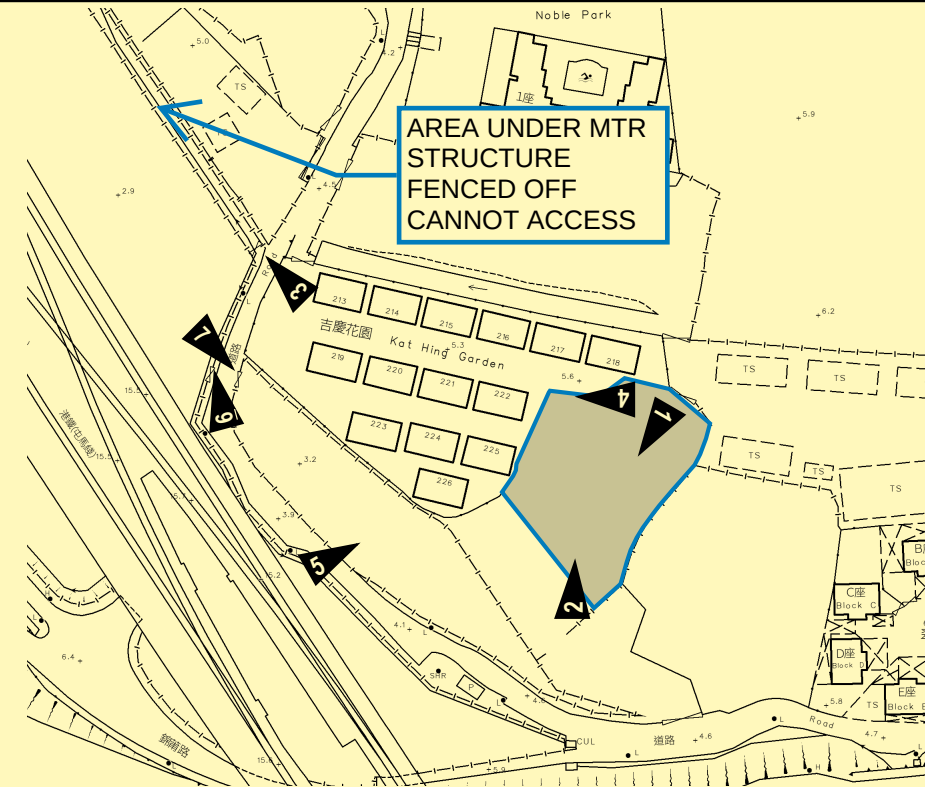
VIEW 1



VIEW 5

AREA FENCED OFF BY OTHER AND CANNOT ACCESS

EXISTING MIN. 375 CHANNEL AT HIGH LEVEL FALL TO EXISTING 525 CHANNEL
SEE PHOTO A IN FIGURE 3



AREA UNDER MTR STRUCTURE FENCED OFF CANNOT ACCESS



VIEW 2



VIEW 6

AREA UNDER MTR STRUCTURE FENCED OFF BY OTHER AND CANNOT ACCESS



EXISTING CHANNEL 400 DEPTH

VIEW 4



525 CHANNEL AND EXISTING PIT

VIEW 7



VIEW 3

525 CHANNEL TO EXISTING WATERCOUSE, CANNOT ACCESS DUE TO FENCE UNDER MTR BRIDGE STRUCTURE.

PROJECT:

Proposed Temporary Shop and Services, Eating Place and Public Vehicle Park (Excluding Container Vehicle) for a Period of 5 Years in "Residential (Group C)" Zone

LOCATION:

Various Lots in D.D. 109, Kam Tin, Yuen Long, New Territories

SITE PHOTOS

APPENDIX D

VER	DESCRIPTION	DATE