R-RICHES PLANNING LIMITED

盈卓規劃有限公司

[redacted]

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

By Email

26 January 2026

Dear Sir,

2nd Further Information

Proposed Temporary Shop and Services with Ancillary Facilities and Associated Filling of Land for a Period of 5 Years in "Village Type Development" Zone,
Various Lots in D.D. 111 and adjoining Government Land, Pat Heung, Yuen Long, New Territories

(S.16 Planning Application No. A/YL-PH/1094)

We are writing to submit further information responding to departmental comments upon the subject application (**Appendices I** and **II**).

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

Yours faithfully,

For and on behalf of
R-riches Planning Limited

Danny NG
Town Planner

[redacted]

2nd Further Information

Proposed Temporary Shop and Services with Ancillary Facilities and Associated Filling of Land for a Period of 5 Years in "Village Type Development" Zone,
Various Lots in D.D. 111 and adjoining Government Land, Pat Heung, Yuen Long, New Territories

(Application No. A/YL-PH/1094)

(i) The applicant would like to submit a response-to-comments table for the consideration of government departments:

Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)		
(1)	We are unable to provide comment on drainage aspect of the application at this stage. A drainage proposal is required at this stage for our further consideration of the captioned application.	Noted. A drainage proposal is submitted for your consideration please (**Appendix II**).

PROPOSED TEMPORARY SHOP AND SERVICES WITH ANCILLARY WORKSHOP AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 5 YEARS, VARIOUS LOTS IN D.D. 111 AND ADJOINING GOVERNMENTLAND, PAT HEUNG, YUEN LONG, NEW TERRITORIES

Drainage Proposal

Jan 2026

MARVELLOUS
CONSTRUCTION & DESIGN COMPANY LIMITED

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1 Introduction

1.1 Background

1.1.1 The applicant seeks planning permission from the Town Planning Board (the Board) to use Lots1523 S.A RP, 1523 S.A ss.16 (Part), 1523 S.A ss.17, 1523 S.A ss.18, 1523 S.A ss.19, 1523 S.Ass.20, 1523 S.A ss.21, 1523 S.A ss.22, 1539 RP (Part), 1539 S.C (Part), 1539 S.D (Part), 1541(Part), 1559 S.B RP and adjoining Government Land (GL) in D.D. 111, Pat Heung, Yuen Long, New Territories (the Site) for 'Proposed Temporary Shop and Services with Ancillary Workshop and Associated Fillling of Land 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 located near the junction of Fan Kam Road and Kam Tin Road. It has an area of approx. 3,758 m^2. The site location is shown in **Figure 1**.

1.2.2 The existing site is already fully paved. Existing levels are various from approximately +17.7 mPD to 17.9. No major site formation of the Application Site is anticipated.

1.2.3 There is an existing watercourse at the north of the site which eventually discharge to a 5m width trapezoidal channel at the north. **Figure 2** indicates the existing drainage system of the area.

2 Development Proposal

2.1 The Proposed Development

2.1.1 The total site area is approximately 3,758 m^2. The catchment plan is shown in **Figure 4**. The site is already fully paved before the development.

Proposed Development Area (Approx.)	
Total Site Area (m^2)	3,758
Paved Area after Development (m^2)	3,758

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.

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:

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)

4 Proposed Drainage System

4.1. Proposed Channels

4.1.1 Proposed channels are designed for collection of runoff for application site. The design calculation of proposed drains are shown in **Appendix A**. The checking of capacity of existing 3m channel against the flow from development is also shown in Appendix A. According to the checking, the utilization is only 0.7%. The site is already fully paved before the development, there is additional runoff generated and no adverse drainage impact is anticipated.

4.1.2 The alignment, size, gradient and details of the proposed drains are shown in **Figure 3**. The catchment plan is shown in **Figure 4**.

4.1.3 Reference Drawings are shown in **Appendix C** for reference. Existing site photos are shown in **Appendix D**.

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 eventually discharge to 5m trapezoidal channel. The site is already fully paved before the development, there is additional runoff generated and no adverse drainage impact is anticipated.

5.1.2 With implementation of the above drainage system, no unacceptable drainage impact is anticipated.

- End of Text -

FIGURES

LEGEND

SITE AREA
(INDICATIVE ONLY)

N

WANG TOI SHAN SHAN TSUEN ROAD

FAN KAM ROAD

粉錦公路

KAM TIN ROAD

PAT HEUNG POLICE STATION

PAT HEUNG FIRE STATION

橫台山菜園村(北)
WANG TOI SHAN TSOI YUEN TSUEN (NORTH)

橫台山邨屋村
WANG TOI SHAN YAU UK TSUEN

PROJECT:

PROPOSED TEMPORARY SHOP AND SERVICES WITH ANCILLARY WORKSHOP AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 5 YEARS

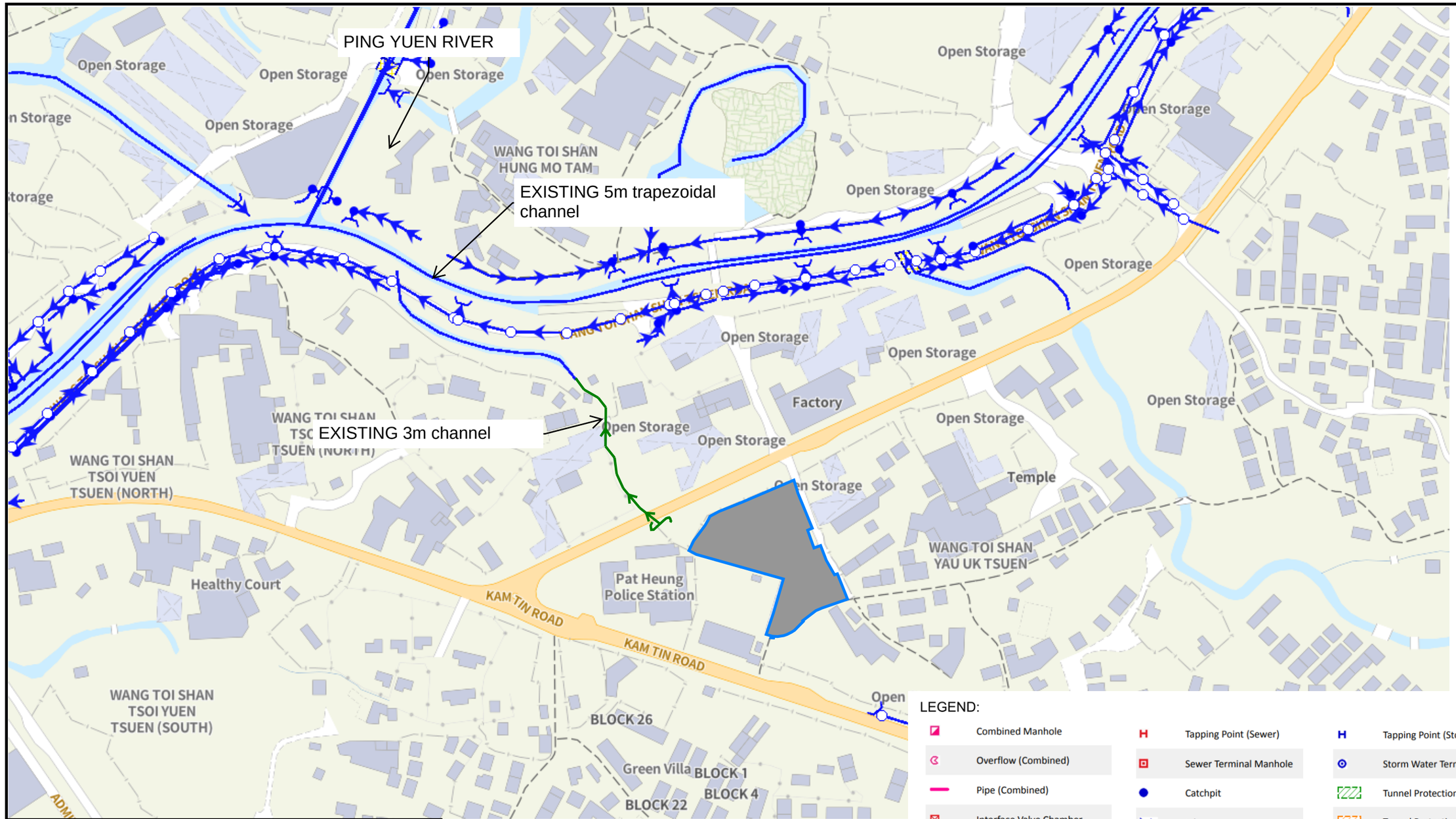
LOCATION:

VARIOUS LOTS IN D.D. 111 AND ADJOINING GOVERNMENTLAND, PAT HEUNG, YUEN LONG, NEW TERRITORIES

TITLE
SITE LOCATION PLAN

FIGURE NUMBER
FIGURE 1

VER	DESCRIPTION	DATE



LEGEND:

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

LEGEND

SITE AREA
(INDICATIVE ONLY)

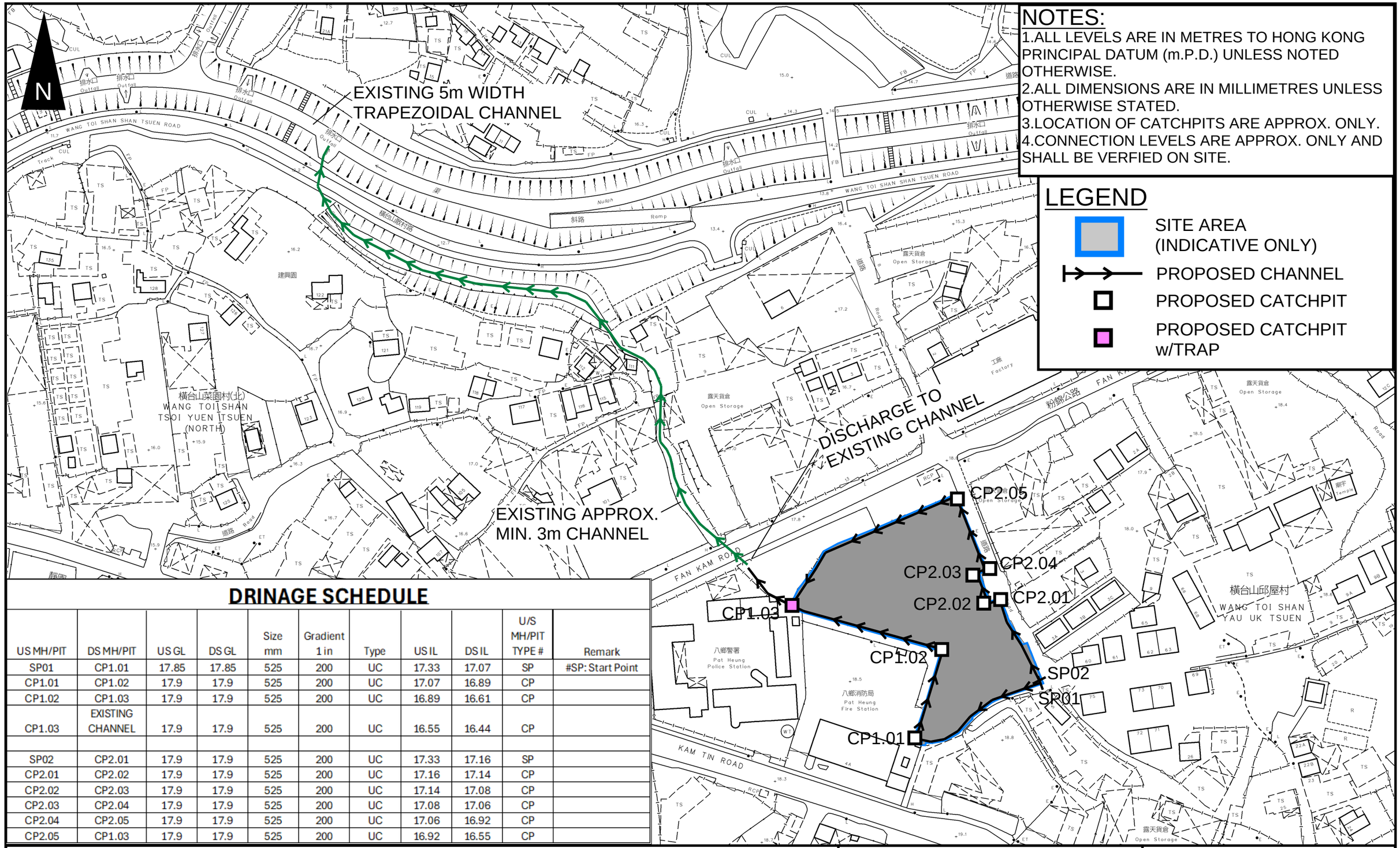
PROJECT:
PROPOSED TEMPORARY SHOP AND SERVICES WITH ANCILLARY WORKSHOP AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 5 YEARS

TITLE
EXISTING DRAINAGE PLAN

FIGURE NUMBER
FIGURE 2

LOCATION:
VARIOUS LOTS IN D.D. 111 AND ADJOINING GOVERNMENTLAND, PAT HEUNG, YUEN LONG, NEW TERRITORIES

VER	DESCRIPTION	DATE



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

DRINAGE SCHEDULE

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 #	Remark
SP01	CP1.01	17.85	17.85	525	200	UC	17.33	17.07	SP	#SP: Start Point
CP1.01	CP1.02	17.9	17.9	525	200	UC	17.07	16.89	CP	
CP1.02	CP1.03	17.9	17.9	525	200	UC	16.89	16.61	CP	
CP1.03	EXISTING CHANNEL	17.9	17.9	525	200	UC	16.55	16.44	CP	
SP02	CP2.01	17.9	17.9	525	200	UC	17.33	17.16	SP	
CP2.01	CP2.02	17.9	17.9	525	200	UC	17.16	17.14	CP	
CP2.02	CP2.03	17.9	17.9	525	200	UC	17.14	17.08	CP	
CP2.03	CP2.04	17.9	17.9	525	200	UC	17.08	17.06	CP	
CP2.04	CP2.05	17.9	17.9	525	200	UC	17.06	16.92	CP	
CP2.05	CP1.03	17.9	17.9	525	200	UC	16.92	16.55	CP	

PROJECT:

PROPOSED TEMPORARY SHOP AND SERVICES WITH ANCILLARY WORKSHOP AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 5 YEARS

LOCATION:

VARIOUS LOTS IN D.D. 111 AND ADJOINING GOVERNMENTLAND, PAT HEUNG, YUEN LONG, NEW TERRITORIES

TITLE
PROPOSED DRAINAGE SYSTEM

FIGURE NUMBER
FIGURE 3

VER	DESCRIPTION	DATE

LEGEND:

FALL

A1: Paved
3,758m²

B1: Paved
47m²

B2: Paved
152m²

B3: Paved
274m²

N

WANG TOI SHAN SHAN TSUEN ROAD

FAN KAM ROAD

粉錦公路

KAM TIN ROAD

錦田公路

橫台山菜園村(北)
WANG TOI SHAN
TSOI YUEN TSUEN
(NORTH)

橫台山邨屋村
WANG TOI SHAN
YAU UK TSUEN

八鄉警署
Pat Heung
Police Station

八鄉消防局
Pat Heung
Fire Station

露天貨倉
Open Storage

工廠
Factory

建興園

靜園

鹿苑

豐盈小築

橫台山敞村路

斜路 Ramp

Nullah

排水口 Outfall

道路 Road

PROJECT:

PROPOSED TEMPORARY SHOP AND SERVICES WITH ANCILLARY WORKSHOP AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 5 YEARS

LOCATION:

VARIOUS LOTS IN D.D. 111 AND ADJOINING GOVERNMENTLAND, PAT HEUNG, YUEN LONG, NEW TERRITORIES

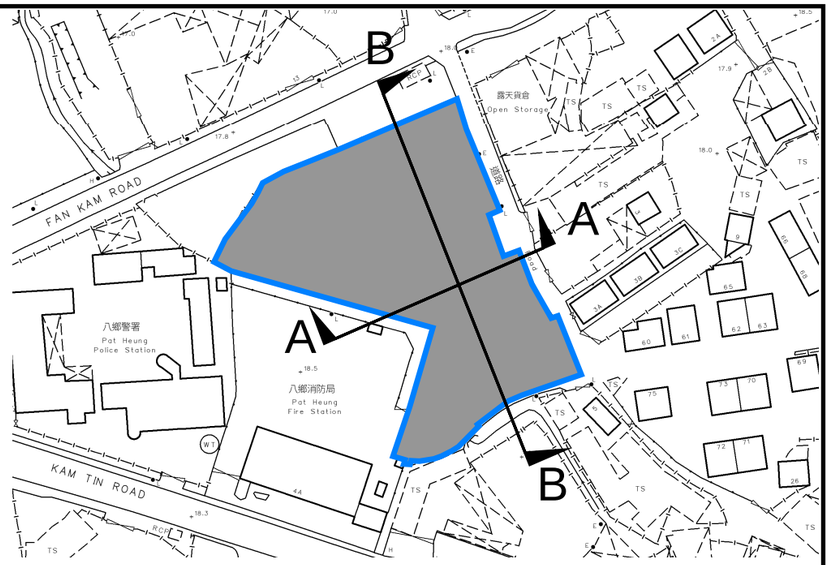
TITLE
CATCHMENT PLAN

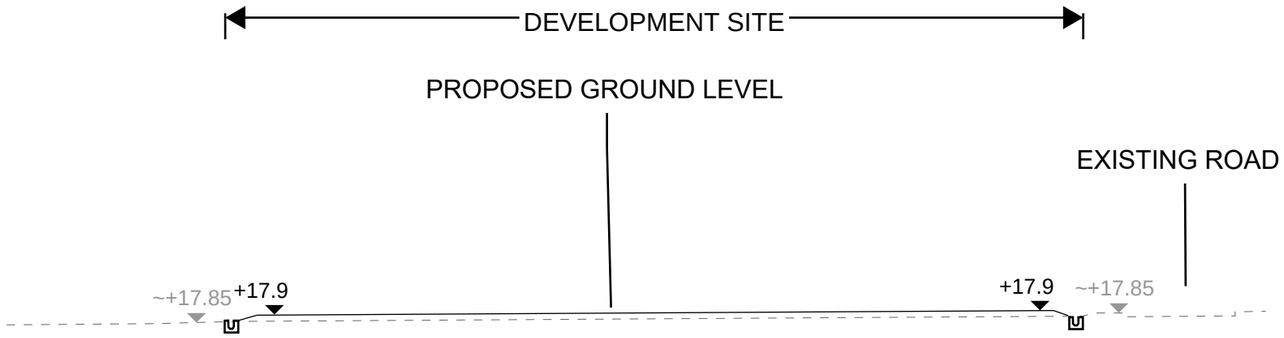
FIGURE NUMBER
FIGURE 4

VER	DESCRIPTION	DATE

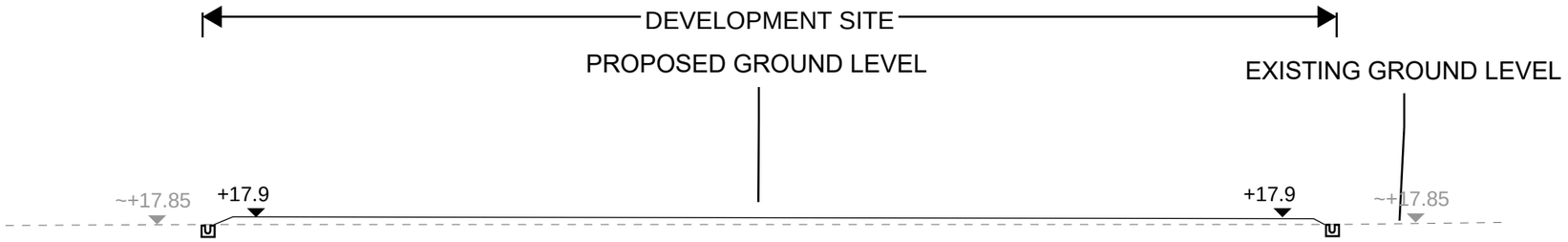
LEGEND

SITE AREA
(INDICATIVE ONLY)





N.T.S.
SECTION A-A



N.T.S.
SECTION B-B

PROJECT: PROPOSED TEMPORARY SHOP AND SERVICES WITH ANCILLARY WORKSHOP AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 5 YEARS	TITLE SECTIONS	FIGURE NUMBER FIGURE 5
LOCATION: VARIOUS LOTS IN D.D. 111 AND ADJOINING GOVERNMENTLAND, PAT HEUNG, YUEN LONG, NEW TERRITORIES		

VER	DESCRIPTION	DATE

APPENDIX

Appendix A: Design Calculation

Zone

HKO

Return Period	1 in	50	years

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 m^2)

Catchment	A1	B1	B2	B3
Total Area	3758	47	152	274
Hard Paved Area	3758	47	152	274
Unpaved Area	0	0	0	0
Equival. Area	3570.1	44.65	144.4	260.3

Pavement Type	Hard Paved	Unpaved
Runoff Coefficient	0.95	0.35

Calculation Table of Drainage System

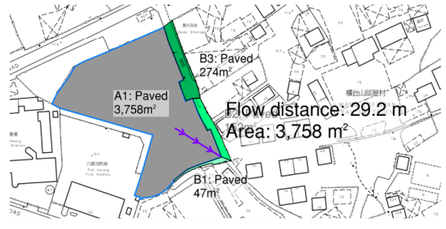
US MH/PIT	DS MH/PIT	US GL	DS GL	Size mm	Gradient 1 in	Type	US IL	DS IL	U/S MH/PIT TYPE #	Length m	V m/s	Capacity m^3/s	Catchments	Total Equivalent Area m^2	ToC min	Intensity mm/hr ##	Total Discharge m^3/s	Utilitization	Remark
SP01	CP1.01	17.85	17.85	525	200	UC	17.33	17.07	SP	52	1.62	0.40	A1,B1	3614.75	2.60	299	0.30	75.3%	
CP1.01	CP1.02	17.85	17.85	525	200	UC	17.07	16.89	CP	34.1	1.62	0.40	A1,B1	3614.75	3.13	290	0.29	73.0%	
CP1.02	CP1.03	17.85	17.85	525	200	UC	16.89	16.61	CP	57.9	1.62	0.40	A1,B1	3614.75	3.48	285	0.29	71.6%	
CP1.03	EXISTING CHANNEL	17.85	17.85	525	200	UC	16.55	16.44	CP	21.5	1.62	0.40	A1,B1,B2,B3	4019.45	4.20	275	0.31	76.8%	
SP02	CP2.01	17.85	17.85	525	200	UC	17.33	17.16	SP	33	1.62	0.40	A1,B2	3714.50	2.60	299	0.31	77.3%	
CP2.01	CP2.02	17.85	17.85	525	200	UC	17.16	17.14	CP	4.4	1.62	0.40	A1,B1	3614.75	2.94	293	0.29	73.8%	
CP2.02	CP2.03	17.85	17.85	525	200	UC	17.14	17.08	CP	12.1	1.62	0.40	A1,B1	3614.75	2.98	293	0.29	73.6%	
CP2.03	CP2.04	17.85	17.85	525	200	UC	17.08	17.06	CP	3.3	1.62	0.40	A1,B1	3614.75	3.11	291	0.29	73.1%	
CP2.04	CP2.05	17.85	17.85	525	200	UC	17.06	16.92	CP	28.8	1.62	0.40	A1,B1	3614.75	3.14	290	0.29	72.9%	
CP2.05	CP1.03	17.85	17.85	525	200	UC	16.92	16.55	CP	74.3	1.62	0.40	A1,B1	3614.75	3.44	285	0.29	71.8%	
Checking of Existing 3m Channel				3000	200	UC					5.19	41.70	A1,B1,B2,B3	4019.45	4.20	275	0.31	0.7%	

#SP: Start Point

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

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			
(m2)	(m)	(mPD)	(mPD)		(min)	(min)
3758	29.2	17.9	17.85	0.171	2.6	2.6



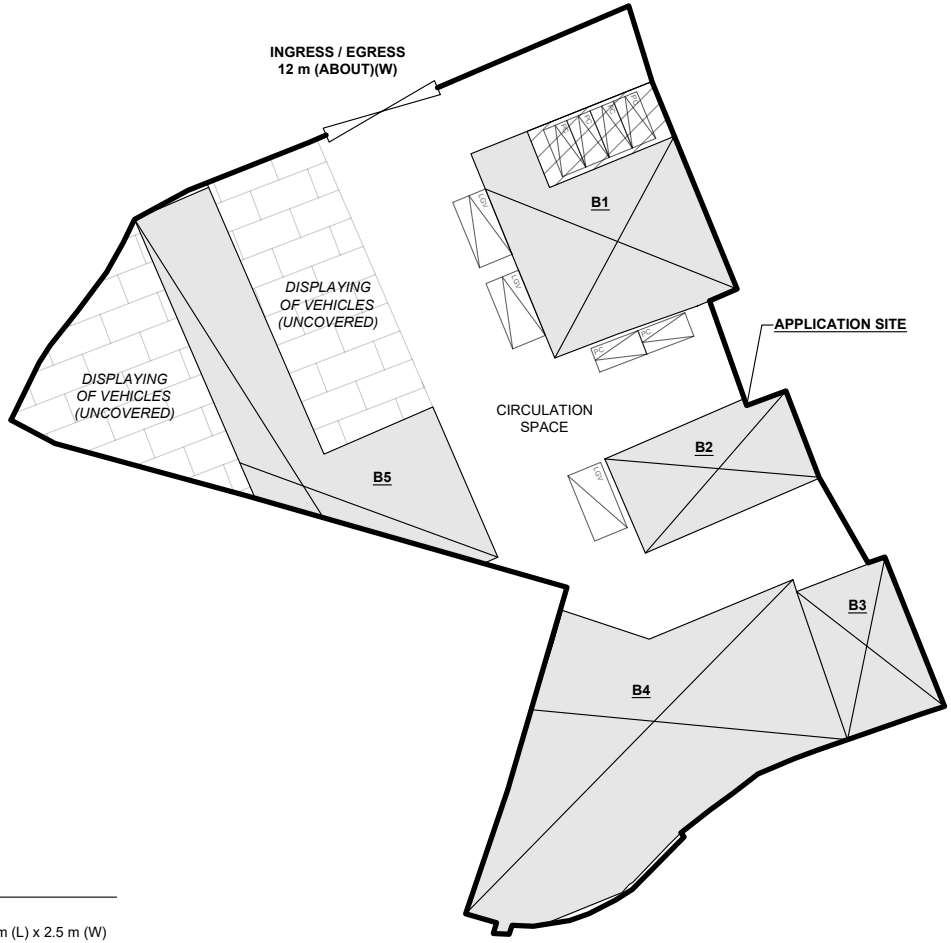
APPENDIX B - PROPOSED SITE LAYOUT PLAN

DEVELOPMENT PARAMETERS

APPLICATION SITE AREA	: 3,758 m^2	(ABOUT)
COVERED AREA	: 1,893 m^2	(ABOUT)
UNCOVERED AREA	: 1,865 m^2	(ABOUT)
PLOT RATIO	: 0.94	(ABOUT)
SITE COVERAGE	: 50 %	(ABOUT)
NO. OF STRUCTURE	: 5	
DOMESTIC GFA	: NOT APPLICABLE	
NON-DOMESTIC GFA	: 3,517 m^2	(ABOUT)
TOTAL GFA	: 3,517 m^2	(ABOUT)
BUILDING HEIGHT	: 6 m - 8 m	(ABOUT)
NO. OF STOREY	: 1 - 2	

STRUCTURE	USE	COVERED AREA	GROSS FLOOR AREA	BUILDING HEIGHT
B1	SHOP AND SERVICES, SITE OFFICE WASHROOM AND COVERED PARKING SPACE	428 m^2 (ABOUT)	777 m^2 (ABOUT)*	8 m (ABOUT)(2-STOREY)
B2	SHOP AND SERVICES WITH ANCILLARY WORKSHOP	190 m^2 (ABOUT)	190 m^2 (ABOUT)	6 m (ABOUT)(1-STOREY)
B3	SHOP AND SERVICES WITH ANCILLARY WORKSHOP	154 m^2 (ABOUT)	308 m^2 (ABOUT)	8 m (ABOUT)(2-STOREY)
B4	SHOP AND SERVICES, OFFICE WITH ANCILLARY WORKSHOP	705 m^2 (ABOUT)	1,410 m^2 (ABOUT)	8 m (ABOUT)(2-STOREY)
B5	SHOP AND SERVICES, FIRE SERVICE WATER TANK AND PUMP ROOM	416 m^2 (ABOUT)	832 m^2 (ABOUT)	8 m (ABOUT)(2-STOREY)
	TOTAL	**1,893 m^2 (ABOUT)**	**3,517 m^2 (ABOUT)**	

**PORTION OF STRUCTURE B1 IS 1-STOREY, GFA OF STRUCTURE B1 - 428 m^2 + 349 m^2 = 777 m^2*



PARKING AND LOADING / UNLOADING PROVISIONS

NO. OF PRIVATE CAR PARKING SPACE	: 6
DIMENSION OF PARKING SPACE	: 5 m (L) x 2.5 m (W)
NO. OF LIGHT GOODS VEHICLE PARKING SPACE	: 2
DIMENSION OF PARKING SPACE	: 7 m (L) x 3.5 m (W)
NO. OF L/UL SPACE FOR LIGHT GOODS VEHICLE	: 1
DIMENSION OF L/UL SPACE	: 7 m (L) x 3.5 m (W)

LEGEND

- APPLICATION SITE
- STRUCTURE (CANOPY)
- STRUCTURE (CANOPY / 4-SIDE OPENED)
- PARKING SPACE (PC)
- PARKING SPACE (LGV)
- LOADING / UNLOADING SPACE (LGV)
- INGRESS / EGRESS

**SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY*

NORTH
W E
S

PLANNING CONSULTANT
R-RICHES PLANNING LIMITED

PROJECT
PROPOSED TEMPORARY SHOP AND SERVICES WITH ANCILLARY WORKSHOP AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 5 YEARS

SITE LOCATION
VARIOUS LOTS IN D.D. 111 AND ADJOINING GOVERNMENT LAND, PAT HEUNG, YUEN LONG, NEW TERRITORIES

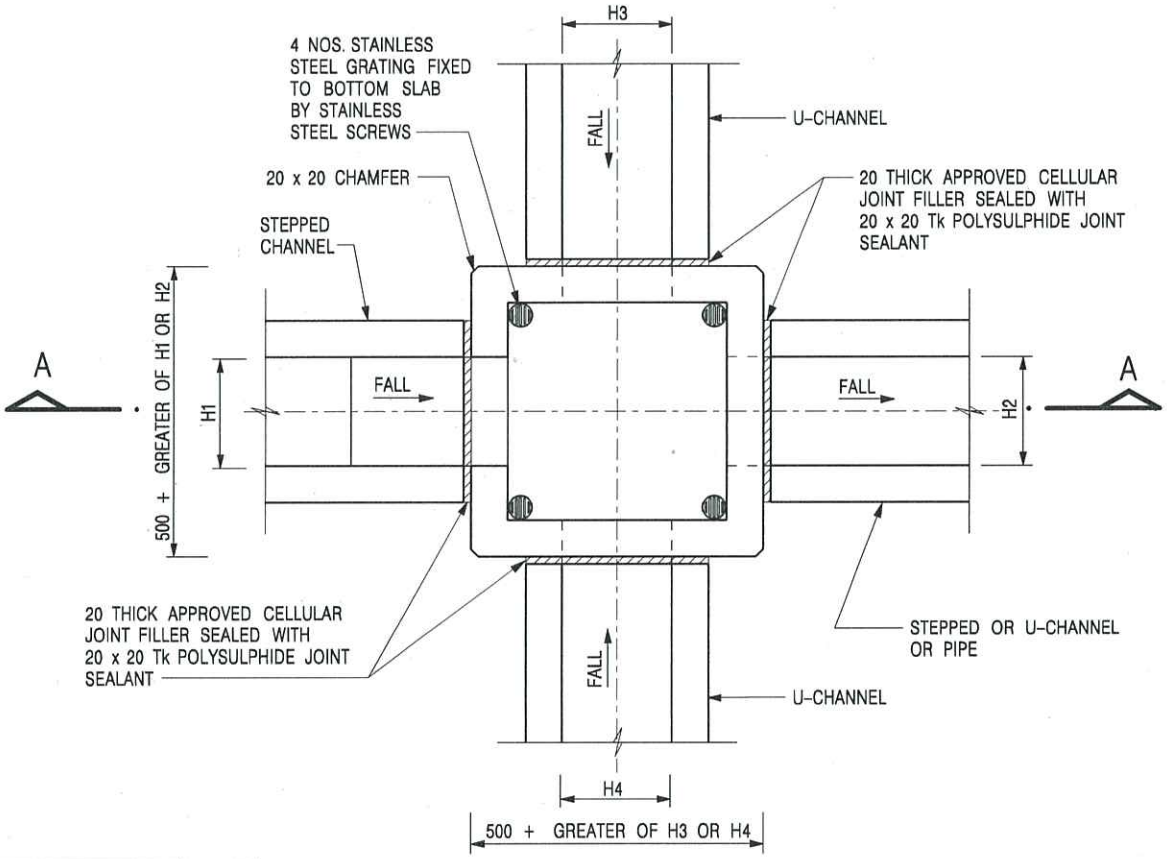
SCALE
1 : 750 @ A4

DRAWN BY	DATE
MN	3.10.2025
REVISED BY	DATE
APPROVED BY	DATE

DWG. TITLE
LAYOUT PLAN

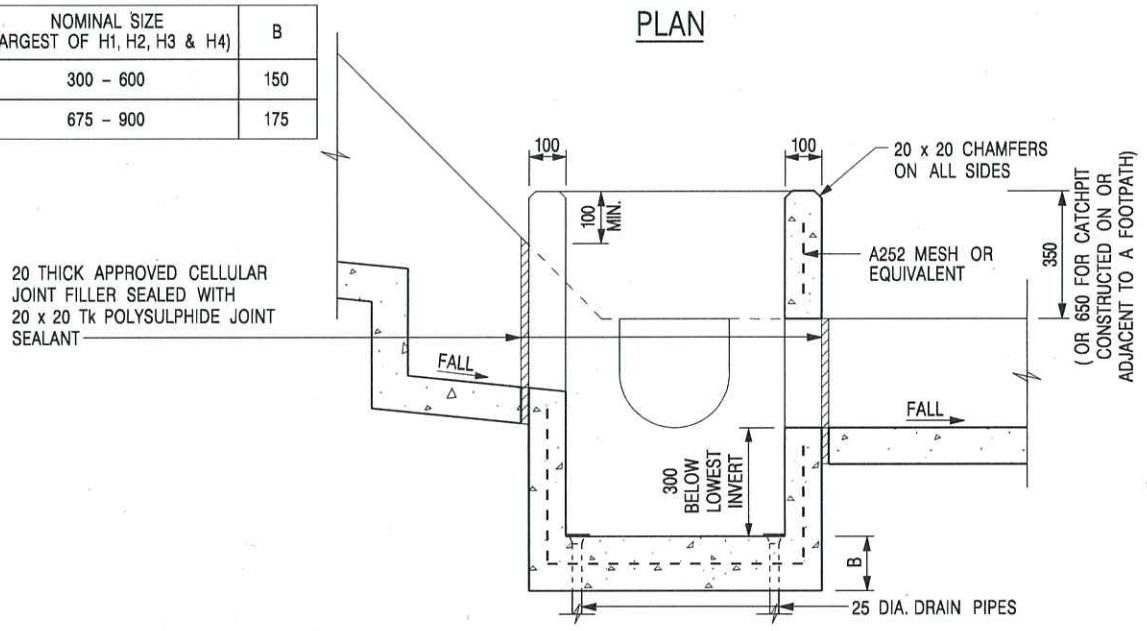
DWG NO.	VER.
PLAN 4	001

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.

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

CATCHPIT WITH TRAP

(SHEET 1 OF 2)

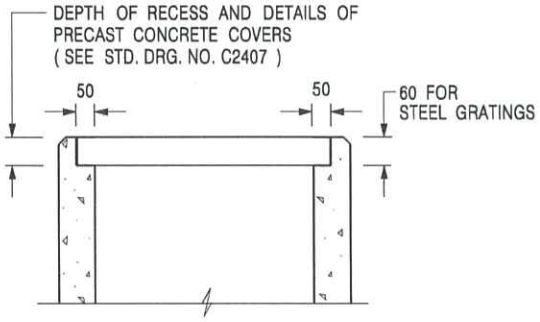
CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

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

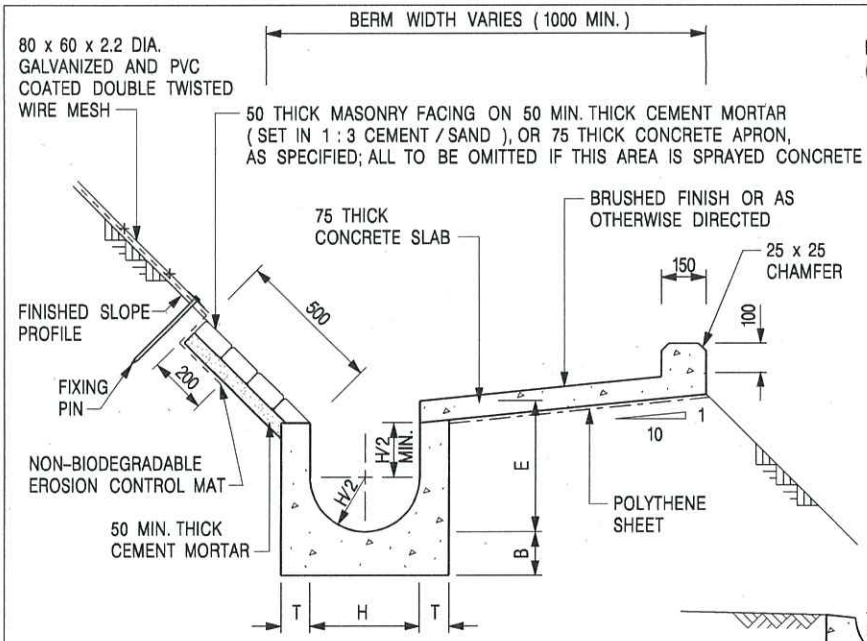
CATCHPIT WITH TRAP
(SHEET 2 OF 2)

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

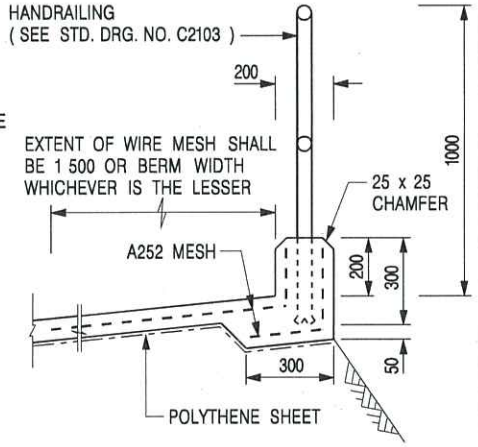
SCALE 1 : 20

DATE JAN 1991

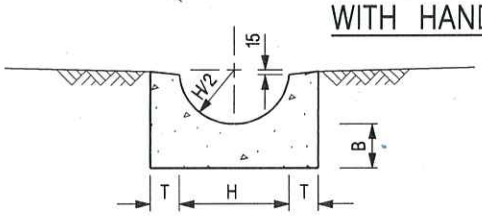
DRAWING NO. C2406 /2A



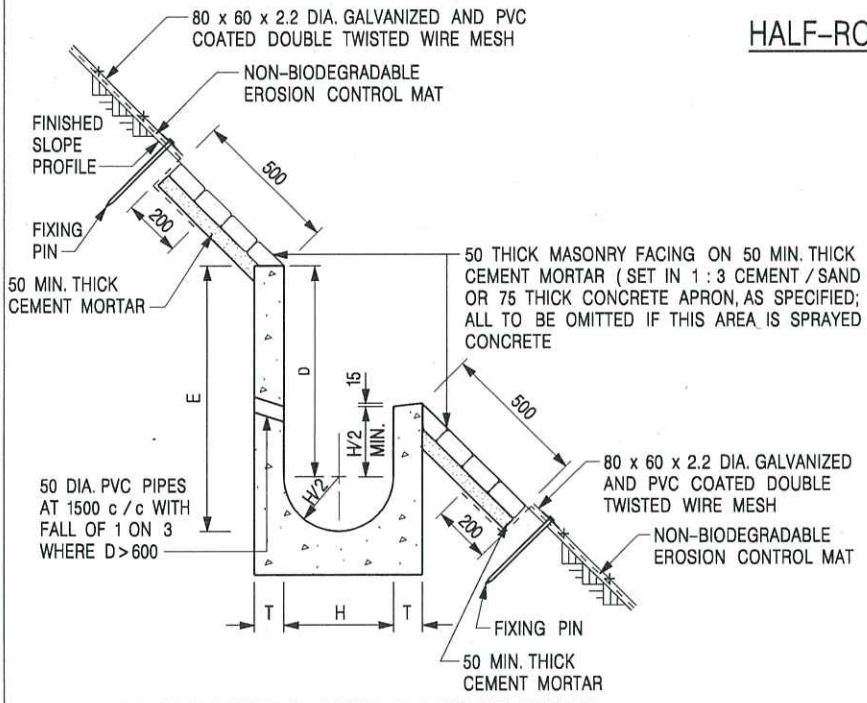
U-CHANNELS CONSTRUCTED ON BERM



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

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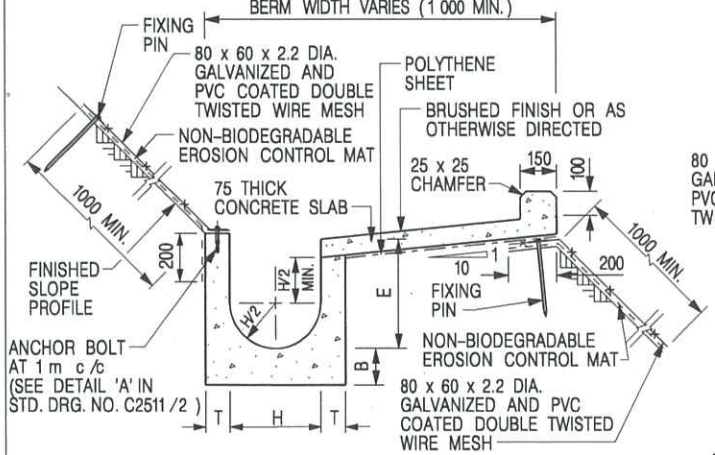
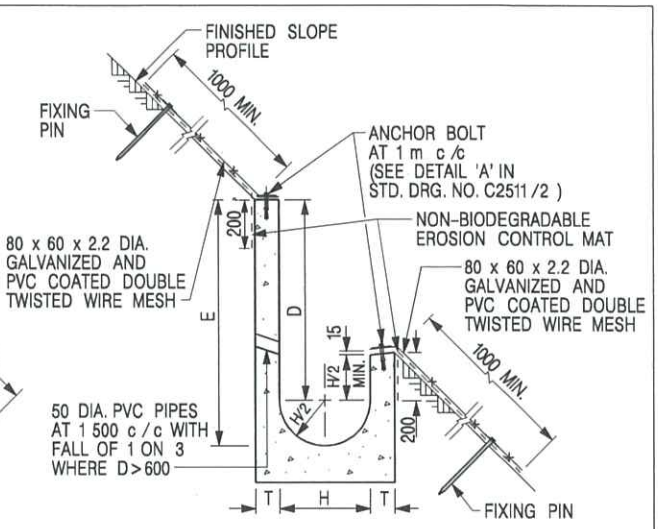
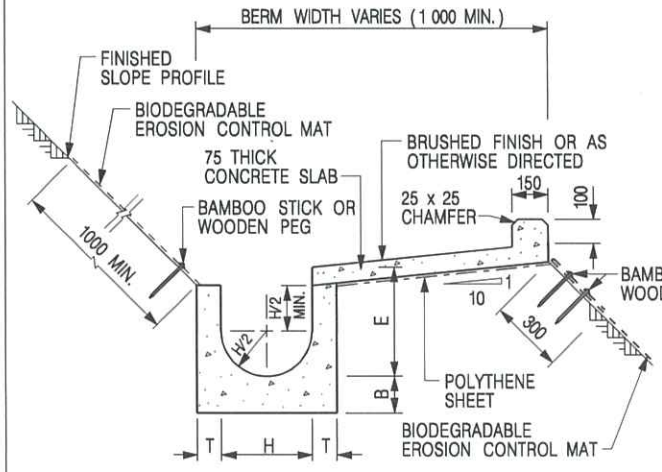


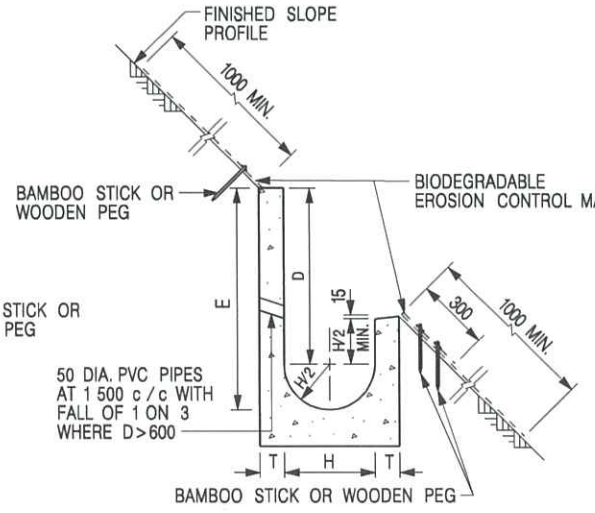
U-CHANNELS CONSTRUCTED ON BERM WITH NON-BIODEGRADABLE EROSION CONTROL MAT



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

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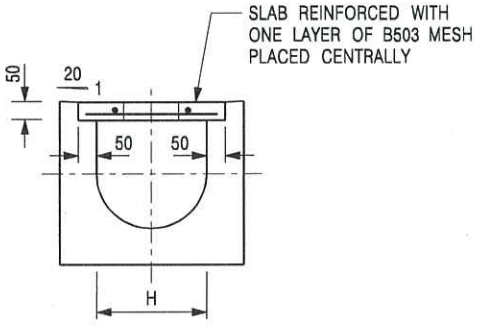
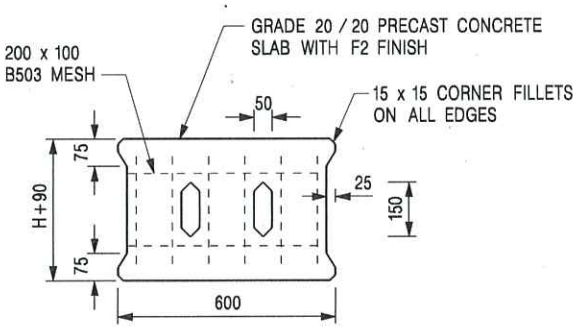


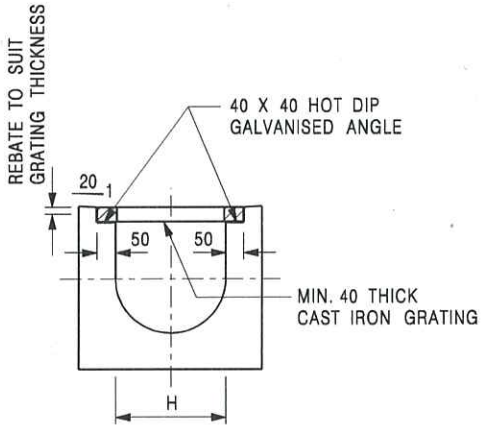
TYPICAL SECTION



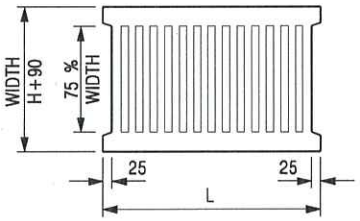
PLAN OF SLAB

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

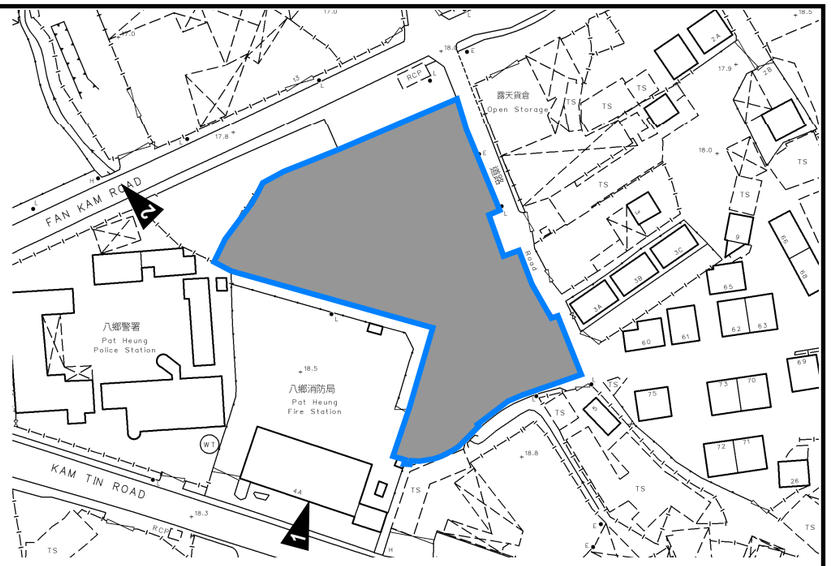
COVER SLAB AND CAST IRON GRATING FOR CHANNELS

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DATE JAN 1991

DRAWING NO. C2412E



PROJECT:
PROPOSED TEMPORARY SHOP AND SERVICES WITH ANCILLARY WORKSHOP AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 5 YEARS

SITE PHOTOS

APPENDIX D

LOCATION:
VARIOUS LOTS IN D.D. 111 AND ADJOINING GOVERNMENTLAND, PAT HEUNG, YUEN LONG, NEW TERRITORIES

VER	DESCRIPTION	DATE