

寄件者: Christian Chim [REDACTED]
寄件日期: 2026年05月26日星期二 16:58
收件者: tpbpd/PLAND
副本: Jason Sek Hei WONG/PLAND; Jeff Chi Wai TSE/MND/DSD; Bon Tang; Matthew Ng; Louis Tse; Danny Ng; Grace Wong
主旨: RE: [FI] S.16 Planning Application No. A/YL-SK/454 - Further Information
附件: FI2 for A_YL-SK_454 (20260526)_2.pdf

郵件標幟: 待處理
標幟狀態: 已標幟

類別: Internet Email

Dear Sir,

We write to submit further information in response to the departmental comments on the captioned application. This is to supersede our previous submission in the preceding message dated 26.5.2026 at 10:58am.

Should you require more information, please do not hesitate to contact us. Thank you for your kind attention.

Kind Regards,

Christian CHIM | Town Planner
R-riches Group (HK) Limited

R-riches Property Consultants Limited | R-riches Planning Limited | R-riches Construction Limited

T: [REDACTED] | F: [REDACTED] | M: [REDACTED] | E: [REDACTED]
A: [REDACTED]

From: Christian Chim
Sent: Tuesday, May 26, 2026 10:58 AM
To: Town Planning Board <tpbpd@pland.gov.hk>
Cc: 'Jason Sek Hei WONG/PLAND' [REDACTED]; [REDACTED]; Bon Tang [REDACTED]; Matthew Ng [REDACTED]; Louis Tse [REDACTED]; [REDACTED]; Danny Ng [REDACTED]; Grace Wong [REDACTED]
Subject: RE: [FI] S.16 Planning Application No. A/YL-SK/454 - Further Information

Dear Sir,

We write to submit further information in response to the departmental comments on the captioned application. This is to supersede our previous submission in the preceding message dated 22.5.2026 at 12:28pm.

Should you require more information, please do not hesitate to contact us. Thank you for your kind attention.

Kind Regards,

Christian CHIM | Town Planner
R-riches Group (HK) Limited

☐Urgent ☐Return receipt ☐Expand Group ☐Restricted ☐Prevent Copy ☐Confidential

R-riches Property Consultants Limited | R-riches Planning Limited | R-riches Construction Limited

T: [REDACTED] | F: [REDACTED] | M: [REDACTED] | E: [REDACTED]

A: [REDACTED]

From: Christian Chim

Sent: Friday, May 22, 2026 12:28 PM

To: Town Planning Board <tpbpd@pland.gov.hk>

Cc: 'Jason Sek Hei WONG/PLAND' [REDACTED]; [REDACTED]; Bon

Tang [REDACTED]; Matthew Ng [REDACTED]; Louis Tse [REDACTED];

[REDACTED]; Danny Ng [REDACTED]; Grace Wong [REDACTED]

Subject: [FI] S.16 Planning Application No. A/YL-SK/454 - Further Information

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Kind Regards,

Christian CHIM | Town Planner

R-riches Group (HK) Limited

R-riches Property Consultants Limited | R-riches Planning Limited | R-riches Construction Limited

T: [REDACTED] | F: [REDACTED] | M: [REDACTED] | E: [REDACTED]

A: [REDACTED]

Our Ref. : [REDACTED]
Your Ref. : TPB/A/YL-SK/454

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

By E-mail

26 May 2026

Dear Sir,

2nd Further Information

**Proposed Temporary Shop and Services and Public Vehicle Park
(excluding Container Vehicle) with Ancillary Facilities and Associated Filling of Land
for a Period of 5 Years in "Village Type Development" Zone,
Lot 354 in D.D. 112, Shui Lau Tin, Shek Kong, Yuen Long, New Territories**

(S.16 Planning Application No. A/YL-SK/454)

We write to submit further information in response to departmental comments on the captioned application.

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. Jason WONG

email: jshwong@pland.gov.hk)



Response-to-Comment (RtC)

**Proposed Temporary Shop and Services and Public Vehicle Park
(excluding Container Vehicle) with Ancillary Facilities and Associated Filling of Land
for a Period of 5 Years in “Village Type Development” Zone,
Lot 354 in D.D. 112, Shui Lau Tin, Shek Kong, Yuen Long, New Territories**

(S.16 Application No. A/YL-SK/454)

(i) An RtC table:

Departmental Comments		Applicant's Responses
1. Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)		
(a)	To clarify whether there would be proposed wall/hoardings and to clarify extend of existing and/or proposed hoarding/wall.	The application site (the Site) is currently surrounded by mesh fencing. Upon obtaining planning permission, the applicant will erect solid boundary fencing with 100 mm openings at the toe along the site boundary. Please refer to the elevation of the typical openings at the toe of hoardings at Figure 3 of the enclosed drainage proposal.
(b)	CP 1.05 to be within private lot and provide sand trap before discharge.	The location of CP1.05 (equipped with sand trap) has been revised to situate within a private lot (outside the Site) near the boundary of adjoining Government land (GL). Figure 3 of the drainage proposal has been updated. Upon obtaining planning permission, the applicant will deal with respectively lot owners for the construction of the drainage facilities between the Site and GL, as well as submit HBP1 for connection to existing government drainage facilities.

Proposed Temporary Shop and Services and Public Vehicle Park (Excluding Container Vehicle) with Ancillary Facilities and Associated Filling of Land for a Period of 5 Years in “Village Type Development” Zone, Lot 354 in D.D. 112, Shui Lau Tin, Shek Kong, Yuen Long, New Territories

Drainage Proposal

May 2026 r1



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

1 Introduction

1.1 Background

- 1.1.1 The applicant seeks planning permission from the Town Planning Board (the Board) to use Lot 354 in D.D. 112, Shui Lau Tin, Shek Kong, Yuen Long, New Territories (the Site) for ‘Proposed Temporary Shop and Services and Public Vehicle Park (Excluding Container Vehicle) with Ancillary Facilities and Associated Filling 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 to the south of Shek Kong Airfield. It has an area of approx. 3,763 m². The site location is shown in **Figure 1**.
- 1.2.2 The existing site is mostly unpaved. Existing levels are various from approximately +18.7 to +19.2 mPD. The site would be paved not more than 200 mm for site formation of the proposed structures, and the provision of parking, loading/unloading (L/UL) and circulation space.
- 1.2.3 There is an approx. 12m width rectangular nullah by the north of the site. It would eventually discharge to Kam Tin River. **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 3,763 m². The catchment plan is shown in **Figure 4**.

Proposed Development Area (Approx.)	
Total Site Area (m ²)	3,763
Paved Area after Development (m ²)	3,763

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 as per table 28 of corrigendum no.1/2022.

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:

$$\text{Manning's Equation: } v = \frac{R^{\frac{6}{5}}}{n} S_f^{\frac{1}{2}}$$

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:

$$\text{Colebrook-White Equation: } \frac{1}{\sqrt{f}} = -\sqrt{32gRS} \log \log \left(\frac{k_s}{14.8R} + \frac{1.255v}{R\sqrt{32gRS_f}} \right)$$

where,

V	=	velocity of the pipe flow (m/s)
S _f	=	hydraulic gradient
k _r	=	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. It is proposed to discharge to existing approx. 12m width rectangular nullah at the north. According to the checking of existing drains in **Appendix A**, they have enough capacity to carry the flow proposed development.
- 4.1.2 The design calculations of proposed drains are shown in **Appendix A**. Checking of utilization of existing approx. 12m width trapezoidal channel is also indicated in **Appendix A**. It is shown that the utilization is only about 0.07%.
- 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 Reference Drawings are shown in **Appendix C** for reference.

5 Conclusion

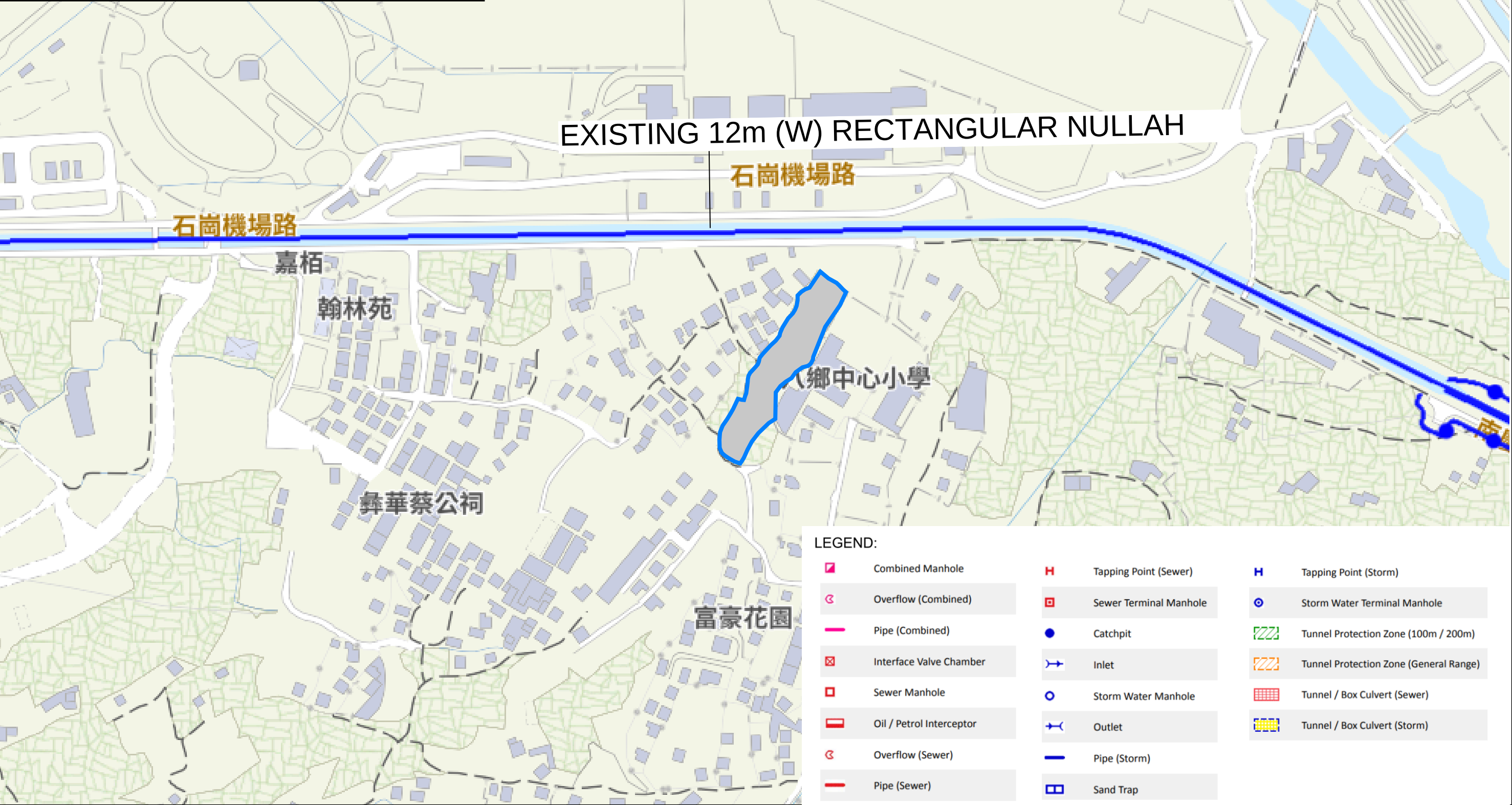
- 5.1.1 Drainage review has been conducted for the Proposed Development. The surface runoff will be collected by the proposed drains and discharged to existing 12m width nullah.
- 5.1.2 With implementation of the above drainage system, no unacceptable drainage impact is anticipated.

- End of Text -

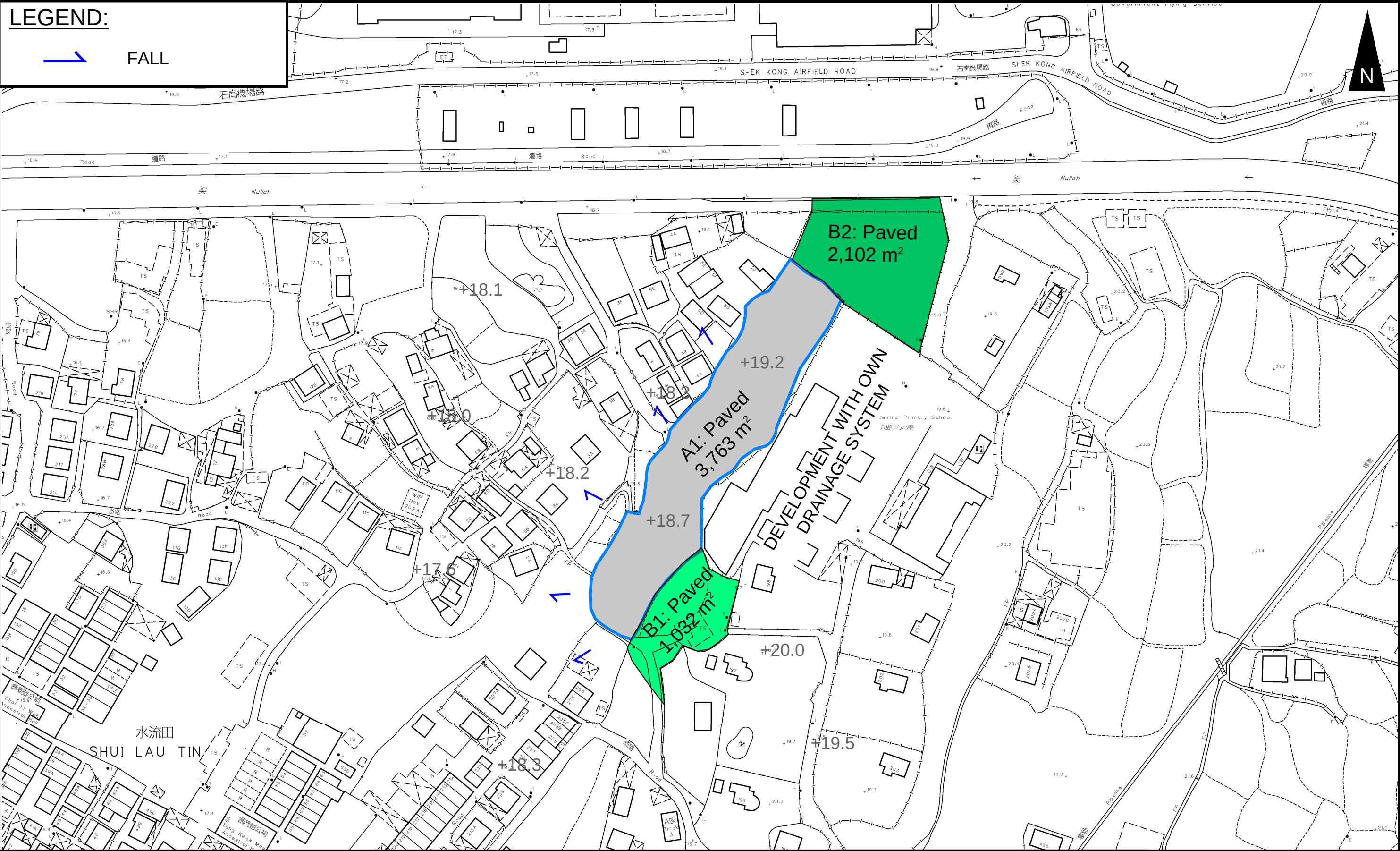
FIGURES

LEGEND

SITE AREA
(INDICATIVE ONLY)



PROJECT: Proposed Temporary Shop and Services and Public Vehicle Park (Excluding Container Vehicle) with Ancillary Facilities and Associated Filling of Land for a Period of 5 Years in “Village Type Development” Zone	TITLE EXISTING DRAINAGE PLAN	FIGURE NUMBER FIGURE 2		
LOCATION: Lot 354 in D.D. 112, Shui Lau Tin, Shek Kong, Yuen Long, New Territories				
		VER	DESCRIPTION	DATE

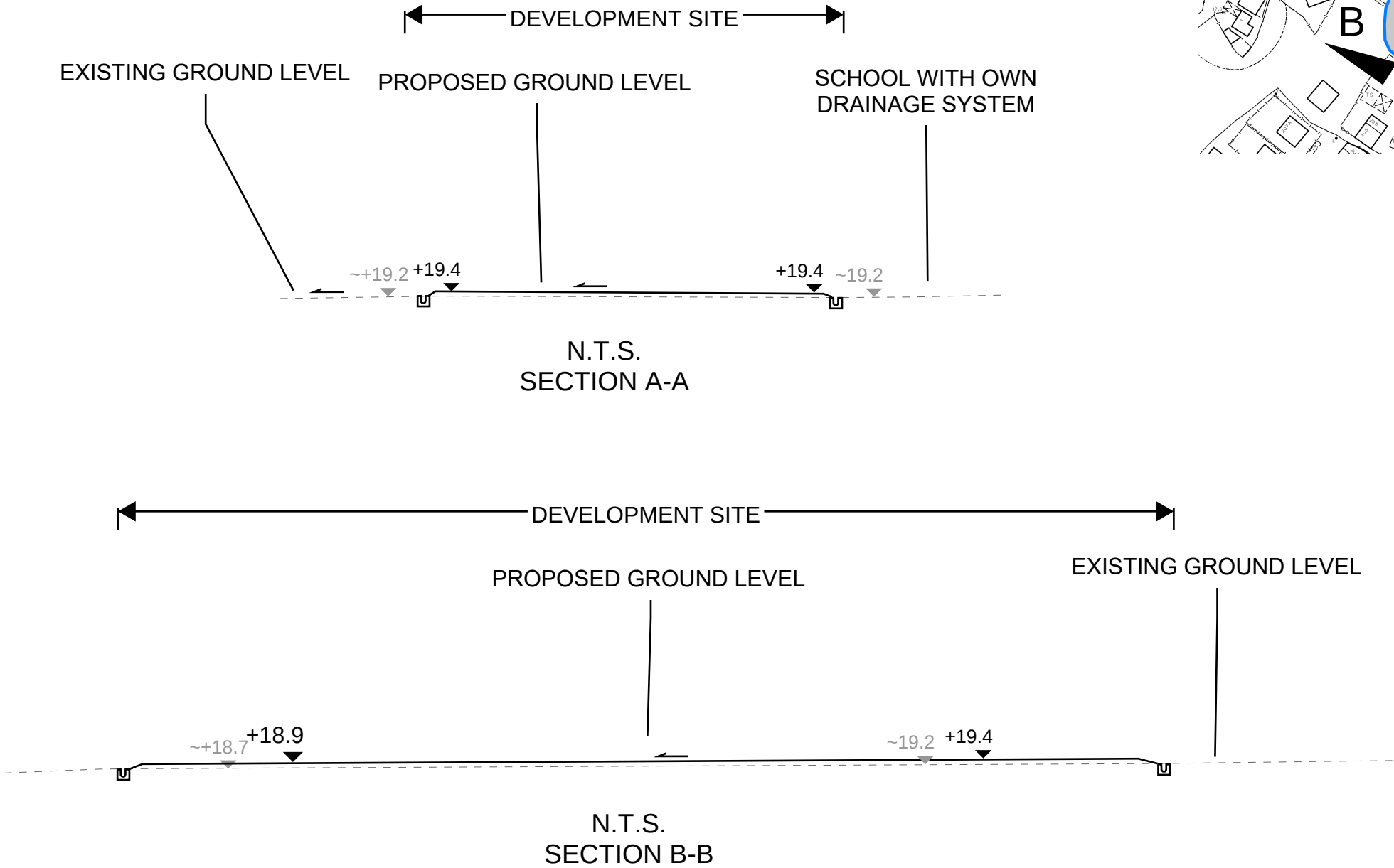
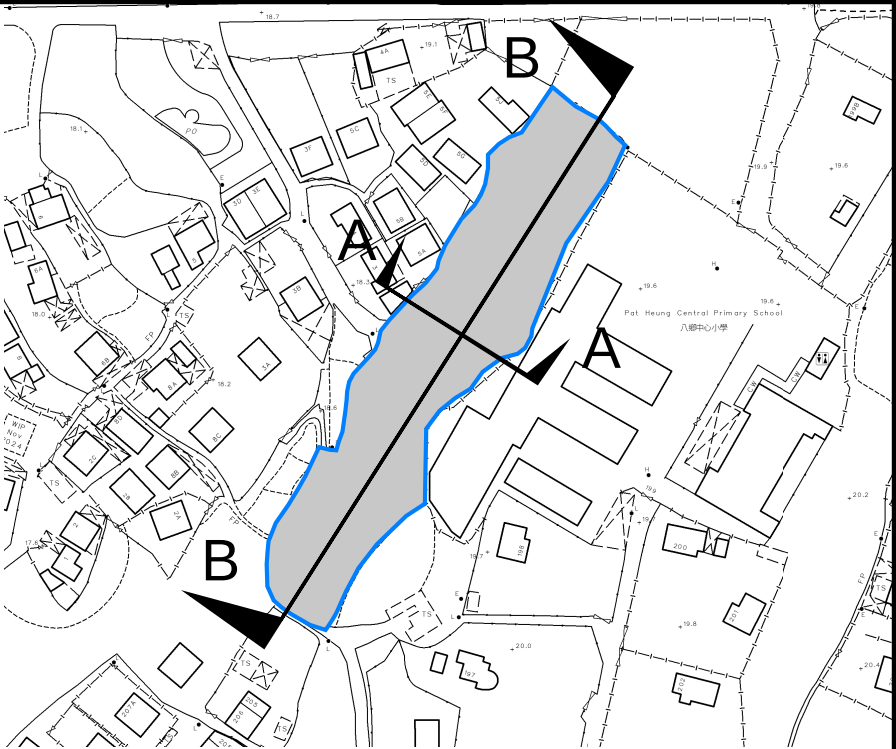


PROJECT: Proposed Temporary Shop and Services and Public Vehicle Park (Excluding Container Vehicle) with Ancillary Facilities and Associated Filling of Land for a Period of 5 Years in “Village Type Development” Zone	TITLE CATCHMENT PLAN	FIGURE NUMBER FIGURE 4		
		VER	DESCRIPTION	DATE

LEGEND



SITE AREA
(INDICATIVE ONLY)



PROJECT:

Proposed Temporary Shop and Services and Public Vehicle Park (Excluding Container Vehicle) with Ancillary Facilities and Associated Filling of Land for a Period of 5 Years in “Village Type Development” Zone

TITLE
SECTIONS

FIGURE NUMBER
FIGURE 5

LOCATION:

Lot 354 in D.D. 112, Shui Lau Tin, Shek Kong, Yuen Long, New Territories

VER	DESCRIPTION	DATE
-----	-------------	------

APPENDIX

Zone				n	0.014	Storm Constant	HKO a	505.5	
HKO	Return Period	1 in	50	years	Ks		0.15	HKO b	3.29
					Viscosity		0.000001	HKO c	0.355

[illegible]

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	Utilizatio n	Remark	
SP01	CP1.00a	18.70	18.70	600	200	UC	18.10	18.04	SP	12.6	1.78	0.57	A1	3574.85	2.30	305	0.30	53.1%		
CP1.00a	CP1.00	18.70	18.70	600	200	UC	18.04	17.96	CP	14.8	1.78	0.57	A1	3574.85	2.42	303	0.30	52.7%		
CP1.00	CP1.01	18.70	18.70	600	200	UC	17.96	17.83	CP	26.3	1.78	0.57	A1	3574.85	2.56	300	0.30	52.3%		
CP1.01	CP1.02	18.70	18.70	600	200	UC	17.83	17.81	CP	4.9	1.78	0.57	A1	3574.85	2.80	296	0.29	51.5%		
CP1.02	CP1.02a	18.70	19.20	600	200	UC	17.81	17.66	CP	29.4	1.78	0.57	A1	3574.85	2.85	295	0.29	51.4%		
CP1.02a	CP1.03	19.20	19.20	600	150	UC	17.66	17.27	CP	58.3	2.05	0.66	A1	3574.85	3.13	290	0.29	43.8%		
CP1.03	CP1.04	19.20	19.20	600	150	UC	17.27	17.12	CP	22.8	2.05	0.66	A1	3574.85	3.60	283	0.28	42.7%		
CP1.04	CP1.05	19.20	19.20	675	100	UC	17.12	16.95	CP	17.2	2.72	1.10	A1,B1,B2	6552.15	3.91	279	0.51	46.0%		
CP1.05	Exsiting 12m (W) Nullah	19.20	19.20	675	110	PIPE	16.95	16.88	CP	7.5	2.88	1.03	A1,B1,B2	6552.15	4.02	277	0.50	49.0%		
SP02	CP2.01	18.70	18.70	600	200	UC	18.10	17.90	SP	40.4	1.78	0.57	A1,B1	4555.25	2.30	305	0.39	67.7%		
CP2.01	CP2.02	18.70	18.70	600	200	UC	17.90	17.80	CP	18.9	1.78	0.57	A1,B1	4555.25	2.68	298	0.38	66.1%		
CP2.02	CP2.02a	18.70	19.20	600	200	UC	17.80	17.62	CP	36.3	1.78	0.57	A1,B1	4555.25	2.86	295	0.37	65.4%		
CP2.02a	CP2.03	19.20	19.20	600	200	UC	17.62	17.35	CP	54	1.78	0.57	A1,B1	4555.25	3.20	289	0.37	64.2%		
CP2.03	CP1.04	19.20	19.20	600	200	UC	17.35	17.24	CP	22.1	1.78	0.57	A1,B1	4555.25	3.70	282	0.36	62.5%		
Flow From Proposed Development													A1	3574.85	4.02	277	0.28			
#SP: Start Point																				

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)
1032	26.2	19	18.9	0.382	2.3	2.3



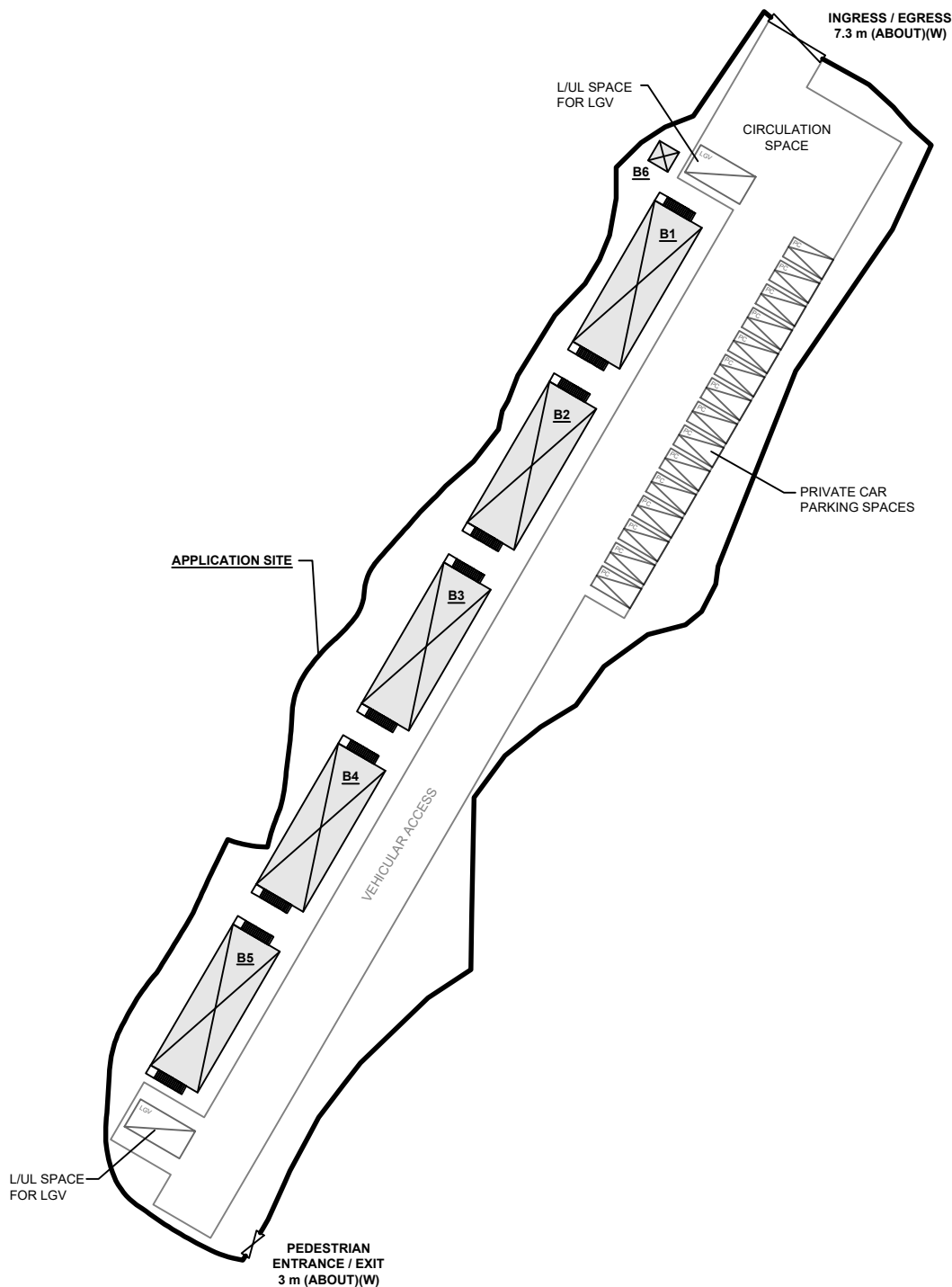
APPENDIX B - PROPOSED SITE LAYOUT PLAN

DEVELOPMENT PARAMETERS

APPLICATION SITE AREA	: 3,763 m ²	(ABOUT)
COVERED AREA	: 597 m ²	(ABOUT)
UNCOVERED AREA	: 3,166 m ²	(ABOUT)
PLOT RATIO	: 0.3	(ABOUT)
SITE COVERAGE	: 16 %	(ABOUT)
NO. OF STRUCTURE	: 6	
DOMESTIC GFA	: NOT APPLICABLE	
NON-DOMESTIC GFA	: 1,137 m ²	(ABOUT)
TOTAL GFA	: 1,137 m ²	(ABOUT)
BUILDING HEIGHT	: 3 m - 8 m	(ABOUT)
NO. OF STOREY	: 1 - 2	

STRUCTURE	USE	COVERED AREA	GROSS FLOOR AREA	BUILDING HEIGHT
B1	S&S, OFFICE AND WASHROOM	118 m ² (ABOUT)*	226 m ² (ABOUT)#	8 m (ABOUT)(2-STOREY)
B2	S&S, OFFICE AND WASHROOM	118 m ² (ABOUT)*	226 m ² (ABOUT)#	8 m (ABOUT)(2-STOREY)
B3	S&S, OFFICE AND WASHROOM	118 m ² (ABOUT)*	226 m ² (ABOUT)#	8 m (ABOUT)(2-STOREY)
B4	S&S, OFFICE AND WASHROOM	118 m ² (ABOUT)*	226 m ² (ABOUT)#	8 m (ABOUT)(2-STOREY)
B5	S&S, OFFICE AND WASHROOM	118 m ² (ABOUT)*	226 m ² (ABOUT)#	8 m (ABOUT)(2-STOREY)
B6	METER ROOM	7 m ² (ABOUT)	7 m ² (ABOUT)#	3 m (ABOUT)(1-STOREY)
TOTAL		597 m ² (ABOUT)	1,137 m ² (ABOUT)	

* COVERED AREA OF STRUCTURE: 108 m² (ENCLOSED) + 10 m² (STAIRCASES) = 118 m² (ABOUT)
 # GFA OF STRUCTURE: 108 m² (G/F) + 108 m² (1/F) + 10 m² (STAIRCASES) = 226 m² (ABOUT)
 S&S SHOP AND SERVICES



PARKING PROVISIONS

NO. OF PRIVATE CAR PARKING SPACE	: 15
DIMENSION OF PARKING SPACE	: 5 m (L) X 2.5 m (W)
NO. OF L/U/L SPACE FOR LIGHT GOODS VEHICLE	: 2
DIMENSION OF PARKING SPACE	: 7 m (L) X 3.5 m (W)

LEGEND

	APPLICATION SITE
	STRUCTURE
	PARKING SPACE (PC)
	L/U/L SPACE (LGV)
	INGRESS / EGRESS

PLANNING CONSULTANT



PROJECT

PROPOSED TEMPORARY SHOP AND SERVICES AND PUBLIC VEHICLE PARK (EXCLUDING CONTAINER VEHICLE) WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 5 YEARS

ADDRESS

LOT 354 IN D.D. 112, SHUI LAU TIN, SHEK KONG, YUEN LONG, NEW TERRITORIES

SCALE

1 : 750 @ A4

DRAWN BY

MN

DATE

18.8.2025

REVISED BY

DATE

TITLE

LAYOUT PLAN

DWG NO.

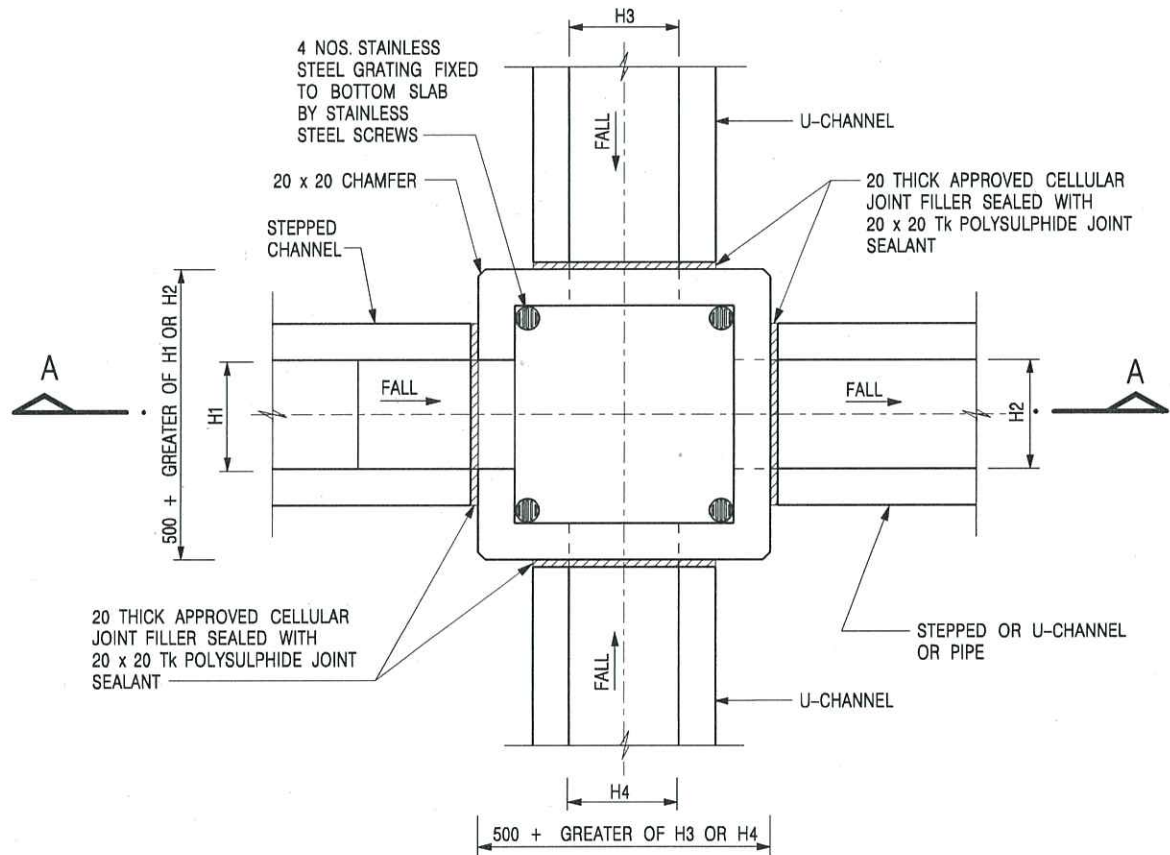
PLAN 4

VER.

001

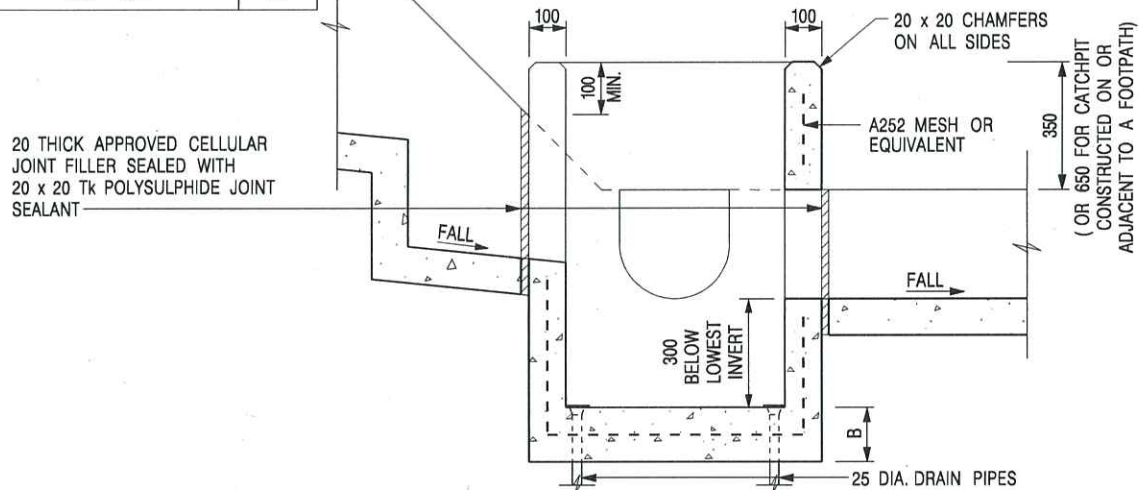


Appendix C - Reference Drawings



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.

CATCHPIT WITH TRAP
(SHEET 1 OF 2)

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



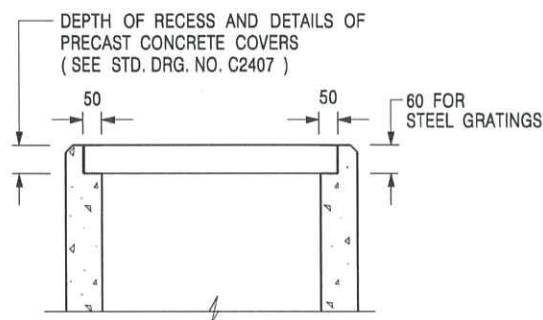
CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

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)**



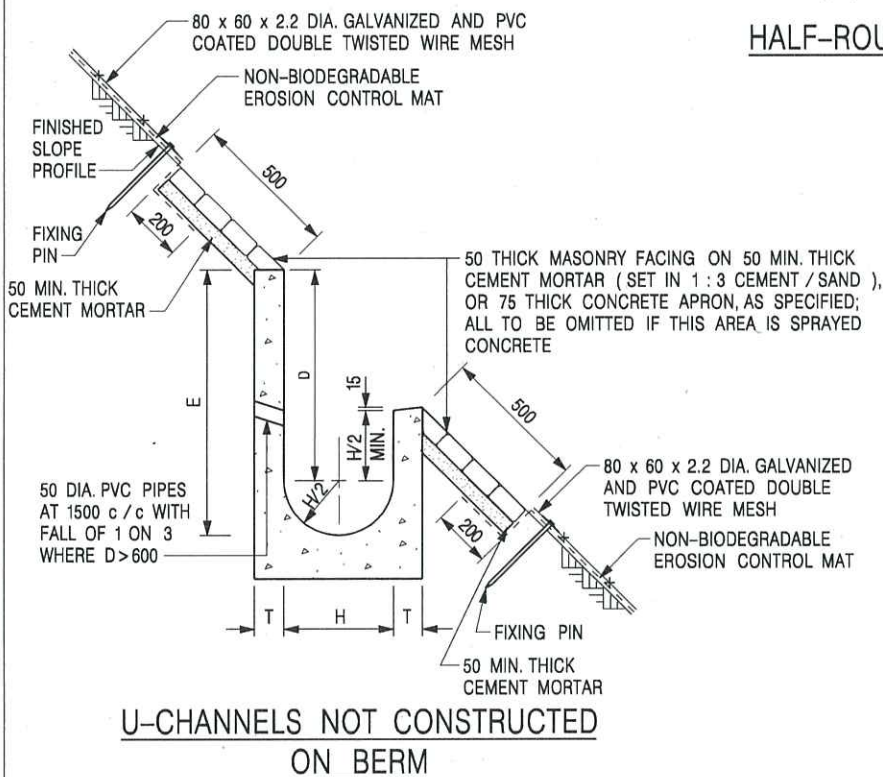
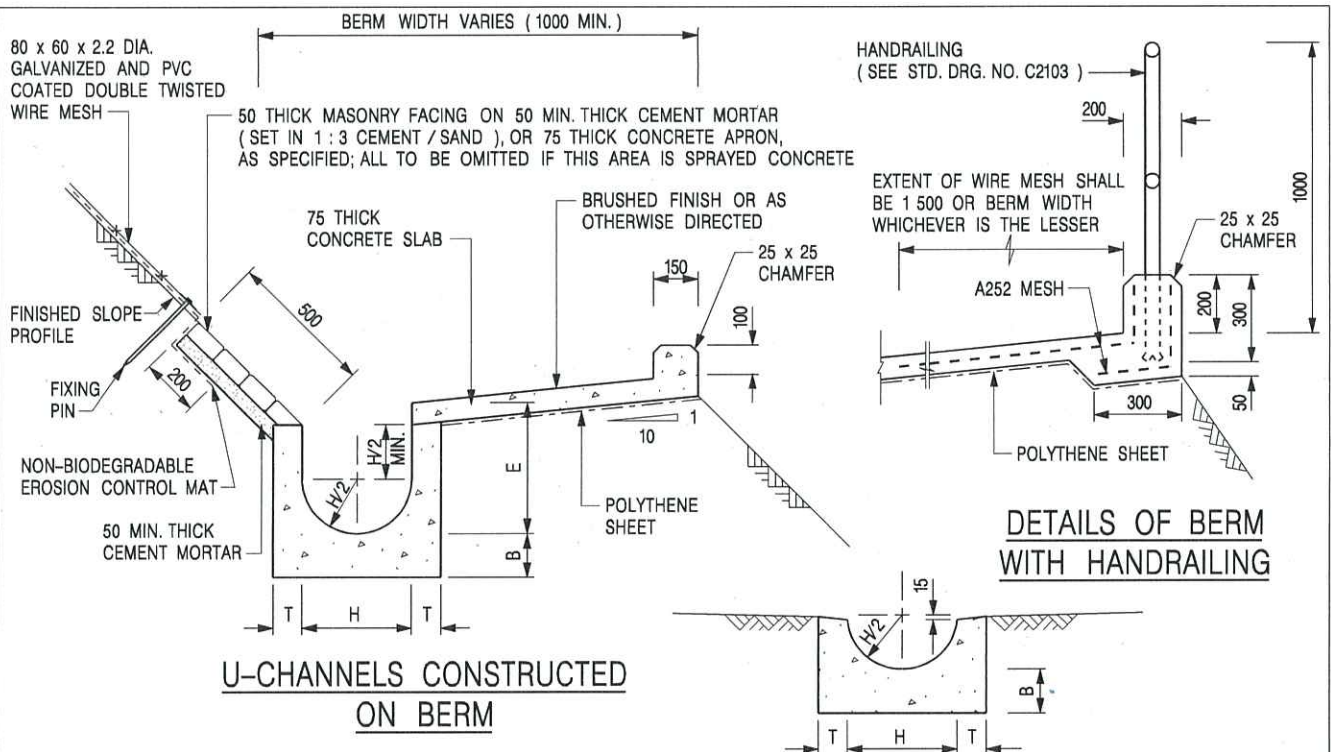
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

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)



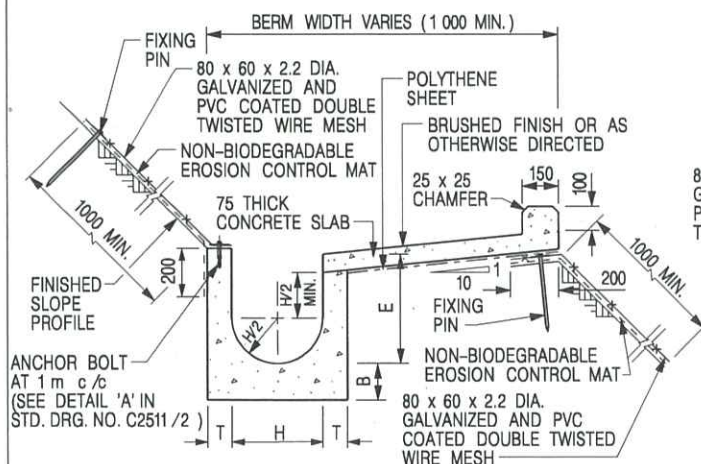
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 25

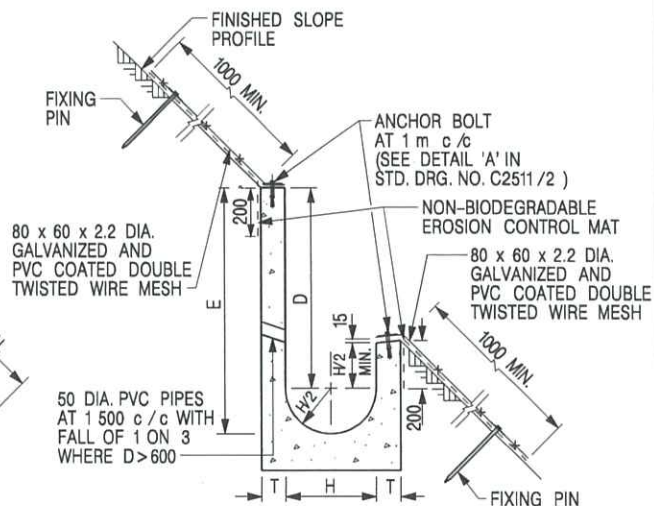
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DATE JAN 1991

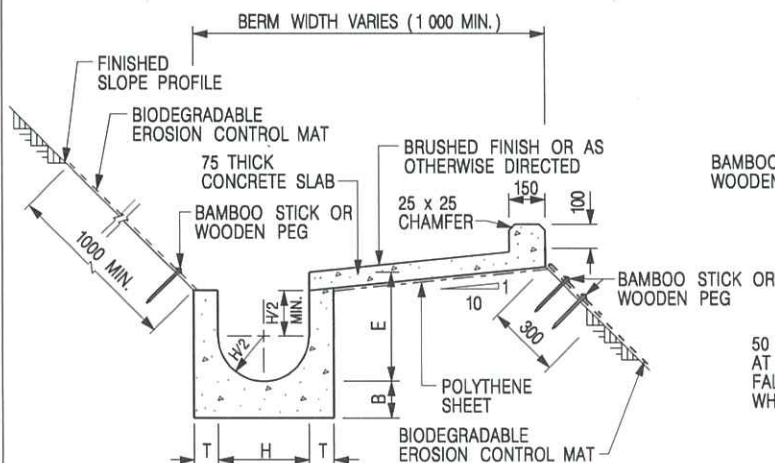
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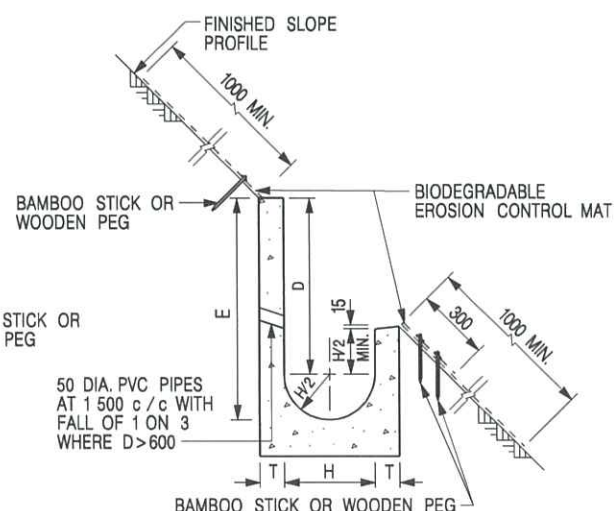
**U-CHANNELS CONSTRUCTED ON BERM
WITH NON-BIODEGRADABLE
EROSION CONTROL MAT**



**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:

- 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)**



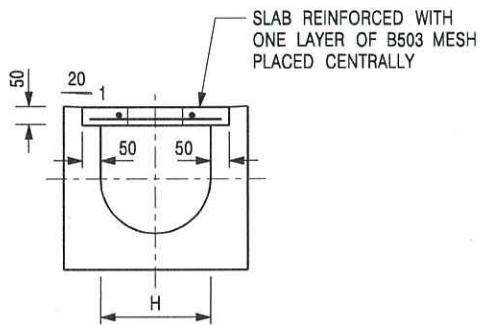
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE DIAGRAMMATIC

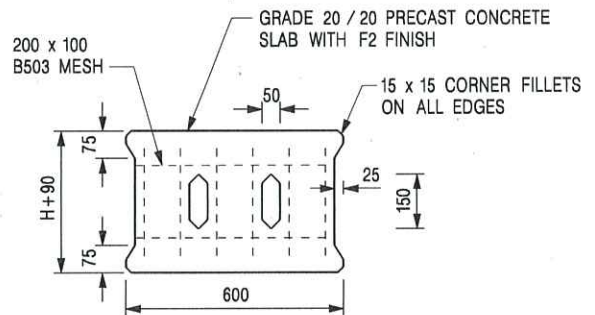
DRAWING NO.

DATE JAN 1991

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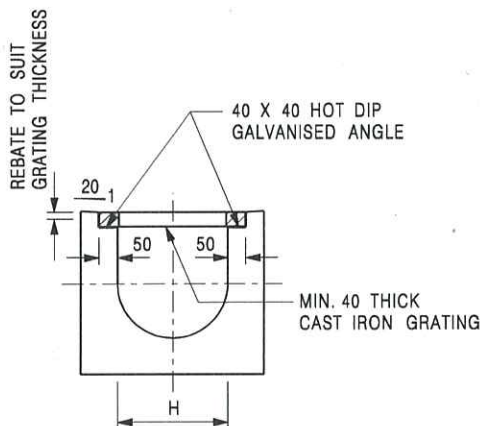
TYPICAL SECTION



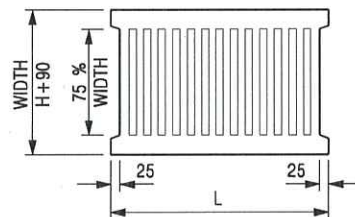
PLAN OF SLAB

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.

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