

Appendix II

Drainage Impact Assessment



PROPOSED TEMPORARY FOOD INDUSTRIAL PARK
WITH ANCILLARY FACILITIES AND ASSOCIATED
DIVERSION OF STREAM FOR A PERIOD OF 3 YEARS,
VARIOUS LOTS IN D.D. 78 AND D.D. 80 AND
ADJOINING GOVERNMENT LAND, LIN MA HANG,
NEW TERRITORIES

Drainage Impact Assessment

Aug 2026 r5



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 3-1 – Proposed Drainage System
Figure 3-2 – Drainage Schedule
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 Photos

1 Introduction

1.1 Background

- 1.1.1 The applicant seeks planning permission from the Town Planning Board (the Board) to use Various Lots in D.D. 78 and D.D.80 and adjoining government land, Lin Ma Hang, New Territories (the Site) for 'Proposed Temporary Warehouse for Agricultural Produce with Ancillary Distribution Centre and Facilities for a Period of 3 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 Lin Ma Hang Road. It has an area of approx. 15,370 m². The site location is shown in **Figure 1**.
- 1.2.2 The existing site is mostly unpaved. Existing levels are various from approximately +14 to +16 mPD. The final site formation levels are approx.. +16 mPD. It would be paved for formation of structure and maneuvering of vehicle.
- 1.2.3 There is an approx. 8m width trapezoidal channel by the south of the site. It would eventually discharge to Shenzhen 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 15,370 m². The catchment plan is shown in **Figure 4**.

Proposed Development Area (Approx.)	
Total Site Area (m ²)	15,370
Paved Area after Development (m ²)	15,370

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 10 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 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)

The development is proposed for temporary use for a period of 3 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:

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

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

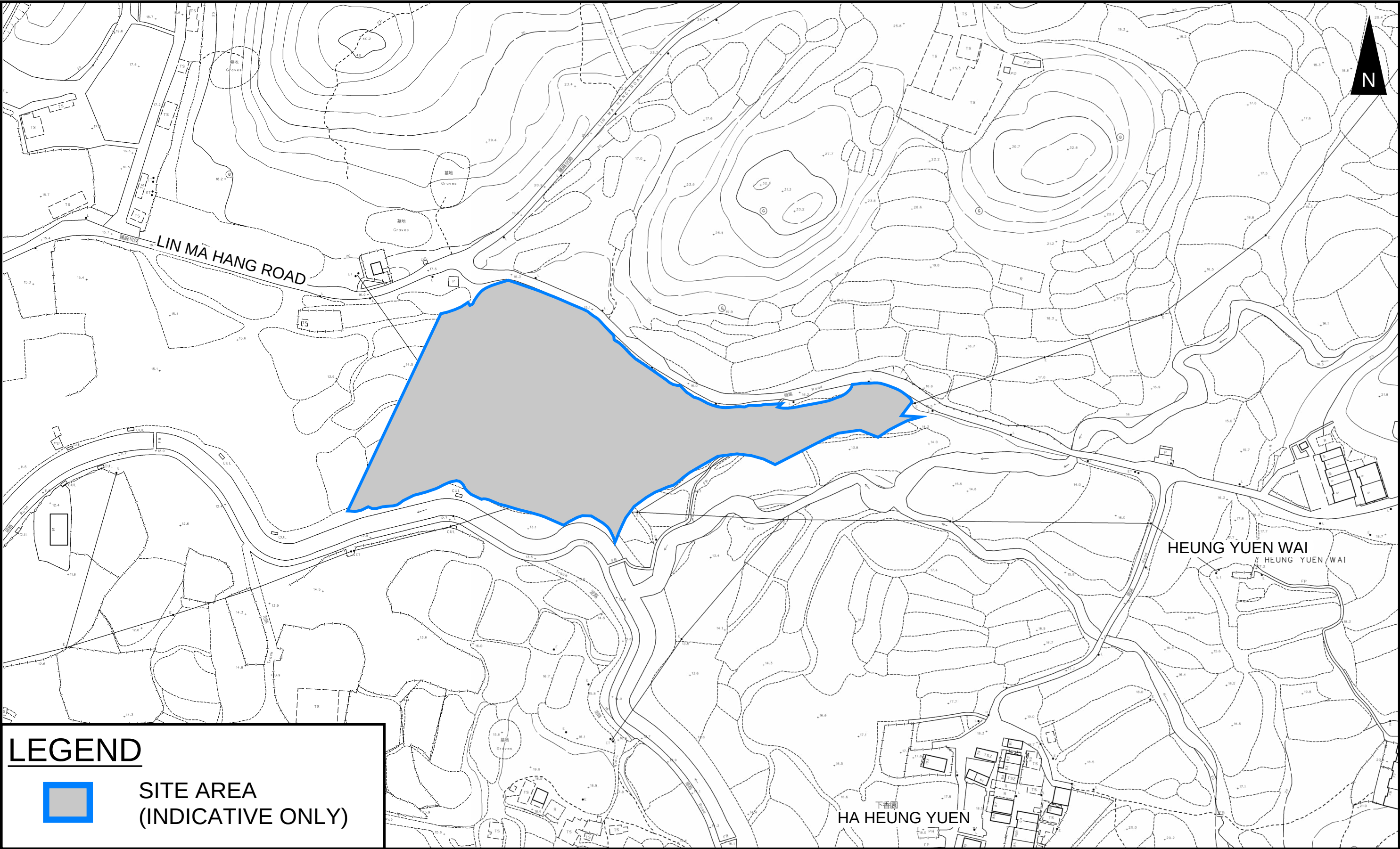
- 4.1.1 Proposed channels are designed for collection of runoff for application site. It is proposed to discharge to existing approx. 8m width trapezoidal channel. According to the checking of existing drains in **Appendix A**, they have enough capacity to carry the flow from existing catchment and proposed development.
- 4.1.2 The design calculations of proposed drains are shown in **Appendix A**. Checking of utilization of existing approx. 8m width trapezoidal channel is also indicated in **Appendix A**. It is shown that the utilization is only about 1.97%.
- 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. 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 discharged to existing 8m width trapezoidal channel.
- 5.1.2 With implementation of the above drainage system, no unacceptable drainage impact is anticipated.

- End of Text -

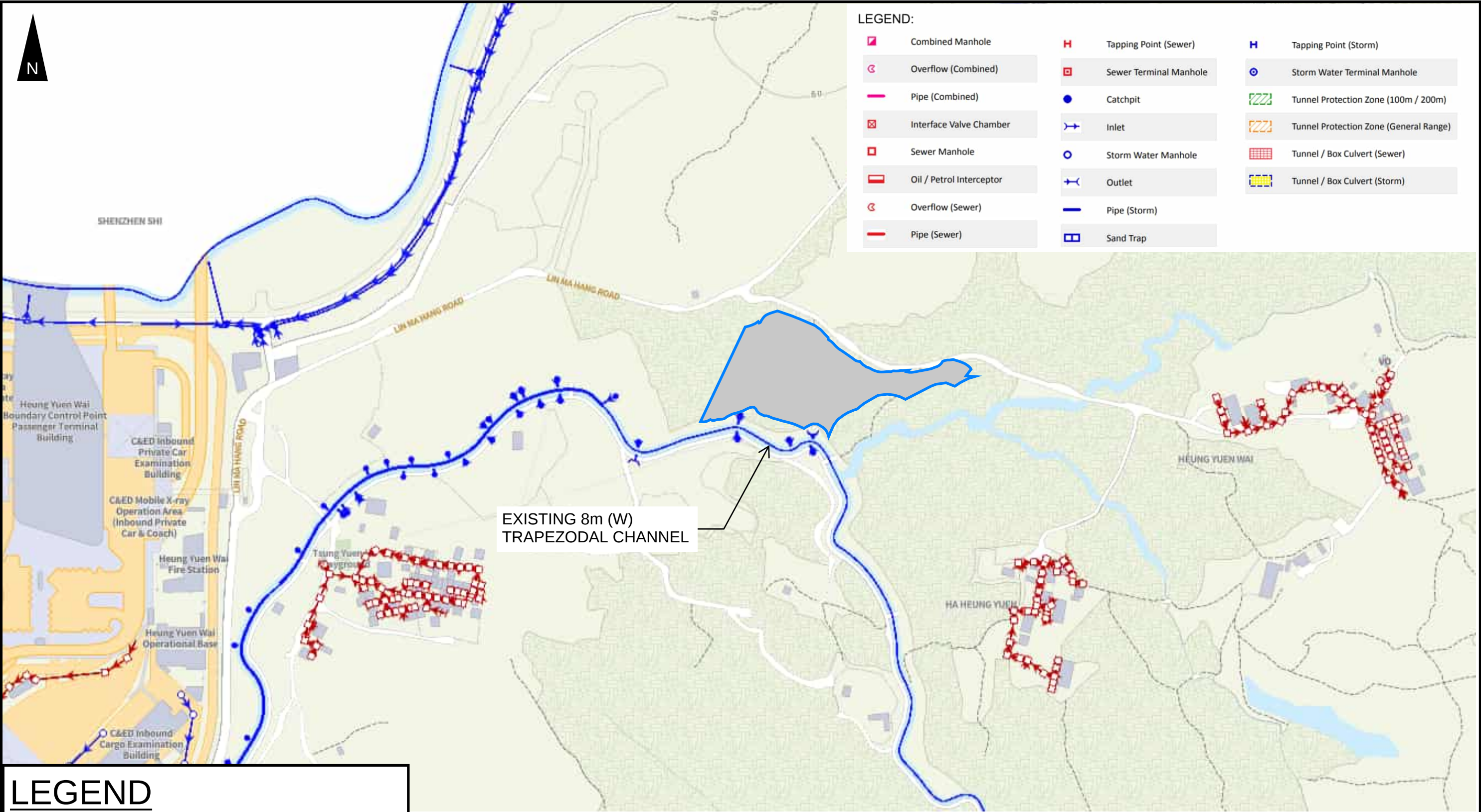
FIGURES



LEGEND

SITE AREA
(INDICATIVE ONLY)

PROJECT: PROPOSED TEMPOPRARY FOOD INDUSTRIAL PARK WITH ANCILLARY FACILITIES AND ASSOCIATED DIVERSION OF STREAM FOR A PERIOD OF 3 YEARS	TITLE SITE LOCATION PLAN	FIGURE NUMBER FIGURE 1		
		VER	DESCRIPTION	DATE



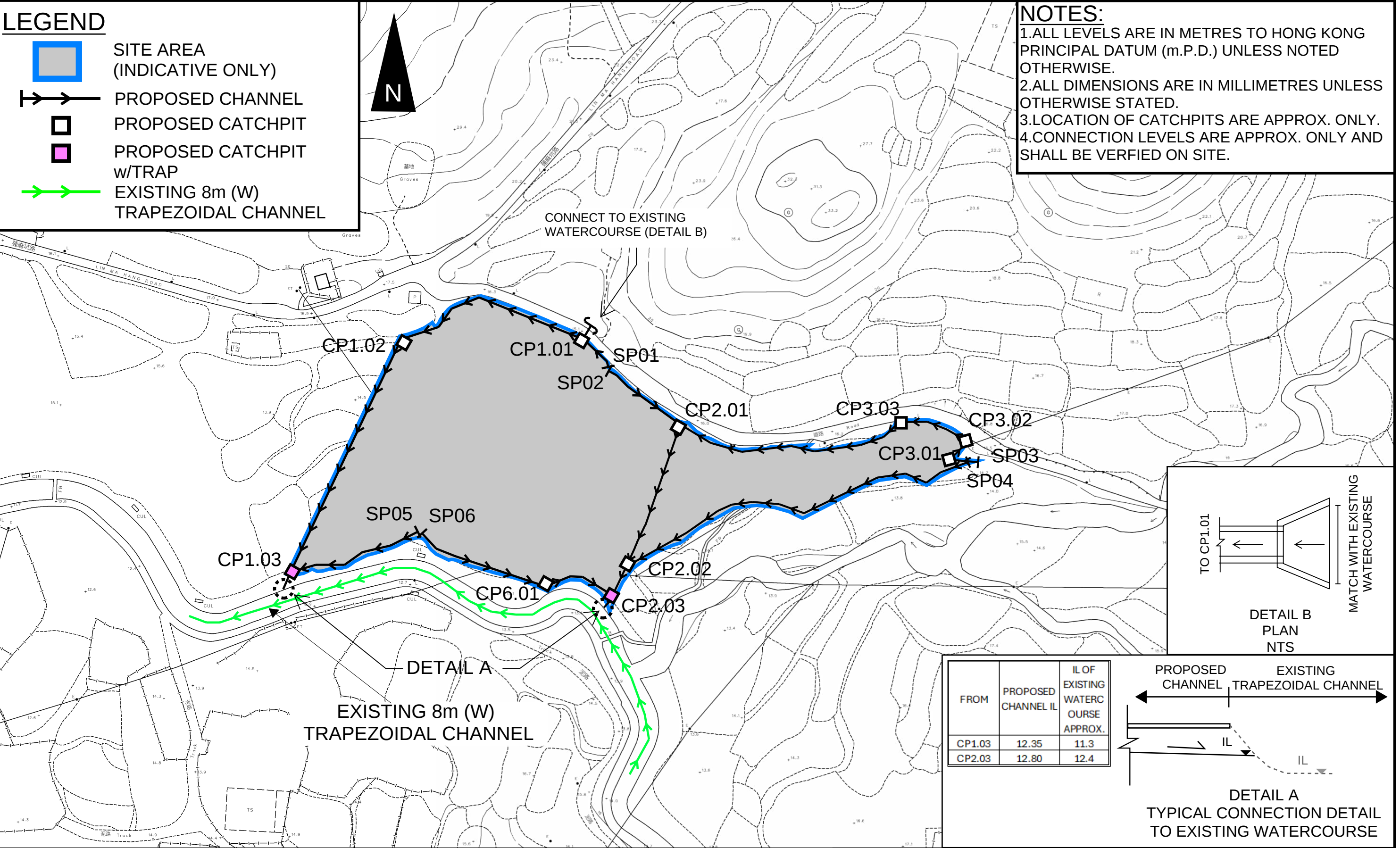
PROJECT:
PROPOSED TEMPOPRARY FOOD INDUSTRIAL PARK WITH ANCILLARY FACILITIES AND ASSOCIATED DIVERSION OF STREAM FOR A PERIOD OF 3 YEARS

LOCATION:
VARIOUS LOTS IN D.D. 78 AND D.D. 80 AND ADJOINING GOVERNMENT LAND, LIN MA HANG, NEW TERRITORIES

TITLE
EXISTING DRAINAGE PLAN

FIGURE NUMBER
FIGURE 2

VER	DESCRIPTION	DATE



PROJECT: PROPOSED TEMPOPRARY FOOD INDUSTRIAL PARK WITH ANCILLARY FACILITIES AND ASSOCIATED DIVERSION OF STREAM FOR A PERIOD OF 3 YEARS	TITLE PROPOSED DRAINAGE SYSTEM	FIGURE NUMBER FIGURE 3-1						
LOCATION: VARIOUS LOTS IN D.D. 78 AND D.D. 80 AND ADJOINING GOVERNMENT LAND, LIN MA HANG, NEW TERRITORIES		<table><tr><td></td><td></td><td></td></tr><tr><td>VER</td><td>DESCRIPTION</td><td>DATE</td></tr></table>				VER	DESCRIPTION	DATE
VER	DESCRIPTION	DATE						

DRAINAGE 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	16.2	15.2	525	200	UC	15.68	14.68	SP	#SP: Start Point
CP1.01	CP1.02	15.2	15.5	600	350	UC	14.60	14.32	CP	
CP1.02	CP1.03	15.5	13.4	750	200	UC	14.32	12.65	CP	
CP1.03	EXISTING WATERCOURSE	13.4	13.1	750	200	UC	12.65	12.35	CP	
SP02	CP2.01	16.2	16.0	675	200	UC	15.53	15.33	SP	
CP2.01	CP2.02	16.0	16.0	900	200	UC	14.53	14.27	CP	
CP2.02	CP2.03	16.0	13.9	900	200	UC	14.27	13.00	CP	
CP2.03	EXISTING WATERCOURSE	13.9	13.9	900	200	UC	12.81	12.80	CP	
SP03	CP3.01	15.7	15.8	750	350	UC	14.95	14.92	SP	
CP3.01	CP3.02	15.8	16.1	750	350	UC	14.92	14.89	CP	
CP3.02	CP3.03	16.1	16.0	750	350	UC	14.89	14.81	CP	
CP3.03	CP2.01	16.0	16.0	750	350	UC	14.81	14.53	CP	
SP04	CP2.03	15.7	13.9	450	200	UC	15.25	13.45	SP	
SP05	CP1.03	13.6	13.4	675	200	UC	12.93	12.65	SP	
SP06	CP6.01	13.6	13.7	675	200	UC	12.93	12.87	SP	
CP6.01	CP2.03	13.7	13.9	675	200	UC	12.87	12.81	CP	

PROJECT:
 PROPOSED TEMPORARY FOOD INDUSTRIAL PARK WITH ANCILLARY FACILITIES AND
 ASSOCIATED DIVERSION OF STREAM FOR A PERIOD OF 3 YEARS

TITLE
 DRAINAGE SCHEDULE

FIGURE NUMBER
 FIGURE 3-2

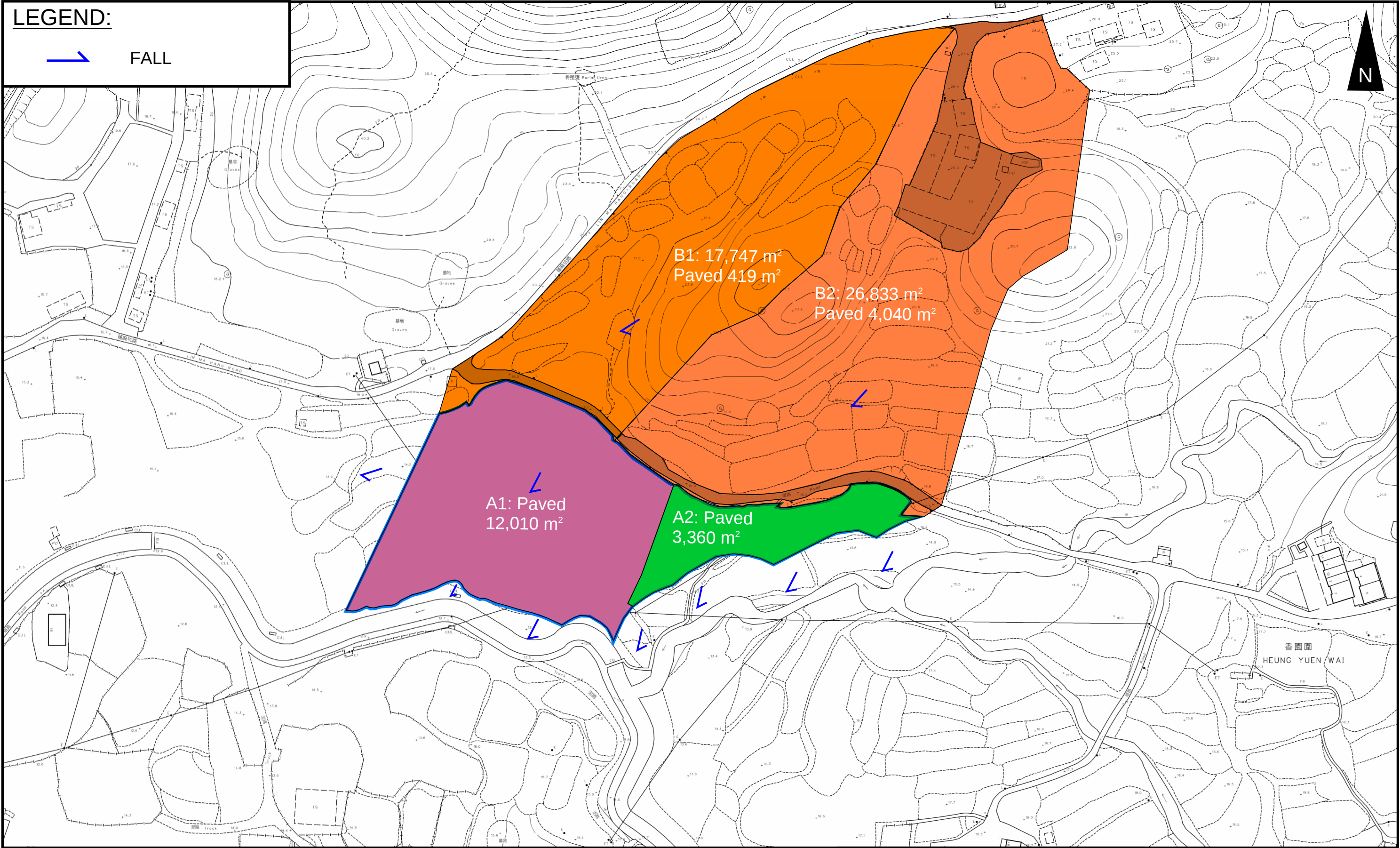
LOCATION:
 VARIOUS LOTS IN D.D. 78 AND D.D. 80 AND ADJOINING GOVERNMENT LAND, LIN MA
 HANG, NEW TERRITORIES

VER	DESCRIPTION	DATE

LEGEND:



FALL



PROJECT:
PROPOSED TEMPOPRARY FOOD INDUSTRIAL PARK WITH ANCILLARY FACILITIES AND ASSOCIATED DIVERSION OF STREAM FOR A PERIOD OF 3 YEARS

TITLE
CATCHMENT PLAN

FIGURE NUMBER
FIGURE 4

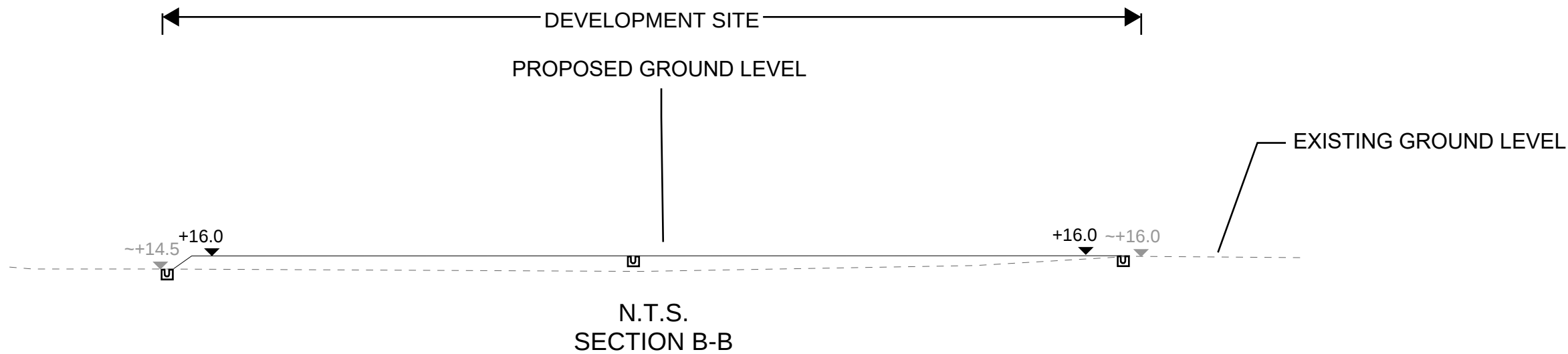
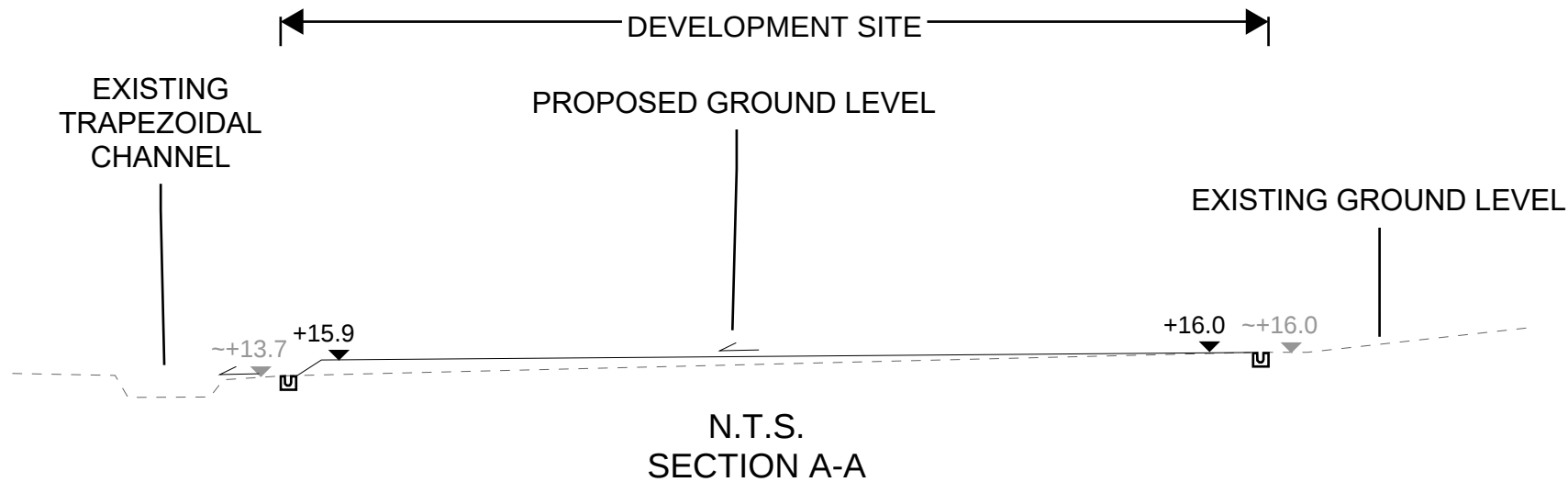
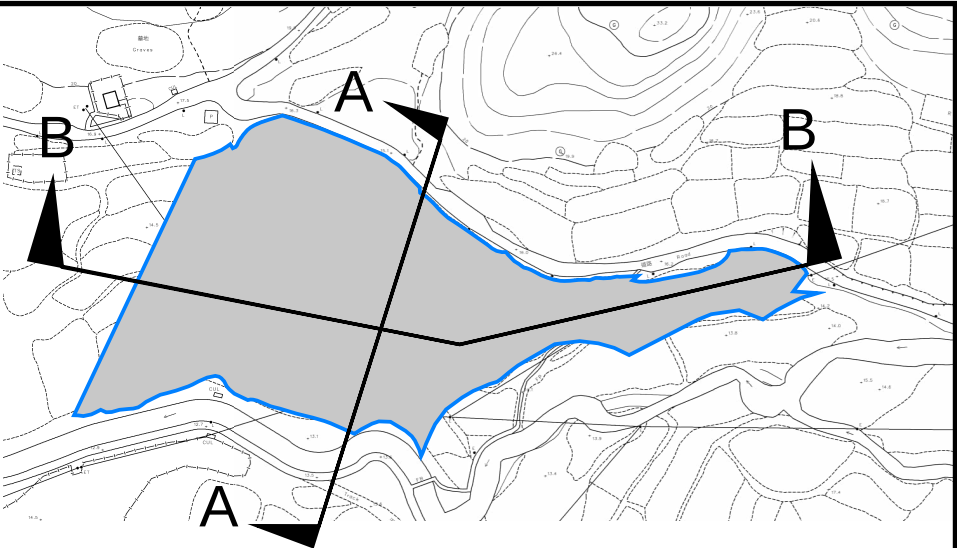
LOCATION:
VARIOUS LOTS IN D.D. 78 AND D.D. 80 AND ADJOINING GOVERNMENT LAND, LIN MA HANG, NEW TERRITORIES

VER	DESCRIPTION	DATE
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LEGEND



SITE AREA
(INDICATIVE ONLY)



PROJECT:
PROPOSED TEMPOPRARY FOOD INDUSTRIAL PARK WITH ANCILLARY FACILITIES AND
ASSOCIATED DIVERSION OF STREAM FOR A PERIOD OF 3 YEARS

TITLE
SECTIONS

FIGURE NUMBER
FIGURE 5

LOCATION:
VARIOUS LOTS IN D.D. 78 AND D.D. 80 AND ADJOINING GOVERNMENT LAND, LIN MA
HANG, NEW TERRITORIES

VER	DESCRIPTION	DATE
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APPENDIX

Appendix A: Design Calculation

Zone	North District	Return Period	1 in	10	years	n	0.014	Storm Constant	North District a	454.9
						Ks	0.15		North District b	3.44
						Viscosity	0.000001		North District c	0.412

Catchment	A1	A2	B1	B2														
Total Area	12010	3360	17747	23688														
Hard Paved Area	12010	3360	419	4040														
Unpaved Area	0	0	17328	19648														
Equival. Area	11409.5	3192	6462.85	10714.8														

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 m³/s	Catchments	Total Equivalent Area m²	ToC min	Intensity mm/hr **	Total Discharge m³/s	Utilization	Remark
SP01	CP1.01	16.20	15.20	525	200	UC	15.68	14.68	SP	15.3	1.62	0.40	B1	6462.85	10.90	169	0.30	75.9%	
CP1.01	CP1.02	15.20	15.50	600	350	UC	14.60	14.32	CP	97.8	1.34	0.43	B1	6462.85	11.06	168	0.30	70.0%	
CP1.02	CP1.03	15.50	13.40	750	200	UC	14.32	12.65	CP	103.8	2.06	1.03	A1,B1	17872.35	12.27	162	0.81	78.0%	
CP1.03	EXISTING WATERCOURSE	13.40	13.10	750	200	UC	12.65	12.35	CP	7.8	2.06	1.03	A1,B1	17872.35	13.11	159	0.79	76.4%	
SP02	CP2.01	16.20	16.00	675	200	UC	15.53	15.33	SP	35.8	1.92	0.78	B2	10714.80	10.90	169	0.50	64.3%	
CP2.01	CP2.02	16.00	16.00	900	200	UC	14.53	14.27	CP	53.1	2.33	1.68	A1,A2,B2	25316.30	12.46	162	1.14	67.7%	
CP2.02	CP2.03	16.00	13.90	900	200	UC	14.27	13.00	CP	24	2.33	1.68	A1,A2,B2	25316.30	12.84	160	1.13	67.0%	
CP2.03	EXISTING WATERCOURSE	13.90	13.90	900	200	UC	12.81	12.80	CP	3.4	2.33	1.68	A1,A2,B2	25316.30	13.01	159	1.12	66.7%	
SP03	CP3.01	15.70	15.80	750	350	UC	14.95	14.92	SP	11.5	1.56	0.78	B2	10714.80	10.90	169	0.50	64.3%	
CP3.01	CP3.02	15.80	16.10	750	350	UC	14.92	14.89	CP	10.7	1.56	0.78	B2	10714.80	11.02	168	0.50	64.0%	
CP3.02	CP3.03	16.10	16.00	750	350	UC	14.89	14.81	CP	26.5	1.56	0.78	B2	10714.80	11.14	168	0.50	63.8%	
CP3.03	CP2.01	16.00	16.00	750	350	UC	14.81	14.53	CP	96.9	1.56	0.78	B2	10714.80	11.42	166	0.50	63.3%	
SP04	CP2.03	15.70	13.90	450	200	UC	15.25	13.45	SP	18	1.47	0.26	A2	3192.00	10.90	169	0.15	56.5%	
SP05	CP1.03	13.60	13.40	675	200	UC	12.93	12.65	SP	54.7	1.92	0.78	A1	11409.50	10.90	169	0.54	68.5%	
SP06	CP6.01	13.60	13.70	675	200	UC	12.93	12.87	SP	11.5	1.92	0.78	A1	11409.50	10.90	169	0.54	68.5%	
CP6.01	CP2.03	13.70	13.90	675	200	UC	12.87	12.81	CP	10.7	1.92	0.78	A1	11409.50	11.00	168	0.53	68.3%	
Flow From Proposed Development														A1,A2	14601.50	13.11	159	0.65	

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

Capacity Checking of existing 8m (W) Trapezoidal Channel for flow from Proposed Development Area

Total Depth

1.30 m

Freeboard

Water Depth

a1

b1

a2

b2

Width of Water Surface

Base Width

a1

1

b1

0.5

a2

1

b2

0.5

Total Depth

1.30

m

Base Width

7.00

m

Assumed Water Depth

1.00

m

Freeboard

0.30

m

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	m²	m	m		1 in	m/s	m³/s
1.00	0.30	7.00	8.00	7.50	9.24	0.81	0.014	200	4.40	32.97

Total flow due to the application

=

0.65 m³/s

Utilization Rate

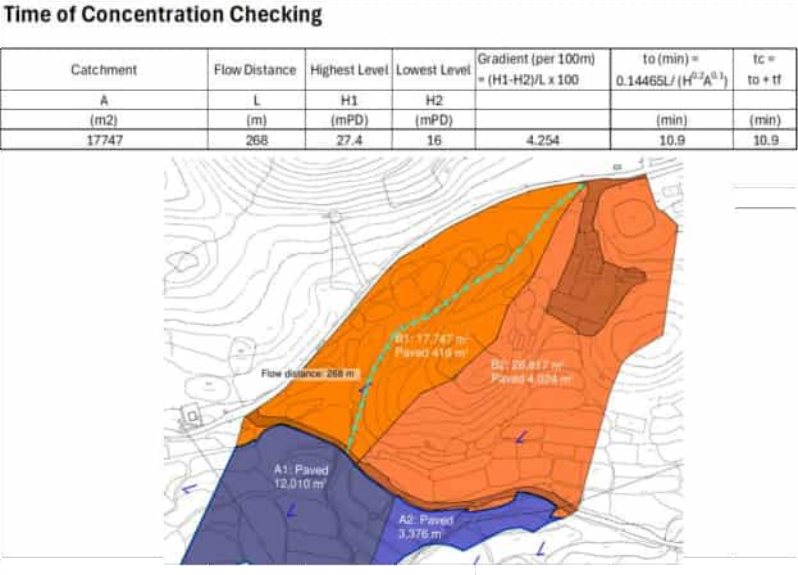
=

1.97%

Total flow due to the Application Site only occupy

1.97%

of the existing Channel/ Watercourse.



APPENDIX B - PROPOSED SITE LAYOUT PLAN

DEVELOPMENT PARAMETERS

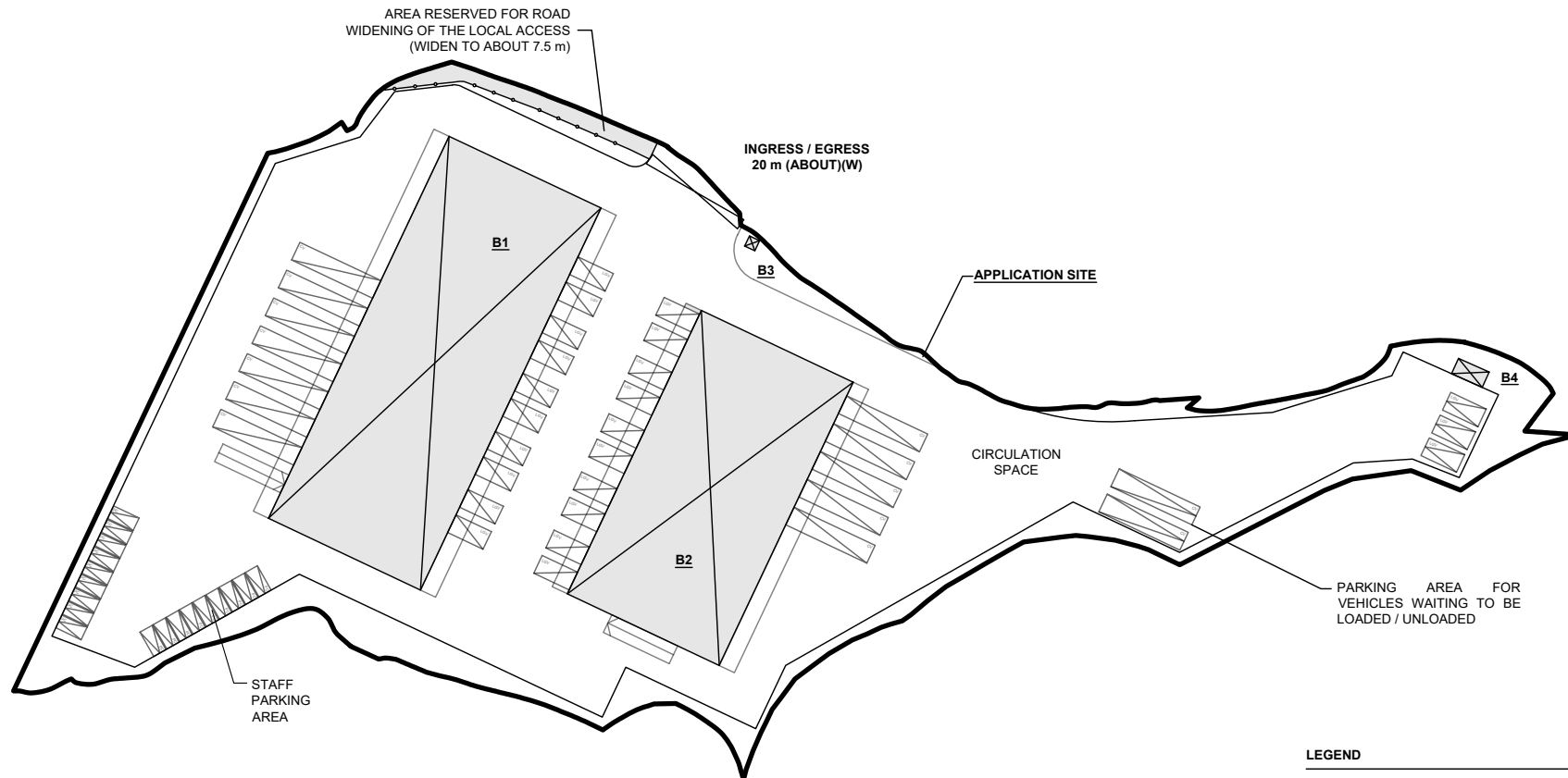
APPLICATION SITE AREA	: 15,370 m ²	(ABOUT)
COVERED AREA	: 4,757 m ²	(ABOUT)
UNCOVERED AREA	: 10,613 m ²	(ABOUT)
PLOT RATIO	: 0.57	(ABOUT)
SITE COVERAGE	: 31 %	(ABOUT)
NO. OF STRUCTURE	: 4	
DOMESTIC GFA	: NOT APPLICABLE	
NON-DOMESTIC GFA	: 8,702 m ²	(ABOUT)
TOTAL GFA	: 8,702 m ²	(ABOUT)
BUILDING HEIGHT	: 3 m - 15 m	(ABOUT)
NO. OF STOREY	: 1 - 2	

STRUCTURE	USE	COVERED AREA	GROSS FLOOR AREA	BUILDING HEIGHT
B1	FOOD INDUSTRIAL CENTRE	2,719 m ² (ABOUT) ¹	4,984 m ² (ABOUT)	15 m (ABOUT)(2-STOREY)
B2	FOOD INDUSTRIAL CENTRE	2,016 m ² (ABOUT) ²	3,696 m ² (ABOUT)	15 m (ABOUT)(2-STOREY)
B3	GUARDHOUSE	4 m ² (ABOUT)	4 m ² (ABOUT)	3 m (ABOUT)(1-STOREY)
B4	METER ROOM	18 m ² (ABOUT)	18 m ² (ABOUT)	3 m (ABOUT)(1-STOREY)
TOTAL		4,757 m ² (ABOUT)	8,702 m ² (ABOUT)	

ANCILLARY OFFICE AND WASHROOM ARE PROVIDED AT STRUCTURES B1 AND B2

¹ STRUCTURE B1 - 454 m² OF CANOPY IS PROVIDED AT G/F FOR L/UL ACTIVITIES

² STRUCTURE B2 - 336 m² OF CANOPY IS PROVIDED AT G/F FOR L/UL ACTIVITIES



PARKING PROVISIONS

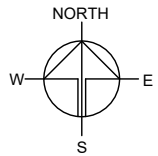
NO. OF PRIVATE CAR (PC) PARKING SPACE	: 18
DIMENSION OF PARKING SPACE	: 2.5 m (W) x 5 m (L)
NO. OF LIGHT GOODS VEHICLE (LGV) PARKING SPACE	: 3
DIMENSION OF PARKING SPACE	: 3.5 m (W) x 7 m (L)
NO. OF CONTAINER VEHICLE (CV) PARKING SPACE	: 2
DIMENSION OF PARKING SPACE	: 3.5 m (W) x 16 m (L)

LOADING / UNLOADING PROVISIONS

NO. OF L/UL SPACE FOR LGV	: 20
DIMENSION OF L/UL SPACE	: 3.5 m (W) x 7 m (L)
NO. OF L/UL SPACE FOR CV	: 12
DIMENSION OF L/UL SPACE	: 3.6 m (W) x 16 m (L)

LEGEND

	APPLICATION SITE
	STRUCTURE (ENCLOSED)
	STRUCTURE (CANOPY)
	RAMP TO STRUCTURE
	PARKING SPACE (PC)
	PARKING SPACE (LGV)
	PARKING SPACE (CV)
	LOADING / UNLOADING SPACE (LGV)
	LOADING / UNLOADING SPACE (CV)
	INGRESS / EGRESS



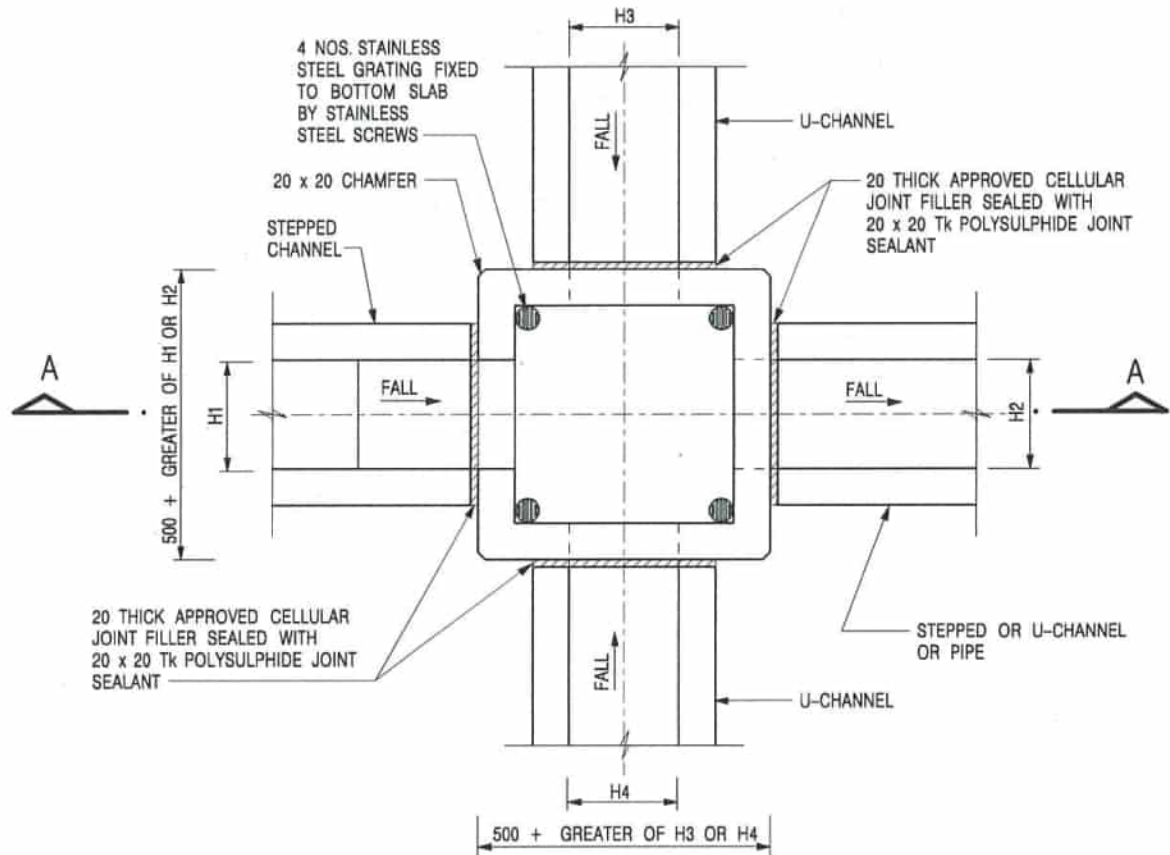
PROJECT
PROPOSED TEMPORARY FOOD INDUSTRIAL PARK WITH ANCILLARY FACILITIES AND ASSOCIATED DIVERSION OF STREAM FOR A PERIOD OF 3 YEARS

SITE LOCATION
VARIOUS LOTS IN D.D. 78 AND D.D. 80 AND ADJOINING GOVERNMENT LAND, HEUNG YUEN WAI, NEW TERRITORIES

SCALE 1 : 1250 @ A4	
DRAWN BY MN	DATE 27.8.2026
REVISED BY	DATE
APPROVED BY	DATE
DWG. TITLE LAYOUT PLAN	
DWG NO. PLAN 4	VER. 002

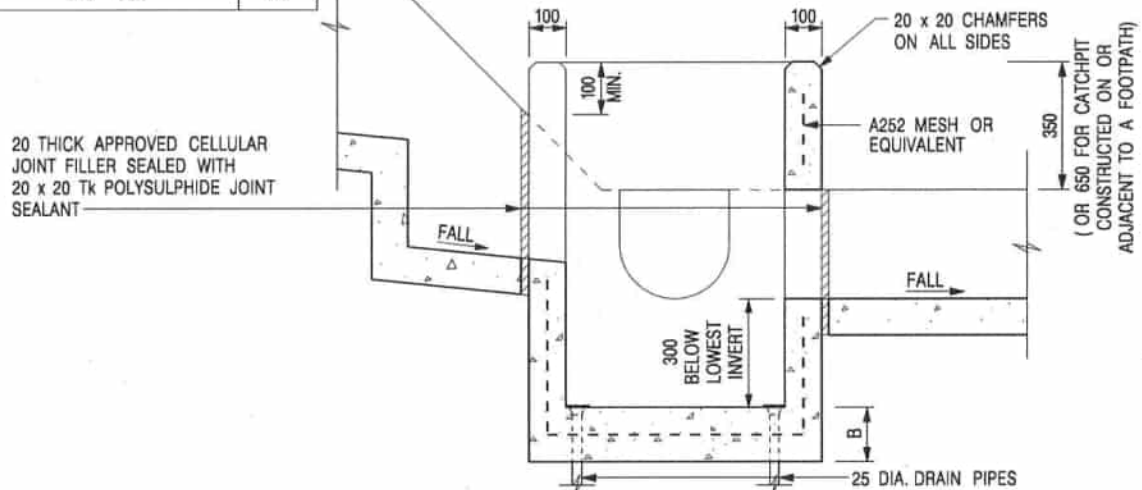
*SITE BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

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



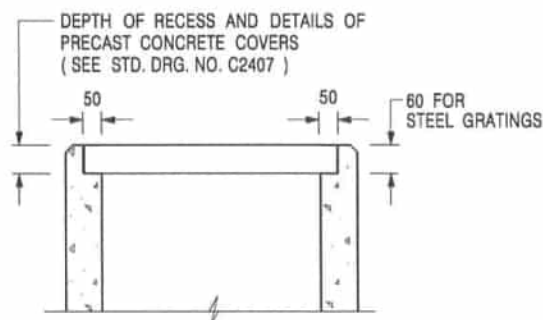
CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

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 mm 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)**



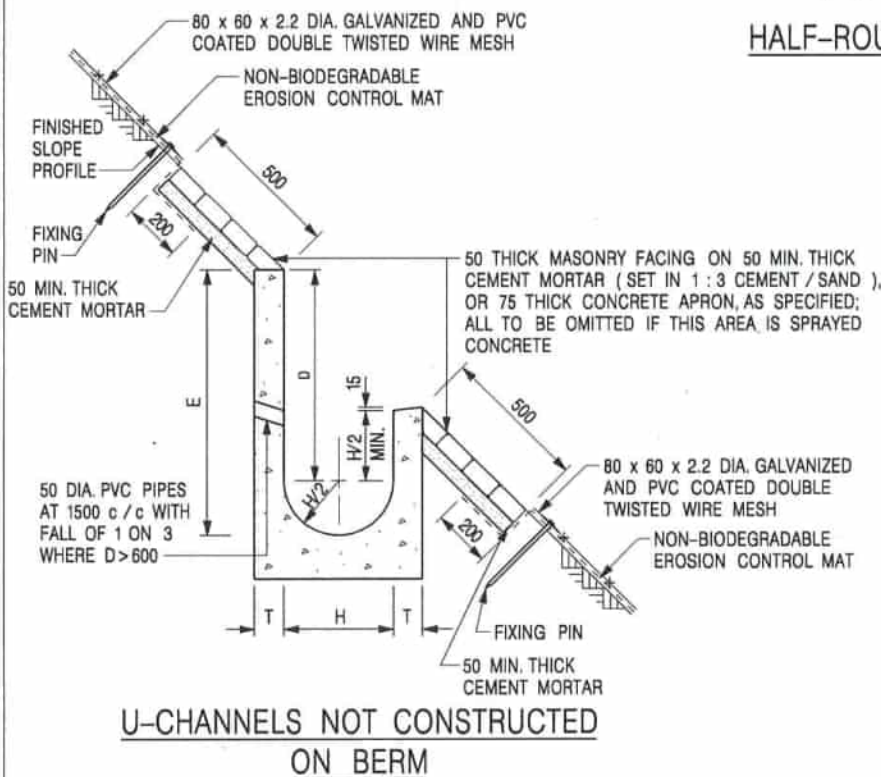
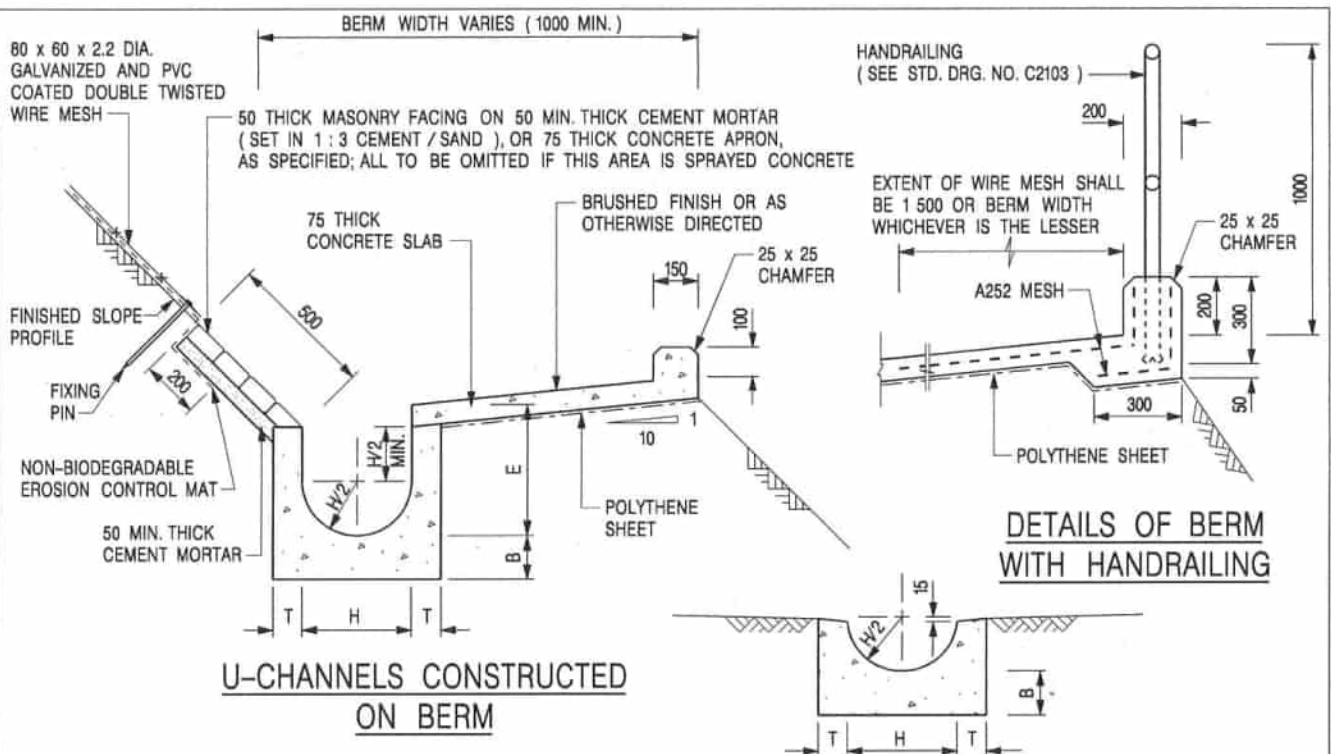
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

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)



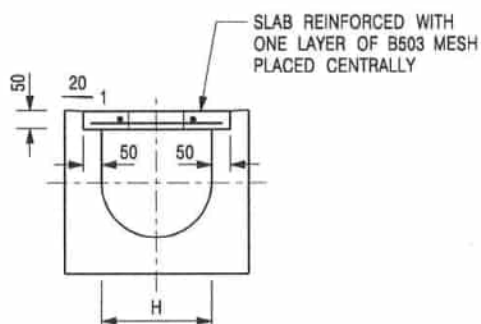
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 25

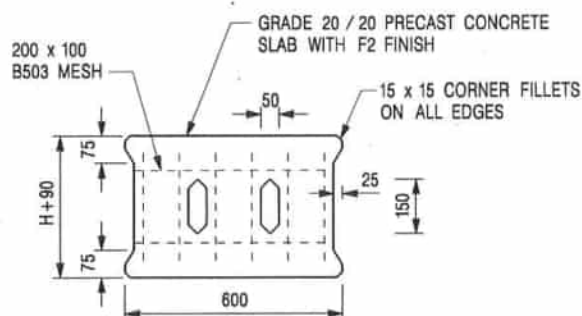
DRAWING NO.

DATE JAN 1991

C2409I



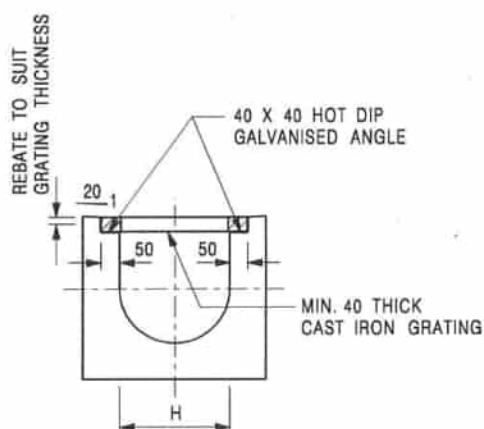
TYPICAL SECTION



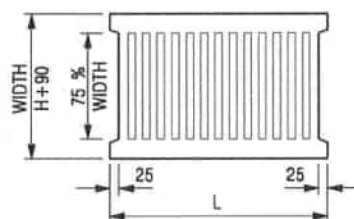
PLAN OF SLAB

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**



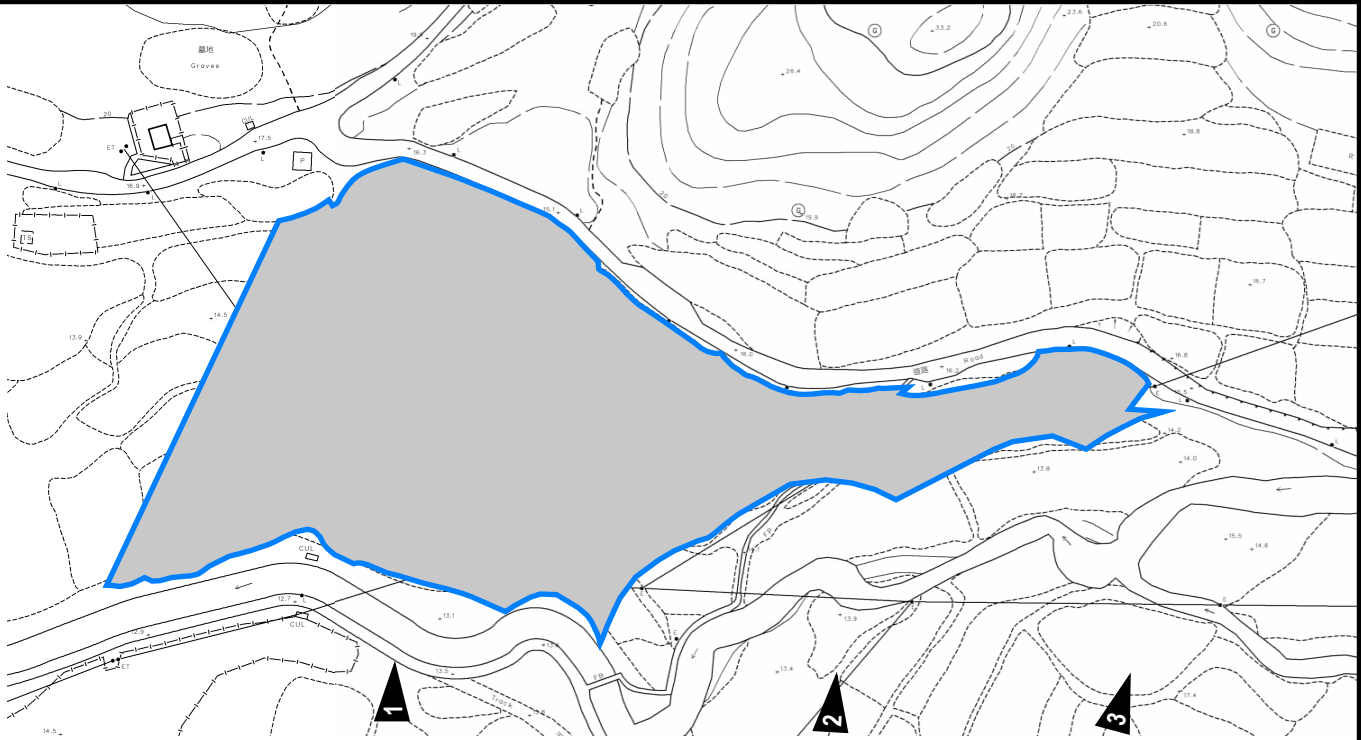
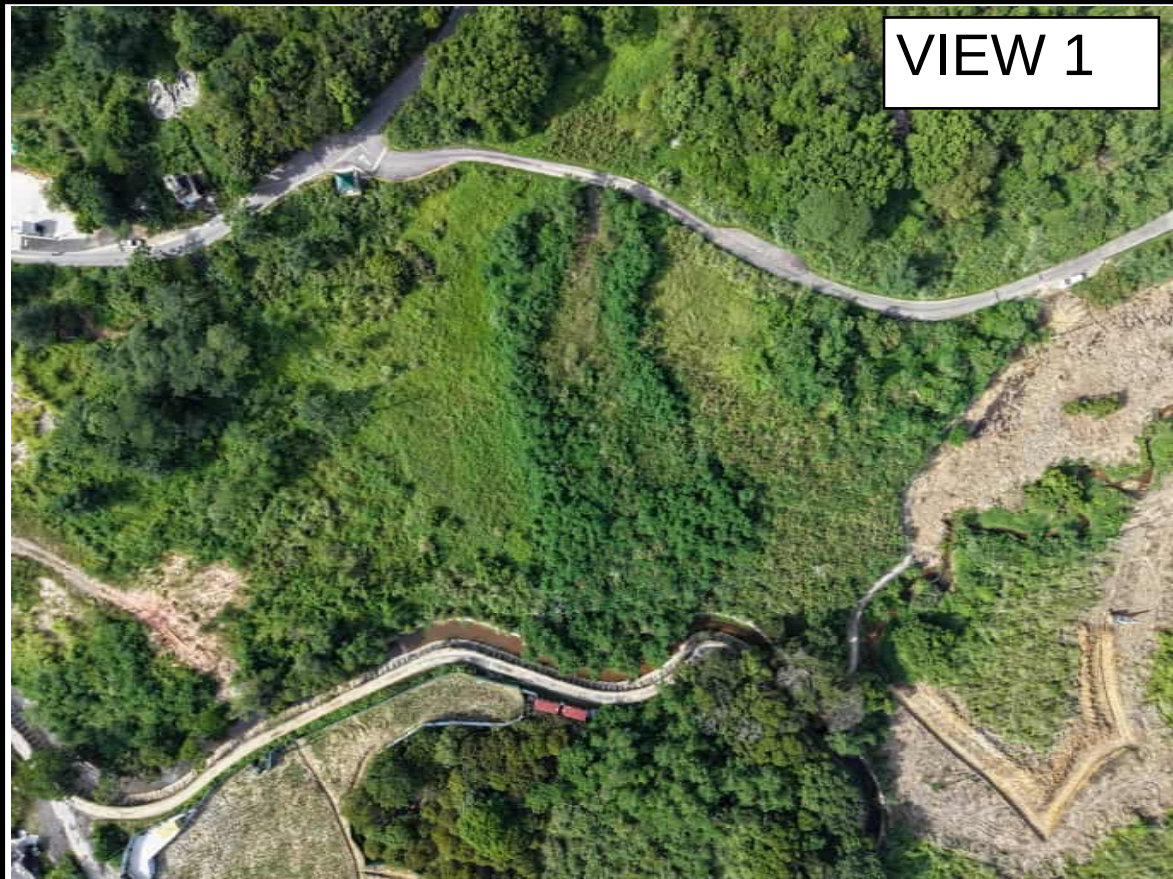
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.

C2412E



PROJECT: PROPOSED TEMPOPRARY FOOD INDUSTRIAL PARK WITH ANCILLARY FACILITIES AND ASSOCIATED DIVERSION OF STREAM FOR A PERIOD OF 3 YEARS	SITE PHOTOS	APPENDIX D		
LOCATION: VARIOUS LOTS IN D.D. 78 AND D.D. 80 AND ADJOINING GOVERNMENT LAND, LIN MA HANG, NEW TERRITORIES		VER	DESCRIPTION	DATE