Appendix I

The Accepted Drainage Proposal of the Previous Application No. A/YL-KTN/775

規　劃　署

粉嶺、上水及元朗東規劃處
新界荃灣青山公路 388 號
中染大廈 22 樓 2202 室

Planning Department

Fanling, Sheung Shui & Yuen Long East
District Planning Office
Unit 2202, 22/F., CDW Building,
388 Castle Peak Road, Tsuen Wan, N.T.

來函檔號	Your Reference :	DD107 Lot 1224 S.D & VL
本署檔號	Our Reference :	TPB/A/YL-KTN/775
電話號碼	Tel. No. :	▇▇▇▇▇
傳真機號碼	Fax No. :	▇▇▇▇▇

By Post & Fax ▇▇▇▇▇

(Attn: Mr. Orpheus LEE)

3 March 2023

Dear Sir/Madam,

Submission for Compliance with Approval Condition (e)
— the Submission of Drainage Proposal

Proposed Temporary Animal Boarding Establishment
for a Period of 5 Years and Filling of Land in "Agriculture" Zone,
Lots 1224 S.D, 1225 S.B and 1226 S.D in D.D. 107, Fung Kat Heung, Kam Tin
(Application No. A/YL-KTN/775)

   I refer to your submission dated 5.10.2022 for compliance with the captioned approval condition. Relevant department has been consulted on your submission. Your submission is considered:

   ☑ Acceptable. The captioned condition **has been complied with**. Please find detailed departmental comments in **Appendix**.

   ☐ Acceptable. Since the captioned condition requires both the submission and implementation of the proposal, it **has not been fully complied with**. Please proceed to implement the accepted proposal for full compliance with the approval condition.

   ☐ Not acceptable. The captioned condition **has not been complied with**.

   Should you have any queries, please contact Mr. Terence TANG (Tel: ▇▇▇▇▇) of the Drainage Services Department directly.

Yours faithfully,

(Anthony LUK)
District Planning Officer/
Fanling, Sheung Shui & Yuen Long East
Planning Department

我們的理想 - 「透過規劃工作,使香港成為世界知名的國際都市。」
Our Vision – "We plan to make Hong Kong an international city of world

<u>c.c.</u>
CE/MN of DSD   (Attn.: Mr. Terence TANG)   (Fax: ███████)

<u>Internal</u>
CTP/TPB

AL/LD/cw

Appendix

<u>Comments from the Chief Engineer/Mainland North, Drainage Services Department:</u>

(i)   The applicant should implement the drainage facilities on site in accordance with the agreed drainage proposal.

(ii)   The applicant is required to rectify the drainage system if they are found to be inadequate or ineffective during operation.   The applicant shall also be liable for and shall indemnify claims and demands arising out of damage or nuisance caused by a failure of the drainage system.

(iii)   The proposed development would neither obstruct overland flow nor adversely affected any existing natural streams, village drains, ditches and the adjacent areas.

(iv)   The applicant should consult DLO/YL and seek consent from relevant lot owners for any works to be carried out outside his lot boundary before commencement of the drainage works.

(v)   The site is adjacent to an existing watercourse that the applicant shall strictly implement the drainage works according to the drainage proposal and shall not encroach/fill/adversely affect the existing watercourse. The applicant shall take extreme care when working in the vicinity of the existing watercourse in order not to disturb, interfere with or cause damage to them. Any blockage or damage to the said watercourse due to the proposed development shall be made good at the applicant's cost.

Our Ref.: DD107 Lot 1224 S.D & VL
Your Ref.: TPB/A/YL-KTN/775

The Secretary
Town Planning Board   **By Email**
15/F, North Point Government office
333 Java Road   5 October 2022
North Point, Hong Kong

Dear Sir,

Compliance with Approval Condition (e)

Proposed Temporary Animal Boarding Establishment for a Period of 5 Years and Filling of Land in "Agriculture" Zone, Lots 1224 S.D, 1225 S.B and 1226 S.D in D.D. 107, Fung Kat Heung, Kam Tin, Yuen Long, New Territories

(S.16 Planning Application No. A/YL-KTN/775)

We are writing to submit a revised drainage proposal (**Appendix I**) for compliance with approval condition (e) of the subject application, i.e. the submission of drainage proposal. Your kind attention to the matter is much appreciated.

Should you require more information regarding the application, please contact our Ms. Grace WONG at ███████████ or the undersigned at your convenience.
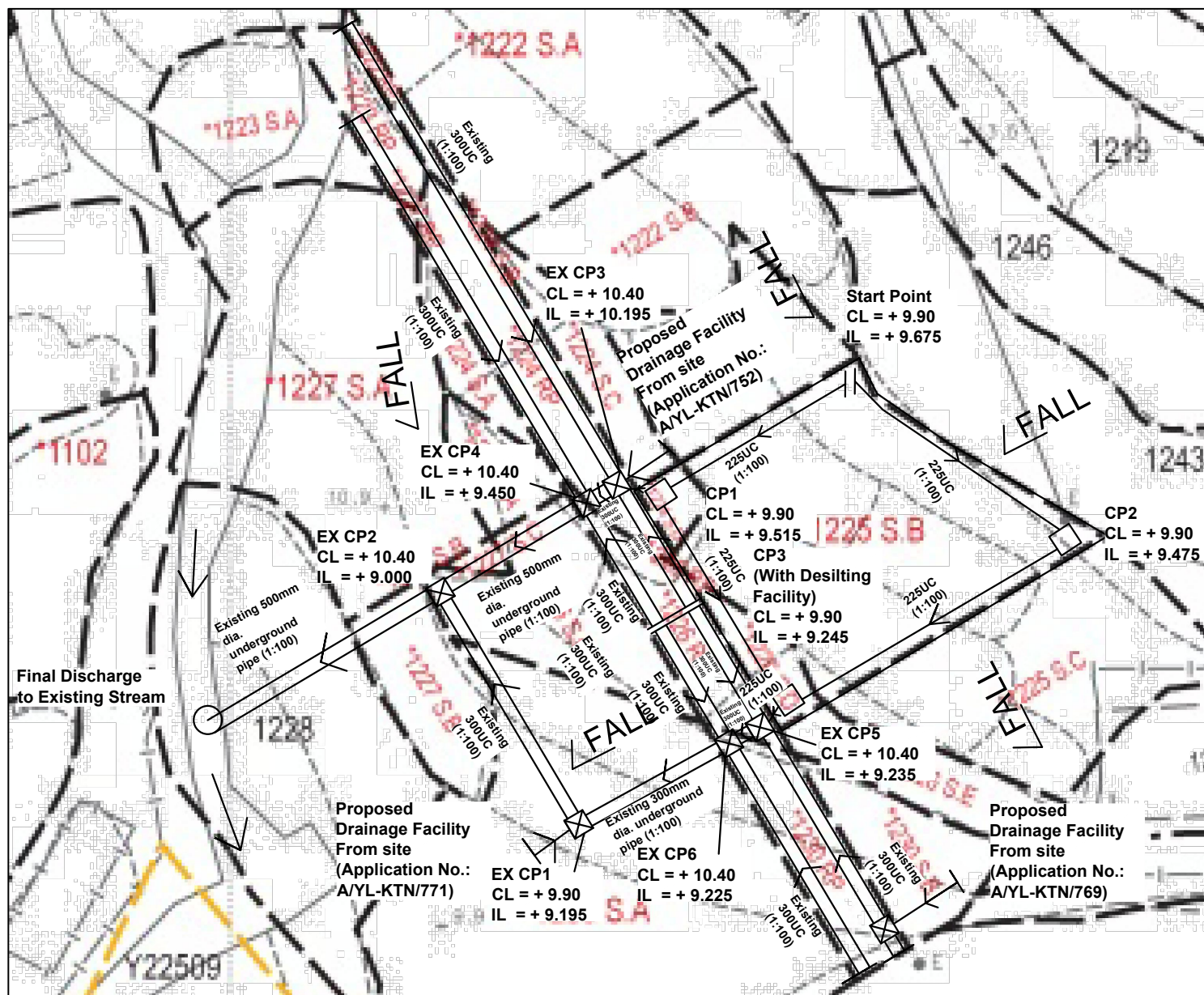
Yours faithfully,

For and on behalf of
R-riches Property Consultants Limited
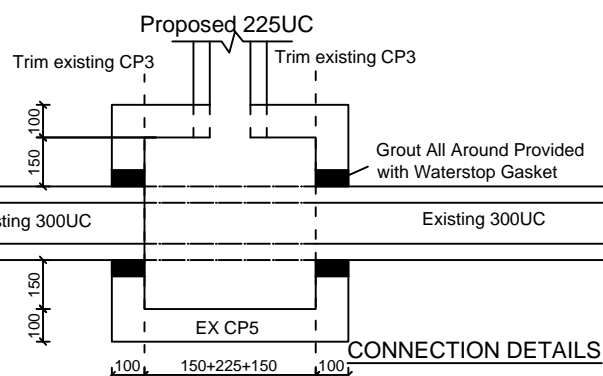
Orpheus LEE
Planning and Development Consultant

Site plan labels:

- ˈˈ1222 S.A
- ˈ1223 S A
- Existing 300UC (1:100)
- Existing 300UC (1:100)
- ˈ1227 S.A
- FALL
- ˈ1102
- 1246
- 1219
- 1243
- 1225 S.B

EX CP3
CL = + 10.40
IL = + 10.195

Proposed Drainage Facility From site (Application No.: A/YL-KTN/752)

Start Point
CL = + 9.90
IL = + 9.675

FALL

FALL

EX CP4
CL = + 10.40
IL = + 9.450

225UC (1:100)

225UC (1:100)

CP1
CL = + 9.90
IL = + 9.515

CP2
CL = + 9.90
IL = + 9.475

EX CP2
CL = + 10.40
IL = + 9.000

CP3
(With Desilting Facility)
CL = + 9.90
IL = + 9.245

225UC (1:100)

225UC (1:100)

Existing 500mm dia. underground pipe (1:100)

Existing 500mm dia. underground pipe (1:100)

Final Discharge to Existing Stream

1228

EX CP5
CL = + 10.40
IL = + 9.235

FALL

Proposed Drainage Facility From site (Application No.: A/YL-KTN/771)

Existing 300mm dia. underground pipe (1:100)

EX CP6
CL = + 10.40
IL = + 9.225

Proposed Drainage Facility From site (Application No.: A/YL-KTN/769)

EX CP1
CL = + 9.90
IL = + 9.195

Y22509

LEGEND

☐ CP Proposed CatchPit

→ Proposed UC (1:100) with Cast Iron Cover/underground pipe

⊠ CP Existing CatchPit

→ Existing Drain

Note:
1. No solid fence wall to be erected.

2. Catchpits (CP3) with desilting facility shall follow CEDD standard drawing No. C2406l.

3. Catchpit and UC follows Typical Details of Geotechnical Manual for Slope Fig.8.10 and Fig.8.11 respectively.

4. All proposed u-channel is covered by cast iron

Proposed 225UC

Trim existing CP3   Trim existing CP3

100
150

Grout All Around Provided with Waterstop Gasket

Existing 300UC   Existing 300UC

150
100

EX CP5

100 | 150+225+150 | 100

CONNECTION DETAILS

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT CO.

Title: Drainage Proposal

D01

Project:
Proposed Temporary Animal Boarding Establishment for a period of 5 years and Filling of Land atLots 1224 S.D, 1225 S.B and 1226 S.D in D.D. 107, Fung Kat Heung, Kam Tin, N.T.
(Application No.: A/YL-KTN/775)

Drawn by: DM

Date: 19th Jan 2022

Check by: DM

Scale: ––––

Company:
Project :   A/YL-KTN/752

Date: 12/1/2022

Calculation for channels:

Catchment Area of site (A/YL-KTN/771)

Grass-paved Area   =   548   m^2
                          =   0.000548   km^2

Peak runoff in m^3/s   =   0.278   x   0.25   x   250   mm/hr   x 0.000548 km^2
                          =   0.009522 m^3/s
                          =   571   liter/min

Hard-paved Area   =   722   m^2
                          =   0.000722   km^2

Peak runoff in m^3/s   =   0.278   x   0.95   x   250   mm/hr   x 0.000722 km^2
                          =   0.04767   m^3/s
                          =   2860   liter/min

Total Peak runoff in m^3/s =   0.057192 m^3/s
                          =   3431   liter/min

According to (Figure 8.7 - Chart for the Rapid Design of Channels),
For gradient 1:100, existing 225UC will be suitable.

DEVELOPMENT PARAMETERS OF THE APPLICATION SITE

APPLICATION SITE AREA : 1,270m² (ABOUT)
COVERED AREA : 115m² (ABOUT)
UNCOVERED AREA : 1,155m² (ABOUT)

PLOT RATIO : 0.2 (ABOUT)
SITE COVERAGE : 9% (ABOUT)

NO. OF STRUCTURE : 2
DOMESTIC GFA : NOT APPLICABLE
NON-DOMESTIC GFA : 215m² (ABOUT)
BUILDING HEIGHT : 3m - 7m (ABOUT)
NO. OF STOREY : 1 - 2

STRUCTURE	USE	COVERED AREA	GFA	BUILDING HEIGHT
B1	ANIMAL BOARDING ESTABLISHMENT STORAGE OF PET GOODS	100m² (ABOUT)	200m² (ABOUT)	7m (ABOUT)(2-STOREY)
B2	FIRE SERVICE WATER TANK AND CONTROL PANEL	15m² (ABOUT)	15m² (ABOUT)	3m (ABOUT)(1-STOREY)
	TOTAL	115m² (ABOUT)	215m² (ABOUT)	

NORTH
W — E
S

LANDSCAPING AREA

APPLICATION SITE

INGRESS / EGRESS
6m (ABOUT)

B2

B1
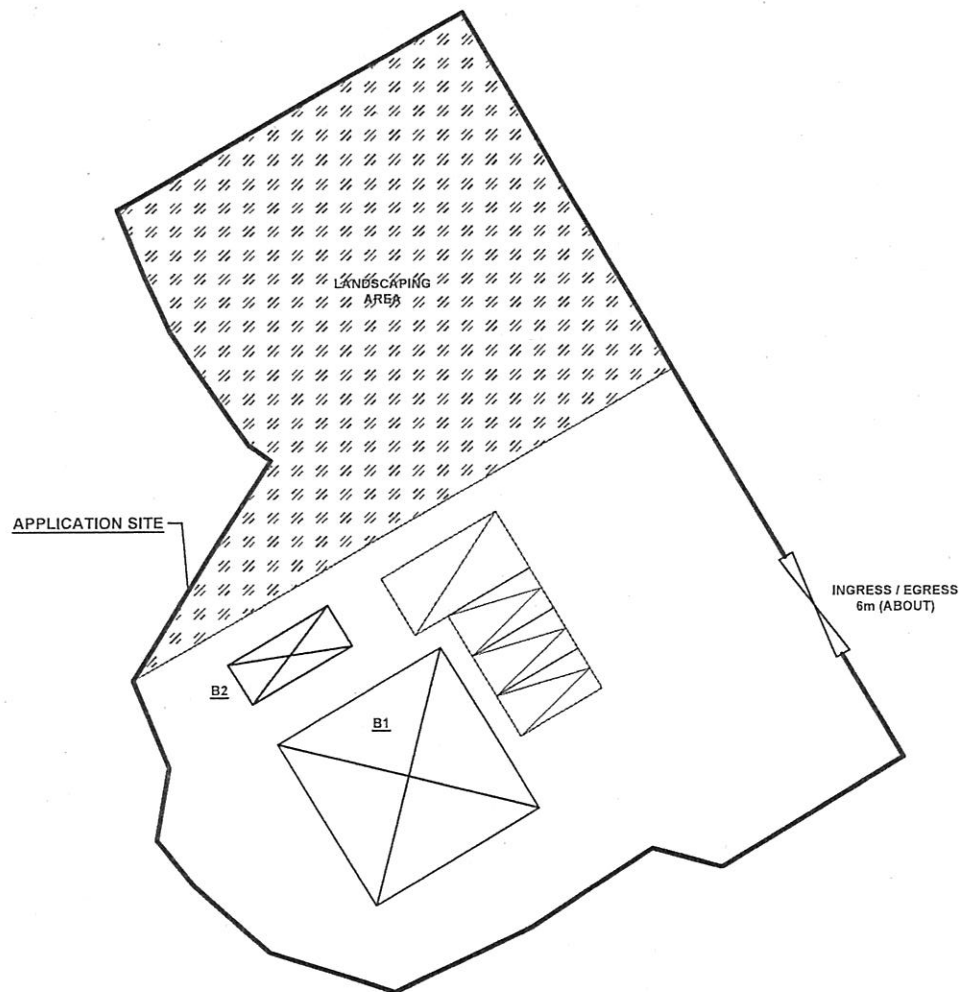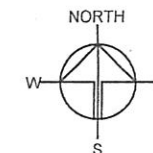
PARKING PROVISIONS

NO. OF PRIVATE CAR PARKING SPACE : 3
DIMENSION OF PARKING SPACE : 2.5m (W) X 5m (L)

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

LEGEND

APPLICATION SITE
STRUCTURE
PARKING SPACE
L/UL SPACE
INGRESS / EGRESS

Drawing No. P04
Ver. 01

Project
PROPOSED TEMPORARY ANIMAL BOARDING ESTABLISHMENT FOR A PERIOD OF 5 YEARS AND LAND FILLING

VARIOUS LOTS IN D.D. 107, FUNG KAT HEUNG, KAM TIN

Drawing Title
LAYOUT PLAN

Scale of A4
1 : 400

Drawn | Date 1.4.2021
Revised | Date

Catchment Area of site (A/YL-KTN/769)

Grass-paved Area	=	344	m^2						
	=	0.000344	km^2						

Peak runoff in m^3/s	=	0.278	x	0.25	x	250	mm/hr	x 0.000344	km^2
	=	0.005977	m^3/s						
	=	359	liter/min						

Hard-paved Area	=	221	m^2						
	=	0.000221	km^2						

Peak runoff in m^3/s	=	0.278	x	0.95	x	250	mm/hr	x 0.000221	km^2
	=	0.014592	m^3/s						
	=	875	liter/min						

Total Peak runoff in m^3/s	=	0.020569	m^3/s
	=	1234	liter/min

According to (Figure 8.7 - Chart for the Rapid Design of Channels),
For gradient 1:100, existing 225UC will be suitable.

PAVED RATIO OF THE APPLICATION SITE

APPLICATION SITE AREA : 565m² (ABOUT)
COVERED BY STRUCTURE : 60m² (11%)(ABOUT)

GRASS PAVER AREA : 344m² (61%)(ABOUT)

LANDSCAPING AREA : 161m² (28%)(ABOUT)

LAND FILLING AREA : 60m² (11%)(ABOUT)
DEPTH OF LAND FILLING : NOT MORE THAN 0.2m (ABOUT)
MATERIAL OF LAND FILLING : CONCRETE
PURPOSE OF LAND FILLING : SITE FORMATION OF STRUCTURES

NORTH
N
W — E
S

CIRCULATION AND PARKING / L/UL SPACE □

EXISTING SITE LEVEL : 10.2mPD(ABOUT)
SURFACE : GRASS PAVER

NO LAND FILLING AT THIS PORTION OF THE SITE

APPLICATION SITE

SITE FORMATION OF STRUCTURE ▨

EXISTING SITE LEVEL : 10.2mPD (ABOUT)

PROPOSED SITE LEVEL : 10.4mPD (ABOUT)
MATERIAL OF FILLING : CONCRETE
DEPTH OF FILLING : NOT MORE THAN 0.2m
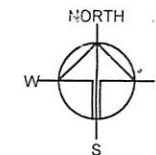
INGRESS / EGRESS
6m (ABOUT)

LANDSCAPING
AREA

LANDSCAPING AREA ▨

EXISTING SITE LEVEL : 10.2mPD(ABOUT)

NO LAND FILLING AT THIS PORTION OF THE SITE

LEGEND

▨ LAND FILLING AREA
□ GRASS PAVER
▨ LANDSCAPING AREA

Drawing No.		Ver.
P05		01

Project

PROPOSED TEMPORARY ANIMAL BOARDING ESTABLISHMENT FOR A PERIOD OF 5 YEARS AND LAND FILLING

LOT 1225 S.C & VL IN D.D. 107, FUNG KAT HEUNG, KAM TIN

Drawing Title
PAVED RATIO OF THE SITE

Scale of A4
1 : 300

Drawn		Date
		1.4.2021
Revised		Date

Catchment Area of site (A/YL-KTN/775)

| Grass-paved Area | = | 303 | m^2 |
| | = | 0.000303 | km^2 |

Peak runoff in m^3/s = 0.278 x 0.25 x 250 mm/hr x 0.000303 km^2
= 0.005265 m^3/s
= 316 liter/min

| Hard-paved Area | = | 264 | m^2 |
| | = | 0.000264 | km^2 |

Peak runoff in m^3/s = 0.278 x 0.95 x 250 mm/hr x 0.000264 km^2
= 0.017431 m^3/s
= 1046 liter/min

Total Peak runoff in m^3/s = 0.022695 m^3/s
= 1362 liter/min

According to (Figure 8.7 - Chart for the Rapid Design of Channels),
For gradient 1:100, existing 225UC will be suitable.

DEVELOPMENT PARAMETERS OF THE APPLICATION SITE

APPLICATION SITE AREA : 567m² (ABOUT)
COVERED AREA : 108m² (ABOUT)
UNCOVERED AREA : 459m² (ABOUT)

PLOT RATIO : 0.2 (ABOUT)
SITE COVERAGE : 19% (ABOUT)

NO. OF STRUCTURE : 1
DOMESTIC GFA : NOT APPLICABLE
NON-DOMESTIC GFA : 108m² (ABOUT)
BUILDING HEIGHT : 3.5m (ABOUT)
NO. OF STOREY : 1

STRUCTURE	USE	COVERED AREA	GFA	BUILDING HEIGHT
B1	ANIMAL BOARDING ESTABLISHMENT STORAGE OF PET GOODS	108m² (ABOUT)	108m² (ABOUT)	3.5m (ABOUT)(1-STOREY)
	TOTAL	108m² (ABOUT)	108m² (ABOUT)	

NORTH

APPLICATION SITE

LANDSCAPING AREA

INGRESS / EGRESS
7m (ABOUT)

B1
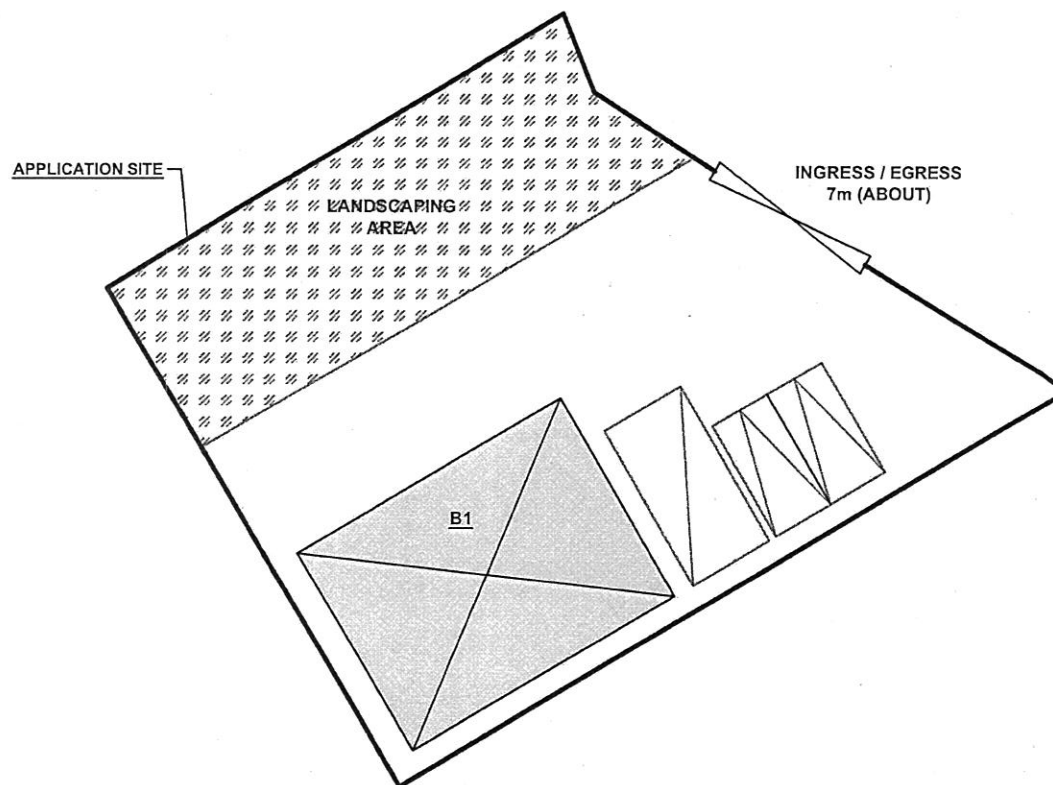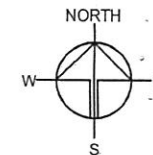
PARKING PROVISIONS

NO. OF PRIVATE CAR PARKING SPACE : 2
DIMENSION OF PARKING SPACE : 2.5m (W) X 5m (L)

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

LEGEND

APPLICATION SITE
STRUCTURE
PARKING SPACE
L/UL SPACE
INGRESS / EGRESS

Drawing No. P04 | Ver. 01

Project
PROPOSED TEMPORARY ANIMAL BOARDING ESTABLISHMENT FOR A PERIOD OF 5 YEARS AND LAND FILLING

LOT 1224 S.D & VL IN D.D. 107, FUNG KAT HEUNG, KAM TIN

Drawing Title
LAYOUT PLAN

Scale of A4
1 : 300

Drawn | Date 7.5.2021
Revised | Date

Catchment Area of site (A/YL-KTN/752)

| Grass-paved Area | = | 350 | m^2 | | | | | | |
| | = | 0.00035 | km^2 | | | | | | |

Peak runoff in m^3/s	=	0.278	x	0.25	x	250	mm/hr	x 0.00035	km^2
	=	0.006081	m^3/s						
	=	365	liter/min						

| Hard-paved Area | = | 216 | m^2 | | | | | | |
| | = | 0.000216 | km^2 | | | | | | |

Peak runoff in m^3/s	=	0.278	x	0.95	x	250	mm/hr	x 0.000216	km^2
	=	0.014261	m^3/s						
	=	856	liter/min						

| Total Peak runoff in m^3/s | = | 0.020343 | m^3/s |
| | = | 1221 | liter/min |

According to (Figure 8.7 - Chart for the Rapid Design of Channels),
For gradient 1:100, existing 225UC will be suitable.

NORTH

W — E

S

PAVED RATIO OF THE APPLICATION SITE

APPLICATION SITE AREA	: 566m² (ABOUT)
COVERED BY STRUCTURE	: 216m² (38%)(ABOUT)
GRASS PAVER AREA	: 350m² (62%)(ABOUT)
LAND FILLING AREA	: 216m² (38%)(ABOUT)
DEPTH OF LAND FILLING	: NOT MORE THAN 0.2m (ABOUT)
MATERIAL OF LAND FILLING	: CONCRETE
PURPOSE OF LAND FILLING	: SITE FORMATION OF STRUCTURES
	CIRCULATION AND PARKING / L/UL SPACES
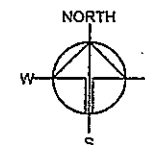
CIRCULATION AND PARKING / L/UL SPACE

EXISTING SITE LEVEL	: 11.1mPD(ABOUT)
SURFACE	: GRASS PAVER

NO LAND FILLING AT THIS PORTION OF THE SITE

INGRESS / EGRESS
6m (ABOUT)

APPLICATION SITE
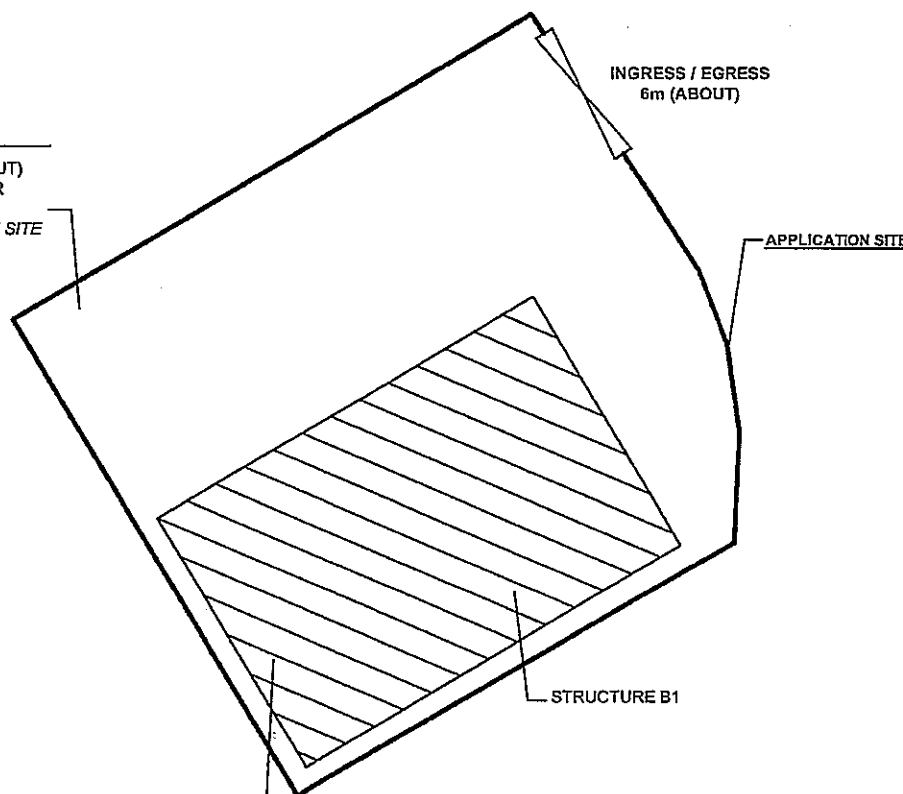
STRUCTURE B1

SITE FORMATION OF STRUCTURE

EXISTING SITE LEVEL	: 11.1mPD (ABOUT)
PROPOSED SITE LEVEL	: 11.3mPD (ABOUT)
MATERIAL OF FILLING	: CONCRETE
DEPTH OF FILLING	: NOT MORE THAN 0.2m

LEGEND

▨ LAND FILLING AREA
☐ GRASS PAVER

Drawing No.	Ver.
P05	01

Project
PROPOSED TEMPORARY ANIMAL BOARDING ESTABLISHMENT FOR A PERIOD OF 5 YEARS AND LAND FILLING

LOT 1222 S.B AND VARIOUS LOTS IN D.D. 107, FUNG KAT HEUNG, KAM TIN

Drawing Title
PAVED RATIO OF THE SITE

Scale of A4
1 : 300

Drawn	Date
	5.1.2021
Revised	Date

Catchment Area of site (A/YL-KTN/814)

| Hard-paved Area | = | 516 | m^2 |
| | = | 0.000516 | km^2 |

Peak runoff in m^3/s	=	0.278	x	0.95	x	250	mm/hr	x 0.000516	km^2
	=	0.034069	m^3/s
	=	2044	liter/min

According to (Figure 8.7 - Chart for the Rapid Design of Channels),
For gradient 1:100, existing 225UC will be suitable.

Catchment Area of site (A/YL-KTN/815)

| Hard-paved Area | = | 584 | m^2 |
| | = | 0.000584 | km^2 |

Peak runoff in m^3/s	=	0.278	x	0.95	x	250	mm/hr	x 0.000584	km^2
	=	0.038559	m^3/s
	=	2314	liter/min

According to (Figure 8.7 - Chart for the Rapid Design of Channels),
For gradient 1:100, existing 225UC will be suitable.

Catchment Area of site (Lot 1223RP, 1224RP, 1226RP and 1230RP)

| Soil-paved Area | = | 722 | m^2 |
| | = | 0.000722 | km^2 |

Peak runoff in m^3/s	=	0.278	x	0.25	x	250	mm/hr	x 0.000722	km^2
	=	0.012545	m^3/s
	=	753	liter/min

Final Discharge through 300mm dia. Pipe = 0.2059702 m^3/s = 12358.212 liter/min
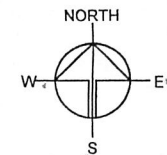
PAVED RATIO OF THE APPLICATION SITE

APPLICATION SITE AREA   : 516m² (ABOUT)
COVERED BY STRUCTURE   : 108m² (18%)(ABOUT)

LAND FILLING AREA   : 516m² (19%)(ABOUT)
DEPTH OF LAND FILLING   : NOT MORE THAN 0.2m (ABOUT)
MATERIAL OF LAND FILLING   : CONCRETE
PURPOSE OF LAND FILLING   : SITE FORMATION OF STRUCTURES
                                 AND CIRCULATION SPACE

NORTH
W — E
S

APPLICATION SITE

CIRCULATION AND PARKING / L/UL SPACE

EXISTING SITE LEVEL   : 10.2mPD (ABOUT)

PROPOSED SITE LEVEL   : 10.3mPD (ABOUT)
MATERIAL OF FILLING   : CONCRETE
DEPTH OF FILLING   : NOT MORE THAN 0.1m

SITE FORMATION OF STRUCTURE

EXISTING SITE LEVEL   : 10.2mPD (ABOUT)

PROPOSED SITE LEVEL   : 10.4mPD (ABOUT)
MATERIAL OF FILLING   : CONCRETE
DEPTH OF FILLING   : NOT MORE THAN 0.2m

LEGEND

APPLICATION SITE
LAND FILLING AREA (SITE FORMATION)
LAND FILLING (CIRCULATION SPACE)

Drawing No.	Ver.
P05	01

Project

PROPOSED TEMPORARY ANIMAL BOARDING ESTABLISHMENT FOR A PERIOD OF 5 YEARS AND LAND FILLING

LOT 1222 S.A (PART) AND 1224 S.B IN D.D. 107

Drawing Title
PAVED RATIO OF THE SITE

Scale of A4
1 : 300

Drawn	Date
	2.12.2021
Revised	Date

Check 500mm dia. Pipes (1:100) by Colebrook-White Equation

$$V = -\sqrt{(8gDs)} \, \log\left(\frac{ks}{3.7D} + \frac{2.51v}{D\sqrt{(2gDs)}}\right)$$

where :

V	=			mean velocity (m/s)	
g	=	9.81	m/s2	gravitational acceleration (m/s2)	
D	=	0.5	m	internal pipe diameter (m)	
ks	=	0.00015	m	hydraulic pipeline roughness (m)	(Table 5, from DSD Sewerage Manual, concrete pipe)
v	=	1.14E-06	m2/s	kinematic viscosity of fluid (m2/s)	
s	=	0.005		hydraulic gradient	
Area A	=	0.19635	m2		

Therefore, design V of pipe = 1.7589 m/s > Design velocity from = 0.2060 m3/s / 0.196349541
catchment area = 1.048998 m/s ===>O.K.

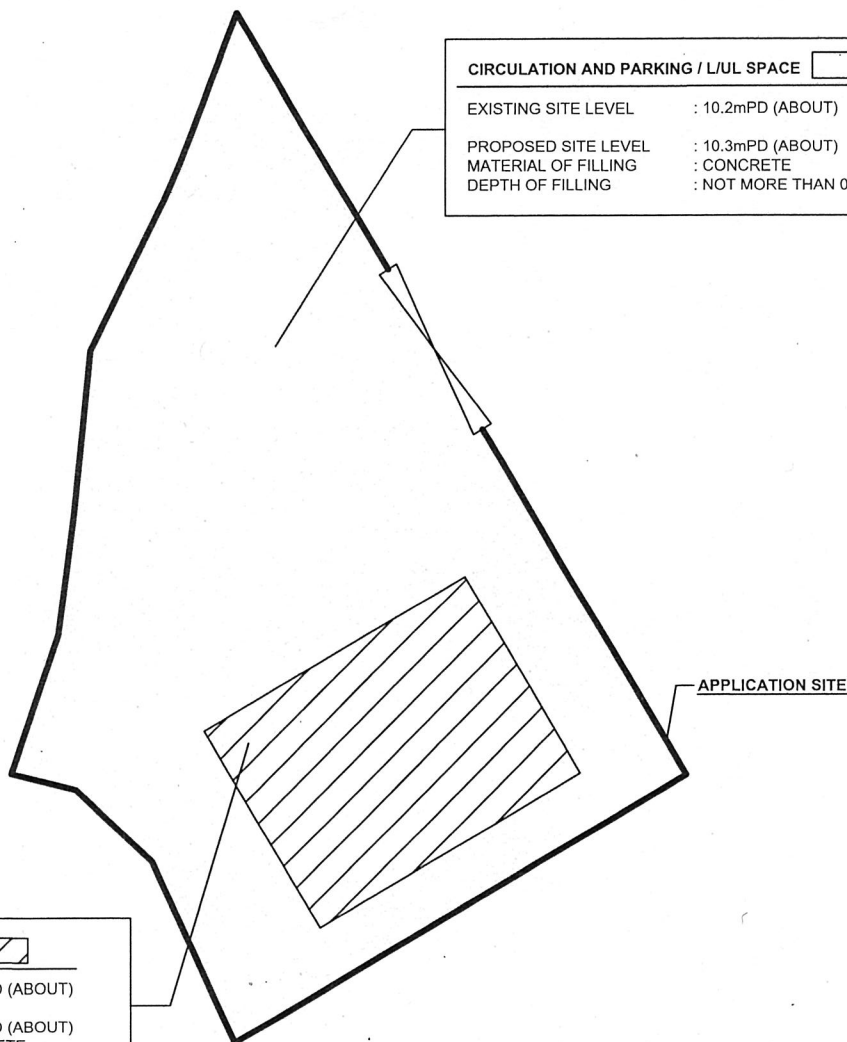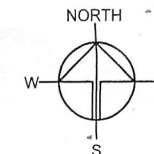Therefore, 500UPVC (1:100) will be adopted for connection bewteen site and final discharge

PAVED RATIO OF THE APPLICATION SITE

APPLICATION SITE AREA : 541 m² (ABOUT)
COVERED BY STRUCTURE : 108 m² (18%)(ABOUT)

LAND FILLING AREA : 541 m² (19%)(ABOUT)

DEPTH OF LAND FILLING : NOT MORE THAN 0.2m (ABOUT)
MATERIAL OF LAND FILLING : CONCRETE
PURPOSE OF LAND FILLING : SITE FORMATION OF STRUCTURES AND CIRCULATION SPACE

NORTH
W — E
S

CIRCULATION AND PARKING / L/UL SPACE

EXISTING SITE LEVEL : 10.2mPD (ABOUT)

PROPOSED SITE LEVEL : 10.3mPD (ABOUT)
MATERIAL OF FILLING : CONCRETE
DEPTH OF FILLING : NOT MORE THAN 0.1m

APPLICATION SITE

SITE FORMATION OF STRUCTURE

EXISTING SITE LEVEL : 10.2mPD (ABOUT)

PROPOSED SITE LEVEL : 10.4mPD (ABOUT)
MATERIAL OF FILLING : CONCRETE
DEPTH OF FILLING : NOT MORE THAN 0.2m

LEGEND

APPLICATION SITE
LAND FILLING AREA (SITE FORMATION)
LAND FILLING (CIRCULATION SPACE)

PLANNING CONSULTANT
R-RICHES PROPERTY CONSULTANT LIMITED

PROJECT
PROPOSED TEMPORARY ANIMAL BOARDING ESTABLISHMENT FOR A PERIOD OF 5 YEARS AND LAND FILLING

SITE LOCATION
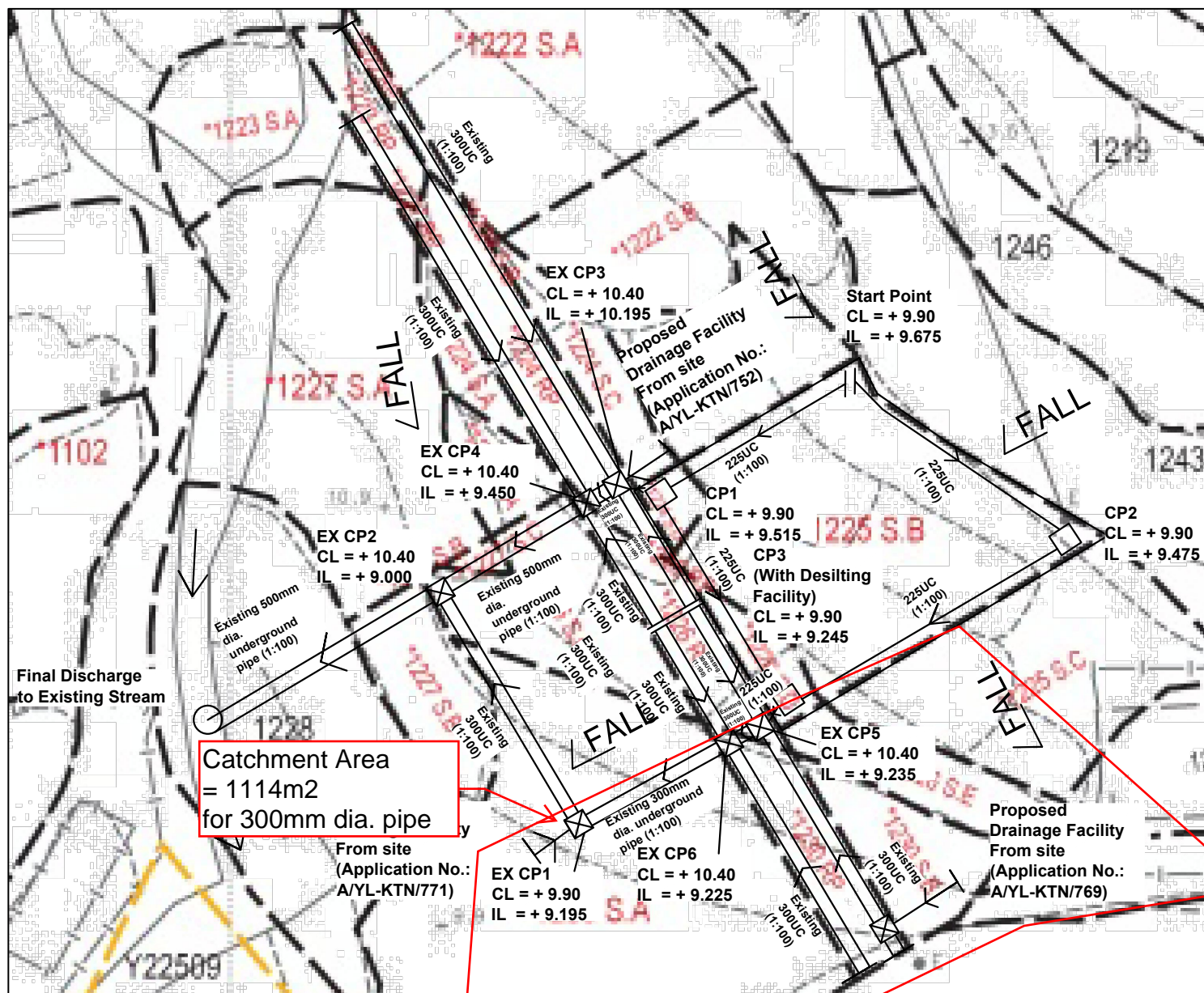VARIOUS LOTS IN D.D. 107, FUNG KAT HEUNG, KAM, YUEN LONG, NEW TERRITORIES

SCALE
1 : 300 @ A4

DRAWN BY	DATE
MN	2.12.2021
CHECKED BY	DATE
OL	22.12.2021
APPROVED BY	DATE

DWG. TITLE
PAVED RATIO

DWG NO.	VER.
PLAN P05	001

Drawing labels and annotations:

- **1222 S.A**
- **1223 S.A**
- **Existing 300UC (1:100)**
- **1222 S.B**
- **EX CP3** CL = + 10.40 IL = + 10.195
- **Start Point** CL = + 9.90 IL = + 9.675
- **1246**
- **1219**
- **Proposed Drainage Facility From site (Application No.: A/YL-KTN/752)**
- **FALL**
- **1227 S.A**
- **EX CP4** CL = + 10.40 IL = + 9.450
- **225UC (1:100)**
- **CP1** CL = + 9.90 IL = + 9.515
- **225UC (1:100)**
- **1243**
- **CP2** CL = + 9.90 IL = + 9.475
- **1102**
- **EX CP2** CL = + 10.40 IL = + 9.000
- **Existing 500mm dia. underground pipe (1:100)**
- **225UC (1:100)**
- **1225 S.B**
- **CP3 (With Desilting Facility)** CL = + 9.90 IL = + 9.245
- **Final Discharge to Existing Stream**
- **Existing 500mm dia. underground pipe (1:100)**
- **Existing 300UC (1:100)**
- **Existing 300UC (1:100)**
- **225UC (1:100)**
- **FALL**
- **FALL**
- **1228**
- **Catchment Area = 1114m2 for 300mm dia. pipe**
- **EX CP5** CL = + 10.40 IL = + 9.235
- **Existing 300mm dia. underground pipe (1:100)**
- **From site (Application No.: A/YL-KTN/771)**
- **EX CP1** CL = + 9.90 IL = + 9.195
- **EX CP6** CL = + 10.40 IL = + 9.225
- **S.A**
- **Proposed Drainage Facility From site (Application No.: A/YL-KTN/769)**
- **Existing 300UC (1:100)**
- **Existing 300UC (1:100)**
- **Y22509**

Note:
1. No solid fence wall to be erected.

2. Catchpits (CP3) with desilting facility shall follow CEDD standard drawing No. C2406I.

3. Catchpit and UC follows Typical Details of Geotechnical Manual for Slope Fig.8.10 and Fig.8.11 respectively.

4. All proposed u-channel is covered by cast iron

CONNECTION DETAILS

- Proposed 225UC
- Trim existing CP3
- Trim existing CP3
- Grout All Around Provided with Waterstop Gasket
- Existing 300UC
- Existing 300UC
- EX CP5
- 100 | 150+225+150 | 100
- 150 / 100
- 100 / 150

正宏工程顧問公司

CHING WAN ENGINEERING CONSULTANT CO.

Project:
Proposed Temporary Animal Boarding Establishment for a period of 5 years and Filling of Land at Lots 1224 S.D, 1225 S.B and 1226 S.D in D.D. 107, Fung Kat Heung, Kam Tin, N.T.
(Application No.: A/YL-KTN/775)

Title: Drainage Proposal	D01
Drawn by: DM	Date: 19th Jan 2022
Check by: DM	Scale: – – – –

Catchment Area of site for existing 300mm dia, pipe

| Catchment Area | = | 1114 | m^2 |
| | = | 0.001114 | km^2 |

Peak runoff in m^3/s	=	0.278	x	0.95	x	250	mm/hr	x	0.001114	km^2
	=	0.073552	m^3/s
	=	4413	liter/min

Check 300mm dia. Pipes (1:100) by Colebrook-White Equation
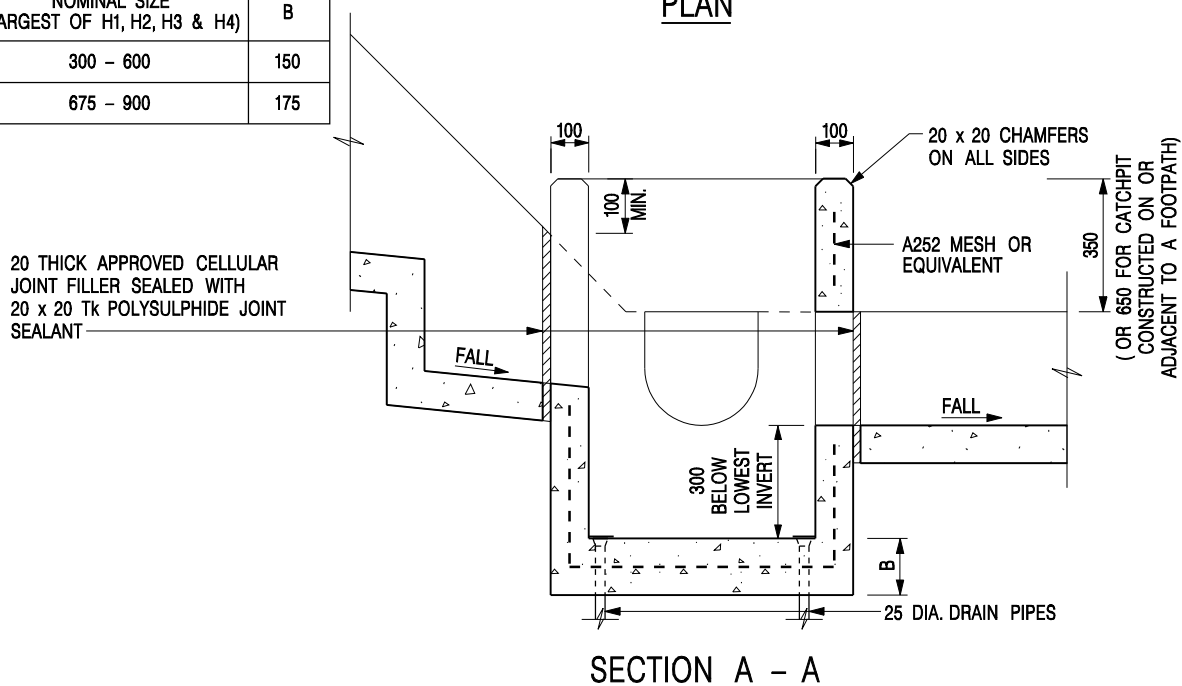
$$V = -\sqrt{(8gDs)}\log\left(\frac{ks}{3.7D} + \frac{2.51v}{D\sqrt{(2gDs)}}\right)$$

where :
V	=			mean velocity (m/s)
g	=	9.81	m/s2	gravitational acceleration (m/s2)
D	=	0.3	m	internal pipe diameter (m)
ks	=	0.00015	m	hydraulic pipeline roughness (m) (Table 5, from DSD Sewerage Manual, concrete pipe)
v	=	1.14E-06	m2/s	kinematic viscosity of fluid (m2/s)
s	=	0.005		hydraulic gradient
Area A	=	0.070686	m2
Therefore, design V of pipe	=	1.2762	m/s	>	Design velocity from	= 0.0736	m3/s /	0.070685835
					catchment area	= 1.040546	m/s	===>O.K.

PLAN

4 NOS. STAINLESS STEEL GRATING FIXED TO BOTTOM SLAB BY STAINLESS STEEL SCREWS

20 x 20 CHAMFER

STEPPED CHANNEL

H3

FALL

U-CHANNEL

20 THICK APPROVED CELLULAR JOINT FILLER SEALED WITH 20 x 20 Tk POLYSULPHIDE JOINT SEALANT

500 + GREATER OF H1 OR H2

H1

FALL

FALL

H2

A

A

20 THICK APPROVED CELLULAR JOINT FILLER SEALED WITH 20 x 20 Tk POLYSULPHIDE JOINT SEALANT

STEPPED OR U-CHANNEL OR PIPE

FALL

H4

U-CHANNEL

500 + GREATER OF H3 OR H4

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

SECTION A – A

100

100

20 x 20 CHAMFERS ON ALL SIDES

100 MIN.

350 (OR 650 FOR CATCHPIT CONSTRUCTED ON OR ADJACENT TO A FOOTPATH)

A252 MESH OR EQUIVALENT

20 THICK APPROVED CELLULAR JOINT FILLER SEALED WITH 20 x 20 Tk POLYSULPHIDE JOINT SEALANT

FALL

FALL

300 BELOW LOWEST INVERT

B

25 DIA. DRAIN PIPES

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.

2. REFER TO SHEET 2 FOR OTHER NOTES.

DEPTH OF RECESS AND DETAILS OF
PRECAST CONCRETE COVERS
(SEE STD. DRG. NO. C2407)

50   50   60 FOR
                   STEEL GRATINGS

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) 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 'G'
   ON STD. DRG. NO. C2405; 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 'F' ON STD. DRG. NO. C2405.

12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS
    CAN ALSO BE USED AS COVERS / GRATINGS.

CATCHPIT WITH TRAP
(SHEET 2 OF 2)

**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**
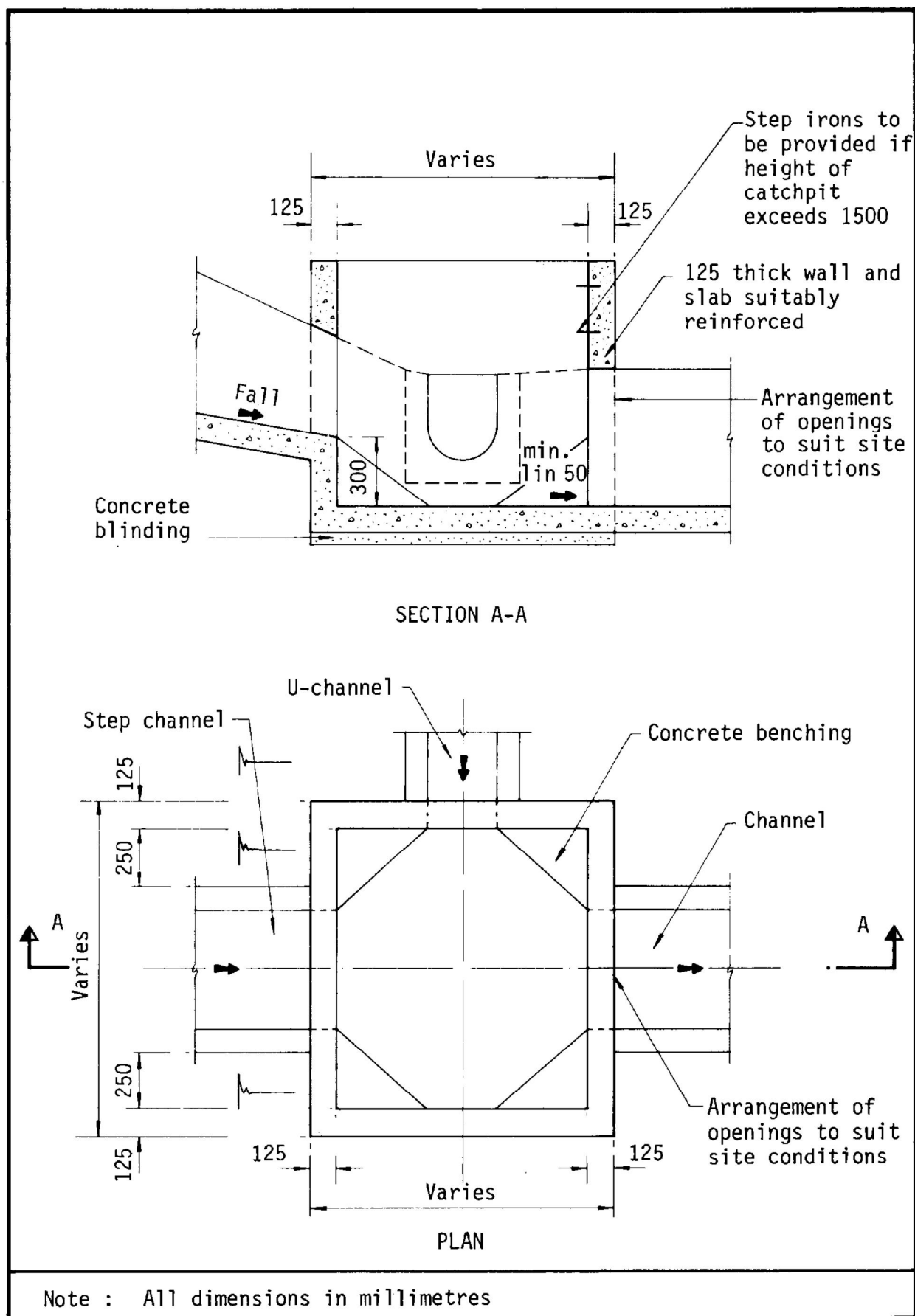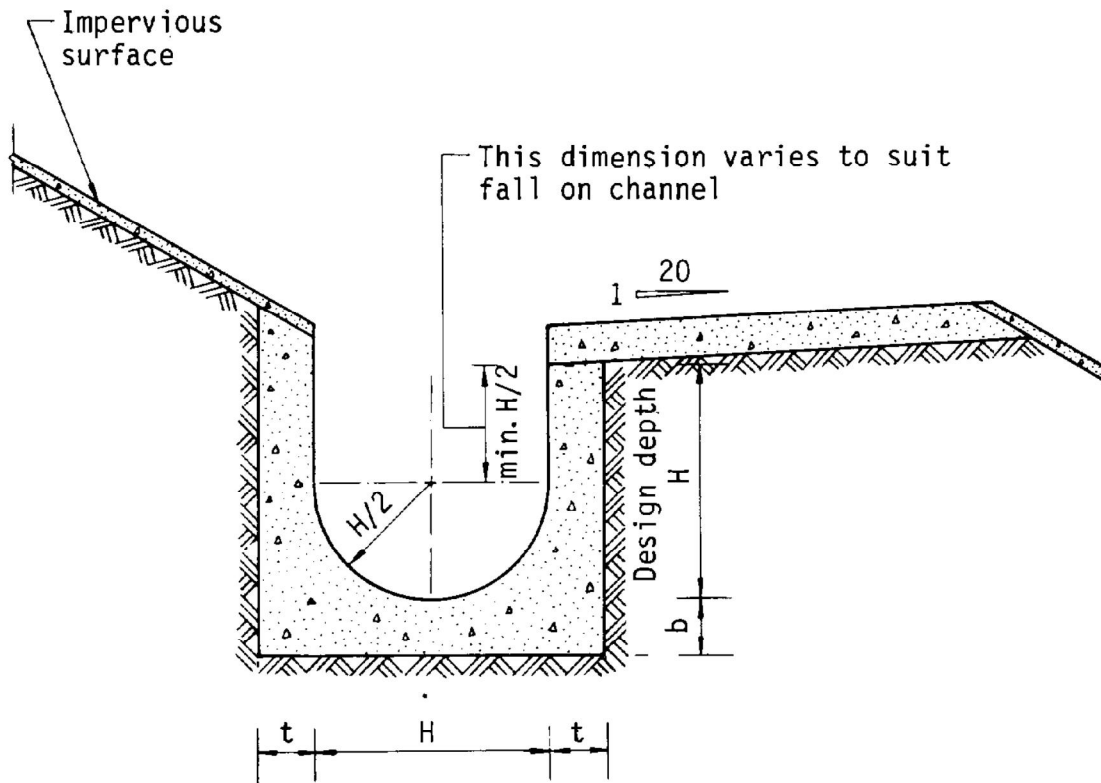
CEDD

SCALE 1 : 20

DATE JAN 1991

DRAWING NO.
C2406 /2

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

Varies

125   125

Step irons to
be provided if
height of
catchpit
exceeds 1500

125 thick wall and
slab suitably
reinforced

Fall

min.
1 in 50

300

Arrangement
of openings
to suit site
conditions

Concrete
blinding

SECTION A-A

Step channel

U-channel

Concrete benching

125

250

Channel

A   A

Varies

250

125

Arrangement of
openings to suit
site conditions

125   125

Varies

PLAN

Note :   All dimensions in millimetres

Figure 8.10 - Typical Details of Catchpits

Figure 8.11 - Typical U-channel Details

Appendix II

Fire Service Installations Proposal
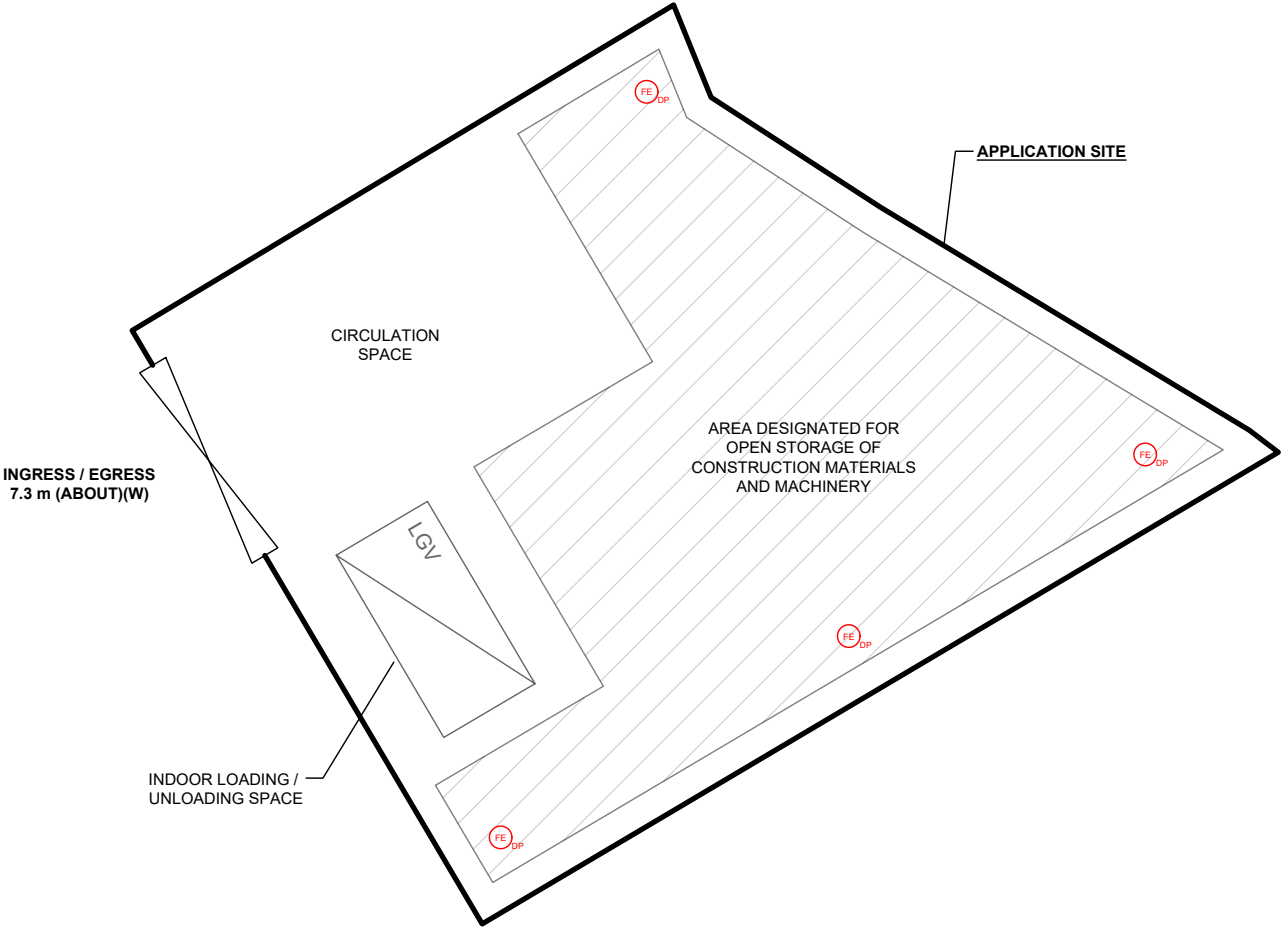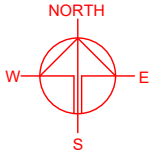
DEVELOPMENT PARAMETERS

APPLICATION SITE AREA : 567 m² (ABOUT)
COVERED AREA : NOT APPLICABLE
UNCOVERED AREA : 567 m² (ABOUT)

OPEN STORAGE AREA : 302 m² (ABOUT)
STACKING HEIGHT : NOT MORE THAN 3 m

NO STRUCTURE IS PROPOSED AT THE APPLICATION SITE.

FIRE SERVICE INSTALLATIONS

(FE/DP) 4 KG DRY POWDER TYPE FIRE EXTINGUISHER

NORTH
W — E
S

APPLICATION SITE

CIRCULATION SPACE

AREA DESIGNATED FOR
OPEN STORAGE OF
CONSTRUCTION MATERIALS
AND MACHINERY

INGRESS / EGRESS
7.3 m (ABOUT)(W)

LGV

INDOOR LOADING /
UNLOADING SPACE

PLANNING CONSULTANT

R-RICHES PLANNING LIMITED

PROJECT
PROPOSED TEMPORARY OPEN STORAGE OF CONSTRUCTION MATERIALS AND MACHINERY AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

SITE LOCATION
VARIOUS LOTS IN D.D. 107, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE
1 : 250 @ A4

DRAWN BY	DATE
MN	22.7.2025
CHECKED BY	DATE
APPROVED BY	DATE

DWG. TITLE
FSIs PROPOSAL

DWG NO.	VER.
APPENDIX II	001

LEGEND

▢ APPLICATION SITE
▨ OPEN STORAGE AREA
▨ LGV LOADING / UNLOADING SPACE (LGV)
▷◁ INGRESS / EGRESS

LOADING/UNLOADING PROVISION

NO. OF LIGHT GOODS VEHICLE PARKING SPACE : 1
DIMENSION OF LOADING/UNLOADING SPACE : 7m (L) X 3.5m (W)