

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in “Agriculture” Zone, Lot 1434 (part) in D.D. 107, Kam Tin, Yuen Long, New Territories

Drainage Appraisal

April 2024

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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 Lot 1434 (part) in D.D. 107, Kam Tin, Yuen Long, New Territories (the Site) for 'Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond' (Proposed Development).
- 1.1.2 This Drainage Proposal is to support the planning application for the proposed use.

1.2 The Site

- 1.2.1 The Application Site area is about 498m², and it situates beside local tracks at the west, south and east. Those local track connect the site to Shui Mei Road in the South of the Proposed Development. The site is partly occupied by existing structures, abandoned dried pond and grassland.
- 1.2.2 The Application Site is surrounded by grassland, temporary structures and local track. It is generally flat with existing ground level of approx. +9.6 mPD and it is proposed to be filled up to +9.8 mPD after the Proposed Development.
- 1.2.3 The site location plan is shown in **Figure 1**.
- 1.2.4 Existing Drainage Plan is shown in **Figure 2** for reference.
- 1.2.5 Proposed Development Layout plan is shown in **Appendix B** for reference.

2. Development Proposal

2.1 The Proposed Development

2.1.1 The total site area is approximately 498m². The indicative development schedule is summarized in Table 1 below for technical assessment purpose.

Proposed Development	
Total Site Area (m ²)	498
Assume all proposed site area as paved area after development for assessment purpose (m ²)	498

Table 1 - Key Development Parameters

3. Assessment Criteria

3.1.1 The Recommended Design Return Period based on Flood Level from SDM (Table 10) is adopted for this DIA. 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 site to the east is generally higher.** The proposed village drainage system intended to collect runoff from the internal site **as well as from the external eastern area.** It is proposed to be discharged to existing nearby public drainage system **which would discharge to existing nullah at Shui Mei Road.** 1 in 10 years return period is adopted for the drainage design. **Catchments plan is shown in Figure 4.**

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 Headquarters Rainfall Zone. Therefore, for 10 years return period, the following values are adopted.

a	=	471.9
b	=	3.02
c	=	0.397

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:

- Paved Area: C = 0.95
- 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:

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

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

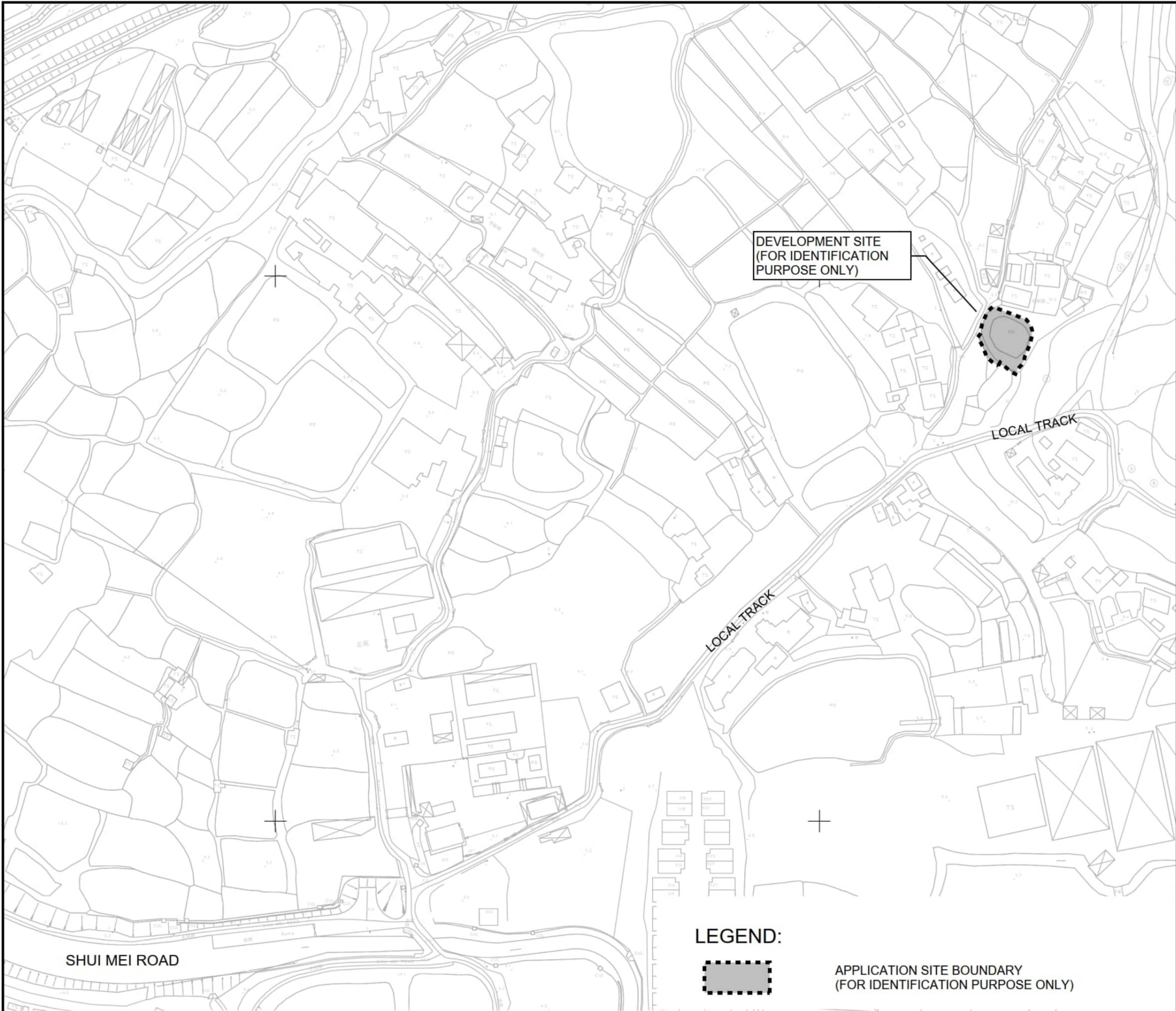
- 4.1.1 A drainage system is proposed to collect the runoff from the application site as well as runoff from the eastern site. It is proposed to be discharged to the existing drainage system under the local tracks at the south. The alignment, size and gradient of the proposed drains are shown in **Figure 3**.
- 4.1.2 The design calculations of proposed channels and checking of existing drains are shown in **Appendix A**.
- 4.1.3 The reference drawings of proposed drains are shown in **Appendix C**.

5. Conclusion

- 5.1.1 A drainage appraisal has been conducted for the Proposed Development. The surface runoff from the Application Site and runoff from eastern area will be collected by the proposed perimeter Uchannel/drains and discharged to the existing drainage system under the southern local track.
- 5.1.2 The utilization of existing drain is approx.. 38% only.
- 5.1.3 With the proposed drainage system, it is anticipated that there will be no significant drainage impact to the area after the implementation of the development.

- End of text -

FIGURES



PROJECT:
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1434 (part) in D.D. 107, Kam Tin, Yuen Long, New Territories

DEVELOPMENT SITE
 (FOR IDENTIFICATION PURPOSE ONLY)

LOCAL TRACK

LOCAL TRACK

SHUI MEI ROAD

LEGEND:



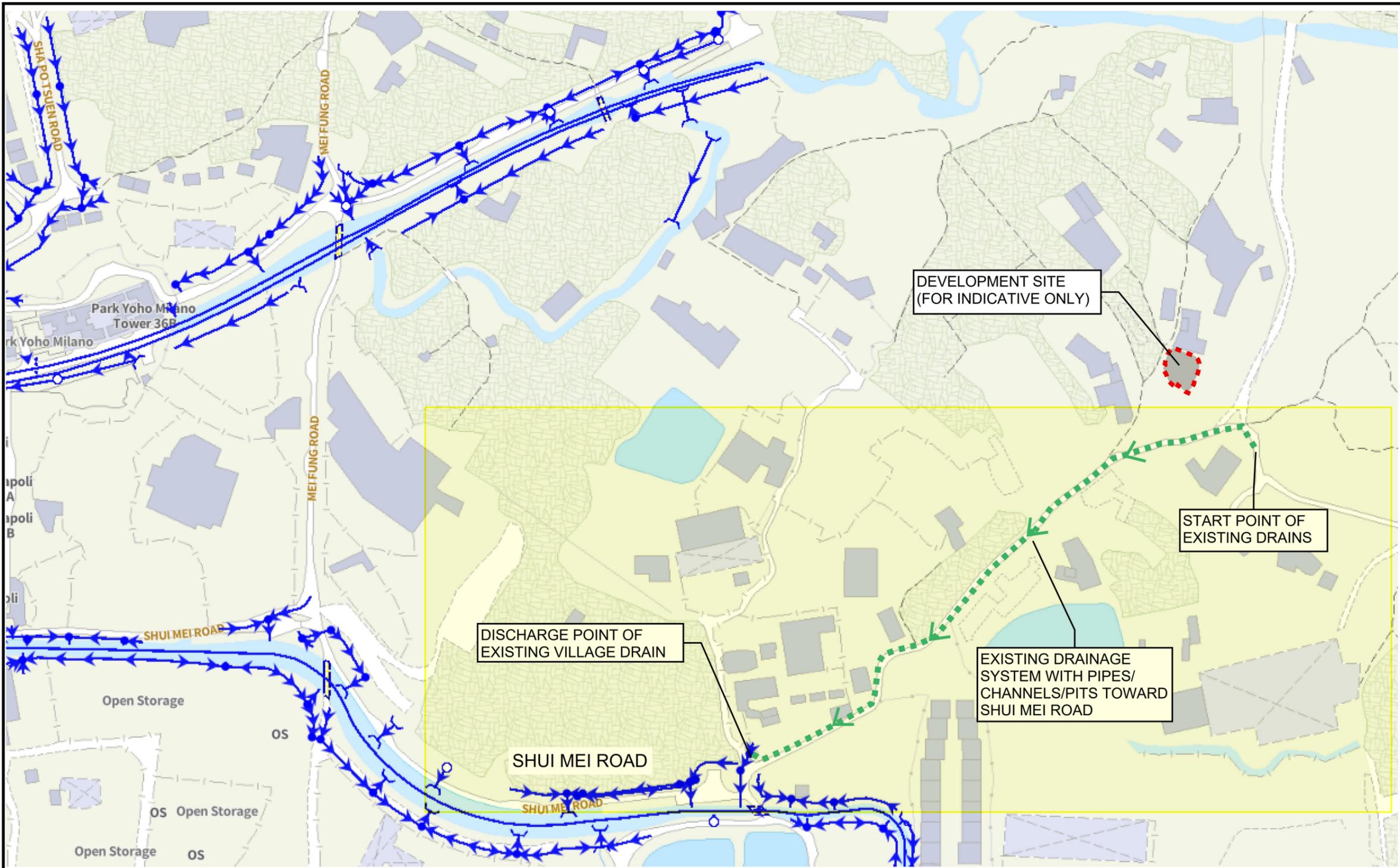
APPLICATION SITE BOUNDARY
 (FOR IDENTIFICATION PURPOSE ONLY)

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REV	DESCRIPTION	DATE
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DRAWING TITLE:
SITE LOCATION PLAN

DRAWING NUMBER:
FIGURE 1



PROJECT:
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1434 (part) in D.D. 107, Kam Tin, Yuen Long, New Territories

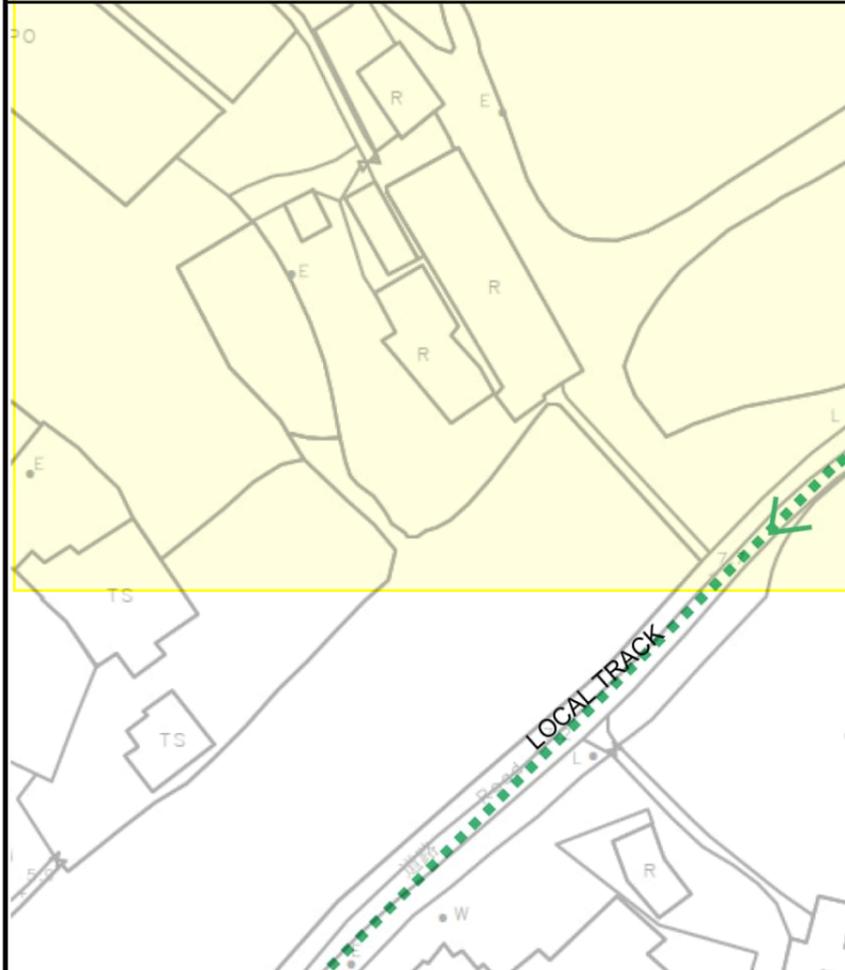
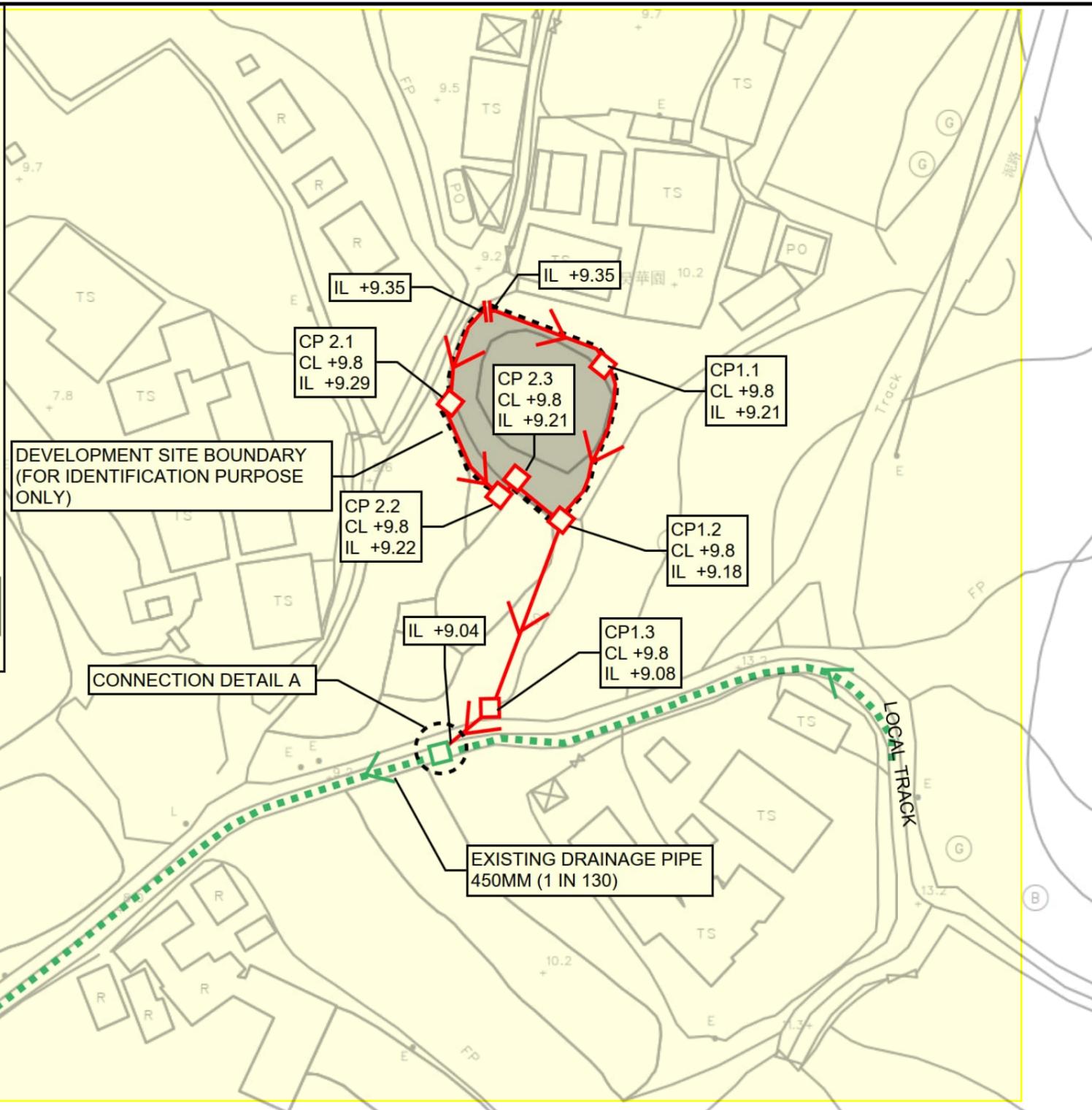
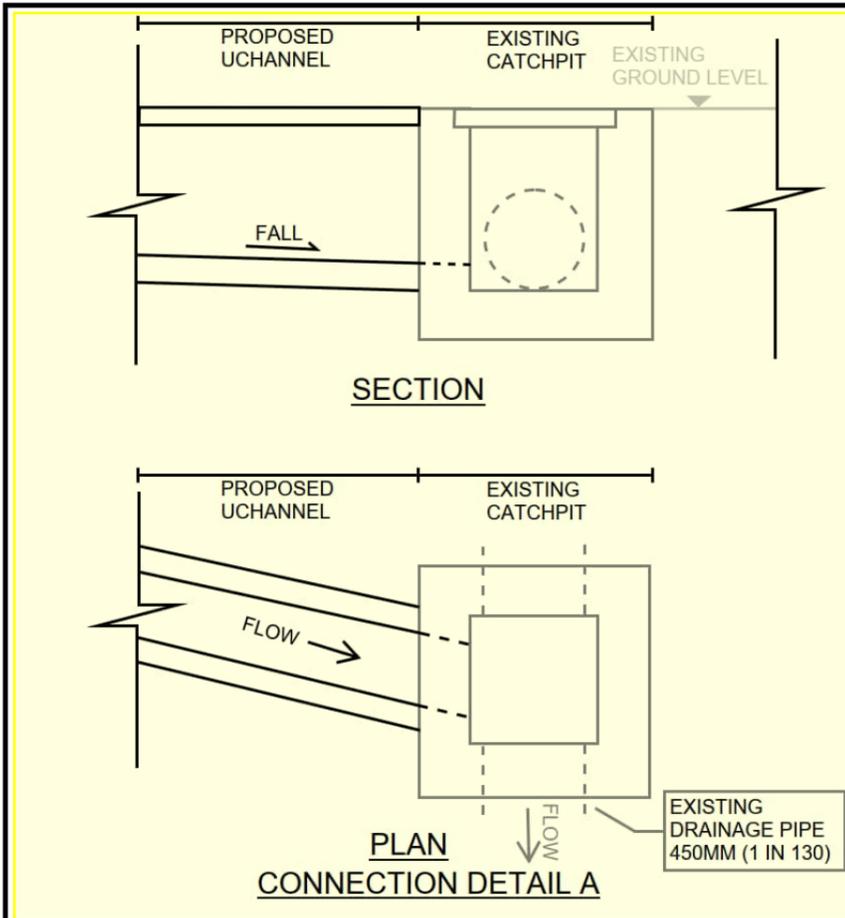
LEGEND:

- | | | | | | |
|--|--------------------------|--|------------------------|--|--|
| | 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) | | EXISTING DRAINAGE SYSTEM WITH PIPES/CHANNELS/PITS TOWARD SHUI MEI ROAD |
| | Pipe (Sewer) | | Sand Trap | | |

REV	DESCRIPTION	DATE

DRAWING TITLE:
 EXISTING DRAINAGE PLAN

DRAWING NUMBER:
 FIGURE 2A



LEGEND:

-  APPLICATION SITE BOUNDARY (FOR IDENTIFICATION PURPOSE ONLY)
-  EXISTING DRAINAGE SYSTEM WITH PITS UNDER EXISTING TRACK
-  EXISTING CATCHPIT
-  PROPOSED CATCHPIT
-  PROPOSED UCHANNEL (375mm, GRADIENT 1 IN 250)

NOTES:

1. INVERT LEVEL OF CONNECTION POINT AND SIZE OF EXISTING DRAINS SHOULD BE VERIFIED ON SITE BEFORE CONSTRUCTION.

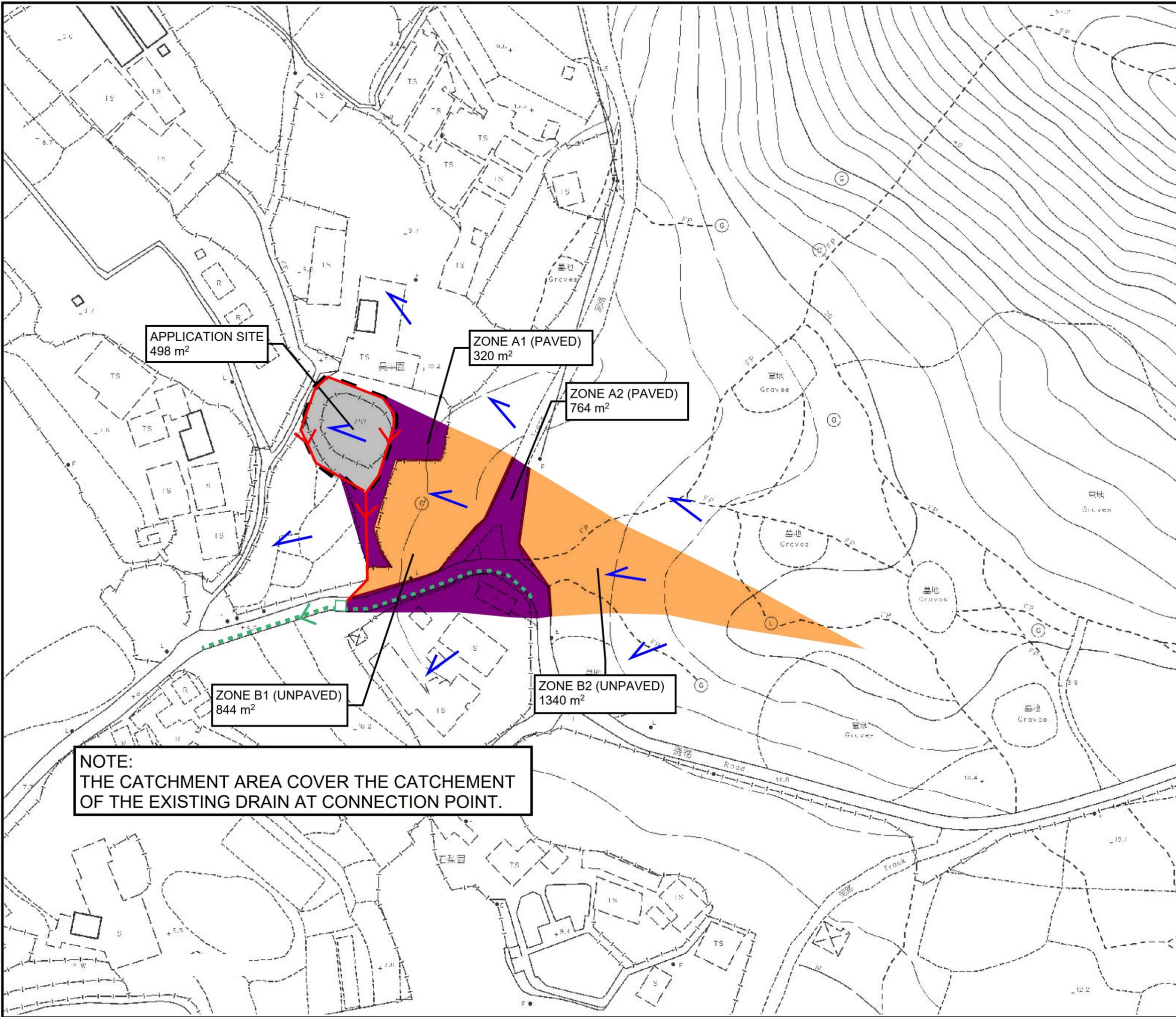
PROJECT:
Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1434 (part) in D.D. 107, Kam Tin, Yuen Long, New Territories

REV	DESCRIPTION	DATE

DRAWING TITLE:
PROPOSED DRAINAGE SYSTEM

DRAWING NUMBER:
FIGURE 3A

PROJECT:
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1434 (part) in D.D. 107, Kam Tin, Yuen Long, New Territories



APPLICATION SITE
498 m²

ZONE A1 (PAVED)
320 m²

ZONE A2 (PAVED)
764 m²

ZONE B1 (UNPAVED)
844 m²

ZONE B2 (UNPAVED)
1340 m²

NOTE:
 THE CATCHMENT AREA COVER THE CATCHMENT OF THE EXISTING DRAIN AT CONNECTION POINT.

REV	DESCRIPTION	DATE

DRAWING TITLE:
CATCHMENT PLAN

DRAWING NUMBER:
FIGURE 4

Appendix

Appendix A - Design Calculation

U Channel - Site Area + Zone A1 + A2 + B1 + B2

Runoff Estimation

Design Return Period	1 in	10	years
Paved Area		1556	(m2)
Unpaved Area		2183	(m2)
Total Equivalent Area		2242	(m2)
Rainfall Intensity, I **		200	mm/hr
Design Discharge Rate, Q***		0.125	m3/s

(498+320+738)
(1340+843)

*** Q = 0.278 x 2242 x 200 / 1000000

U Channel

Channel Size	1 in	375	(mm)
Gradient		250	
Velocity		1.16	m/s
Capacity		0.146	m3/s

Utilization $0.125 / 0.146 = 85.78$ % < 90 % (10% allow for siltation)

Checking of Existing 450mm Drain Pipe at Local Village Road

Runoff Estimation

Design Return Period	1 in	10	years
Paved Area*		1556	m2
Unpaved Area*		2183	m2
Total Equivalent Area		2242	m2
Rainfall Intensity		200	mm/hr
Design Discharge Rate		0.125	m3/s

Checking of Existing 450mm Drain Pipe

Pipe Size		450	mm
Gradient	1 in	130	
Velocity		2.06	m/s
Capacity		0.328	m3/s

(existing gradient is approx 1 in 125, use 1 in 130 for checking)

Utilization = $0.125 / 0.328 = 38.10$ % < 90%

Time of Concentration

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			H		
(m2)	(m)	(mPD)	(mPD)		(min)	(min)
3739	135	21	9.8	8.296	5.618	5.618

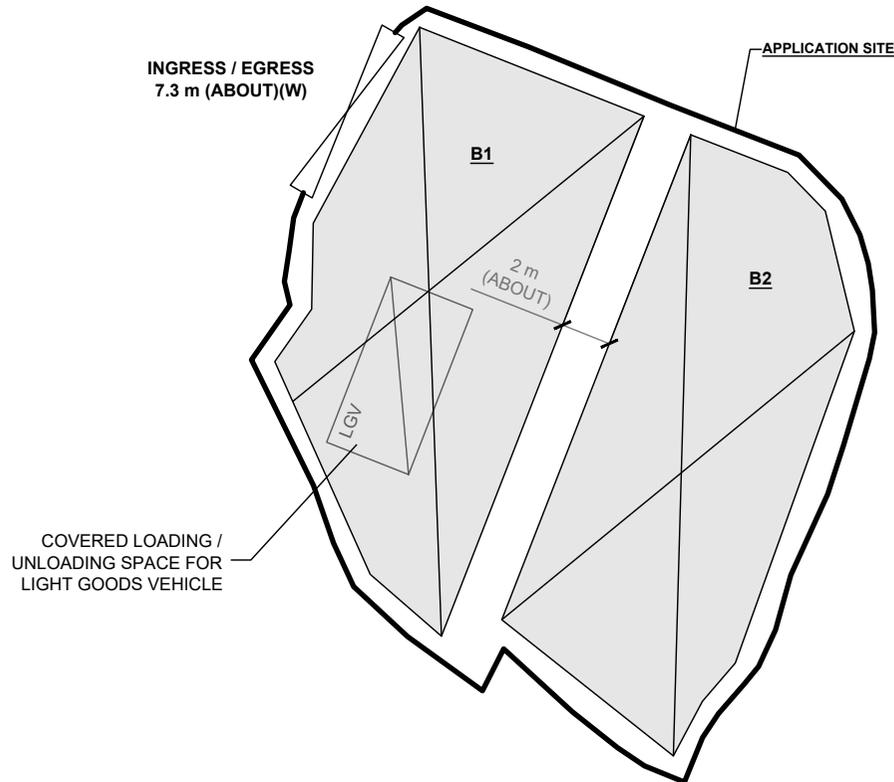
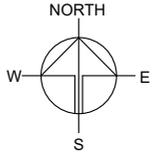
Appendix B - Development Layout Plan

UNCOVERED AREA	: 119 m ²	(ABOUT)
PLOT RATIO	: 0.76	(ABOUT)
SITE COVERAGE	: 76 %	(ABOUT)
NO. OF STRUCTURE	: 2	
DOMESTIC GFA	: NOT APPLICABLE	
NON-DOMESTIC GFA	: 379 m ²	(ABOUT)
TOTAL GFA	: 379 m ²	(ABOUT)
BUILDING HEIGHT	: 7 m	(ABOUT)
NO. OF STOREY	: 1	

B2	COVERED LOADING / UNLOADING AREA WAREHOUSE (EXCLUDING D.G.G.)	188 m ² (ABOUT)
TOTAL		379 m² (ABOUT)

*D.G.G. - DANGEROUS GOODS GODOWN

GFA	BUILDING HEIGHT
191 m ² (ABOUT)	7 m (ABOUT)(1-STOREY)
188 m ² (ABOUT)	7 m (ABOUT)(1-STOREY)
379 m² (ABOUT)	



COVERED LOADING / UNLOADING SPACE FOR LIGHT GOODS VEHICLE

LOADING / UNLOADING PROVISIONS

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
-  LOADING / UNLOADING SPACE
-  INGRESS / EGRESS

PLANNING CONSULTANT



PROJECT

PROPOSED WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

SITE LOCATION

LOT 1434 (PART) IN D.D. 107, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE

1 : 300 @ A4

DRAWN BY: MN DATE: 21.11.2023

REVISED BY: DATE:

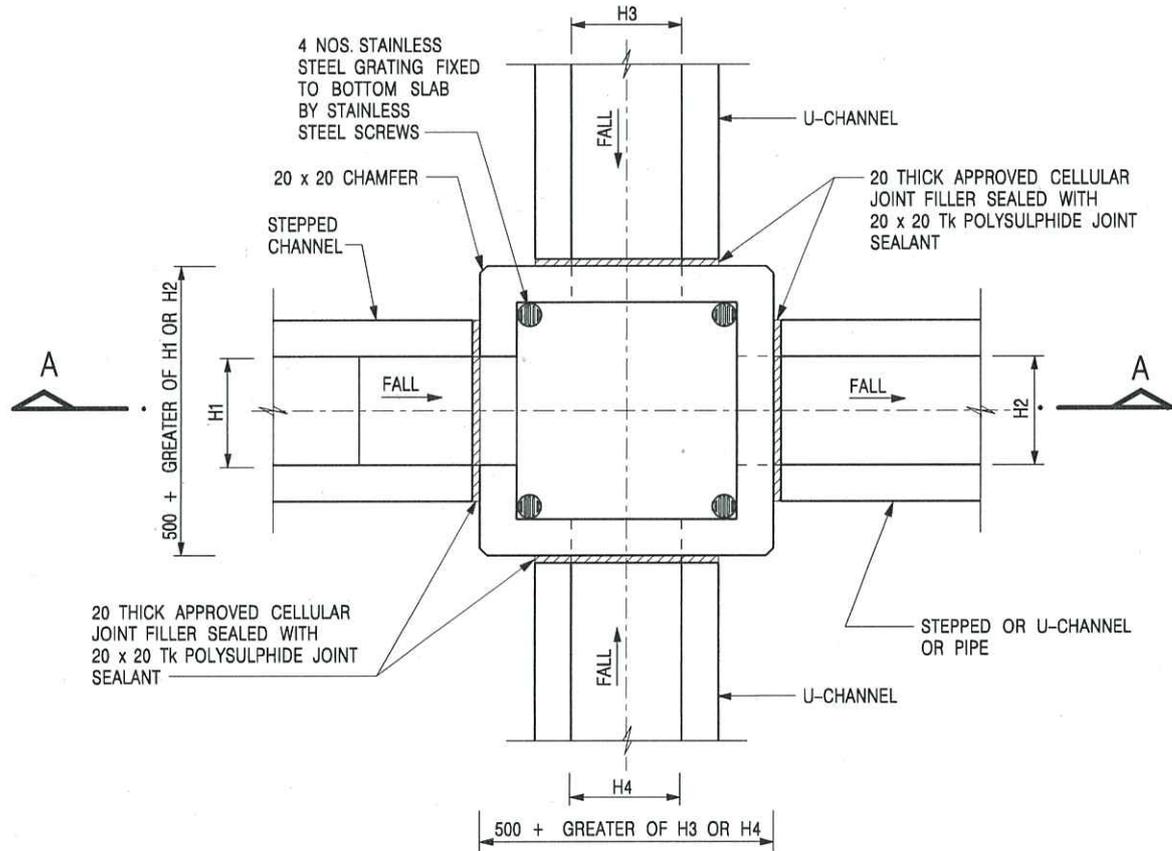
APPROVED BY: DATE:

DWG. TITLE

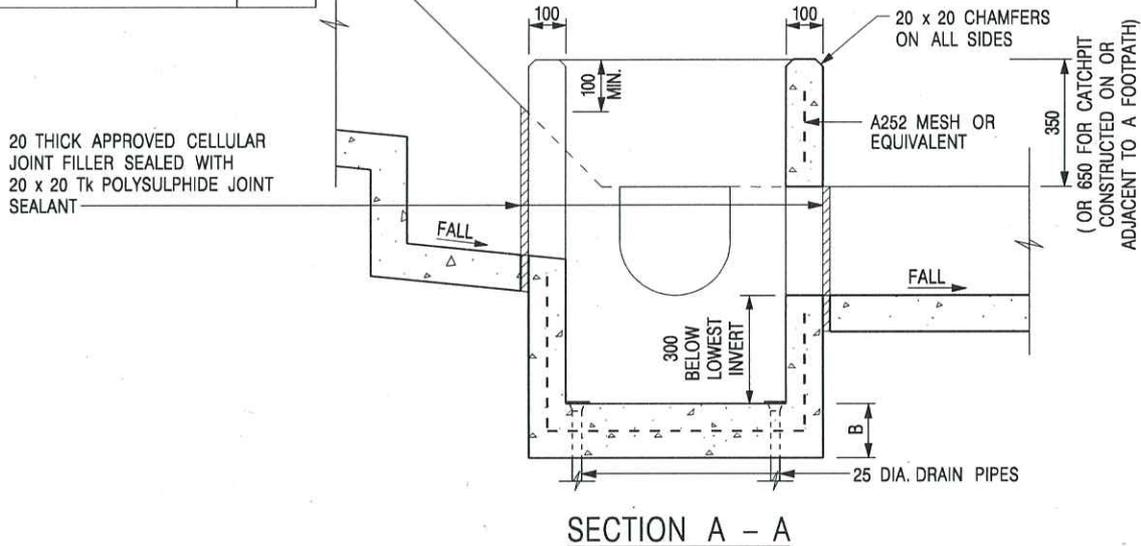
LAYOUT PLAN

DWG. NO. PLAN 4 VER. 001

Appendix C - Reference Drawings



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



NOTES:

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

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

CATCHPIT WITH TRAP
(SHEET 1 OF 2)



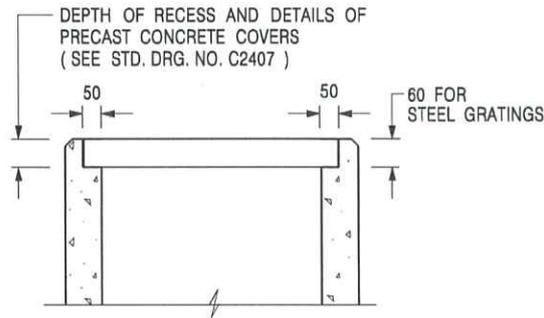
CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DRAWING NO.

DATE JAN 1991

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)



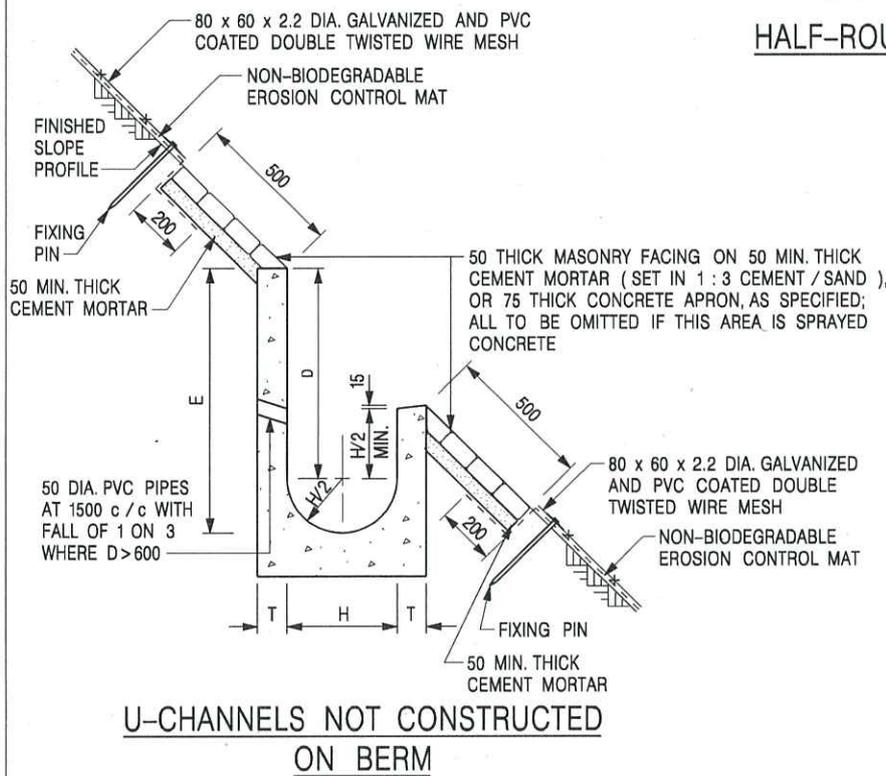
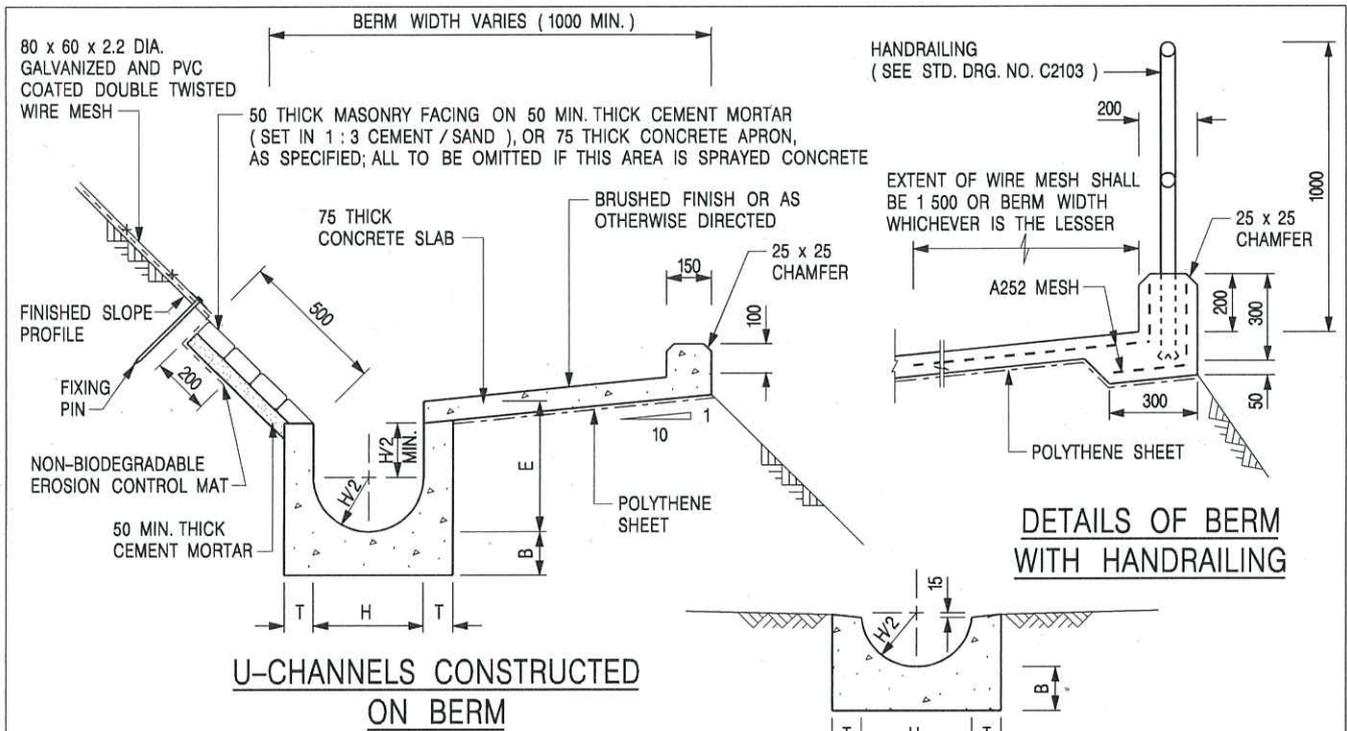
**CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT**

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)



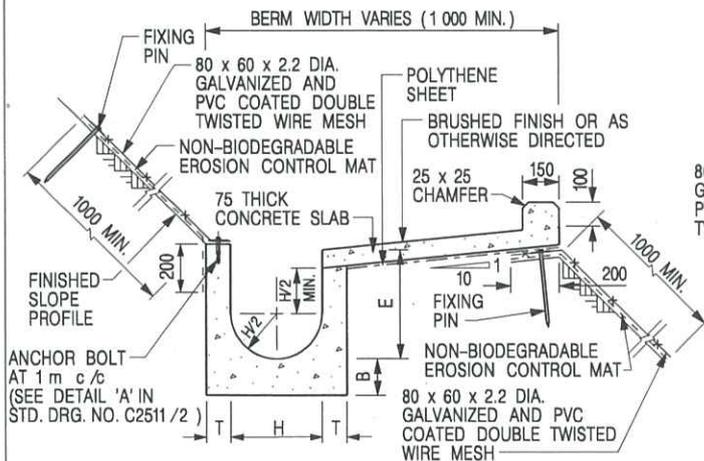
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE 1 : 25

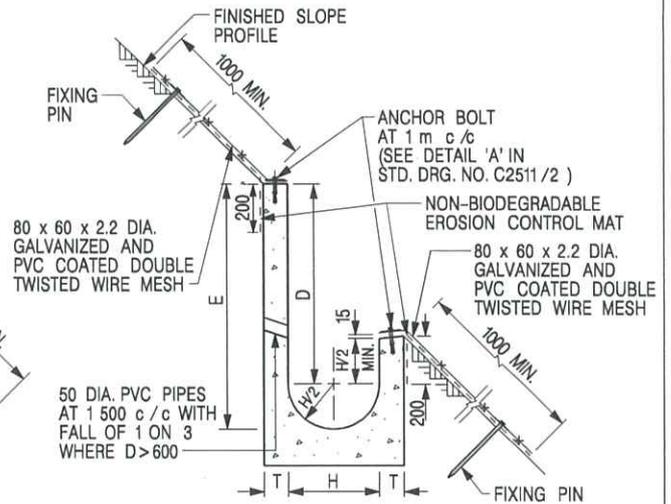
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DATE JAN 1991

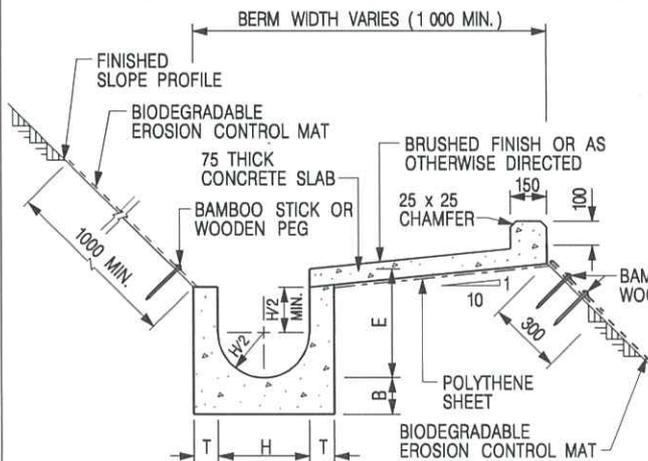
C24091



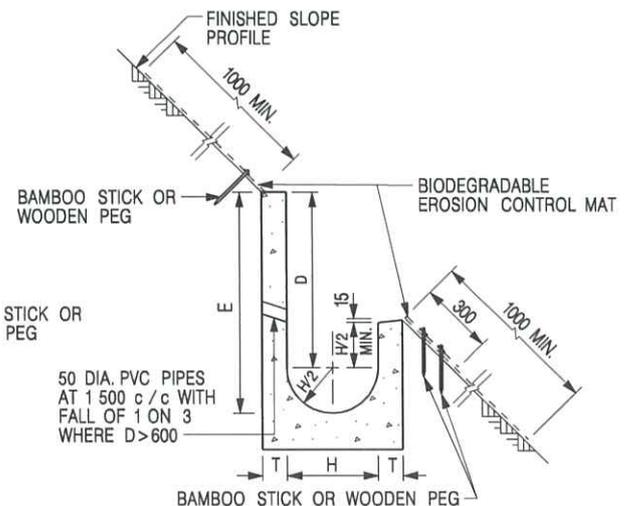
U-CHANNELS CONSTRUCTED ON BERM WITH NON-BIODEGRADABLE EROSION CONTROL MAT



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)



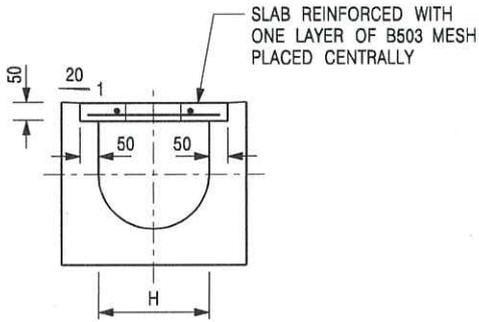
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE DIAGRAMMATIC

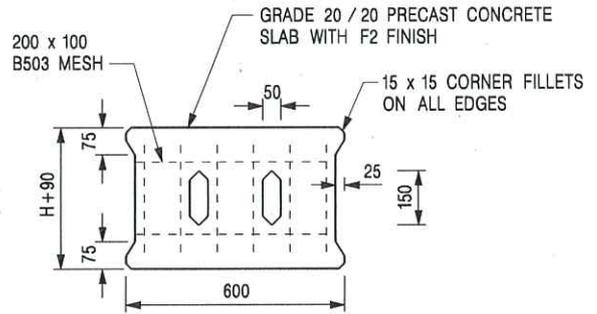
DRAWING NO.

DATE JAN 1991

C24101



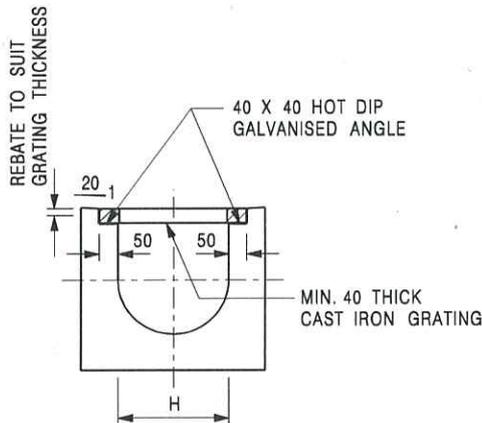
TYPICAL SECTION



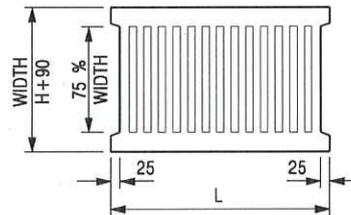
PLAN OF SLAB

U-CHANNELS WITH PRECAST CONCRETE SLABS

(UP TO H OF 525)



TYPICAL SECTION



L = 600mm FOR H ≤ 375mm
L = 400mm FOR H > 375mm

CAST IRON GRATING

(DIMENSIONS ARE FOR GUIDANCE ONLY, CONTRACTOR MAY SUBMIT EQUIVALENT TYPE)

U-CHANNEL WITH CAST IRON GRATING

(UP TO H OF 525)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. H=NOMINAL CHANNEL SIZE.
3. ALL CAST IRON FOR GRATINGS SHALL BE GRADE EN-GJL-150 COMPLYING WITH BS EN 1561.
4. FOR COVERED CHANNELS TO BE HANDED OVER TO HIGHWAYS DEPARTMENT FOR MAINTENANCE, THE GRATING DETAILS SHALL FOLLOW THOSE AS SHOWN ON HyD STD. DRG. NO. H3156.

E	NOTES 3 & 4 AMENDED.	Original Signed	12.2014
D	NOTE 4 ADDED.	Original Signed	06.2008
C	MINOR AMENDMENT. NOTE 3 ADDED.	Original Signed	12.2005
B	NAME OF DEPARTMENT AMENDED.	Original Signed	01.2005
A	CAST IRON GRATING AMENDED.	Original Signed	12.2002
REF.	REVISION	SIGNATURE	DATE

COVER SLAB AND CAST IRON
GRATING FOR CHANNELS



CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DRAWING NO.

DATE JAN 1991

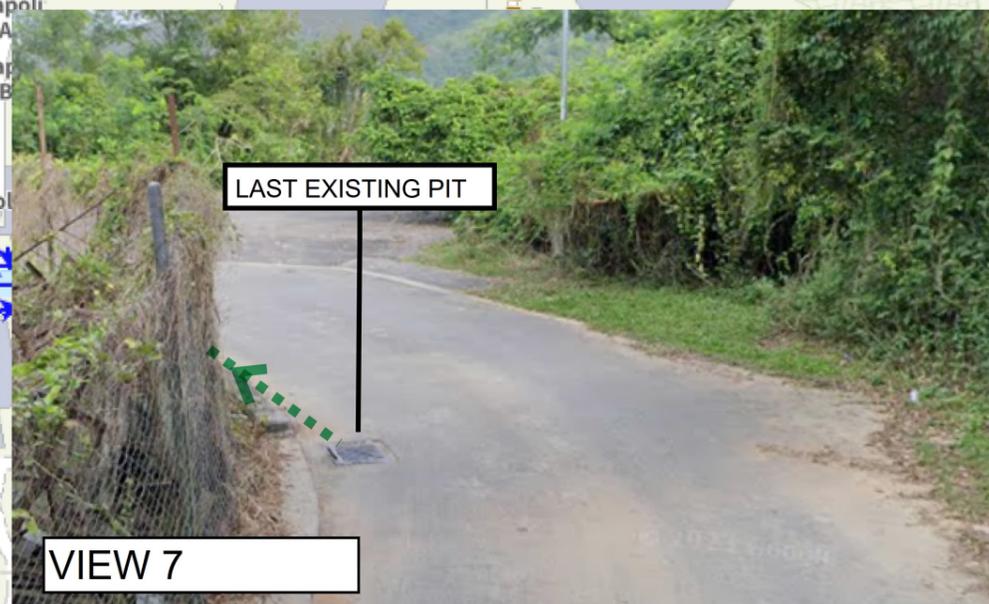
C2412E



VIEW 1



VIEW 2



VIEW 7



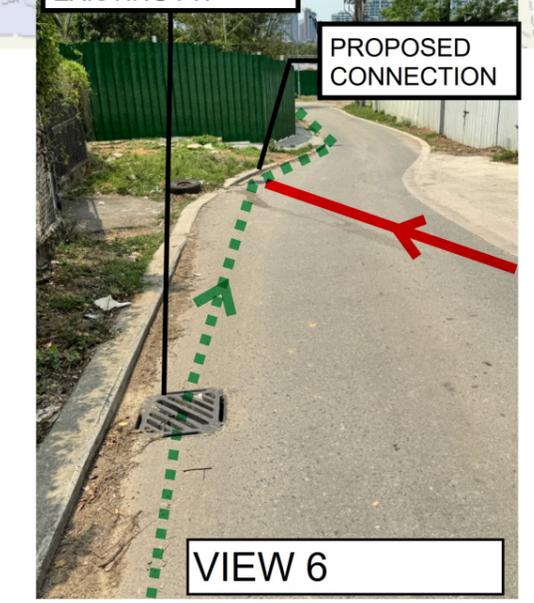
VIEW 3



VIEW 4



VIEW 5

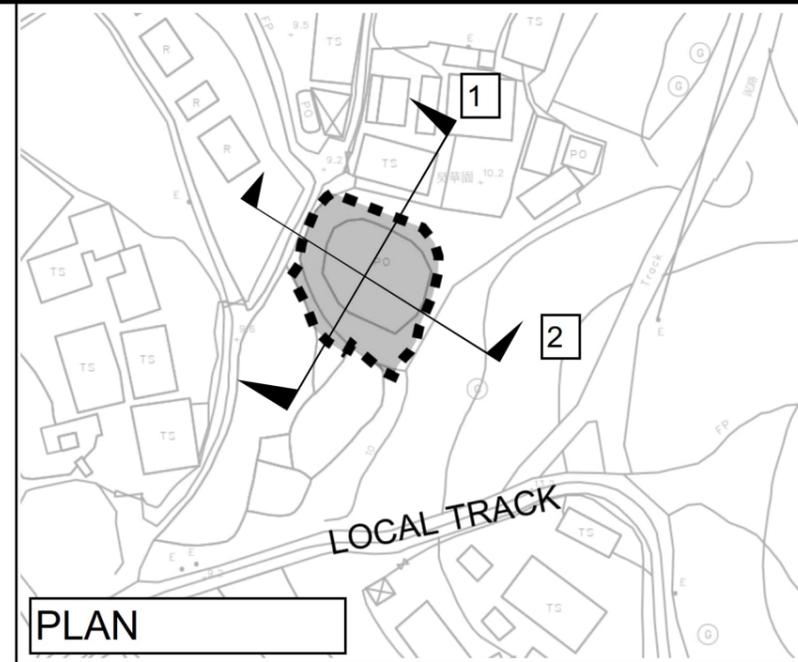


VIEW 6

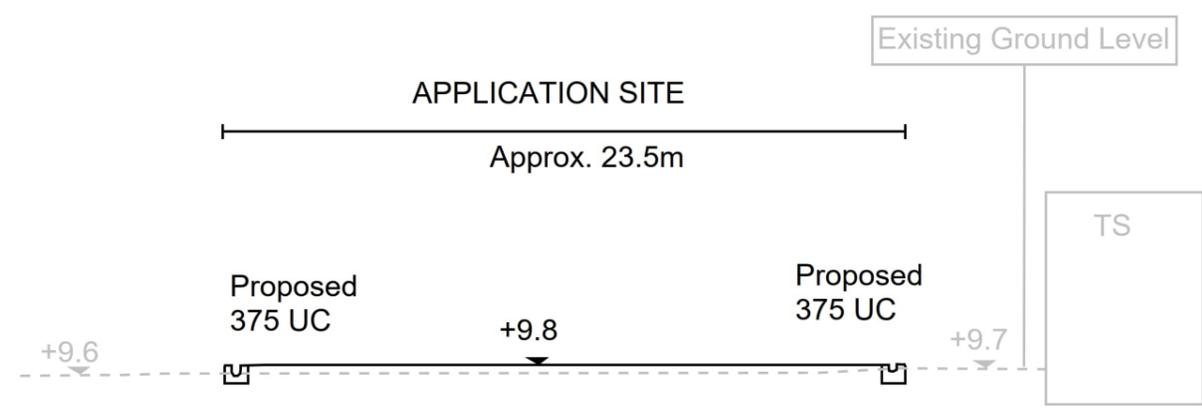
PROJECT:
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1434 (part) in D.D. 107, Kam Tin, Yuen Long, New Territories

Photos Record of Surroundings

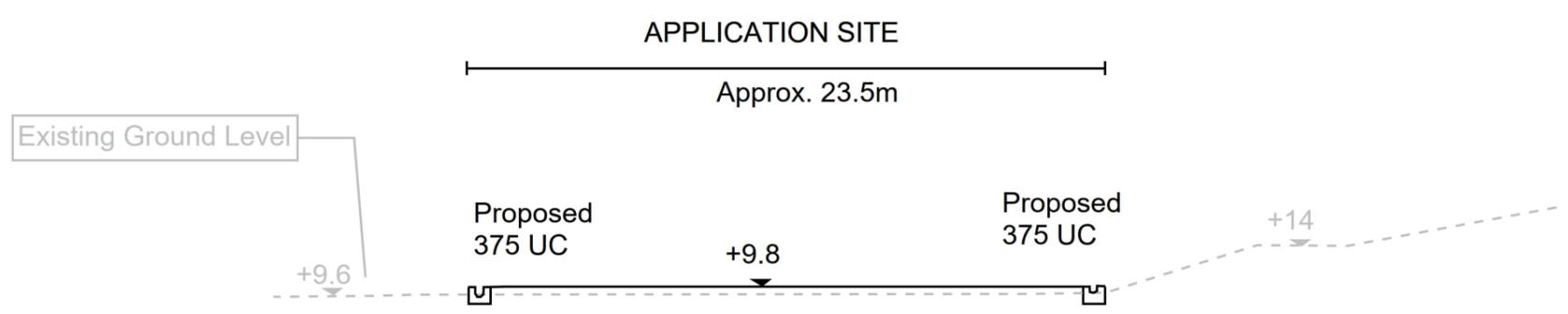
Appendix D



PROJECT:
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1434 (part) in D.D. 107, Kam Tin, Yuen Long, New Territories



SECTION 1



SECTION 2

SECTIONS