Enclosure | 2

Revised Drainage Proposal

Application at Lots 267 (Part) and 268 (Part) in D.D. 84, Lots 481 S.A (Part) and 481 RP (Part) in D.D. 87, and adjoining Government Land, Ping Che, Ta Kwu Ling, New Territories

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Drainage Proposal

Second Submission

Prepared by: Him Tang
Date: 28-June-2024

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22 Hung To Road,
Kwun Tong, Kowloon
Hong Kong

CONTENTS

APPENDICE

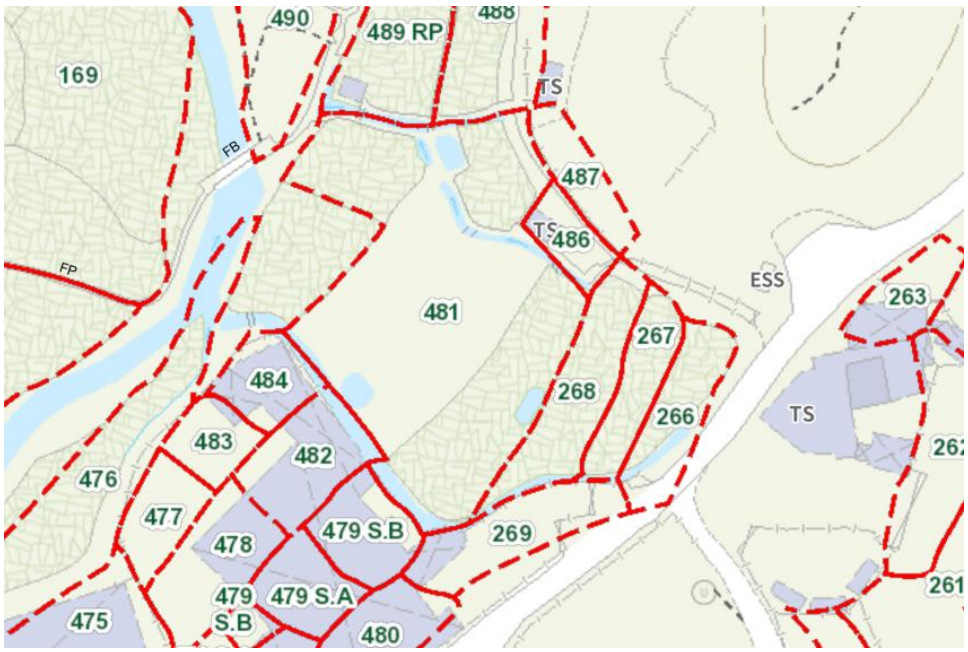
1. INTRODUCTION

The drainage proposal is under the application of Section 16 Planning Application. The proposed uses of the subject lots are a temporary logistic center for a period of 3 years and filling of land and pond at Lots 267 (Part) and 268 (Part) in D.D. 84, Lots 481 S.A (Part) and 481 RP (Part) in D.D. 87, and adjoining Government Land, Ping Che, Ta Kwu Ling, New Territories.

Wings & Associates Consulting Engineers Limited is appointed to be the consultant to prepare for the Drainage Proposal in support of the construction works for the proposed application and address the Drainage Services Department's general comments.

2. SITE DESCRIPTION

2.1 The general views of the application area can be referred to in the figures below. The combined parts of the lot cover an area of about 6500m^2.

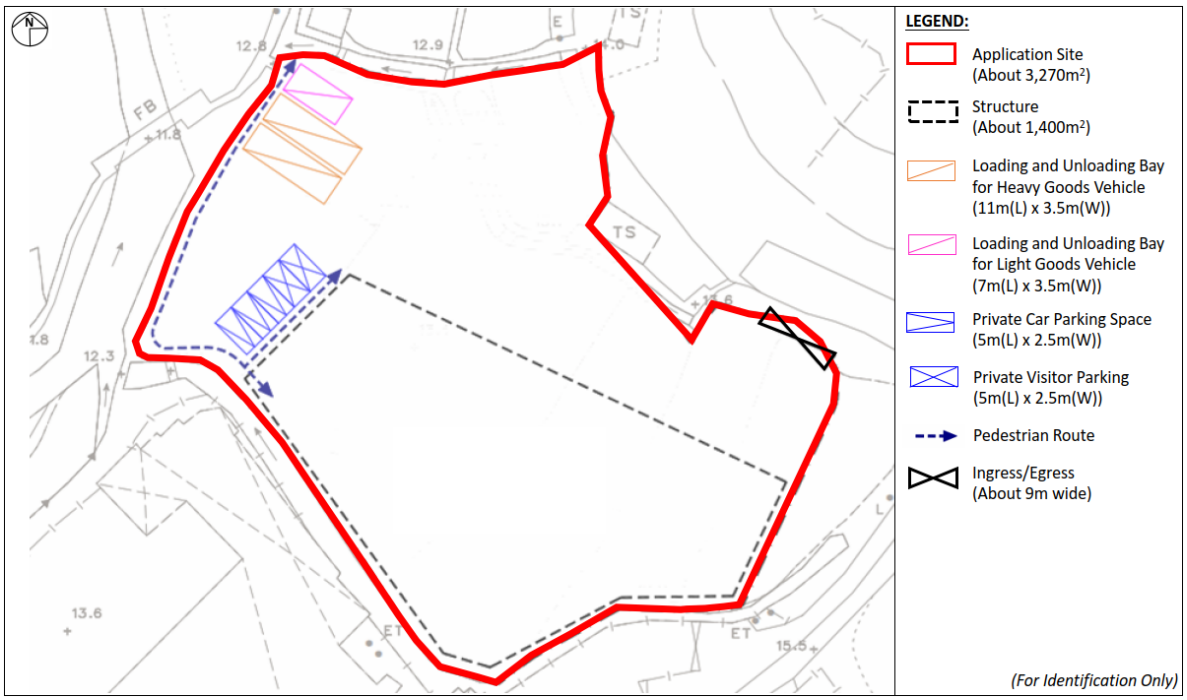


Lot information of the Subject Site

2.2 The figure below shows the proposed boundary of the subject site. This area will be surrounded by fencing in the subject lots. The fencing will provide clearance above ground surface to allow the flow of storm water surface runoff.

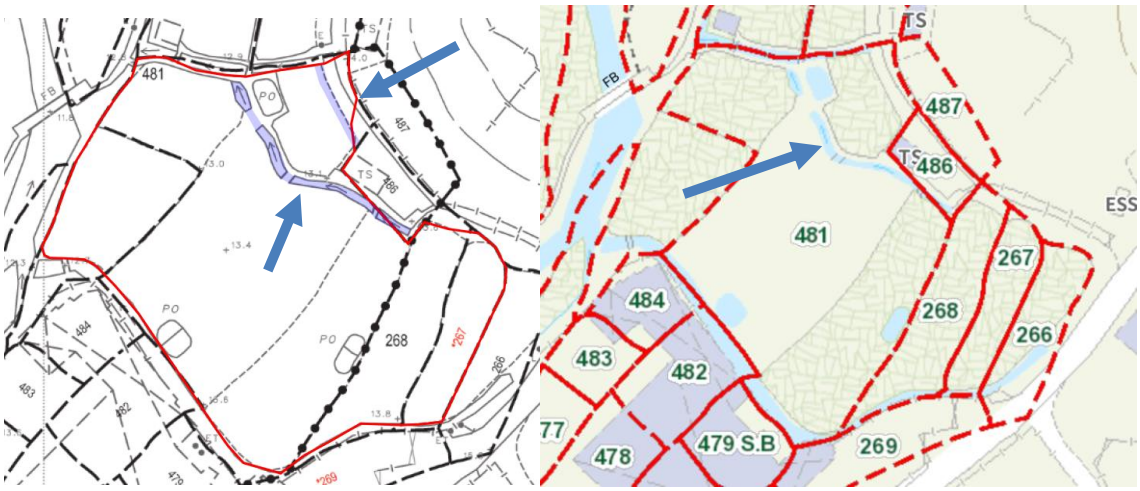
Boundary of the Subject Site and surround by Fencing

2.3 The figure below shows the proposed layout with different parking provisions of this area within the boundary of the fencing where will be a temporary logistic center as we proposed. No permanent structures and buildings will be placed within the subject site, the flow direction will not be affected by any blockage.



Location of the parking area within the subject site

2.4 The figures below show the location of an existing stream course within the subject lot. Photos showing the current conditions can be referred to Appendix.



Existing drainage features within the subject site

2.5 The figure below shows the location of the existing stream course outside of the subject lot. Photos showing the current conditions can be referred to Appendix.

Existing drainage features outside of the subject site

2.6 Referring to the actual site condition, there are existing channels outside the boundary. The figure below shows the location of the existing channels outside of the subject lots. Photos showing the current conditions can be referred to Appendix.

Existing U-Channels at West Side (outside the site boundary)

2.7 The existing ground level of the subject site ranges between +12.17mPD to +14.47 mPD. With reference to the Stormwater Drainage Manual, the mean higher high-water level for Tai Po Kau is +2.02mPD. Water level information from Hong Kong Observatory shows the existing highest water level is recorded as +5.03mCD (+5.176mPD) with tide gauge established in Tai Po Kau.

The Information can be referred to the record from the Observatory and the tables from the Stormwater Drainage Manual, which have shown below.

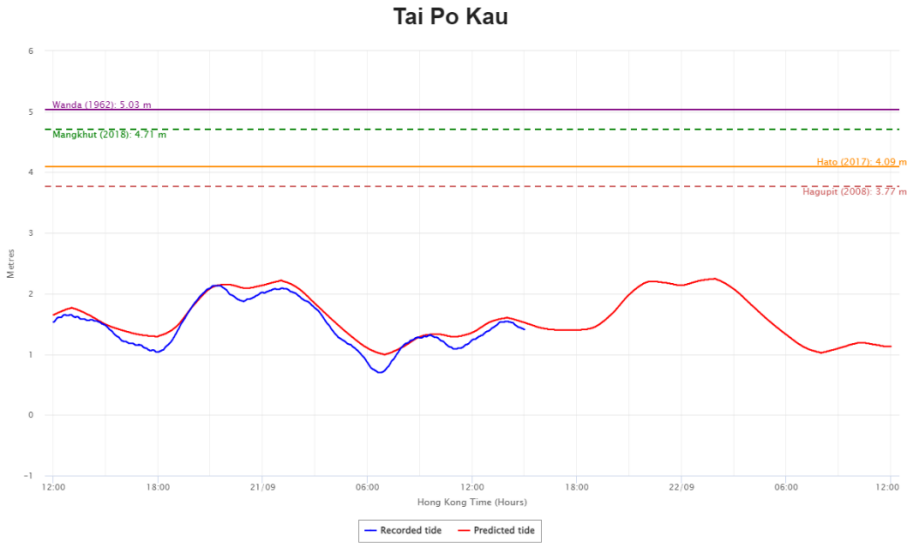


Table 8 – Design Extreme Sea Levels (in mPD)

Return Period (Years)	North Point/ Quarry Bay (1954-2017)	Tai Po Kau (1962-2017)	Tsim Bei Tsui (1974-2017)	Tai O (1985-2017)
2	2.73	2.91	3.07	2.87
5	2.94	3.20	3.31	3.16
10	3.09	3.45	3.51	3.36
20	3.24	3.73	3.74	3.57
50	3.45	4.19	4.09	3.84
100	3.63	4.60	4.40	4.06
200	3.81	5.10	4.77	4.28

Table 9 – Mean Higher High Water (MHHW) Levels (in mPD)

North Point/ Quarry Bay (1962-2017)	Tai Po Kau (1981-2017)	Tsim Bei Tsui (1983-2017)	Tai O (1985-2017)
2.01	2.02	2.32	2.13

3. DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE

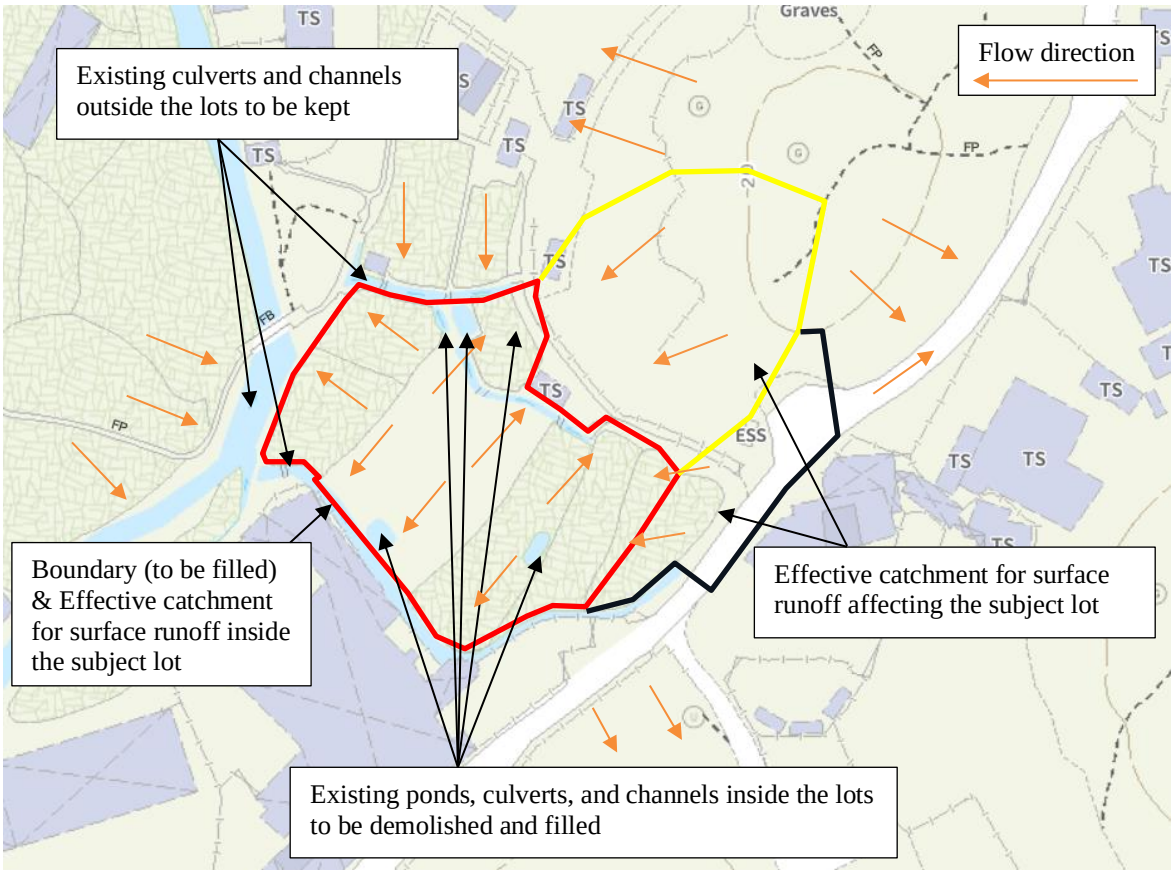
3.1 General Planning

At the very first, the planning of the provision of drainage system to handle stormwater surface runoff within the subject site will cover the following items:

- Maintain the existing stream course, and channels (outside the boundary)
- Backfill and remove the existing ponds, stream course, and channels (inside the boundary)
- Raise the ground surface level inside the subject site by filling works
- Construction of new channels and catchpits

3.2 Identification of the Effective Catchment Area

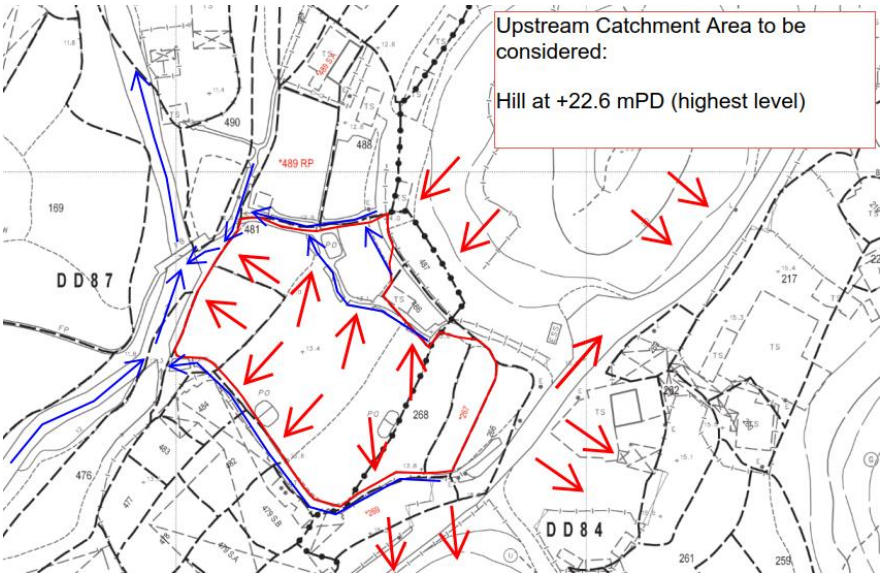
Referring to the location plan and the existing ground level, the considered effective catchment area of surface runoff includes: the area of the subject lots and the adjacent area with higher cover level (including uphill and carriageway).
The other adjacent area will be determined as the anticipated catchment areas of runoff which are not affecting the subject site, in case, those area separate with the subject lots by existing drainage utilities (culvert and channels), carriageway, fencing, and level difference.



Flow Direction of the Catchment Area on this site

3.3 Studying on the Existing Drainage System

According to the existing ground level, upstream profile, and the flow direction and the location of the existing stream course and surface channels, the original drainage system can be determined as the figure below:

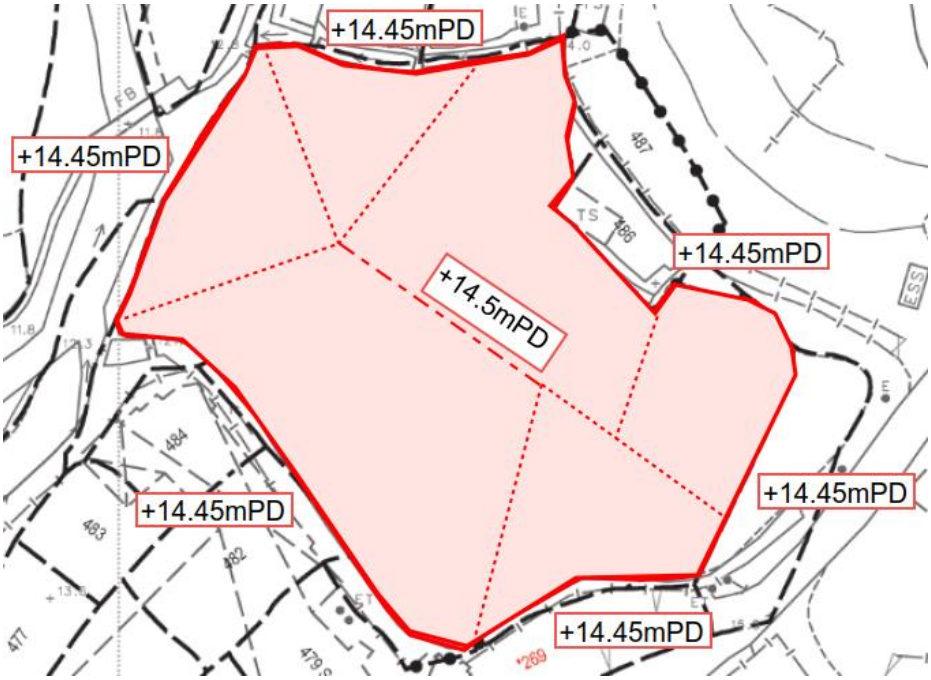


Original drainage network on these lots

3.4 Filling the subject site to rearrange cover level

The area inside the lots will be completely filled up to create a flat surface with slight gradient to provide falls to drainage features and match the existing road surface outside the lot boundary. The existing culvert within the subject lots will be filled and dismantled. The new drainage system will replace the original one.

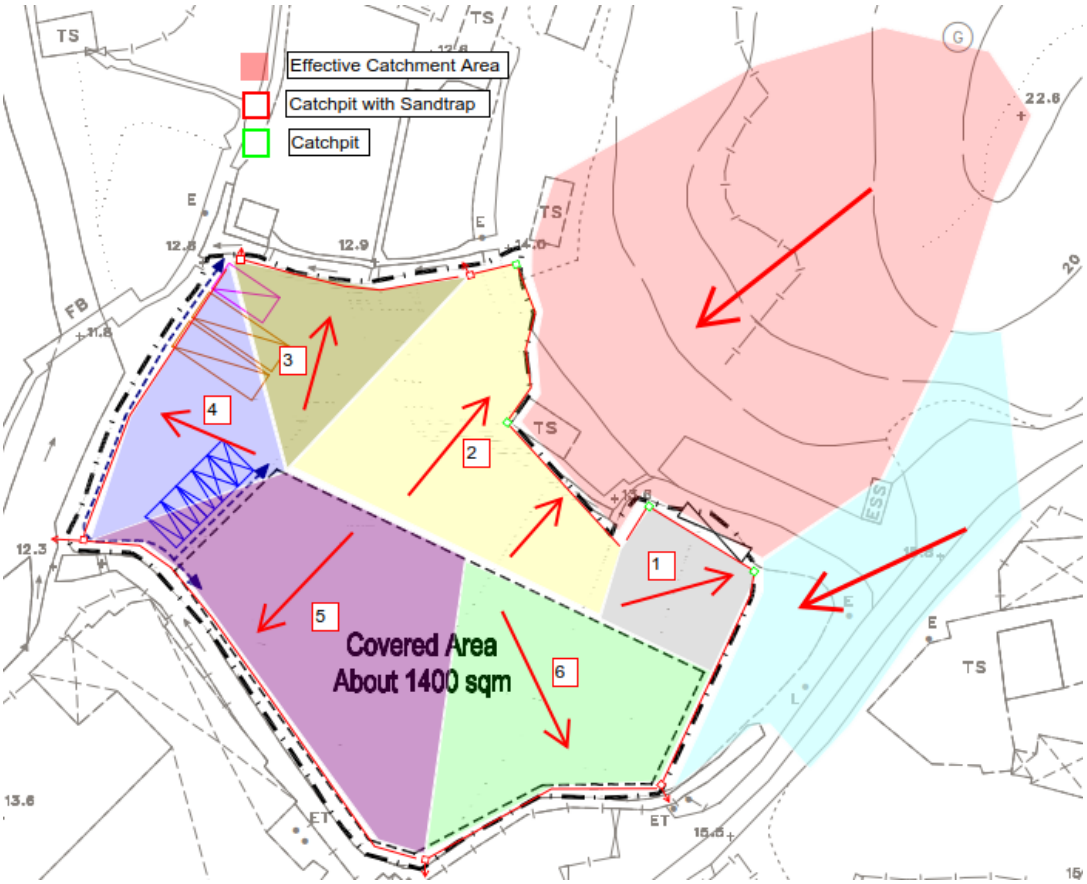
The ground level is proposed to be raised to +14.5mPD for feasible traffic flow and heavy vehicle access. The cover level at the boundary will be around +14.45mPD. The details of the cover levels and the flow direction of the surface runoff can be referred to the drawings and the figure below.



Filling plan of the subject site

3.5 Proposed Flow Direction and Drainage System

The captured catchment areas have been identified for collecting stormwater for the application area. The drainage system has been proposed to discharge stormwater with surface channel and catchpits, the design of the dimension and size have been referred to the guidance from Stormwater Drainage Manual. Calculation has been provided for checking the capacity of the drainage system.



Effective Catchment Area and Flow Direction within the Subject Lots

3.6 Diversion and Filling of Existing stream course

To maintain the drainage system to divert and discharge stormwater surface runoff within the subject site, the proposed channels and catchpit at North-East and East shall be constructed at the very first. Since the stormwater from upstream can be handled, the existing stream course and channels can be filled or removed without disturbance to the performance of the drainage system.

The original flow direction at West, South and West-South remains unchanged, the existing stream course is capable of handling the surface runoff under both the original and the raised cover level. The proposed new channels and catchpit will divert surface runoff to the stream course.

3.7 Design of Channels and Catchpits

The proposed drainage system has been checked to be sufficient to handle stormwater surface runoff within the subject site area and not affecting the adjacent footpath and carriageway to minimize the potential risks of overland flows and flooding by rainfall event. The related calculation and drawing can be related in Appendix.

For the surface channel to change direction, a bend with radius three times the width of the channel will be provided according to the guidance from the design manual. For the turning in sharp angle, catchpits will be provided.

3.8 Drainage Impact of the captioned site

There are two major factors that may affect the loading and capacity of the drainage system within this subject lot, which are the filling of existing stream course and filling of ground surface. To determine the impact of the drainage system, the amount of discharge from the captioned site shall be checked if there are changes or additional discharge generated. Since the flow direction and the effective catchment area of each stream course and channels remain unchanged, the proposed channels are capable to replace the original stream course which will be filled without increasing the catchment area and required flow rate. The details of calculation for rainfall intensity and flow rate can be referred to in the Appendix.

3.9 Discharge Point

The collected stormwater will be diverted and discharged to the existing stream course and river adjacent to the captioned site. Before discharging to the public drainage network, a catchpit with sand trap will be provided. The dimensions and depth are according to the standard drawings from CEDD (drawing no. C2405 & C2406). The proposed connection handles the same effective catchment area from upstream and the subject site which will not induce additional loading to the existing drainage downstream.

4. CONCLUSIONS

4.1 A new drainage system within the subject lots is proposed after the site formation works to raise the ground level to be uniform.

4.2 The stormwater and surface runoff in the effective catchment area will be discharged to the existing drainage system outside the subject lot area (existing river, culverts, and surface channels).

4.3 Having considered each branch of the proposed surface channel to handle the surface runoff from both catchment areas from uphill and the subject lots concurrently in the design checking (design calculation in Appendix refers), the proposed surface channels and catchpits are capable of receiving potential surface runoff in calculating the rainfall intensity storm effect in approximate 50 years of return period.

4.4 Regular maintenance such as routine desilting will be carried out by the development owner for the drainage system (i.e. surface channel and catchpit) surrounding the site to avoid blockage and deterioration.

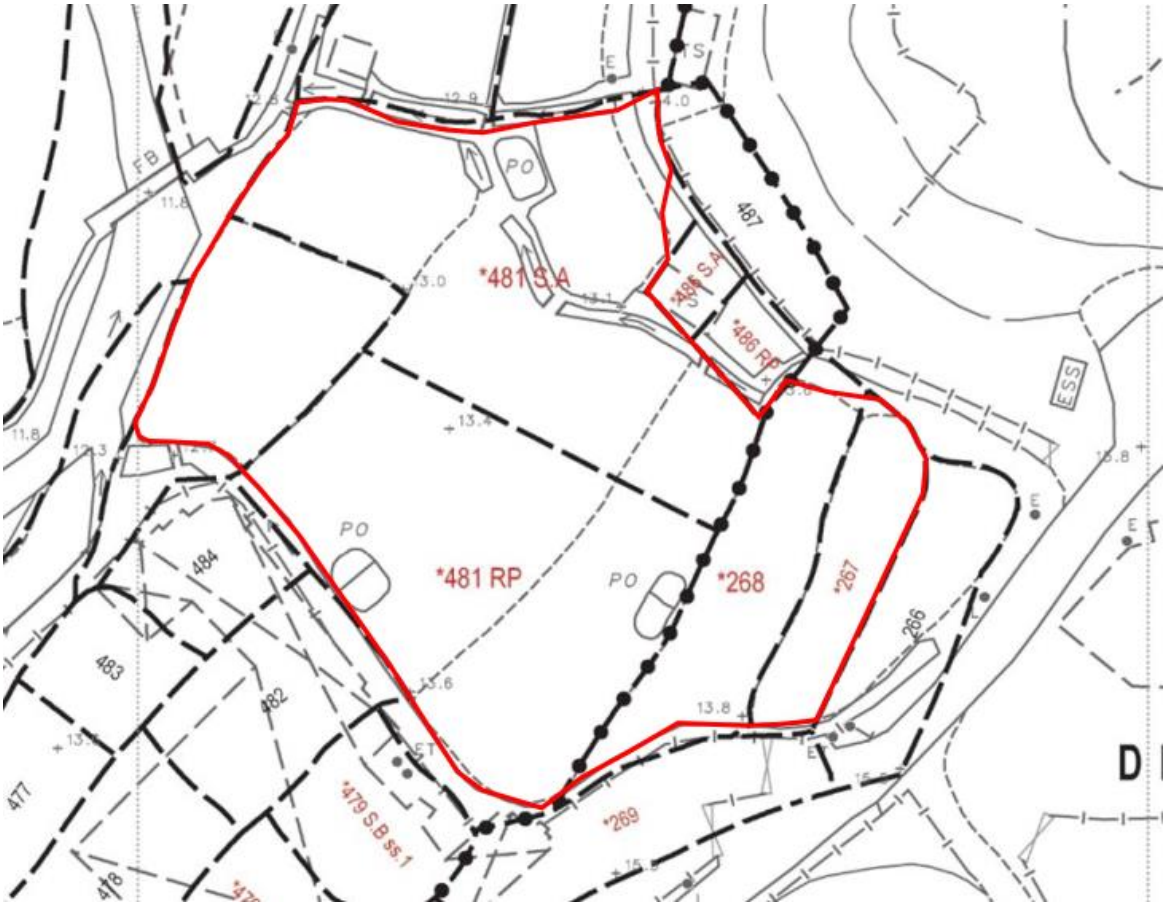
4.5 For the surface channels pass through vehicle access, steel gratings referring to the typical details from standard drawings will be provided.

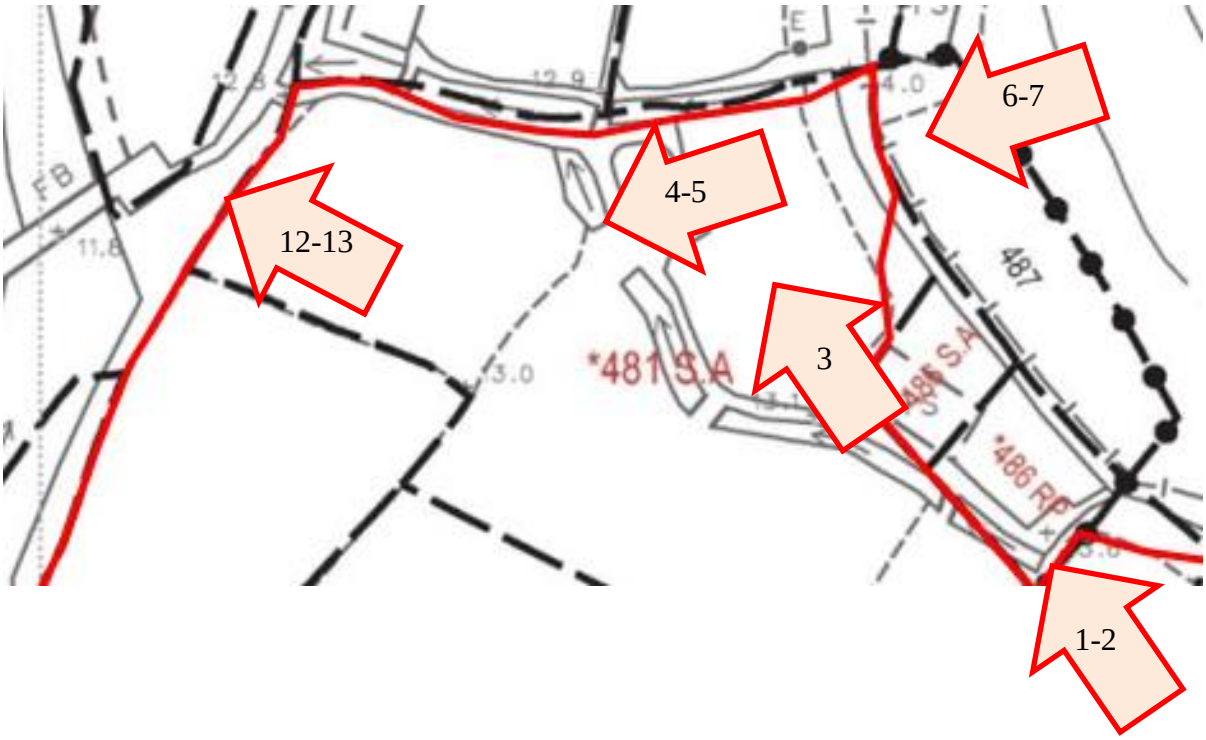
4.6 Openings on the bottom of fencing and walls will be provided surrounding the subject lots to avoid blockage and changing the flow path of the surface runoff.

END OF TEXT

APPENDIX A

Photo Record


*481 S.A
*481 RP
*268
*267
*486 RP
*486 S.A
*479 SB ss 1
PO
ESS
487
484
483
482
477
478
269
266


6-7
4-5
12-13
3
1-2
*481 S.A
*486 RP
*486 S.A
487

WNG

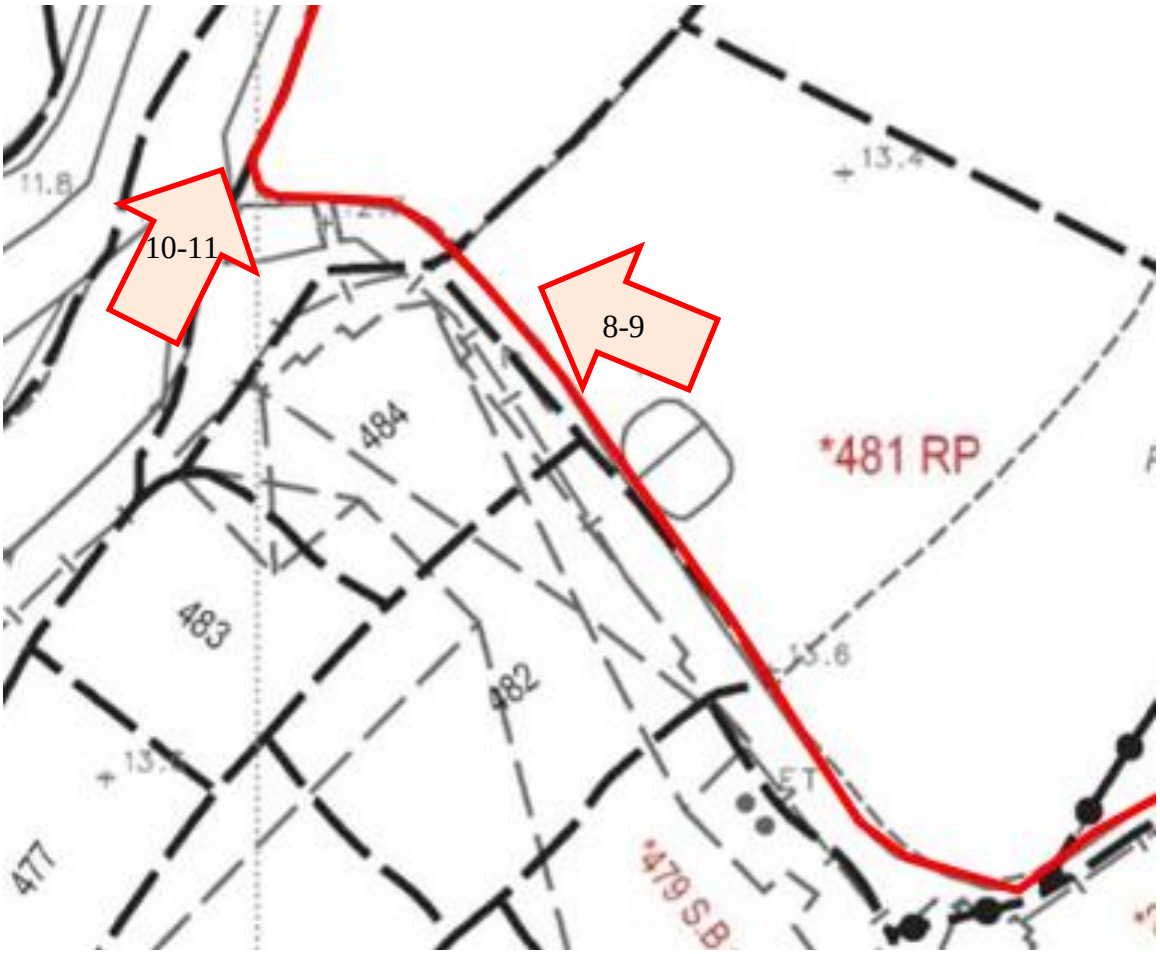

10-11
8-9
*481 RP
484
483
482
477
*479 S.B

Photo No. 1

Photo No. 2

Photo No. 3

Photo No. 4

Photo No. 5

Photo No. 6

Photo No. 7

Photo No. 8

Photo No. 9

Photo No. 10

Photo No. 11

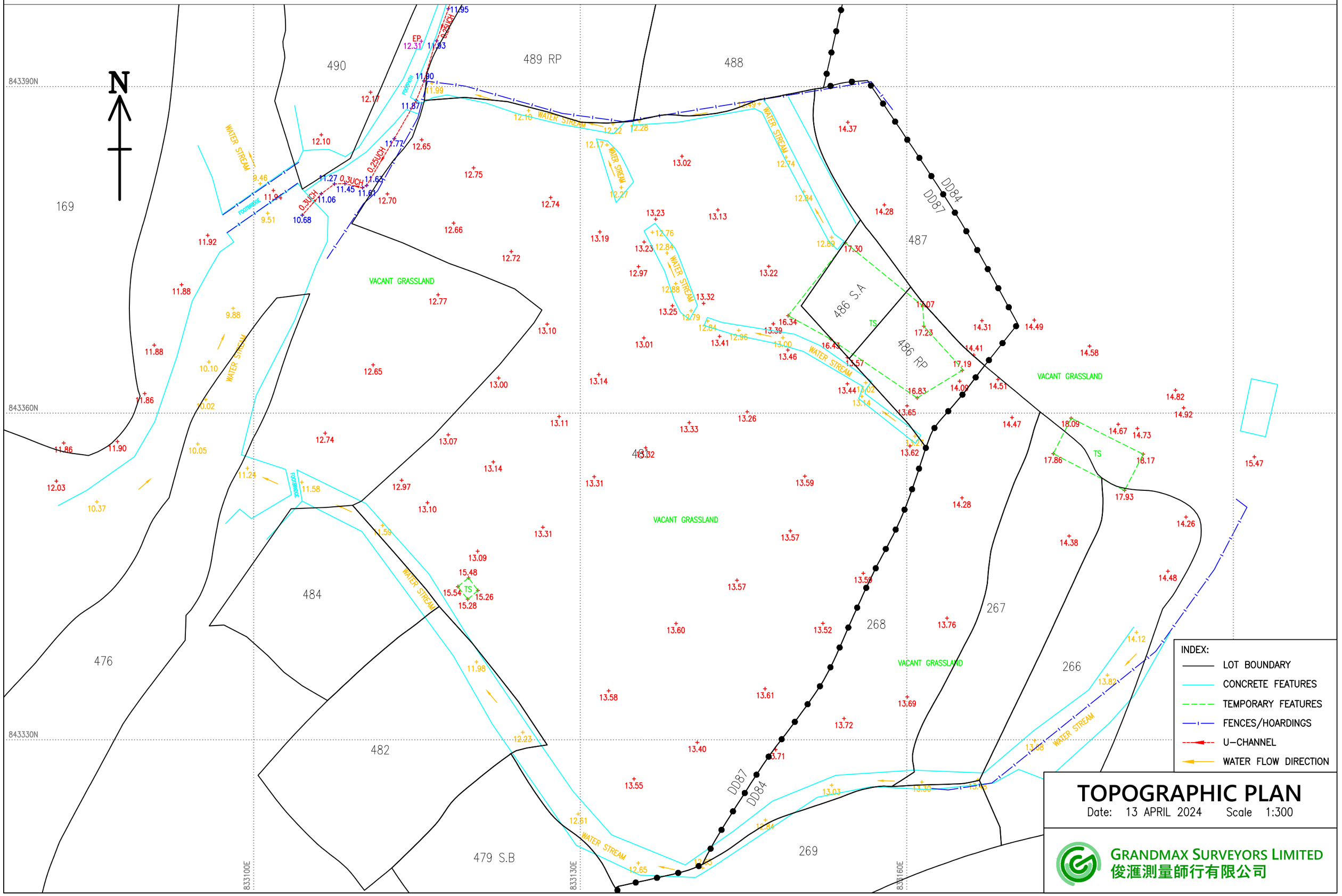
Photo No. 12

Photo No. 13

APPENDIX B

Topography Survey Record

TOPOGRAPHIC SURVEY FOR VARIOUS LOTS IN D.D.87



TOPOGRAPHIC PLAN

Date: 13 APRIL 2024 Scale 1:300

GRANDMAX SURVEYORS LIMITED
俊滙測量師行有限公司

APPENDIX C

Drainage Design Calculation

Project : S.16 Planning Application at Lot 268 (Part) in D.D. 84 and Lot 481 (Part) in D.D. 87)

Catchment Area : 1 (inside Lot)

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m^2)	=	3340.0	m^2	
H = average fall (per 100m) from the summit of catchment to the point of design	=	0.1	m	
L = length which water takes the longest time to reach the design section	=	75.0	m	

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.63 min say 7.63 min

From Figure 8.2 of GMS, assuming storm return period is 1 in 50 years,

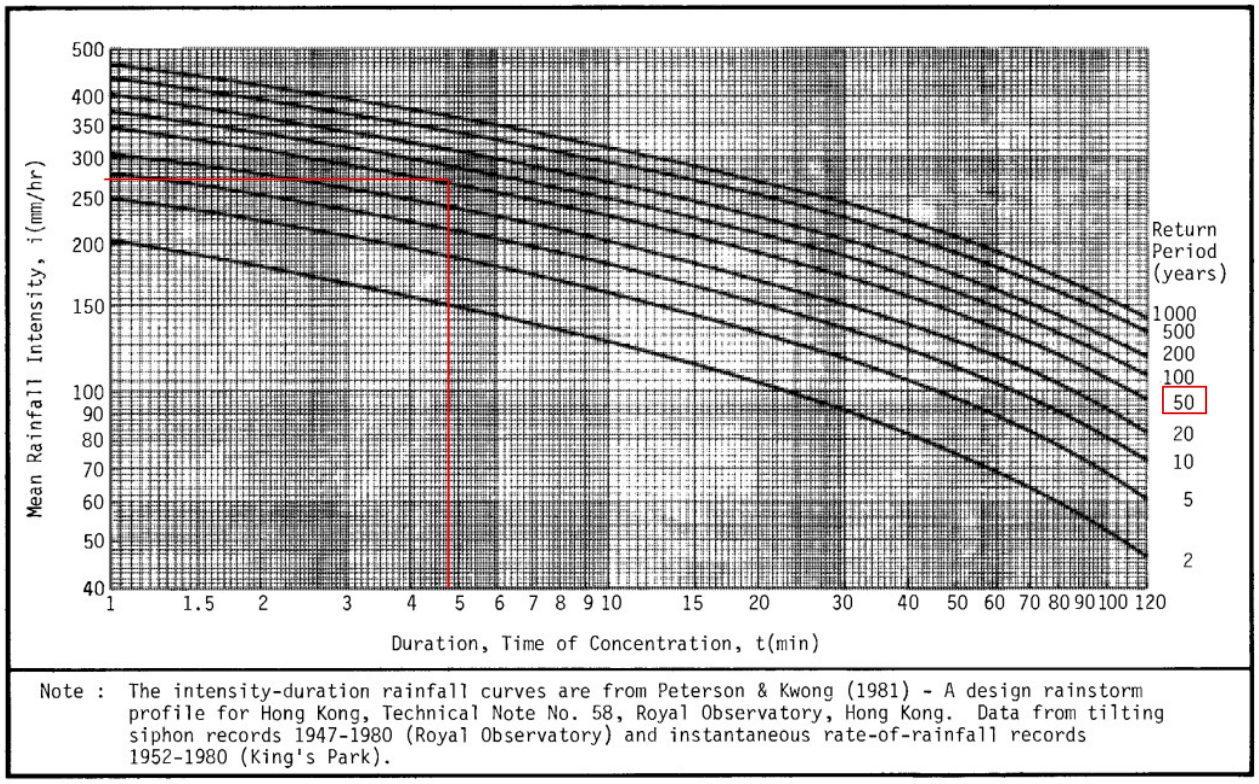


Figure 8.2 - Curves Showing Duration and Intensity of Rainfall in Hong Kong for Various Return Periods

i = designed mean intensity of rainfall (mm/hr) = 243.4 mm/hr

Project : S.16 Planning Application at Lot 268 (Part) in D.D. 84 and Lot 481 (Part) in D.D. 87)

Catchment Area : 2 (Uphill)

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m^2)	=	1900.0	m^2
H = average fall (per 100m) from the summit of catchment to the point of design	=	15.0	m
L = length which water takes the longest time to reach the design section	=	65.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 2.57 min say 2.57 min

From Figure 8.2 of GMS, assuming storm return period is 1 in 50 years,

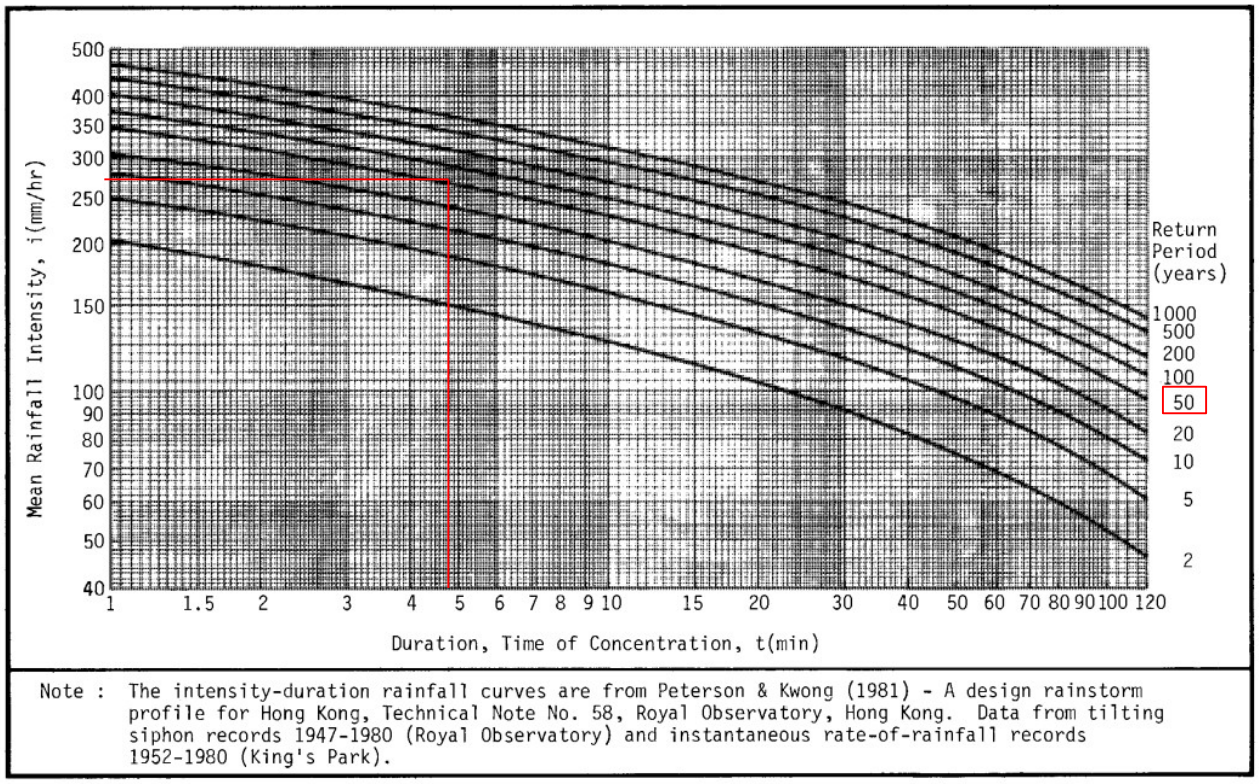


Figure 8.2 - Curves Showing Duration and Intensity of Rainfall in Hong Kong for Various Return Periods

i = designed mean intensity of rainfall (mm/hr) = 307.7 mm/hr

Project : S.16 Planning Application at Lot 268 (Part) in D.D. 84 and Lot 481 (Part) in D.D. 87)

Catchment Area : 3 (Carriageway)

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A = area of catchment (m^2)	=	1200.0	m^2	
H = average fall (per 100m) from the summit of catchment to the point of design	=	6.0	m	
L = length which water takes the longest time to reach the design section	=	75.0	m	

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 3.73 min say 3.73 min

From Figure 8.2 of GMS, assuming storm return period is 1 in 50 years,

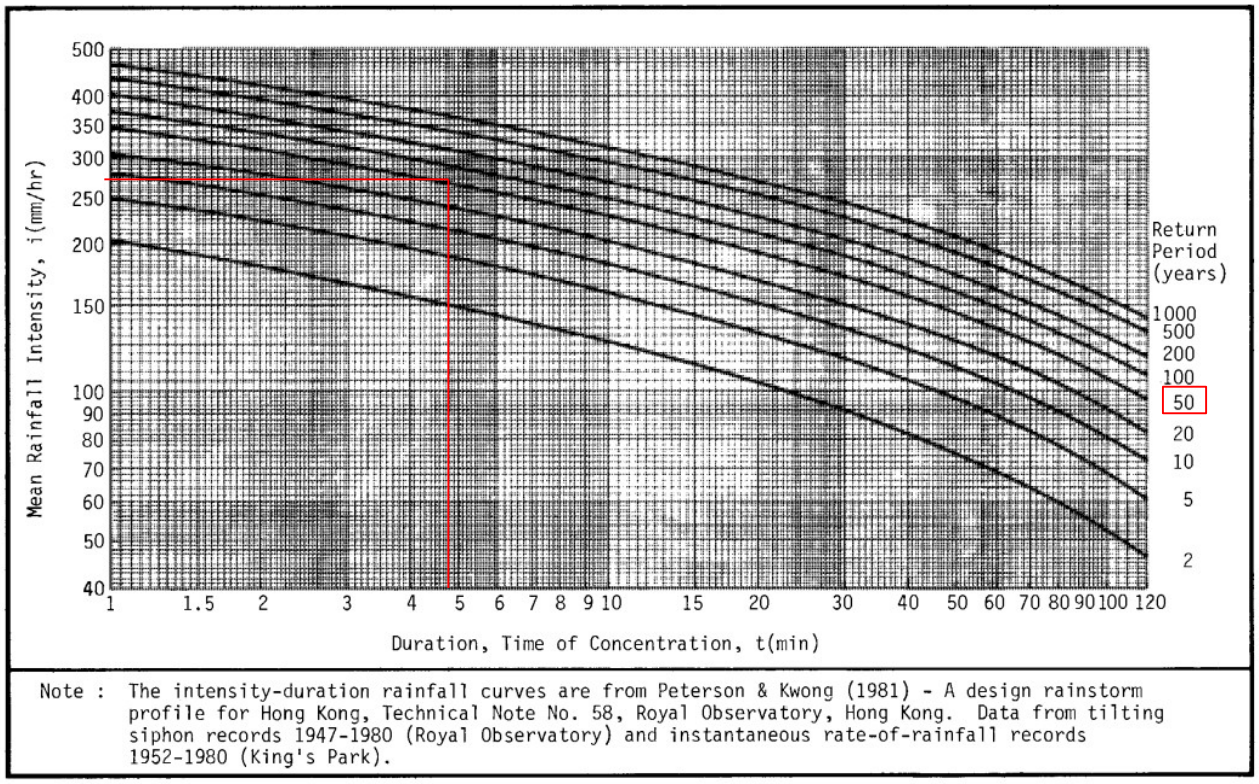


Figure 8.2 - Curves Showing Duration and Intensity of Rainfall in Hong Kong for Various Return Periods

i = designed mean intensity of rainfall (mm/hr) = 287.9 mm/hr

Design Calculation of U-Channel

Project : **S.16 Planning Application at Lot 268 (Part) in D.D. 84 and Lot 481 (Part) in D.D. 87)**

Reference code: Stormwater Drainage Manual 2018 & Geotechnical Manual for Slope

Assumption:
- Runoff Coefficient for grass 0.2 (Steep and sandy grassland)
- Runoff Coefficient for concrete 1
- Catchment 1 3340 m^2 (Effective catchment inside subject lot) Rainfall Intensity = 243.4 mm/hr
- Catchment 2 1900 m^2 (Effective catchment from uphill) Rainfall Intensity = 307.7 mm/hr
- Catchment 3 1200 m^2 (Effective catchment from carriageway) Rainfall Intensity = 287.9 mm/hr
- Allowance 10 % reduction in flow area due to permissible degradation between desilting cycles

Abbreviation and Terms:

USCP	Upstream Catchpit	RAINFALL INTENSIT	Rainfall Intensity, mm/hr
DSCP	Downstream Catchpit	RUNOFF COEF.	Runoff Coefficient
USGL	Upstream Ground Level, mPD	CATCHMENT	Catchment Area, m^2
USIL	Upstream Invert Level, mPD	EFF. AREA	Effective Area, m^2
DSIL	Downstream Invert Level, mPD	CUM. AREA	Cumulative Effective Area, m^2
INVERT DIFF.	INVERT DIFFERENCE, m	DESIGN FLOW	Design Flow m^3/s
LENGTH	Channel Length, m	SIZE	Channel Size, mm
SLOPE	Channel Gradient, 1 in	UC TYPE	Channel Type
		VEL.	Velocity of Channel by Manning's Equation where n = 0.013
		FLOW CAP.	Fullbore Capacity m^3/s
		SPARE CAP.	Spare Capacity m^3/s

Cathcment		USGL mPD	DSGL mPD	USIL mPD	DSIL mPD	AVG. DEPTH m	INVERT DIFF. m	LENGTH m	GRADIENT 1 in	RAINFALL INTENSITY mm/hr	RUNOFF COEF.	CATCHMENT m^2	Affected Area %	EFF. AREA m^2	DESIGN FLOW m^3/s	CUM. DESIGN m^3/s	SIZE mm	TYPE	VEL m/s	ALLOWANCE (REDUCTION %)	FLOW CAP. m^3/s	SPARE CAP. m^3/s	UTILISATION %	RESULT	A (m^2)	P (m)	R (m)
1	Branch 1	14.50	14.45	14.23	13.76	0.69	0.47	46.7	100	243.4	1	3340	20	668	0.04519	0.04519	225	UC	1.5	10	0.208	0.163	22	OK	0.135	1.512	0.089
2		22.60	14.45	14.23	13.76	0.69	0.47	46.7	100	307.7	0.2	1900	100	380	0.03250	0.03250	225	UC	1.5	10	0.208	0.176	16	OK	0.135	1.512	0.089
3		15.80	14.45	14.23	13.76	0.69	0.47	46.7	100	287.9	1	1200	100	1200	0.09605	0.09605	225	UC	1.5	10	0.208	0.112	46	OK	0.135	1.512	0.089
Resultant & Discharge															0.17375	0.17375	225	UC	1.5	10	0.208	0.034	84	OK	0.135	1.512	0.089
1	Branch 2	14.50	14.45	14.23	13.85	0.61	0.38	38.0	100	243.4	1	3340	20	668	0.04519	0.04519	225	UC	1.5	10	0.179	0.134	25	OK	0.118	1.338	0.088
2		22.60	14.45	14.23	13.85	0.61	0.38	38.0	100	307.7	0.2	1900	100	380	0.03250	0.03250	225	UC	1.5	10	0.179	0.146	18	OK	0.118	1.338	0.088
Resultant & Discharge															0.07770	0.07770	225	UC	1.5	10	0.179	0.101	43	OK	0.118	1.338	0.088
1	Branch 3	14.50	14.45	14.23	13.90	0.56	0.33	33.0	100	243.4	1	3340	30	1002	0.06779	0.06779	225	UC	1.5	10	0.162	0.094	42	OK	0.107	1.238	0.087
Discharge															0.06779	0.06779	225	UC	1.5	10	0.162	0.094	42	OK	0.107	1.238	0.087
1	Branch 4	14.50	14.45	14.30	14.05	0.40	0.25	25.0	100	243.4	1	3340	20	668	0.04519	0.04519	150	UC	1.2	10	0.060	0.015	75	OK	0.052	0.886	0.059
Discharge															0.04519	0.04519	150	UC	1.2	10	0.060	0.015	75	OK	0.052	0.886	0.059
1	Branch 5	14.50	14.45	14.30	13.76	0.69	0.54	53.6	100	243.4	1	3340	40	1336	0.09039	0.09039	150	UC	1.2	10	0.109	0.019	83	OK	0.090	1.457	0.062
Discharge															0.09039	0.09039	150	UC	1.2	10	0.109	0.019	83	OK	0.090	1.457	0.062
1	Branch 6	14.50	14.45	14.30	14.01	0.44	0.29	29.0	100	243.4	1	3340	20	668	0.04519	0.04519	150	UC	1.2	10	0.067	0.022	68	OK	0.057	0.966	0.059
Discharge															0.04519	0.04519	150	UC	1.2	10	0.067	0.022	68	OK	0.057	0.966	0.059
Total Catchment for Site = 6440 m^2																											

APPENDIX D

Construction Drawing

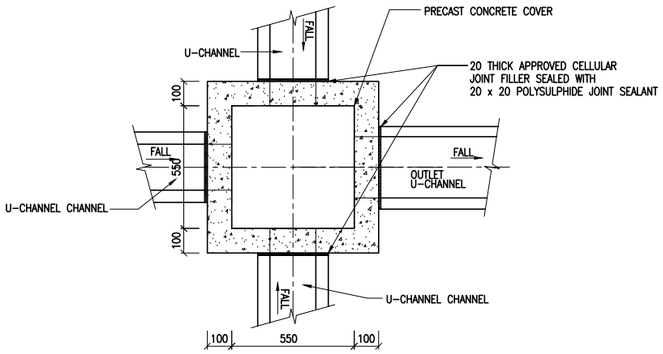
ISO A1 594mm x 841mm

GENERAL NOTES:

1. GRADE 40D CONCRETE SHALL BE USED UNLESS OTHERWISE STATED.
2. THE PROPOSED DRAINAGE WORKS, WHETHER WITHIN OR OUTSIDE THE LOT BOUNDARY, SHALL BE CONSTRUCTED AND MAINTAINED BY THE OWNER AT HIS OWN EXPENSE. FOR WORKS TO BE UNDERTAKEN OUTSIDE THE LOT BOUNDARY, PRIOR CONSENT FROM DLO AND/OR RELEVANT PRIVATE LOT OWNERS SHALL BE SOUGHT.
3. ALL U-CHANNEL SHALL BE GRADIENT 1:100 UNLESS OTHERWISE STATED.
4. GRATE COVERS SHALL BE PROVIDED FOR THE SECTION THAT VEHICLE MAY CROSS THE CHANNELS.

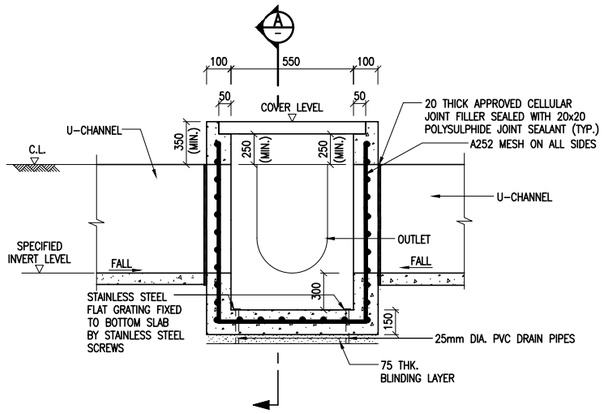
SCHEDULE OF CATCHPIT

CATCHPIT NO.	CATCHPIT TYPE	COVER LEVEL (mPD)	BTM. LEVEL (mPD)	INLET LEVEL (mPD)	OUTLET LEVEL (mPD)
CP1A	1	+14.45	+14.08	+14.23	+14.23
CP1B	1	+14.45	+13.94	+14.09	+14.09
CP1C	2	+14.45	+13.36	+13.81	+13.81
CP2A	1	+14.45	+13.89	+14.04	+14.04
CP2B	2	+14.45	+13.39	+13.84	+13.84
CP3	2	+14.45	+13.44	+13.89	+13.89
CP4	2	+14.45	+13.58	+14.03	+14.03
CP5	2	+14.45	+13.31	+13.76	+13.76
CP6	2	+14.45	+13.56	+14.01	+14.01



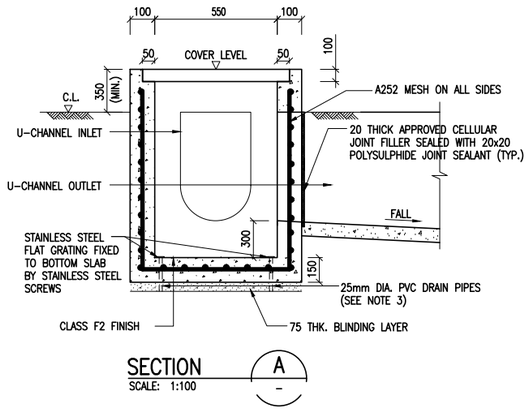
PLAN OF CATCHPIT (TYPE 1&2)

(REFERENCE: CEDD STANDARD DRAWING NO. IC2406_1&2)
N.T.S.



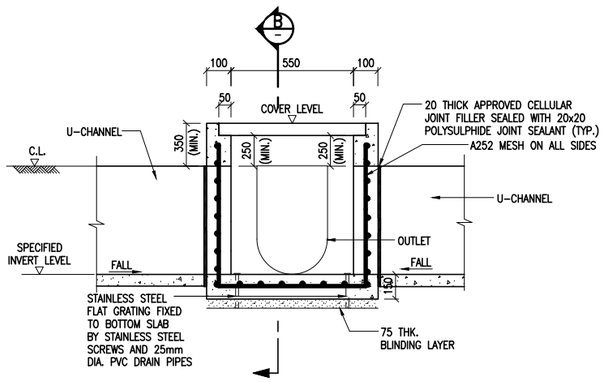
SECTION OF TYPE 2 CATCHPIT

SCALE 1:100



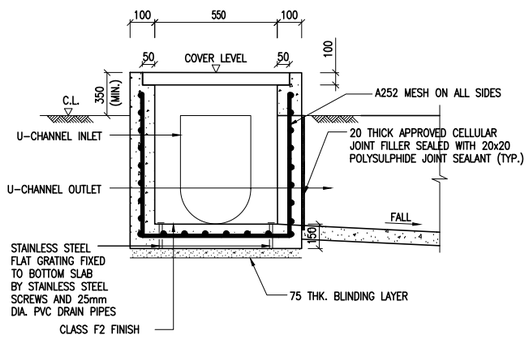
SECTION A

SCALE: 1:100



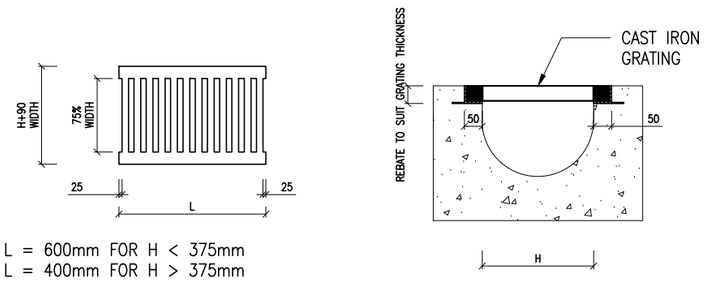
SECTION OF TYPE 1 CATCHPIT

SCALE 1:100



SECTION B

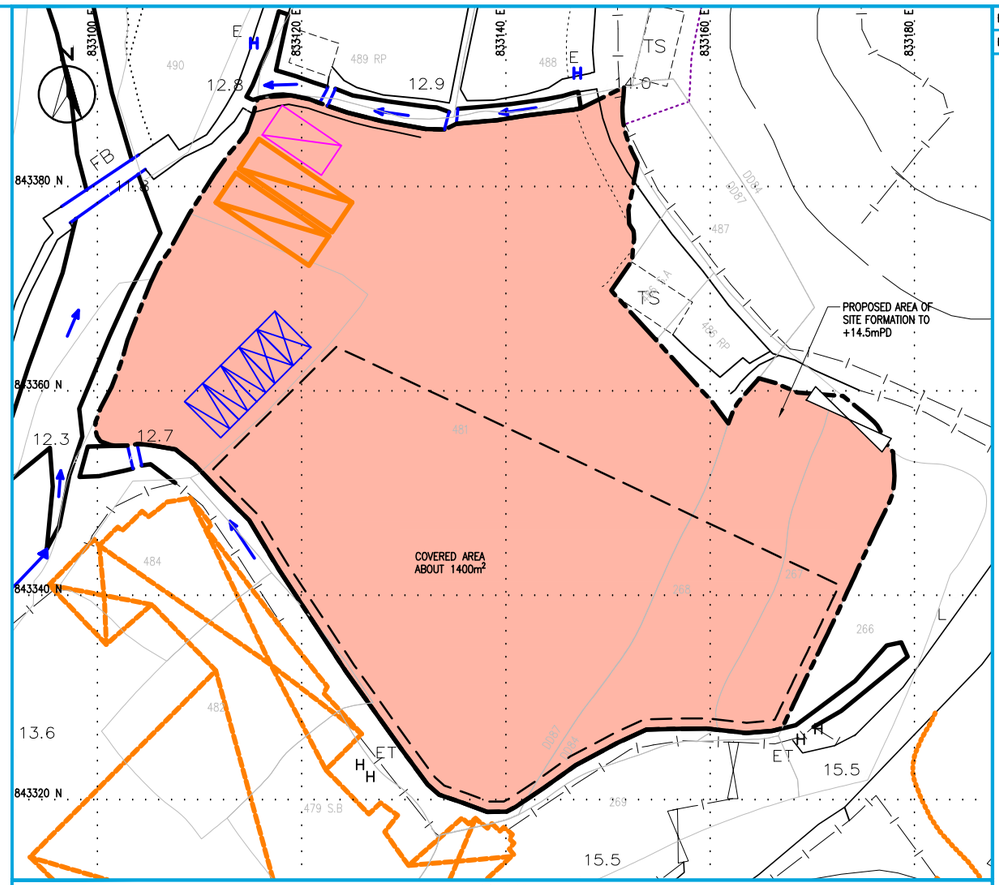
SCALE: 1:100



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

CAST IRON GRATING FOR U-CHANNELS

(REFERENCE : CEDD DWG. NO. C2412D)
N.T.S.



PLAN

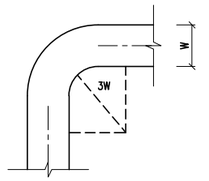
SCALE 1:600

B.D. REF.
F.S.D. REF.

LEGEND:

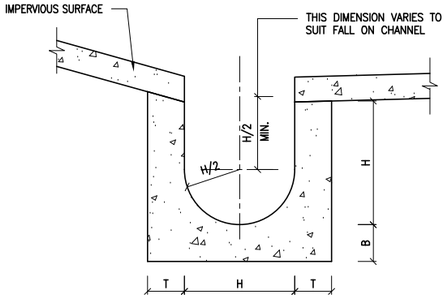
- APPLICATION BOUNDARY
- PROPOSED HGV L/UL BAY (11mx3.5m)
- PROPOSED LGV L/UL BAY (7mx3.5m)
- PROPOSED PRIVATE CAR PARKING SPACE (5mx2.5m)
- PROPOSED VISITOR PARKING SPACE (5mx2.5m)
- PROPOSED 9m WIDE VEHICULAR ACCESS

NOMINAL SIZE H	THICKNESS T	THICKNESS B
150	100	100
225–600	175	225
675–1200	175	225



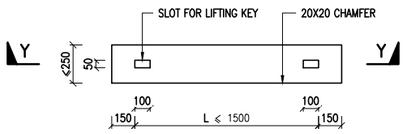
CHANNEL CHANGING DIRECTION THROUGH BENDS

(REFERENCE : PAGE 100 GEOTECHNICAL MANUAL FOR SLOPES)
N.T.S.



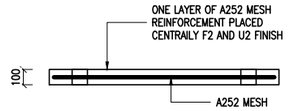
DETAILS OF U-CHANNEL

(REFERENCE : FIG. 8.11 OF GEOTECHNICAL MANUAL FOR SLOPES)
N.T.S.



PLAN OF PRECAST CONCRETE COVERS

(REFERENCE : CEDD DWG. NO. C2407B)
N.T.S.



SECTION Y–Y
PRECAST CONCRETE COVERS FOR SAND TRAP AND CATCHPIT

(REFERENCE : CEDD DWG. NO. C2407B)
N.T.S.

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	24050		
DRAWN BY:	QYD		04/24
DESIGNED BY:	HT		04/24
CHECKED BY:	MC		04/24
APPROVED BY:	VT		04/24
SCALE:	AS SHOWN (A3)		
CAD FILE:	WNG_24050_C_DRA_001		

PROJECT:
SDO 01/2024 PEDESTRIAN WALKWAY LINKING WEST KOWLOON CULTURAL DISTRICT AND TAI KOK TSUI DESIGN AND CONSTRUCTION SUPERVISION

DRAWING TITLE:
GENERAL NOTES AND LAYOUT PLAN

DRAWING NO: WNG/24050/C/DRA/001
REV: –

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.
榮瑞顧問工程師有限公司

Plot File by: USER115 5/7/2024 9:58:17 am
PATH \\192.168.1.20\SS_Eng4_SAE_2024\P24050 (Drainage Consultancy Services For S.16 Planning Application At Lot 268 (Part) In D.D. 84 And Lot 481 (Part) In D.D. 87)\05-Drawing\01-Working\DWG\WNG_24050_C_DRA_001.dwg

ISO A1 594mm x 841mm

B.D. REF.

F.S.D. REF.

LEGEND:

- BOUNDARY OF LOTS FOR THIS APPLICATION
- EXISTING DRAINAGE FEATURES
- FLOW DIRECTION

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

ALL MEASUREMENTS MUST BE CHECKED AT THE SITE – DO NOT SCALE DRAWING – ALL DRAWING SPECIFICATIONS AND THEIR COPY RIGHT ARE THE PROPERTY OF ENGINEERS, ARCHITECTS, DESIGNERS AND SHALL BE RETURNED AT THE COMPLETION OF THE WORK – THIS DRAWING IS NOT VALID FOR FOR CONSTRUCTION PURPOSES UNLESS EXPRESSEDLY CERTIFIED.

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	24050		
DRAWN BY:	QYD		04/24
DESIGNED BY:	HT		04/24
CHECKED BY:	MC		04/24
APPROVED BY:	VT		04/24
SCALE:	1:500 (A3)		
CAD FILE:	WNG_24050_C_DRA_002		

PROJECT:

SDO 01/2024 PEDESTRIAN WALKWAY LINKING WEST KOWLOON CULTURAL DISTRICT AND TAI KOK TSUI DESIGN AND CONSTRUCTION SUPERVISION

DRAWING TITLE:

PROPOSED EFFECTIVE CATCHMENT AREA FOR SURFACE RUNOFF AFFECTING SUBJECT LOTS

DRAWING NO:	REV:
WNG/24050/C/DRA/002	–

翁翔鼎同工程師有限公司
WING & ASSOCIATES
CONSULTING ENGINEERS LTD.

Plot File by: USER115 2/5/2024 2:08:07 pm
PATH C:\Users\USER115\Desktop\Working\P24050 Hung Lung Hang Drainage Proposal\001245_N3A0_P24050-DWG\WNG_24050_C_DRA_002.dwg

ISO A1 594mm x 841mm

N

U-CHANNEL CONNECTS TO EXISTING CHANNEL/CULVERT

U CHANNEL (BRANCH 4)

CP3 (TYPE 2)
C.L.: +14.45mPD
A1: +13.89mPD
X1: +13.89mPD

225 UC

+ 14.45

U-CHANNEL CONNECTS TO EXISTING CHANNEL/CULVERT

U CHANNEL (BRANCH 3)

CP2B (TYPE 2)
C.L.: +14.45mPD
A1: +13.84mPD
X1: +13.84mPD

PROPOSED SITE BOUNDARY

150 UC

U-CHANNEL CONNECTS TO EXISTING CHANNEL/CULVERT

CP4 (TYPE 2)
C.L.: +14.45mPD
A1: +14.03mPD
X1: +14.03mPD

+ 14.50

CP2A (TYPE 1)
C.L.: +14.45mPD
A1: +14.04mPD
X1: +14.04mPD

CP1A (TYPE 1)
C.L.: +14.45mPD
A1: +14.23mPD
X1: +14.23mPD

PROPOSED VEHICLE ACCESS

U CHANNEL (BRANCH 4)

U-CHANNEL CONNECTS TO EXISTING CHANNEL/CULVERT

CP5 (TYPE 2)
C.L.: +14.45mPD
A1: +13.76mPD
X1: +13.76mPD

U CHANNEL (BRANCH 2)

U CHANNEL (BRANCH 1)

CP1B (TYPE 1)
C.L.: +14.45mPD
A1: +14.09mPD
X1: +14.09mPD

U CHANNEL (BRANCH 5)

U-CHANNEL CONNECTS TO EXISTING CHANNEL/CULVERT

CP6 (TYPE 2)
C.L.: +14.45mPD
A1: +14.01mPD
X1: +14.01mPD

CP1C (TYPE 2)
C.L.: +14.45mPD
A1: +13.81mPD
X1: +13.81mPD

U-CHANNEL CONNECTS TO EXISTING CHANNEL/CULVERT

U CHANNEL (BRANCH 6)

843380 N.
843360 N.
843340 N.
843320 N.

B.D. REF.
F.S.D. REF.

LEGEND:
PROPOSED 9m WIDE VEHICULAR ACCESS

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	24050		
DRAWN BY:	QYD		04/24
DESIGNED BY:	HT		04/24
CHECKED BY:	MC		04/24
APPROVED BY:	VT		04/24
SCALE:	1:300 (A3)		
CAD FILE:	WNG_24050_C_DRA_003		

PROJECT:
SDO 01/2024 PEDESTRIAN WALKWAY LINKING WEST KOWLOON CULTURAL DISTRICT AND TAI KOK TSUI DESIGN AND CONSTRUCTION SUPERVISION

DRAWING TITLE:
PROPOSED DRAINAGE SYSTEM

DRAWING NO: WNG/24050/C/DRA/003
REV: –

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.

Plot File by: USER115 5/7/2024 9:58:31 am
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