
寄件者: charlie.tsui [REDACTED]
寄件日期: 2025年11月07日星期五 10:58
收件者: tpbpd/PLAND
副本: Andrea Wing Yin YAN/PLAND; Ivan Sze Yuet FUNG/PLAND
主旨: Planning Application No. A/YL-KTN/1159 - Submission of Further Information 3
附件: A_YL-KTN_1159_FI3_Attachments.pdf

類別: Internet Email

Your Ref.: TPB/A/YL-KTN/1159

Dear Sir/Madam,

**Application for Permission under Section 16 of the Town Planning Ordinance (Cap.131)
Proposed Temporary Open Storage of Vehicles and Construction Materials with Ancillary Office and
Associated Filling of Land for a Period of 3 Years at
Lots 1512, 1513 S.A, 1513 S.B, 1513 RP, 1514 S.A, 1514 S.B, 1514 RP, 1515, 1516 and 1632 in D.D. 107 and
Adjoining Government Land, Fung Kat Heung,
Yuen Long, New Territories
(Planning Application No. A/YL-KTN/1159)**

Submission of Further Information 3

Reference is made to the captioned planning application and the further information submitted previously on 30 September 2025 and 17 October 2025.

To address the comments from the Planning Department, we are pleased to submit further information including the following documents for your consideration:

- Attachment 1** - Site Photos taken on 31 October 2025
- Attachment 2** - Revised Landscape Proposal
- Attachment 3** - Replacement Page of Application Form
- Attachment 4** - Revised Filling of Land Plan
- Attachment 5** - Updated Drainage Impact Assessment (DIA)

Regarding the tree group situated between the application site (i.e. Lot 1513 S.B) and the adjacent Lot 1481 in D.D. 107, a site visit conducted on 31 October 2025 revealed that there was site works in Lot 1481 which intruded into Lot 1513 S.B (**Attachment 1**). The concerned tree group was unexpectedly affected. To the applicant's understanding, the workers mistakenly recognized the current fencing as the lot boundary and trespassed into the application site. As a result, the applicant has no choice but to admit that he is unable to record the exact location, species and condition of the concerned tree group.

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

To compensate the tree loss caused by this unanticipated event, the applicant undertakes to plant 10 more trees along the northern boundary of the site. The total no. of new trees planted is increased to 15. Please refer to **Attachment 2** for the revised landscape proposal. In conjunction with this, the total hard-paved area for the proposed development will be further reduced to about 7,552m². Relevant updated documents are at **Attachments 3 to 4** to reflect the proposed changes. For the updated DIA at **Attachment 5**, it is to rectify the discrepancies between the report and the current development proposal, and there is no change in assumption and conclusion.

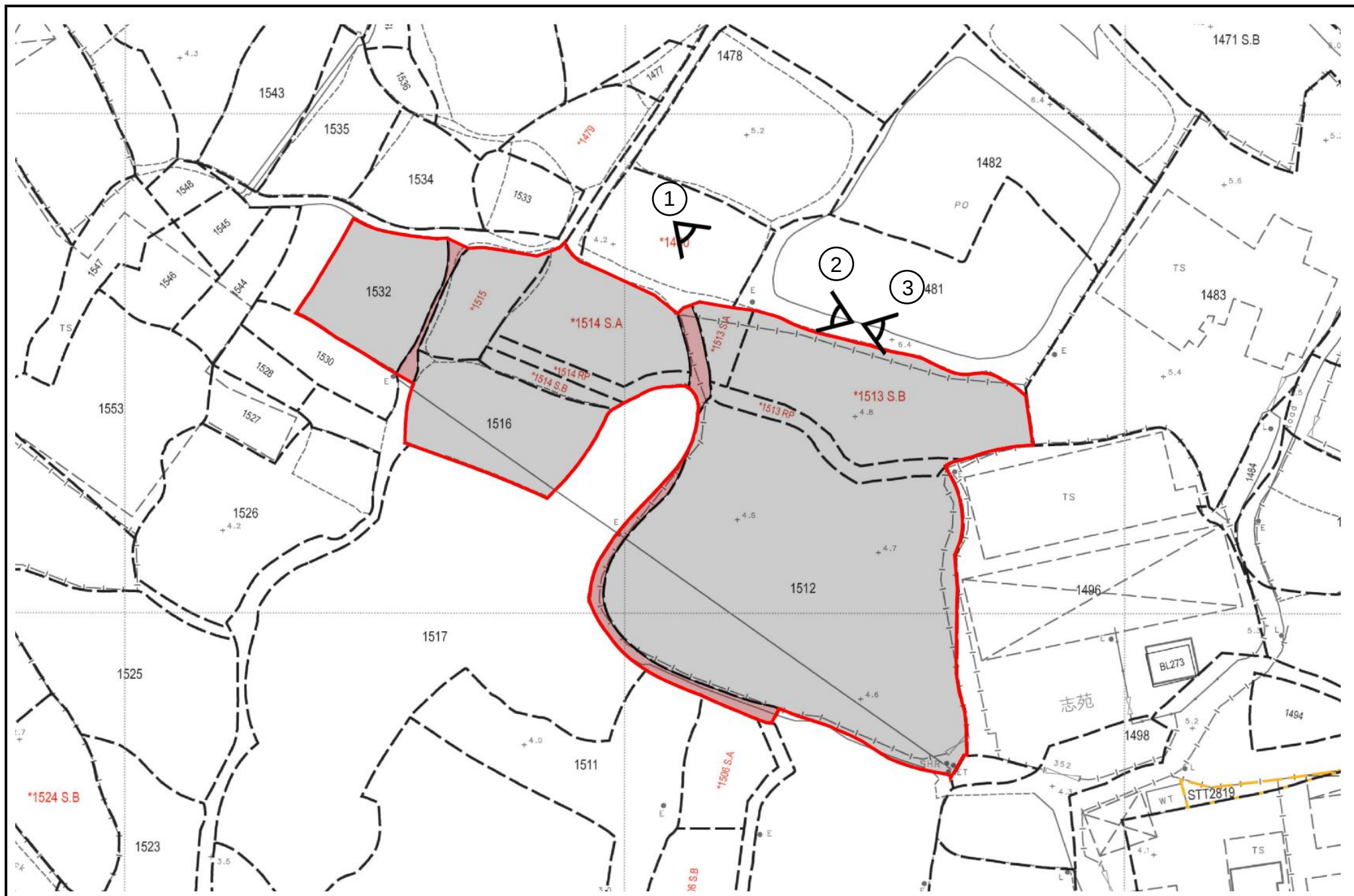
We sincerely ask the Town Planning Board to favorably consider the application. Should you have any queries, please contact the undersigned at [REDACTED]. Thank you.

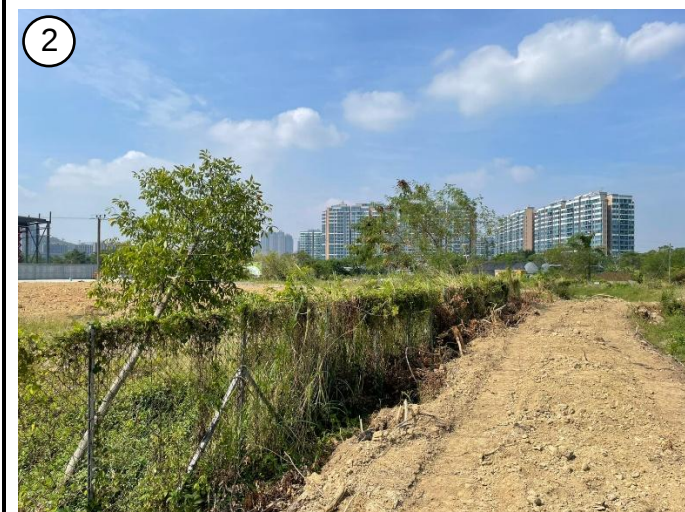
Best regards,
Charlie TSUI
Town Planner

United Crown Holdings Limited
[REDACTED]
[REDACTED]

Attachment 1

Site Photos taken on 31 October 2025





Attachment 2

Revised Landscape Proposal

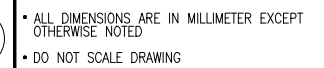
APPLICATION SITE AREA : 7,627 m² (ABOUT)

NO. OF NEW TREES TO BE PLANTED	: 15 (P01 TO P15)
SPECIES OF NEW TREES	: <i>FICUS BENJAMINA</i>
HEIGHT OF NEW TREES	: NOT LESS THAN 2.75M
SPACING OF NEW TREES	: NOT LESS THAN 4M

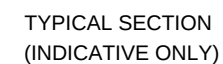
DIMENSION OF PLANTING AREA : ① 22.3M (L) X 1.8M (W) X 1.2M (D)
: ② 40M (L) X 1.8M (W) X 1.2M (D)



1. THE APPLICANT SHALL MAINTAIN THE PLANTS IN GOOD CONDITION DURING THE PLANNING APPROVAL PERIOD.
2. THE APPLICANT SHALL REPLACE PLANTS WHICH ARE DYING OR DEAD DURING THE PLANNING APPROVAL PERIOD.
3. THE APPLICANT SHALL PROVIDE ADEQUATE IRRIGATION FOR THE PLANTS.



	APPLICATION SITE
	PRIVATE CARS AND LIGHT GOODS VEHICLES
	CONSTRUCTION MATERIALS
	STRUCTURE
	PARKING SPACE (Private Car) 2.5 m (W) X 5 m (L)
	L/UL SPACE (Light Goods Vehicles) 3.5 m (W) X 7 m (L)
	ENTRANCE / EXIT
	EXISTING TREE
	PROPOSED NEW TREES



-	LAYOUT PLAN	15 OCT 2025	
REVISION			
	name		
drawn	CY		-
		DATE	20 AUG 2025
checked	-	DATE	
approved	-	DATE	
contract no. -			
project no. DD107			
TITLE :			
PROPOSED TEMPORARY OPEN STORAGE OF VEHICLES AND CONSTRUCTION MATERIALS WITH ANCILLARY OFFICE AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS			
SITE LOCATION :			
LOTS 1512, 1513 S.A, 1513 S.B, 1513 RP, 1514 S.A, 1514 S.B, 1514 RP, 1515, 1516 AND 1632 IN D.D. 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, YUEN LONG, NEW TERRITORIES			
drawing title.			
LANDSCAPE PROPOSAL			
drawing no.		rev.	scale
		-	N.T.S.

Attachment 3

Replacement Page of Application Form

Proposed operating hours 擬議營運時間 9:00 a.m. to 7:00 p.m. from Mondays to Saturdays (excluding Sundays and Public Holidays)			
(d) Any vehicular access to the site/subject building? 是否有車路通往地盤／有關建築物？	Yes 是	☒ There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用))Local track leading from Shui Mei Road..... ☐ There is a proposed access. (please illustrate on plan and specify the width) 有一條擬議車路。(請在圖則顯示，並註明車路的闊度) ☐	
	No 否		
(e) Impacts of Development Proposal 擬議發展計劃的影響 (If necessary, please use separate sheets to indicate the proposed measures to minimise possible adverse impacts or give justifications/reasons for not providing such measures. 如需要的話，請另頁註明可盡量減少可能出現不良影響的措施，否則請提供理據/理由。)			
(i) Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動？	Yes 是	☐ Please provide details 請提供詳情 	
	No 否	☒	
(ii) Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程？	Yes 是	☒ (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用地盤平面圖顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及／或範圍) ☐ Diversion of stream 河道改道 ☐ Filling of pond 填塘 Area of filling 填塘面積 sq.m 平方米 ☐ About 約 Depth of filling 填塘深度 m 米 ☐ About 約 ☒ Filling of land 填土 Area of filling 填土面積 7.552 sq.m 平方米 ☒ About 約 Depth of filling 填土厚度 ... Not more than 0.8 ... m 米 ☐ About 約 ☐ Excavation of land 挖土 Area of excavation 挖土面積 sq.m 平方米 ☐ About 約 Depth of excavation 挖土深度 m 米 ☐ About 約 	
	No 否	☐	
(iii) Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響？	On environment 對環境	Yes 會 ☐	No 不會 ☒
	On traffic 對交通	Yes 會 ☐	No 不會 ☒
	On water supply 對供水	Yes 會 ☐	No 不會 ☒
	On drainage 對排水	Yes 會 ☐	No 不會 ☒
	On slopes 對斜坡	Yes 會 ☐	No 不會 ☒
	Affected by slopes 受斜坡影響	Yes 會 ☐	No 不會 ☒
	Landscape Impact 構成景觀影響	Yes 會 ☐	No 不會 ☒
	Tree Felling 砍伐樹木	Yes 會 ☒	No 不會 ☐
	Visual Impact 構成視覺影響	Yes 會 ☐	No 不會 ☒
	Others (Please Specify) 其他 (請列明)	Yes 會 ☐	No 不會 ☒

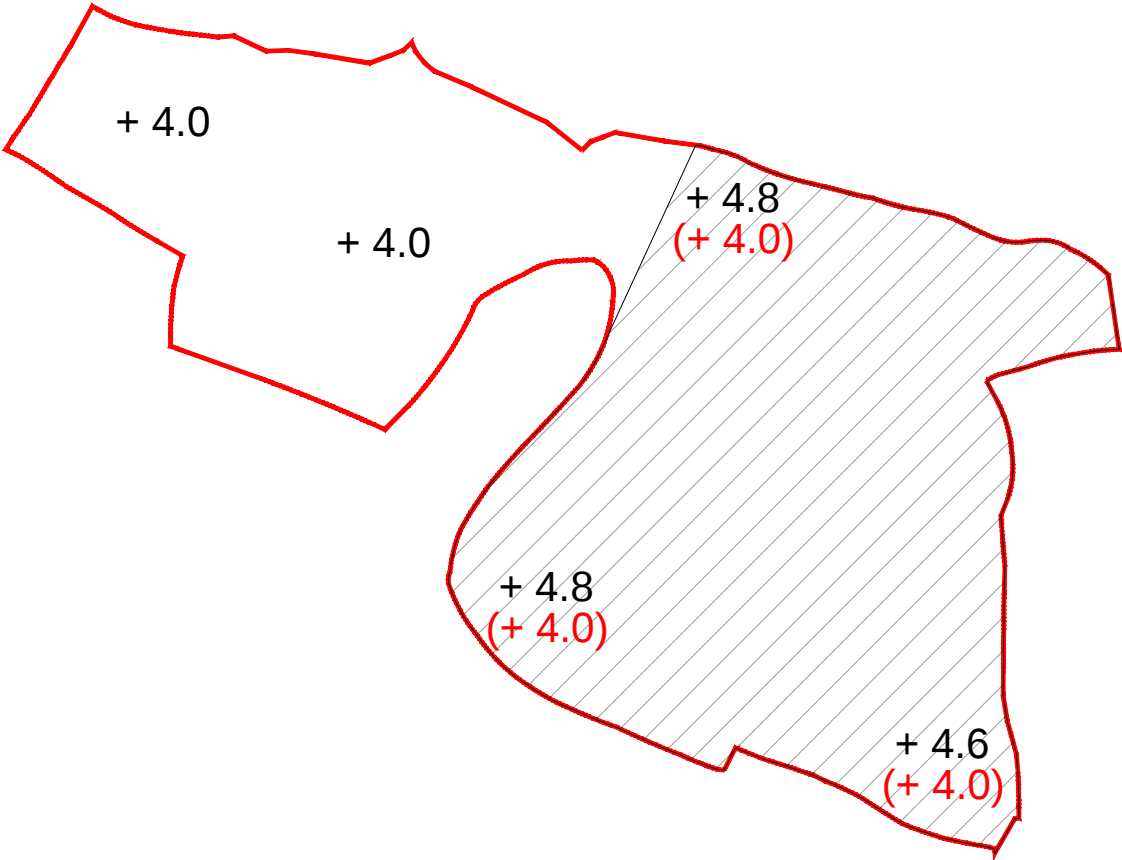
Attachment 4

Revised Filling of Land Plan

EXISTING CONDITION OF THE APPLICATION SITE

APPLICATION SITE AREA : 7,627 m² (ABOUT)
EXISTING SITE SURFACE : SOILED GROUND AND CONCRETE
EXISTING SITE LEVELS : +4.0 mPD TO +4.8 mPD
EXISTING HARD-PAVED SURFACE AREA : 4,940 m² (ABOUT)

SITE LEVELS ARE FOR INSICATIVE PURPOSE ONLY

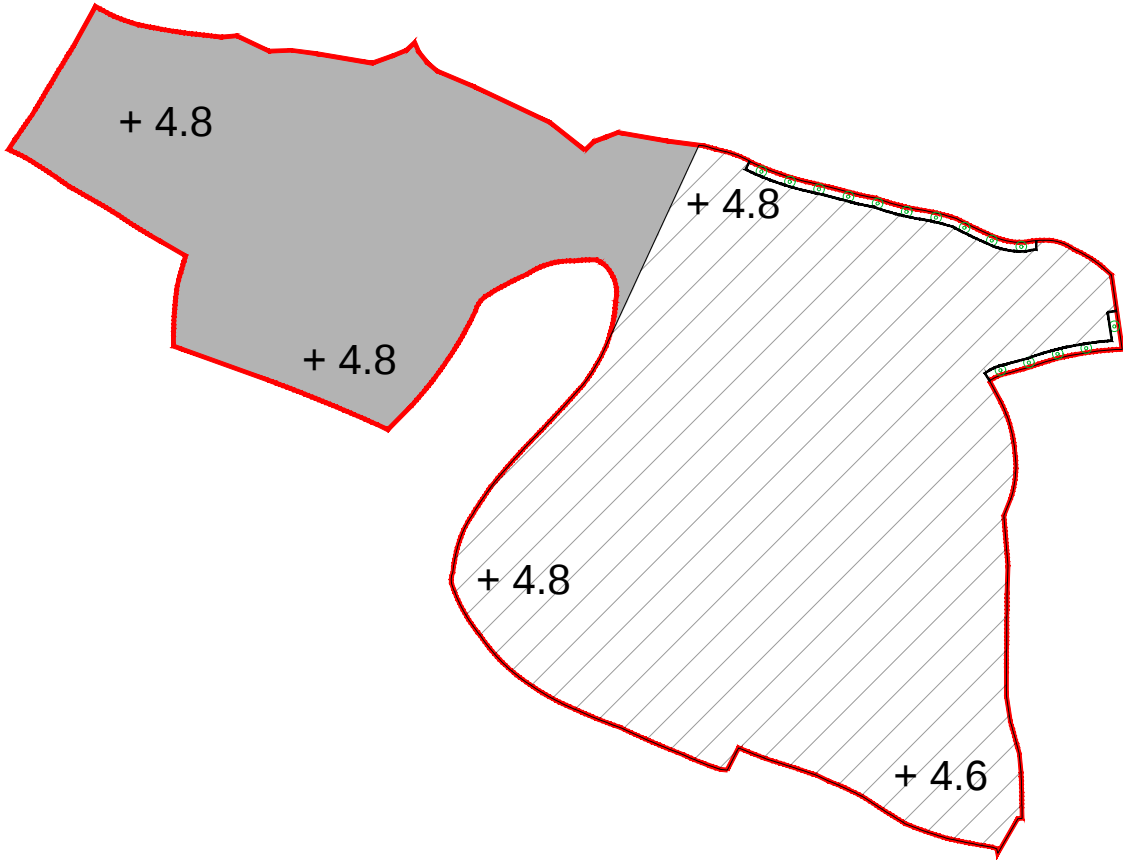


EXISTING SITE LEVEL
THE APPLICATION SITE

(INDICATION ONLY)

PROPOSED FILLING OF LAND AREA OF THE APPLICATION SITE

APPLICATION SITE AREA : 7,627 m² (ABOUT)
PROPOSED PLANTER AREA : 75 m² (ABOUT)
TOTAL HARD-PAVED AREA : 7,552 m² (ABOUT)
EXISTING HARD-PAVED SURFACE AREA : 4,865 m² (ABOUT)
PROPOSED FILLING OF LAND AREA : 2,687 m² (ABOUT)
PROPOSED LAND FILLING DEPTH : NOT MORE THAN 0.8 m
PROPOSED SITE LEVELS : +4.0 mPD TO +4.8 mPD
MATERIAL OF FILLING FOR SITE FORMATION : SOIL WITH CONCRETE AND ASPHALT



PROPOSED SITE LEVEL
THE APPLICATION SITE



- ALL DIMENSIONS ARE IN MILLIMETER EXCEPT OTHERWISE NOTED
- DO NOT SCALE DRAWING

LEGEND

-  APPLICATION SITE
-  PROPOSED FILLING OF LAND AREA
-  HARD PAVING
-  PROPOSED PLANTER AREA
- +00.0 PROPOSED SITE LEVEL
- +00.0 ORIGINAL SITE LEVEL
-  PROPOSED NEW TREES

A	REVISED	15 OCT 2025
-	LAYOUT PLAN	20 AUG 2025
REVISION		
drawn	CY	DATE 20 AUG 2025
checked	-	DATE -
approved	-	DATE -
contract no. -		
project no. DD107		
TITLE : PROPOSED TEMPORARY OPEN STORAGE OF VEHICLES AND CONSTRUCTION MATERIALS WITH ANCILLARY OFFICE AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS		
SITE LOCATION : LOTS 1512, 1513 S.A, 1513 S.B, 1513 RP, 1514 S.A, 1514 S.B, 1514 RP, 1515, 1516 AND 1632 IN D.D, 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, YUEN LONG, NEW TERRITORIES		
drawing title. FILLING OF LAND PLAN		
drawing no. PLAN 4	rev. -	scale N.T.S.

Attachment 5

Updated Drainage Impact Assessment

Excel Link Development Limited

Proposed Temporary Open Storage of Vehicles and Construction Materials with Ancillary Office and Associated Filling of Land for A Period of 3 YEARS, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories

**Drainage Impact Assessment
(Section 16 Planning Application No. A/YL-KTN/1159)**



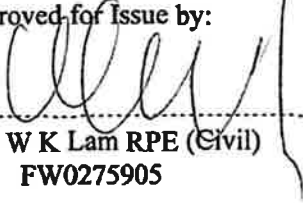
Document No. V1094/03
Issue 1

November 2025

V1094/03
Issue 1
November 2025

Proposed Temporary Open Storage of Vehicles and Construction Materials with Ancillary Office and Associated Filling of Land for A Period of 3 YEARS, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories

**Drainage Impact Assessment
(Section 16 Planning Application No. A/YL-KTN/1159)**

Approved for Issue by:	
	
Kenny W K Lam RPE (Civil) FW0275905	
Position:	Deputy Managing Director
Date:	5 November 2025

United Crown Holdings Ltd
Resident Letter Box 223,
D.D. 125 Lot 1194, Ha Tsuen Road,
Yuen Long, New Territories

Mannings (Asia) Consultants Ltd
5/F, Winning Commercial Building
46-48 Hillwood Road
Tsim Sha Tsui
Kowloon

Proposed Temporary Open Storage of Vehicles and Construction Materials with Ancillary Office and Associated Filling of Land for A Period of 3 YEARS, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories

**Drainage Impact Assessment
(Section 16 Planning Application No. A/YL-KTN/1159)**

Issue	Prepared by	Reviewed by	Date
1	CC	BLE	4 Nov 2025

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Content

1.0	Introduction	1
2.0	Design Methodology and Assumptions.....	2
3.0	Current Flooding Susceptibility and Proposed Drainage.....	5
4.0	Changes to the Drainage Characteristics and Potential Drainage Impact	7
5.0	Drainage Impact Mitigation Measures.....	10
6.0	Monitoring Requirements.....	11
7.0	Conclusion	12

List of Appendix

- Appendix A: Drawing
Appendix B: Design Calculation
Appendix C: Site Photos
Appendix D: Layout Plans of Future Development for Adjacent Area

Drawing List

V1094/201	Layout Plan
V1094/202	Cross Section
V1094/203	Drainage Layout Plan
V1094/204	Catchment Plan – Before Development
V1094/205	Catchment Plan – After Development
V1094/206	Typical Details of Drainage

List of Tables

Table 2-1:	Runoff Coefficient
Table 2-2:	Minimum Pipeline Cover and Manhole Spacing Requirements
Table 2-3:	Storm Constant for SDM
Table 4-1:	Changes in Time of Concentration
Table 4-2:	Design Runoff, Capacity and Utilization of the Proposed U-channels
Table 4-3:	Design Runoff, Capacity and Utilization of the Proposed Pipes
Table 4-4:	Changes in Existing Drainage Systems
Table 4-5:	Estimated Runoff and Capacities of Existing Drainage

Abbreviations

D.D.	Demarcation District
DSD	Drainage Services Department
SDM	Stormwater Drainage Manual



1.0 Introduction

- 1.1 This submission presents the drainage impact assessment of the Proposed Temporary Open Storage of Vehicles and Construction Materials with Ancillary Office and Associated Filling of Land for A Period of 3 Years, at various lots in D.D. 107 and the adjoining government land at Fung Kat Heung, Kam Tin, Yuen Long, New Territories (“Site”)
- 1.2 The Site has an area of about 7,627m² and it is currently 32.3% covered in grassland (about 2,687 m²) and 67.7% hard-paved with concrete (about 4,940m²). The entire site is proposed to be filled with soil with concrete and asphalt surface to a depth not exceeding 0.8m. A 1-storey ancillary site office and a 1-storey electricity meter room are proposed at the site with total GFA of about 225 m² and 6 m² respectively. And a planter with 5 Nos. new trees is proposed at the site with area of 27 m². The general layout plan and cross sections of the Site are shown on the **Drawing Nos. V1094/201 and V1094/202** enclosed in **Appendix A**.
- 1.3 Due to the concerns of possible drainage impact arising from the change of uses, Mannings (Asia) Consultants Limited (MACL) was appointed by the United Crown Holdings Limited to undertake a Drainage Impact Assessment (DIA) to demonstrate the acceptability of drainage impact upon the surrounding environment.



2.0 Design Methodology and Assumptions

Design Code

2.1 The below design codes are to be followed for this design assessment:

- Stormwater Drainage Manual (DSD) - Fifth Edition, January 2018;
- Stormwater Drainage Manual (DSD) - Corrigendum No. 1/2022;
- Stormwater Drainage Manual (DSD) - Corrigendum No. 1/2024;
- Stormwater Drainage Manual (DSD) - Corrigendum No. 2/2024;
- BS 5911 Code of Practice for Precast Concrete Pipe Design
- DSD Standard Drawings

Design Parameters

2.2 Design Parameters

a) Runoff Coefficient

Table 2-1 Runoff Coefficients

Surface Characteristic	Runoff Coefficient, C
Hard Paving, paved area	0.95
Roof area for structure	1.00
Grassland (heavy soil Flat), unpaved area	0.25

Roughness Coefficient for pipe flow $k_s = 3$

b) Minimum Pipeline Cover and Manhole Spacing Requirements

Table 2-2 Minimum Pipeline Cover and Manhole Spacing Requirements

Minimum pipeline cover	
In Roads	0.9 m
In footways and verges	0.45 m
Manhole spacing requirements	
D < 675 mm	80 m
675 < D < 1050	100 m
D > 1050	120 m

c) Bedding factors

- Granular bedding : 1.9
- Plain concrete bedding : 2.6
- Reinforced concrete bedding with allowance : 3.4
- for minimum steel area
- Concrete Surround : 4.5



d) Design Flow Velocity

- Minimum : 1 m/s
- Maximum : 3 m/s (desirable)
- : 6 m/s (absolute)

Return Period

- 2.3 The Site falls within an area zoned “Agriculture” (“AGR”) on the Approved Kam Tin North Outline Zoning Plan No. S/YL-KTN/11 (the OZP). According to Table 10 in Stormwater Drainage Manual (DSD) - Fifth Edition, January 2018, the recommended design return periods based on flood levels of “Intensively Used Agricultural Land” is 2-5 years.
- 2.4 In order to provide a conservative drainage impact assessment, return period of 1 in 50 years is adopted under this assessment.

Analysis Method

2.5 Description of Analysis Method

- a) Rational method is to be adopted for calculation of the peak runoff. The formula is extracted from Section 7.5.2(a) of Stormwater Drainage Manual (SDM) which is to estimate the stormwater runoff as shown below:

$$Q_p = 0.278 CiA$$

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

- b) 10% reduction of the flow area is allowed taken into account of the decomposition of siltation as per DSD’s SDM 2018.
- c) The time of concentration used for determining the duration of the design storm is considered by the time of entry and the time of flow,

$$t_c = t_o + t_f \quad t_f = L/V$$

where

t_o	=inlet time (time taken for flow from the remotest point to reach the most upstream point of the urban drainage system)
t_f	= flow time
L	= Length of drain
V	= flow velocity



- e) The time of entry or time of flow in the hinterland is calculated using the Bransby William's Equation.

$$t_e = \frac{0.14465 L}{A^{0.1} H^{0.2}}$$

Where

t_e	= time of concentration (min)
L	= catchment length (m)
A	= catchment area (m ²)
H	= average catchment slope (m/100m)

- f) The rainfall intensity is extracted from the Section 4.3.2 of SDM which is to estimate the Intensity-Duration –Frequency (IDF) Relationship.

$$i = a / (t_d + b)^c$$

Where

i	= extreme mean intensity in mm/hr
t_d	= duration in minutes ($t_d < 240$)
a, b, c	= storm constants given in table 3 of SDM as below

Table 2-3 Storm Constant of SDM – Corrigendum No.1/2024

Return Period T (years)	50
a	505.5
b	3.29
c	0.355

- g) Colebrook-White Equation is used in hydraulic design for pipe flow.

$$V = -\sqrt{(32gRs)} \log \left(\frac{k_s}{14.8R} + \frac{1.255v}{R\sqrt{(32gRs)}} \right)$$

Where:

V	= mean velocity (m/s)
g	= gravitational acceleration (m/s ²)
R	= hydraulic radius (m)
D	= pipe diameter (m)
k_s	= equivalent sand roughness (m)
v	= kinematic viscosity of fluid (m ² /s)
s	= frictional slope (energy gradient due to frictional loss)



3.0 Current Flooding Susceptibility and Proposed Drainage

Current Site Condition and Flooding Susceptibility

- 3.1 The topography of the Site is generally flat and currently situated with levels around +4.0 mPD. In general, the direction of existing surface runoff flows from north to south. Since the proposed ground levels of the Site are generally higher than the existing surrounding area, flooding susceptibility of the Site is considered as low.
- 3.2 Catchment plan before development is shown in **Drawing No. V1094/204** in **Appendix A**.

Proposed Development

- 3.3 A 1-storey ancillary site office and 1-storey electricity meter room are proposed at the Site as stated in Para. 1.2. After completion of the project, the finished ground level of the Site will be raised to approximately +4.6 mPD to +4.8mPD. All unpaved areas within the site will be proposed to be filled concrete or asphalt surface. A layout plan of the proposed development with **Drawing No. V1094/201** is enclosed in **Appendix A**.

Proposed Drainage

- 3.4 According to the site survey and observations, there is an existing 600mm U-channel (No. **SUP1019846**) and an existing 750mm U-channel (No. **SUP1019843**) located at the southern part of the site and an existing 800mm diameter concrete pipe connecting the existing 750mm U-channel, collecting the runoff from the original site and surrounding area. And the runoff will finally flow through the two U-channels into the existing 750mm diameter outlet concrete pipe (No. **SWD1065685**), which ultimately discharges into a 7.5m wide open channel. After development, runoff from the site will be conveyed into the existing 800mm diameter concrete pipe and flow into the existing 750 mm U-channel and then into the existing 750mm diameter outlet pipe and the existing 7.5m wide open channel. The photo records of the existing drainage are presented in **Appendix C**.
- 3.5 As illustrated in **Drawing Nos. V1094/204** in **Appendix A**, a portion of the runoff from the surrounding area will flow through the site and into the existing 600 mm U-channel. The site formation level will be raised from +4.0 mPD to +4.8 mPD, exceeding the existing level of +4.2 mPD at the northern boundary of the site. As such, 375 mm U-channels will be provided at both the northern and southern perimeters of the site to collect the runoff inside and in the vicinity of the site. These channels will capture runoff from Catchment Area D, while the paved areas within the site (i.e., Catchment Areas C1 – C8) will also be directed into the U-channels. The collected runoff will be conveyed to the existing 750 mm U-channels through proposed catchpits and manholes.
- 3.6 The drainage layout plan and detailed drainage are shown in **Drawing Nos. V1094/203** and **V1094/206** in **Appendix A**. Calculation of the proposed drainage are presented in Section 4 and enclosed in **Appendix B**.



- 3.7 The proposed U-channels and drainage pipes are designed to have sufficient capacities for the estimated runoff from the paved area in the Site. Details of the calculation are enclosed in **Appendix B**.

Changes in Land Use and Planned Drainage Works in Adjacent Area

- 3.8 It is noted that changes of land use might happen at the adjacent area of south of the Site. The layout plans of the proposed works and the proposed drainage works for the adjacent area are attached in **Appendix D** for information.
- 3.9 Since the surface runoff of the adjacent area will be collected and discharged to another existing drainage system near Shui Mei Road as shown in **Drawing No. W1010/113, 114** in **Appendix D**, no drainage impact to the Site in this report is anticipated.



4.0 Changes to the Drainage Characteristics and Potential Drainage Impact

Changes in Land Use and Surface Runoff Characteristics

- 4.1 currently 32.3% covered in grassland (about 2,687 m²) and 67.7% hard-paved with concrete (about 4,940m²). After completion of the project, the Site will be filled with soil with concrete and asphalt surface. Runoff coefficients are shown in Table 2-1 under Para. 2.2.

Changes to Surface Runoff Hydrographs

- 4.2 Changes in land use from unpaved area to paved area would lead to higher and faster surface runoff. However, considering the scale of the proposed development is relatively small, the changes to surface runoff hydrographs is considered as negligible.

Changes in Flood Storage

- 4.3 According to the site survey and observation, there is no flood storage was found near the Site

Changes in Timing of Peak runoff

- 4.4 Changes of time of concentration of Outfall from catchpit **SCH1028765** to 750 mm diameter outlet pipe **SNF1009820** before and after development are summarized in below table. The calculation is attached in **Appendix B**.

Table 4-1 Changes in Time of Concentration

Outlet	Time of concentration (min)	
	Before Development	After Development
SCH1028765 to SNF1009820	39.55	26.00



Hydraulic Bankfull Capacity of the Proposed Drainage System

4.5 The proposed drainage system mentioned in Para. 3.4 to Para 3.6 are designed to have sufficient capacity to cater the flow from the Site. Detailed calculation is attached in **Appendix B**.

4.6 The design runoff, capacity and utilization of the U-channels are summarized in below table.

Table 4-2 Design Runoff, Capacity and Utilization of the Proposed U-channels

Proposed U-Channel	Design Runoff (m³/s)	Capacity (m³/s)	Utilization
UC1 (375UC)	0.099	0.432	23.0%
UC2 (375UC)	0.139	0.483	28.9%
UC3 (375UC)	0.155	0.520	29.7%
UC4 (375UC)	0.195	0.526	37.0%
UC5 (375UC)	0.049	0.100	48.7%
UC6 (375UC)	0.146	0.511	28.5%
UC7 (375UC)	0.166	0.570	29.1%
UC8 (375UC)	0.200	0.578	38.4%

4.7 The design runoff, capacity and utilization of the proposed pipes are summarized in below table.

Table 4-3 Design Runoff, Capacity and Utilization of the Proposed Pipes

Proposed Pipe	Design Runoff (m³/s)	Capacity (m³/s)	Utilization
To Existing 800 Dia. Concrete Pipe:			
CP4 to SMH01 (750 Dia.)	0.371	0.710	52.2%

Changes in Peak Runoff and Peak Velocity at existing drainage system (Existing 600 UC and 750UC, and 750 Dia. Outlet pipe)

4.8 Below table shows the comparison of the peak runoff and peak velocity of the existing drainage system before and after the development. Detailed calculation is attached in **Appendix B**.

Table 4-4 Changes in Existing Drainage Systems

	800 Dia. Pipe		750 Dia. Outlet Pipe		600 UC		750 UC	
	Peak Runoff (m³/s)	Peak Velocity (m/s)	Peak Runoff (m³/s)	Peak Velocity (m/s)	Peak Runoff (m³/s)	Peak Velocity (m/s)	Peak Runoff (m³/s)	Peak Velocity (m/s)
Before Development	0.121	1.536	0.539	2.212	0.224	1.81	0.320	2.05
After Development	0.454	1.536	0.821	2.212	0.180	1.81	0.688	2.05



Potential Drainage Impact to Existing Drainage System

- 4.9 The proposed drainage systems are proposed to discharge to existing 750mm diameter outlet pipe (No. **SWD1065685**) as mentioned in Para. 3.4. Flows to the outlet will be increased.
- 4.10 For the existing drainage system, the two existing U-channels and outlet pipe located at the south of the Site are checked. Both outfall drainage systems have sufficient capacities to cater for the additional runoff upon completion of the proposed development. The estimated runoffs and capacities after development are summarized in Table 4-5.

Table 4-5 Estimated Runoff and Capacities of Existing Drainage

Existing Drainage	Estimated runoff (m³/s)	Capacity (m³/s)	Utilization
600 U-channel	0.180	1.432	12.6%
800 Dia. Pipe	0.455	0.772	59.0%
750 U-channel	0.688	1.998	34.4%
750 Dia. Outlet Pipe	0.821	0.977	84.0%

Temporary Drainage during Construction

- 4.11 According to the site survey and observation, there is no existing drainage system in the Site. Therefore, no existing drainage system would be affected during the construction. Temporary drainage is considered not necessary.

Details of Works to Existing Drainage System

- 4.12 Proposed drainage systems are connecting to existing drainage system as shown in **Drawing No. V1094/003** in **Appendix A**.

Potential Drainage Impacts to Other Land Users

- 4.13 All runoff in the Site will be collected and drain to existing drainage system as stated in Para. 3.4, no drainage impact to other land users is anticipated.



5.0 Drainage Impact Mitigation Measures

- 5.1 As discussed in Para. 4.11 and 4.13, no existing drainage system would be affected and no drainage impact to other land users is anticipated. Therefore, Mitigation measures is considered not necessary.
- 5.2 The Contractor should monitor during the construction to ensure that there is no adverse drainage impact to the nearby drainage systems and adjacent land users.



6.0 Monitoring Requirements

Monitoring During Construction

- 6.1 Monitoring of the drainage system is required during construction to ensure that there are no adverse impacts which may result in flooding or deterioration in the water quality.
- 6.2 Monitoring shall include:
- any siltation or blockages in channels, slit traps or sediment basins;
 - checking the drainage is performing in accordance with the design;
 - checking for damage; and
 - visual inspection of any high sediment levels
- 6.3 The detailed requirements of drainage monitoring should be as shown in the following table:

Table 6.1 – Detailed Requirements for Drainage Monitoring

Type / location of monitoring	Minimum Frequency	Action by
Prepare method statements	Before the start of any works that could impact on drainage	Contractor
Inspect existing drainage systems and all construction drainage systems for blockages or breakages	Daily, Weekly, Before every rainstorm warning	Contractor
	After every rainstorm	Contractor
Inspect sedimentation basins and silt traps	Daily, Weekly, Before every rainstorm warning	Contractor
	After every rainstorm	Contractor



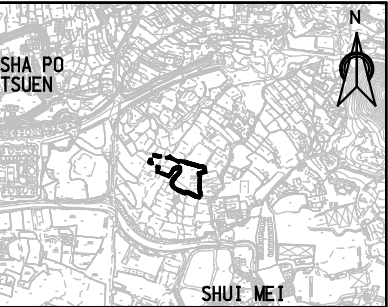
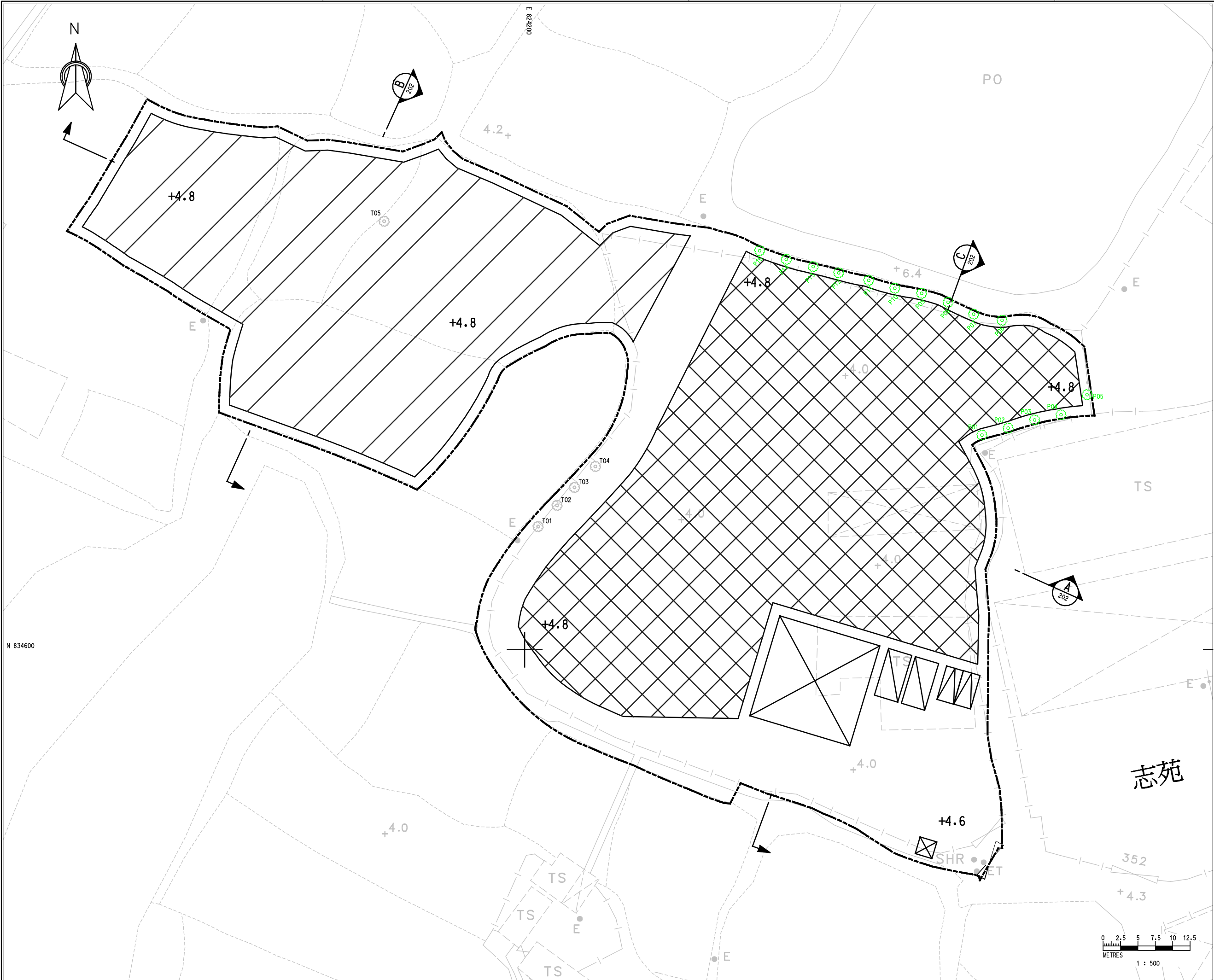
7.0 Conclusion

- 7.1 A Drainage Impact Assessment has been conducted for the proposed land use changes in Fung Kat Heung. The existing drainage system has been checked for the updated runoff from the catchment area and based on our assessment, the existing drainage system would provide sufficient capacity to cater for this additional stormwater. No adverse drainage impact shall be aroused due to the development.



Appendix A

Drawings



KEY PLAN

SCALE 1:20000

- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

- LEGEND :**
- APPLICATION SITE
 - INGRESS / EGRESS
 - PRIVATE CARS AND LIGHT GOODS VEHICLES
 - CONSTRUCTION MATERIALS
 - SITE OFFICE
 - PARKING SPACE (PRIVATE CAR)
 - L/UL SPACE
 - +3.7 PROPOSED SITE LEVEL
 - T04 EXISTING TREE
 - P04 PROPOSED NEW TREE

Rev.	Description of Revision	Date	Ckd.

Client

UNITED CROWN HOLDINGS LIMITED

Consultants

MANNINGS (Asia) Consultants Limited

Scale In A3 AS SHOWN		Date OCT 2025
Designed CC	Drawn KAM	Checked BLE
Design Team Leader SC		Date OCT 2025
Approved KTC		Date OCT 2025

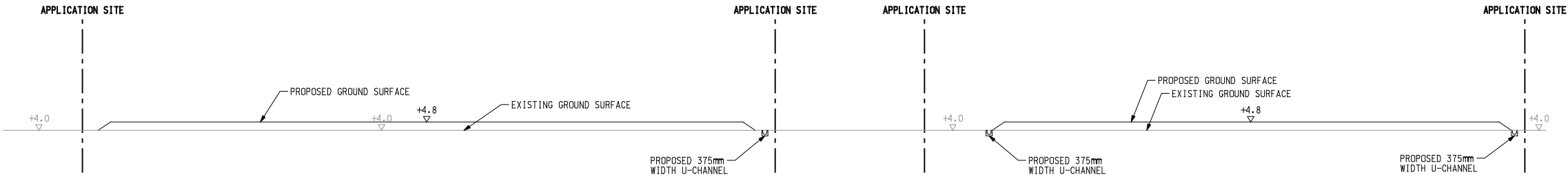
Project

PROPOSED TEMPORARY OPEN STORAGE OF VEHICLES AND CONSTRUCTION MATERIALS WITH ANCILLARY OFFICE AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

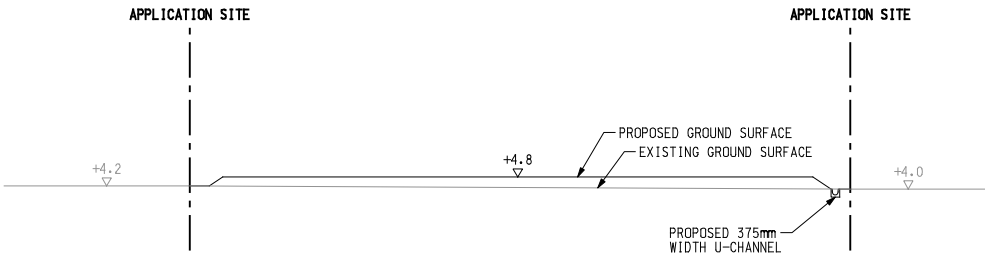
Title

LAYOUT PLAN

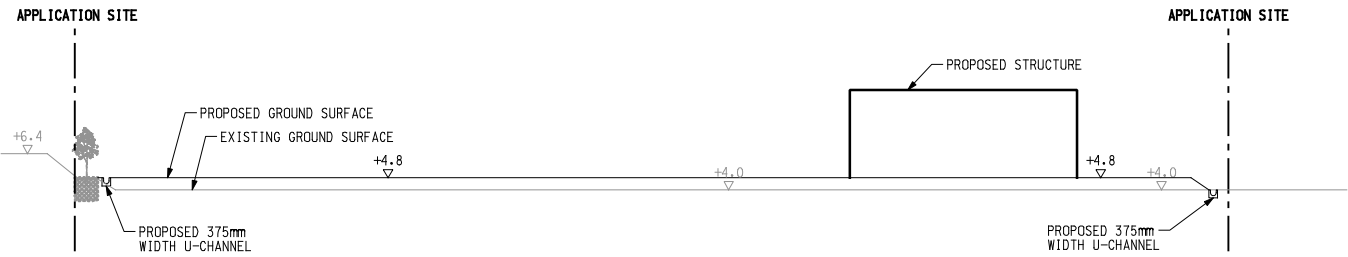
Drawing No. V1094/201	Stage P	Rev. -
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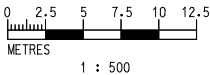
SECTION A
SCALE 1:500



SECTION B
SCALE 1:500



SECTION C
SCALE 1:500



- NOTES :
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 - ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

Rev.	Description of Revision	Date	Ckd.
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Client
UNITED CROWN HOLDINGS LIMITED

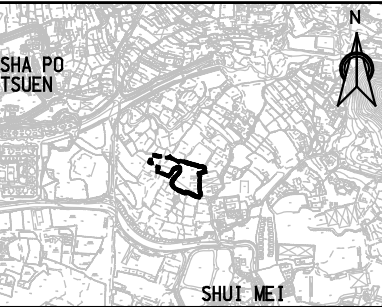
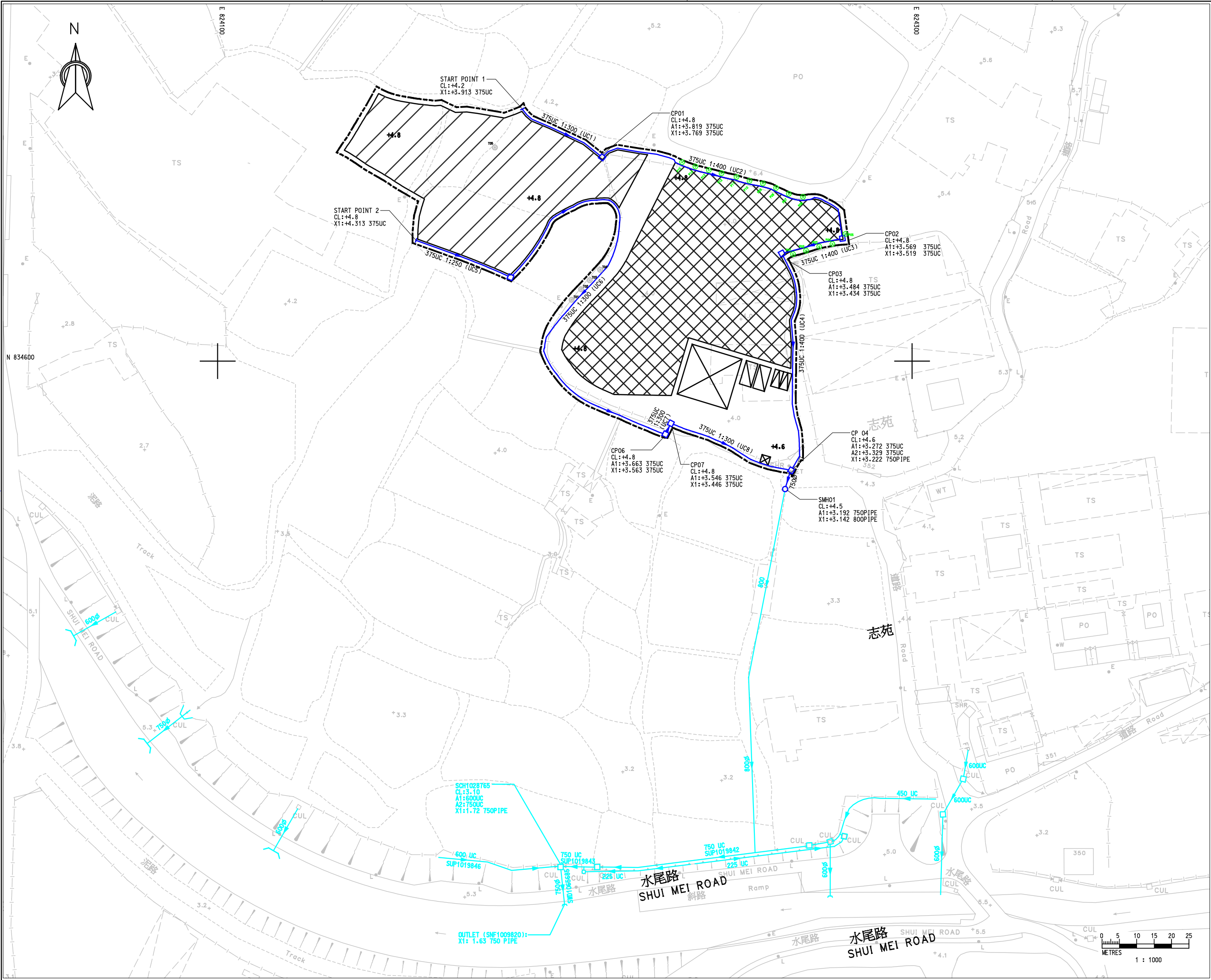
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Design Team Leader SC		Date OCT 2025
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Project
PROPOSED TEMPORARY OPEN STORAGE OF VEHICLES AND CONSTRUCTION MATERIALS WITH ANCILLARY OFFICE AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

Title
CROSS SECTION

Drawing No. V1094/202	Stage P	Rev. -
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KEY PLAN

SCALE 1:20000

- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

- LEGEND :**
- APPLICATION SITE
 - EXISTING U-CHANNEL
 - EXISTING PIPE
 - EXISTING MANHOLE
 - EXISTING CATCHPIT
 - +3.7 PROPOSED SITE LEVEL
 - INGRESS / EGRESS
 - PROPOSED U-CHANNEL
 - PROPOSED PIPE
 - PROPOSED MANHOLE
 - PROPOSED CATCHPIT
 - ▨ PRIVATE CARS AND LIGHT GOODS VEHICLES
 - ▨ CONSTRUCTION MATERIALS
 - ▨ SITE OFFICE
 - ▨ PARKING SPACE (PRIVATE CAR)
 - ▨ L/UL SPACE
 - T04 EXISTING TREE
 - P04 PROPOSED NEW TREE

Rev.	Description of Revision	Date	Ckd.

Client
UNITED CROWN HOLDINGS LIMITED

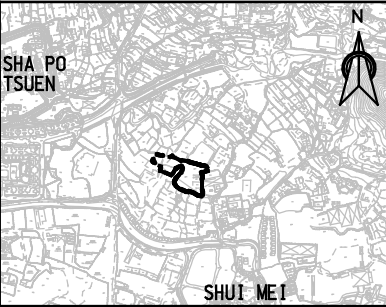
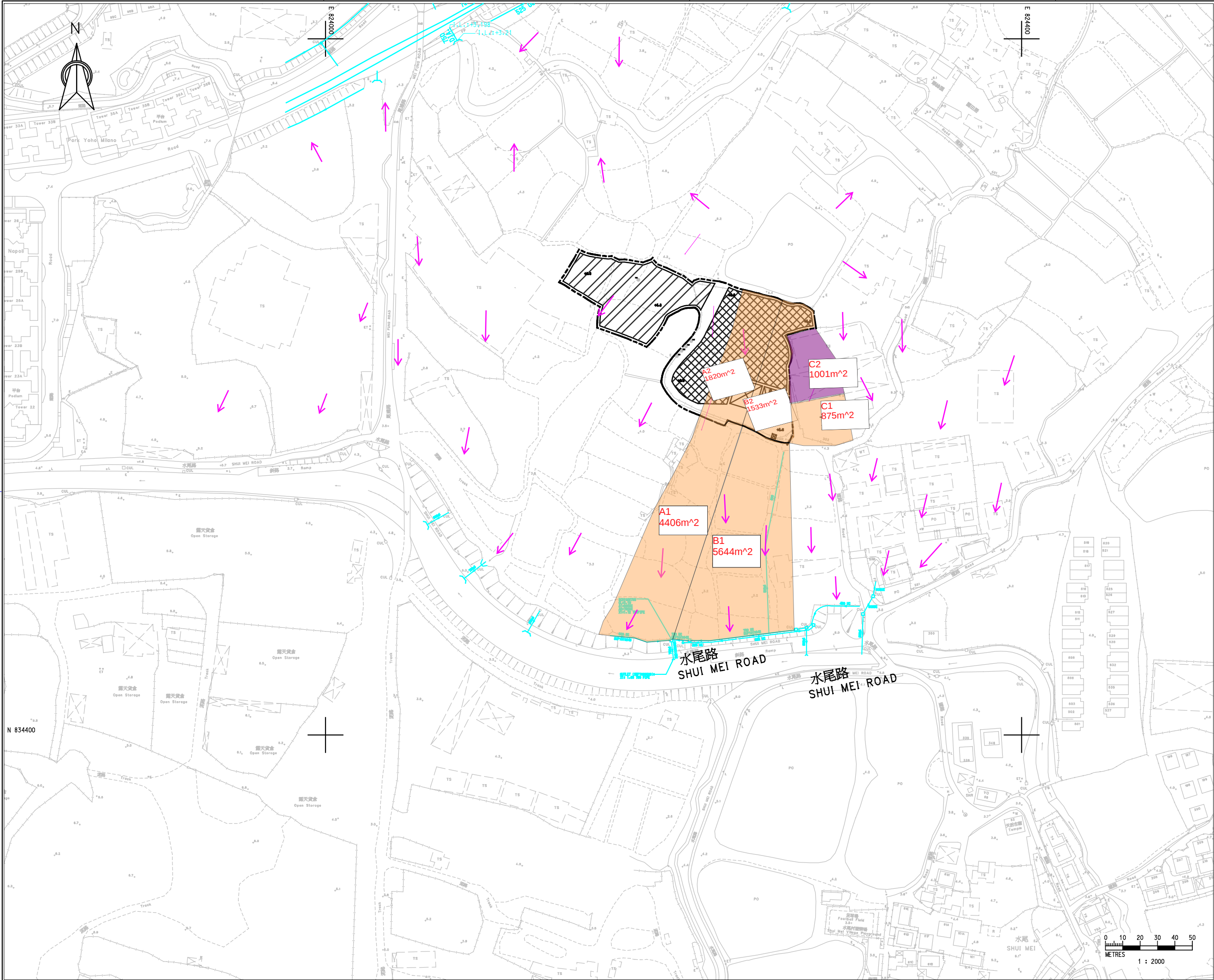
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Scale 1:1000	AS SHOWN	Date OCT 2025
Designed CC	Drawn KAM	Checked BLE
Design Team Leader SC	Date OCT 2025	Date OCT 2025
Approved KTC	Date OCT 2025	Date OCT 2025

Project
PROPOSED TEMPORARY OPEN STORAGE OF VEHICLES AND CONSTRUCTION MATERIALS WITH ANCILLARY OFFICE AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

Title
DRAINAGE LAYOUT PLAN

Drawing No. V1094/203	Stage P	Rev. -
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KEY PLAN
SCALE 1:20000

- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

- LEGEND :**
- APPLICATION SITE
 - EXISTING U-CHANNEL
 - EXISTING PIPE
 - EXISTING MANHOLE
 - EXISTING CATCHPIT
 - ▽ INGRESS / EGRESS
 - ▨ PRIVATE CARS AND LIGHT GOODS VEHICLES
 - ▩ CONSTRUCTION MATERIALS
 - ▧ SITE OFFICE
 - ▤ PARKING SPACE (PRIVATE CAR)
 - ▥ L/UL SPACE
 - T04 EXISTING TREE
 - UNPAVED AREA
 - PAVED AREA
 - ROOF AREA
 - RUNOFF DIRECTION

Rev.	Description of Revision	Date	Ckd.
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Client
UNITED CROWN HOLDINGS LIMITED

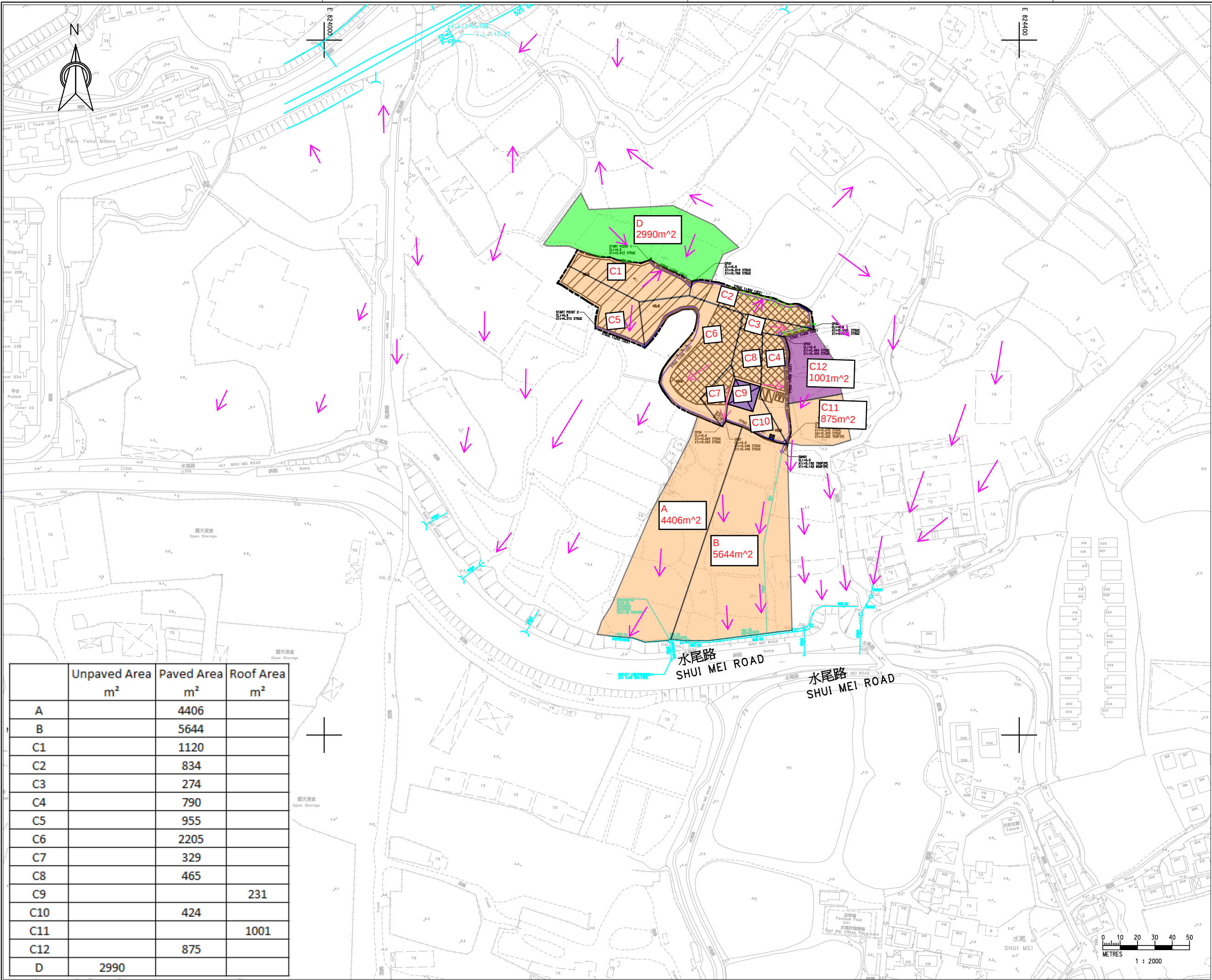
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Designed CC	Drawn KAM	Checked BLE
Design Team Leader SC		Date OCT 2025
Approved KTC		Date OCT 2025

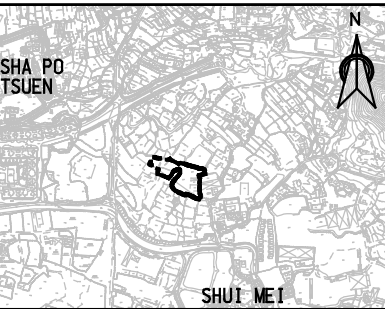
Project
PROPOSED TEMPORARY OPEN STORAGE OF VEHICLES AND CONSTRUCTION MATERIALS WITH ANCILLARY OFFICE AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

Title
CATCHMENT PLAN-BEFORE DEVELOPMENT

Drawing No. V1094/204	Stage P	Rev. -
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	Unpaved Area m ²	Paved Area m ²	Roof Area m ²
A	4406		
B	5644		
C1	1120		
C2	834		
C3	274		
C4	790		
C5	955		
C6	2205		
C7	329		
C8	465		
C9			231
C10		424	
C11			1001
C12		875	
D	2990		



KEY PLAN
SCALE 1:20000

- NOTES :
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 - ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

- LEGEND :
- APPLICATION SITE
 - EXISTING U-CHANNEL
 - EXISTING PIPE
 - EXISTING MANHOLE
 - EXISTING CATCHPIT
 - INGRESS / EGRESS
 - PRIVATE CARS AND LIGHT GOODS VEHICLES
 - CONSTRUCTION MATERIALS
 - SITE OFFICE
 - PARKING SPACE (PRIVATE CAR)
 - L/UL SPACE
 - PROPOSED U-CHANNEL
 - PROPOSED PIPE
 - PROPOSED MANHOLE
 - PROPOSED CATCHPIT
 - T04 EXISTING TREE
 - P04 PROPOSED NEW TREE
 - UNPAVED AREA
 - PAVED AREA
 - ROOF AREA
 - RUNOFF DIRECTION

Rev.	Description of Revision	Date	Ckd.
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Client
UNITED CROWN HOLDINGS LIMITED

Consultants
MANNINGS (Asia) Consultants Limited

Scale In A3 AS SHOWN		Date OCT 2025
Designed CC	Drawn KAM	Checked BLE
Design Team Leader SC		Date OCT 2025
Approved KTC		Date OCT 2025

Project
PROPOSED TEMPORARY OPEN STORAGE OF VEHICLES AND CONSTRUCTION MATERIALS WITH ANCILLARY OFFICE AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

Title
CATCHMENT PLAN-AFTER DEVELOPMENT

Drawing No. V1094/205	Stage P	Rev. -
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- | | | |
|---------------------------------|-------------------|------------------|
| Drawing No.
V1094/206 | Stage
P | Rev.
- |
|---------------------------------|-------------------|------------------|



Appendix B

Design Calculations

Before Development U channel Capacity Checking

Table 1 Capacity Check - U-Channel Before Development

Existing 600 U-Channel (Route left)

U/S ID	D/S ID	Catchment No.	Incre. Area (m ²)			Accum. Area (m ²)			U Channel						Rainfall							Manning's Equation						
			unpaved	Roof	paved	unpaved	Roof	paved	U/S Ground Level	D/S Ground Level	U/S I.L.	D/S I.L.	Size	Length	Gradient	Manning's n	Longest Flow Path	Flow Path Gradient	to (min) = 0.14465L / (H ^{0.2} A ^{0.1})	tf = L/v (min)	Time of Concentration	Intensity	Runoff	Wetted Area	Hydraulic Radius	Velocity	Capacity	Runoff / Capacity
			0.25	1.00	0.95	0.25	1.00	0.95	(mPD)	(mPD)	(mPD)	(mPD)	(mm)	(m)	(1 in)		(m)	(m/100m)	(min)	(min)	(min)	(mm/hr)	(l/s)	(m ²)	(m)	(m/s)	(l/s)	(%)
SUP1019846	SCH1028765	A1+A2	0	0	6226	0	0	6226	3.10	3.10	-	1.720	600	35	250	0.014	215.00	0.006	36.643	0.322	36.96	136	224	0.7894	0.2544	1.81	1432	15.6%

Existing 750 U-Channel (Route right)

U/S ID	D/S ID	Catchment No.	Incre. Area (m ²)			Accum. Area (m ²)			U Channel							Rainfall							Manning's Equation					
			unpaved	Roof	paved	unpaved	Roof	paved	U/S Ground Level	D/S Ground Level	U/S I.L.	D/S I.L.	Size	Length	Gradient	Manning's n	Longest Flow Path	Flow Path Gradient	to (min) = 0.14465L / (H ^{0.2} A ^{0.1})	tf = L/v (min)	Time of Concentration	Intensity	Runoff	Wetted Area	Hydraulic Radius	Velocity	Capacity	Runoff / Capacity
			0.25	1.00	0.95	0.25	1.00	0.95	(mPD)	(mPD)	(mPD)	(mPD)	(mm)	(m)	(1 in)		(m)	(m/100m)	(min)	(min)	(min)	(mm/hr)	(l/s)	(m ²)	(m)	(m/s)	(l/s)	(%)
SUP1019842	SCH1028766	B1+B2+C	0	1001	8052	0	1001	8052	3.50	3.15	-	1.980	750	65	250	0.014	200.00	0.003	39.009	0.541	39.55	133	320	0.8171	0.2952	2.00	1637	19.8%
SCH1028766	SCH1028765	B1+B2+C	0	1001	8052	0	1001	8052	3.15	3.10	-	1.720	750	10	250	0.014	200.00	0.003	39.009	0.541	39.55	133	320	0.9746	0.3057	2.05	1998	16.0%

	50 year
a	505.500
b	3.290
c	0.355

Before Development Pipe Capacity Checking

Table 3 Capacity Check - Pipes Before Development

Existing 800 Dia. Pipe Checking

From Catchpit/Manhole	To Catchpit/Manhole	Sub-Catchment	Paved Catchment Area (m ²)	Roof Catchment Area (m ²)	Unpaved Catchment Area (m ²)	t _c (min)	Intensity (mm/hr)	Peak Flow m ³ /s	Pipe Length (m)	Upstream Invert Level (m PD)	Downstream Invert Level (m PD)	Diameter (mm)	Gradient (1 in)	Total Catchment Area (m ²)	Velocity (m/s)	Capacity (m ³ /s)	Pipe Capcity Check (Flow / Capacity)
SMH01	SUP1019842 (750UC)	C	875	1001	0	5.00	238.6	0.121	105.00	3.142	2.700	800	237.74	875.00	1.536	0.772	15.7%

Existing 750 Dia. Outlet Pipe Checking

From Catchpit/Manhole	To Catchpit/Manhole	Sub-Catchment	Paved Catchment Area (m ²)	Roof Catchment Area (m ²)	Unpaved Catchment Area (m ²)	t _c (min)	Intensity (mm/hr)	Peak Flow m ³ /s	Pipe Length (m)	Upstream Invert Level (m PD)	Downstream Invert Level (m PD)	Diameter (mm)	Gradient (1 in)	Total Catchment Area (m ²)	Velocity (m/s)	Capacity (m ³ /s)	Pipe Capcity Check (Flow / Capacity)
SCH1028765	SNF1009820	A+B+C	14278	1001	0	39.55	133.2	0.539	9.50	1.72	1.63	750	105.56	14278.00	2.212	0.977	55.1%

Rain Storm Return Period = 50year	
a	505.500
b	3.290
c	0.355
Rainfall Intensity i=a/(t _a +b) ^c	

Parameters:
Roughness K_s (Conc. Pipe) = 3 mm
Kinematic Viscosity (ν) = 1.14E-06 m²/s
Paved Area Runoff Coefficient = 0.95
Unpaved Area Runoff Coefficient = 0.25
Roof Area Runoff Coefficient = 1.00
(Refer to Fluid Mechanics)

$$\bar{V} = -\sqrt{32gRS_f} \log \left[\frac{k_s}{14.8R} + \frac{1.255\nu}{R\sqrt{32gRS_f}} \right]$$

Where:
ν =Kinematic viscosity (kg/ms)
R =Hydraulic Diameter (m)
Ks =Surface Roughness (m)
V =Kinematic viscosity (kg/ms)
Sf =Slope of Hydraulic Gradient
g =Gravity (m/s2)

After Development U channel Capacity Checking

Table 2 Capacity Check - U-Channel After Development

Proposed U-Channel (North Side)																													
U/S ID	D/S ID	Catchment No.	Incre. Area (m ²)			Accum. Area (m ²)			U Channel								Rainfall							Manning's Equation					
			unpaved	Roof	paved	unpaved	Roof	paved	U/S Ground Level	D/S Ground Level	U/S I.L.	D/S I.L.	Channel Height	Size	Length	Gradient	Manning's n	Longest Flow Path	Flow Path Gradient	to (min) = 0.14465L / (H ^{0.2} A ^{0.1})	tf = L/v (min)	Time of Concentration - tc	Intensity	Runoff	Wetted Area	Hydraulic Radius	Velocity	Capacity	Runoff / Capacity
			0.25	1	0.95	0.25	1	0.95	(mPD)	(mPD)	(mPD)	(mPD)	(m)	(mm)	(m)	(1 in)		(m)	(m/100m)	(min)	(min)	(min)	(mm/hr)	(l/s)	(m ²)	(m)	(m/s)	(l/s)	(%)
UC 01	CP 01	D + C1	2990	0	1120	2990	0	1120	4.20	4.80	3.913	3.819	0.793	375	28	300	0.014	58.00	0.005	10.462	0.381	10.84	197	99	0.3527	0.1621	1.23	432	23.0%
UC 02	CP 02	C2	0	0	834	0	0	834	4.80	4.80	3.769	3.569	1.043	375	80	400	0.014	71.000	0.010	13.166	1.232	14.40	182	139	0.4465	0.1669	1.08	483	28.9%
UC 03	CP 03	C3	0	0	274	0	0	274	4.80	4.80	3.519	3.484	1.128	375	14	400	0.014	39.000	0.010	8.084	0.215	8.30	212	155	0.4783	0.1681	1.09	520	29.7%
UC 04	CP 04	C4	0	0	790	0	0	790	4.60	4.60	3.434	3.272	1.141	375	65	400	0.014	60.000	0.010	11.187	0.995	12.18	191	195	0.4830	0.1683	1.09	526	37.0%

UC 05	CP 05	C5	0	0	955	0	0	955	4.80	4.80	4.313	4.213	0.400	375	25	250	0.014	61.000	0.010	11.160	0.384	11.54	194	49	0.0927	0.1175	1.08	100	48.7%
UC 06	CP 06	C6	0	0	2205	0	0	2205	4.80	4.80	4.113	3.663	0.950	375	135	300	0.014	105.000	0.010	17.667	1.811	19.48	167	146	0.4115	0.1653	1.24	511	28.5%
UC 07	CP 07	C7	0	0	329	0	0	329	4.80	4.80	3.563	3.546	1.067	375	5	300	0.014	30.000	0.010	6.105	0.067	6.17	228	166	0.4552	0.1672	1.25	570	29.1%
UC 08	CP 04	C8	0	231	889	0	231	889	4.60	4.60	3.446	3.329	1.083	375	35	300	0.014	68.000	0.010	12.243	0.466	12.71	189	222	0.4615	0.1675	1.25	578	38.4%

Existing 600 U-Channel (Route left)																													
U/S ID	D/S ID	Catchment No.	Incre. Area (m ²)			Accum. Area (m ²)			U Channel								Rainfall							Manning's Equation					
			unpaved	Roof	paved	unpaved	Roof	paved	U/S Ground Level	D/S Ground Level	U/S I.L.	D/S I.L.	Channel Height	Size	Length	Gradient	Manning's n	Longest Flow Path	Flow Path Gradient	to (min) = 0.14465L / (H ^{0.2} A ^{0.1})	tf = L/v (min)	Time of Concentration	Intensity	Runoff	Wetted Area	Hydraulic Radius	Velocity	Capacity	Runoff / Capacity
			0.25	1	0.95	0.25	1	0.95	(mPD)	(mPD)	(mPD)	(mPD)	(m)	(mm)	(m)	(1 in)		(m)	(1 in)	(min)	(min)	(min)	(mm/hr)	(l/s)	(m ²)	(m)	(m/s)	(l/s)	(%)
SUP1019846	SCH1028765	A	0	0	4406	0	0	4406	3.10	3.10	-	1.720	1.080	600	35	250	0.014	142.000	0.006	24.424	0.322	24.75	155	180	0.7894	0.2544	1.81	1432	12.6%

Existing 750 U-Channel (Route right)																													
U/S ID	D/S ID	Catchment No.	Incre. Area (m ²)			Accum. Area (m ²)			U Channel								Rainfall							Manning's Equation					
			unpaved	Roof	paved	unpaved	Roof	paved	U/S Ground Level	D/S Ground Level	U/S I.L.	D/S I.L.	Channel Height	Size	Length	Gradient	Manning's n	Longest Flow Path	Flow Path Gradient	to (min) = 0.14465L / (H ^{0.2} A ^{0.1})	tf = L/v (min)	Time of Concentration	Intensity	Runoff	Wetted Area	Hydraulic Radius	Velocity	Capacity	Runoff / Capacity
			0.25	1	0.95	0.25	1	0.95	(mPD)	(mPD)	(mPD)	(mPD)	(m)	(mm)	(m)	(1 in)		(m)	(1 in)	(min)	(min)	(min)	(mm/hr)	(l/s)	(m ²)	(m)	(m/s)	(l/s)	(%)
SUP1019842	SCH1028766	B+C+D	2990	1232	13915	2990	1232	13915	3.50	3.15	-	1.980	0.795	750	65	250	0.014	125.000	0.004	20.463	0.541	21.00	163	688	0.8171	0.2952	2.00	1637	42.0%
SCH1028766	SCH1028765	B+C+D	0	0	0	0	0	0	3.15	3.10	-	1.720	1.005	750	10	250	0.014	-	-	-	-	21.00	163	688	0.9746	0.3057	2.05	1998	34.4%

50 year	
a	505.500
b	3.290
c	0.355

After Development Pipe Capacity Checking

Table 4 Capacity Check - Pipes After Development

Proposed Pipe Checking

From Catchpit/Manhole	To Catchpit/Manhole	Sub-Catchment	Paved Catchment Area (m ²)	Roof Catchment Area (m ²)	Unpaved Catchment Area (m ²)	t _c (min)	Intensity (mm/hr)	Peak Flow m ³ /s	Pipe Length (m)	Upstream Invert Level (m PD)	Downstream Invert Level (m PD)	Diameter (mm)	Gradient (1 in)	Total Catchment Area (m ²)	Velocity (m/s)	Capacity (m ³ /s)	Pipe Capacity Check (Flow / Capacity)
CP 04	SMH01	C(1-10)+D	7396	231	2990	19.48	166.7	0.371	6.00	3.222	3.192	750	200.00	10386.00	1.606	0.710	52.2%

Existing 800 Dia. Pipe Checking

From Catchpit/Manhole	To Catchpit/Manhole	Sub-Catchment	Paved Catchment Area (m ²)	Roof Catchment Area (m ²)	Unpaved Catchment Area (m ²)	t _c (min)	Intensity (mm/hr)	Peak Flow m ³ /s	Pipe Length (m)	Upstream Invert Level (m PD)	Downstream Invert Level (m PD)	Diameter (mm)	Gradient (1 in)	Total Catchment Area (m ²)	Velocity (m/s)	Capacity (m ³ /s)	Pipe Capacity Check (Flow / Capacity)
SMH01	SUP1019842 (750UC)	C(1-12)+D	8271	1232	2990	19.48	166.7	0.455	105.00	3.142	2.700	800	237.74	11261.00	1.536	0.772	59.0%

Existing 750 Dia. Outlet Pipe Checking

From Catchpit/Manhole	To Catchpit/Manhole/Outlet	Sub-Catchment	Paved Catchment Area (m ²)	Roof Catchment Area (m ²)	Unpaved Catchment Area (m ²)	t _c (min)	Intensity (mm/hr)	Peak Flow m ³ /s	Pipe Length (m)	Upstream Invert Level (m PD)	Downstream Invert Level (m PD)	Diameter (mm)	Gradient (1 in)	Total Catchment Area (m ²)	Velocity (m/s)	Capacity (m ³ /s)	Pipe Capacity Check (Flow / Capacity)
SCH1028765	SNF1009820	A1+B1+C(1-9)+D	18321	1232	2990	26.00	152.4	0.821	9.50	1.720	1.63	750	105.56	21311.00	2.212	0.977	84.0%

Rain Storm Return Period = 50year	
a	505.500
b	3.290
c	0.355
Rainfall Intensity i=a/(t _i +b) ^c	

Parameters:
Roughness K_s (Conc. Pipe) = 3 mm
Kinematic Viscosity (ν) = 1.14E-06 m²/s
Paved Area Runoff Coefficient = 0.95
Unpaved Area Runoff Coefficient = 0.25
Roof Area Runoff Coefficient = 1.00
(Refer to Fluid Mechanics)

$$\bar{V} = -\sqrt{32gRS_f} \log \left[\frac{k_s}{14.8R} + \frac{1.255\nu}{R\sqrt{32gRS_f}} \right]$$

Where:
ν =Kinematic viscosity (kg/ms)
R =Hydraulic Diameter (m)
Ks =Surface Roughness (m)
V =Kinematic viscosity (kg/ms)
Sf =Slope of Hydraulic Gradient
g =Gravity (m/s2)

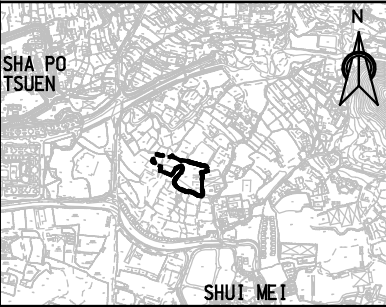
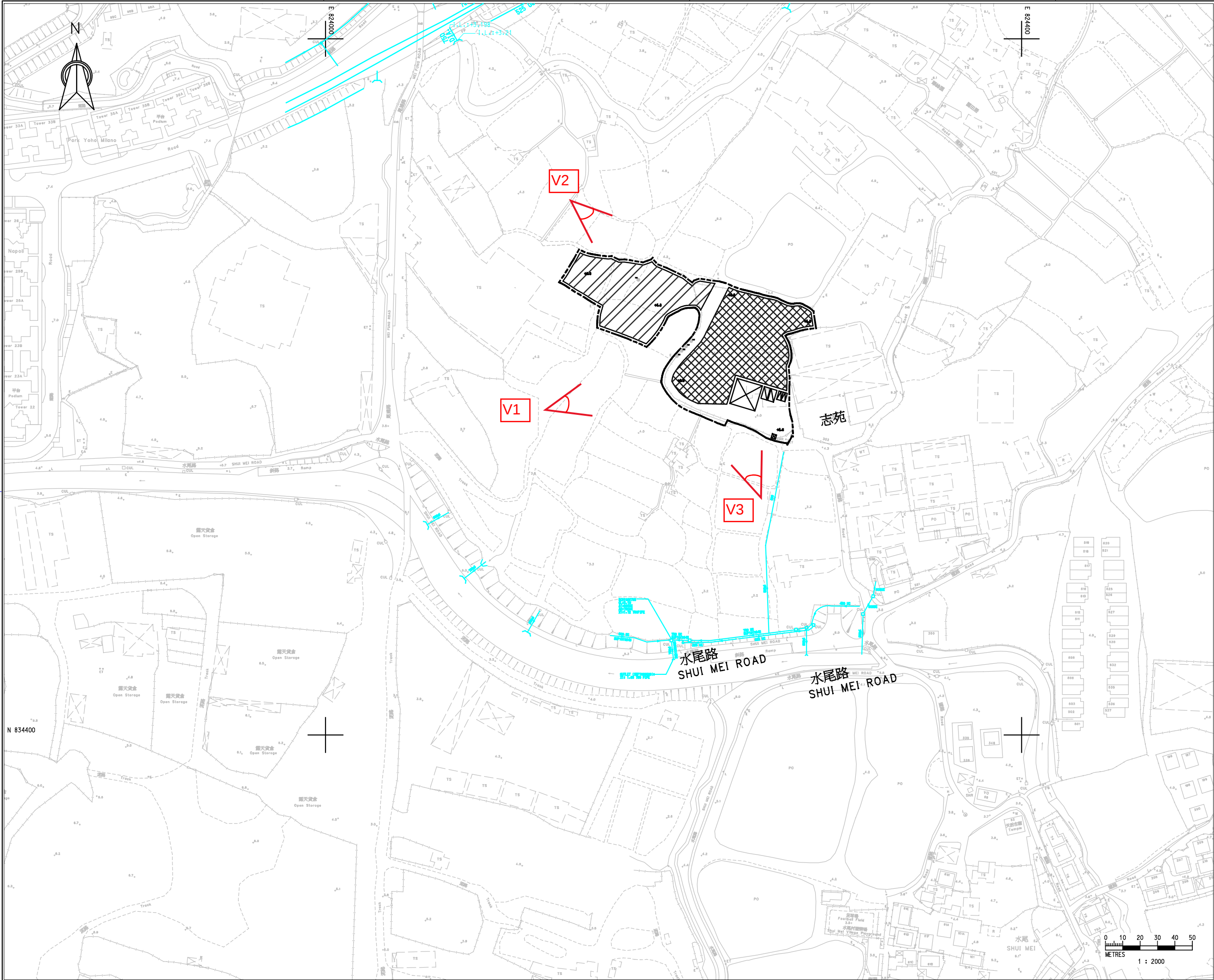


MANNINGS

Proposed Temporary Open Storage of Vehicles and Construction Materials with Ancillary Office and
Associated Filling of Land for A Period of 3 Years, Various Lots in D.D. 107 and Adjoining Government
Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories

Appendix C

Site Photos



KEY PLAN
SCALE 1:20000

- NOTES :
- 1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 - 2. ALL LEVELS ARE IN MPD METRE ABOVE HONG KONG PRINCIPAL DATUM.
- LEGEND :
- APPLICATION SITE
 - EXISTING U-CHANNEL
 - EXISTING PIPE
 - EXISTING MANHOLE
 - EXISTING CATCHPIT
 - INGRESS / EGRESS
 - PRIVATE CARS AND LIGHT GOODS VEHICLES
 - CONSTRUCTION MATERIALS
 - SITE OFFICE
 - PARKING SPACE (PRIVATE CAR)
 - L/LUL SPACE
 - EXISTING TREE

Rev.	Description of Revision	Date	Ckd.

Client
UNITED CROWN HOLDINGS LIMITED

Consultants
MANNINGS
(Asia) Consultants Limited

Scale 1n A3 AS SHOWN		Date OCT 2025
Designed CC	Drawn KAM	Checked BLE
Design Team Leader SC		Date OCT 2025
Approved KTC		Date OCT 2025

Project
PROPOSED TEMPORARY OPEN STORAGE OF VEHICLES AND CONSTRUCTION MATERIALS WITH ANCILLARY OFFICE AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS

Title
SITE PHOTO PLAN

Drawing No. V1094/ 207	Stage P	Rev. -
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Proposed Temporary Open Storage of Vehicles and Construction Materials with Ancillary Office and Associated Filling of Land for A Period of 3 Years, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories

Photo Top View



Photo V1



Proposed Temporary Open Storage of Vehicles and Construction Materials with Ancillary Office and Associated Filling of Land for A Period of 3 Years, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories

Photo V2



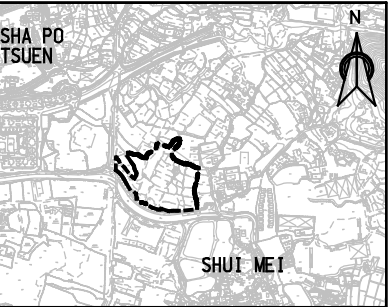
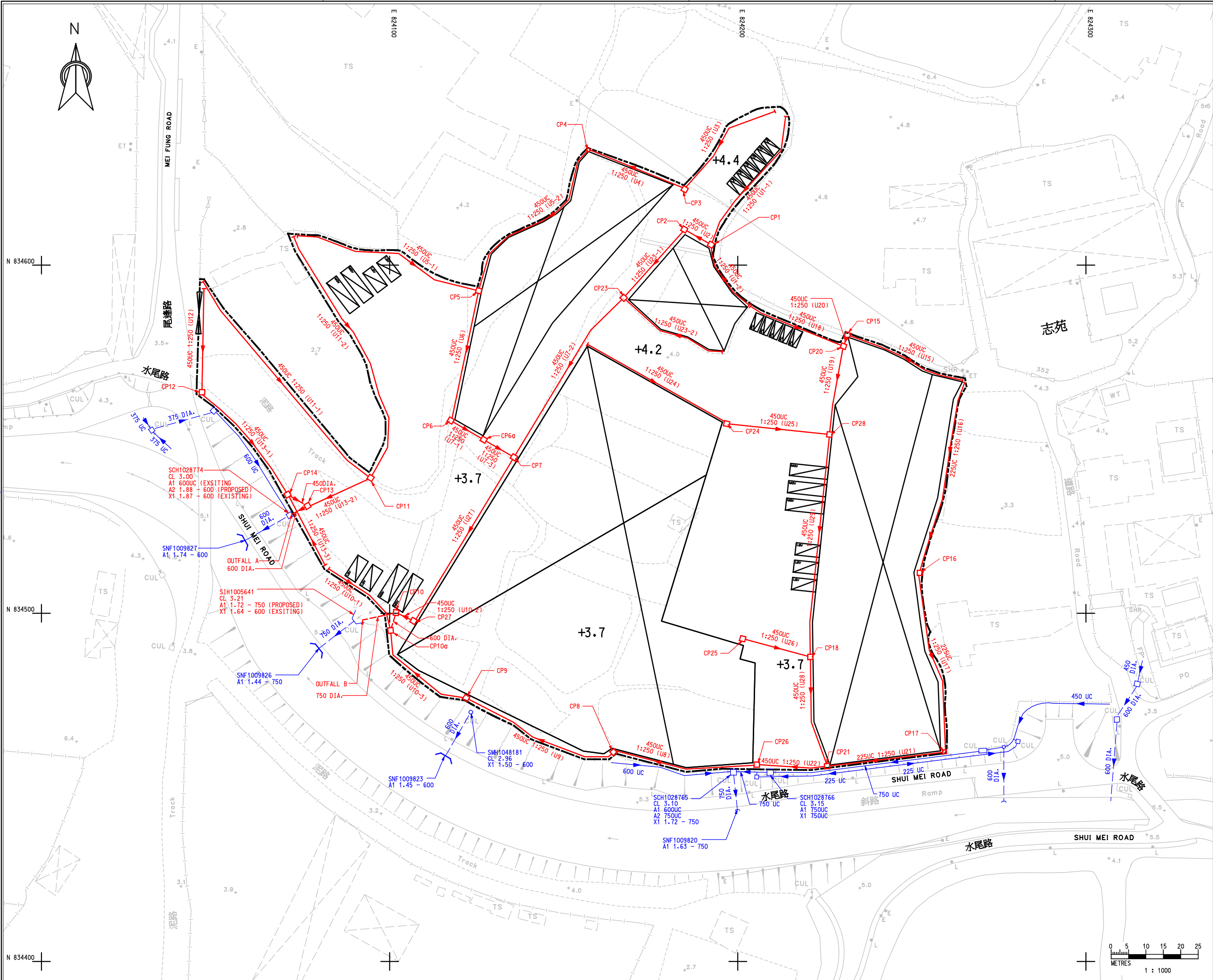
Photo V3





Appendix D

Layout Plans of Future Development for Adjacent Area

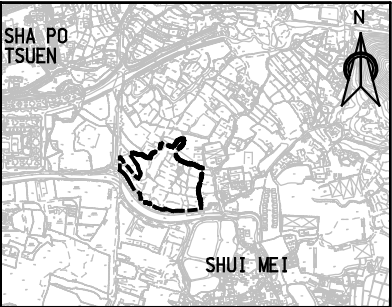
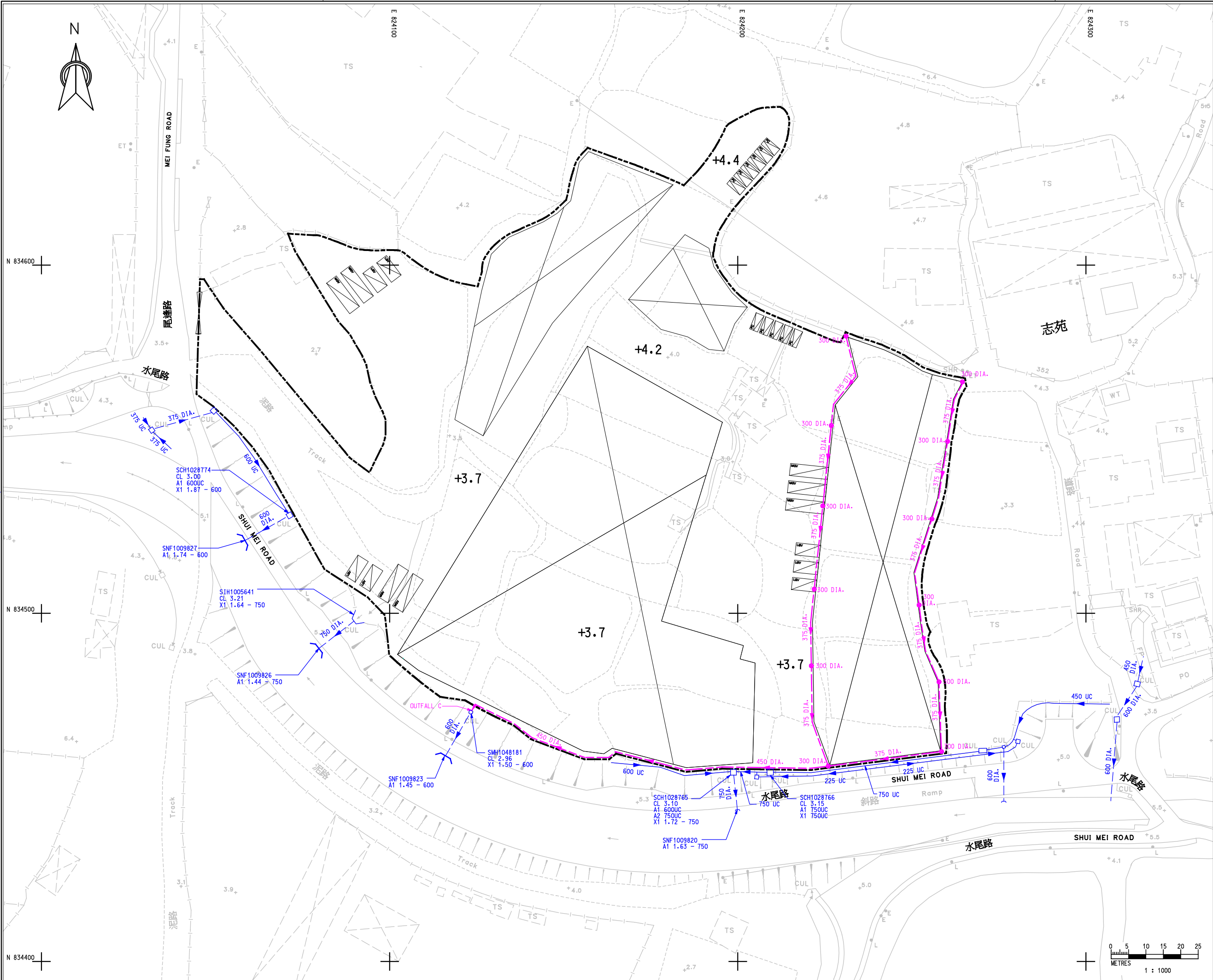


KEY PLAN
SCALE 1:20000

NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

LEGEND :
--- APPLICATION SITE
[Symbol] STRUCTURE
[Symbol] PARKING SPACE (PC)
[Symbol] LOADING / UNLOADING SPACE (LGV)
[Symbol] LOADING / UNLOADING SPACE (MGV)
[Symbol] INGRESS / EGRESS
+3.7 PROPOSED SITE LEVEL
[Symbol] EXISTING U-CHANNEL
[Symbol] EXISTING PIPE
[Symbol] EXISTING MANHOLE
[Symbol] EXISTING CATCHPIT
[Symbol] PROPOSED U-CHANNEL
[Symbol] PROPOSED PIPE
[Symbol] PROPOSED MANHOLE
[Symbol] PROPOSED CATCHPIT

Rev.	Description of Revision	Date	Ckd.
Client			
EXCEL LINK DEVELOPMENT LIMITED			
Consultants			
 MANNINGS (Asia) Consultants Limited			
Scale In A3 AS SHOWN		Date AUG 2025	
Designed EM	Drawn KAM	Checked BLE	
Design Team Leader SC		Date AUG 2025	
Approved KTC		Date AUG 2025	
Project PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS, VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, KAM TIN, YUEN LONG, NEW TERRITORIES			
Title			
DRAINAGE LAYOUT PLAN			
Drawing No. W1010/113		Stage P	Rev. -



KEY PLAN
SCALE 1:20000

- NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. ALL LEVELS ARE IN mPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

- LEGEND :
- APPLICATION SITE
 - STRUCTURE
 - PARKING SPACE (PC)
 - LOADING / UNLOADING SPACE (LGV)
 - LOADING / UNLOADING SPACE (MGV)
 - INGRESS / EGRESS
 - PROPOSED SITE LEVEL
 - PROPOSED DOWNPIPE
 - PROPOSED ELEVATED PIPE
 - EXISTING U-CHANNEL
 - EXISTING PIPE
 - EXISTING MANHOLE
 - EXISTING CATCHPIT

Rev.	Description of Revision	Date	Ckd.

Client
EXCEL LINK DEVELOPMENT LIMITED

Consultants
MANNINGS (Asia) Consultants Limited

Scale In A3 AS SHOWN		Date AUG 2025
Designed EM	Drawn KAM	Checked BLE
Design Team Leader SC		Date AUG 2025
Approved KTC		Date AUG 2025

Project
PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES AND ASSOCIATED FILLING OF LAND FOR A PERIOD OF 3 YEARS, VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, KAM TIN, YUEN LONG, NEW TERRITORIES

Title
DRAINAGE LAYOUT PLAN - STRUCTURE ROOFING

Drawing No. W1010/114	Stage P	Rev. -
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