寄件者:	Louis Tse [redacted]
寄件日期:	2024年12月27日星期五 17:22
收件者:	tpbpd/PLAND
副本:	Andrea Wing Yin YAN/PLAND; Jet Sze Jet CHEUNG/PLAND; Bon Tang; Matthew Ng; Christian Chim; Danny Ng; Grace Wong; Kevin Lam
主旨:	[FI] S.16 Application No. A/YL-KTN/1023 - FI to address departmental comments
附件:	FI2 for A_YL-KTN_1023 (20241227).pdf
類別:	Internet Email

Dear Sir,

Attached herewith the **FI** to address departmental comments of the subject application.

Should you require more information, please do not hesitate to contact me. Thank you for your kind attention.

Kind Regards,

Louis TSE | Town Planner
R-riches Group (HK) Limited

R-riches Property Consultants Limited | R-riches Planning Limited | R-riches Construction Limited
[redacted]

R-Riches
Property Consultants Ltd.

盈卓物業
顧問有限公司

Our Ref. : DD107 Lot 1512 & VL
Your Ref. : TPB/A/YL-KTN/1023

The Secretary,
Town Planning Board,
15/F, North Point Government Offices,
333 Java Road,
North Point, Hong Kong

By Email

27 December 2024

Dear Sir,

2nd Further Information

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, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

(**S.16 Planning Application No. A/YL-KTN/1023**)

We are writing to submit further information to address departmental comments on the subject application (**Appendix I**).

Should you require more information regarding the application, please contact our Mr. Danny NG at [redacted] or the undersigned at your convenience. Thank you for your kind attention.

Yours faithfully,

For and on behalf of
R-riches Property Consultants Limited

Louis TSE
Town Planner

cc DPO/FSYLE, PlanD (Attn.: Ms. Andrea YAN email: awyyan@pland.gov.hk)
(Attn.: Mr. Jet CHEUNG email: jsjcheung@pland.gov.hk)

[redacted]

Responses-to-Comments

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, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

(Application No. A/YL-KTN/1023)

(i) A RtoC Table:

Departmental Comments		Applicant's Responses
1. Comments of the Director of Fire Services (D of FS) (Contact Person: Mr. CHEUNG Wing-hei; Tel.:2733 7737)		
(a)	Based on the submitted FSI proposal, I have the following comments: Schematic drawings will not be vetted at this stage and shall be omitted;	Noted and revised accordingly, please refer to the revised fire service installations (FSIs) proposal for details (**Annex I**).
(b)	Modified hose reel system shall be provided in accordance with the Code of Practice for Minimum Fire Service Installations and Equipment 2022;	
(c)	Sufficient directional and exit signs shall be provided in accordance with BS 5266-1:2016 and the FSD Circular Letter No. 5/2008;	
(d)	Justifications for the non-provision of smoke extraction system to Structure B1, i.e. "Smoke extraction system shall not be provided to structure B1 as the aggregate area of openable windows exceeds 6.25% of the floor area of the structure B1" shall be specified in the FS Notes 8.1;	
(e)	The sprinkler inlets shall be positioned in a prominent position on the exterior of the building;	
(f)	Based on the proposed access route, it is noted that the nearest available street fire hydrant is more than 500m away from the site. In this regard, a street fire hydrant	

	system with adequate flow, pressure and size of water tank shall be provided.	
2.	**Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)** **(Contact Person: Mr. Terence TANG; Tel.: 2300 1257)**	
(a)	The DIA should be signed and certified by a qualified engineer (Registered Professional Engineer in the Civil Engineering discipline) before it is submitted to DSD for comment.	A revised drainage impact assessment report, which signed and certified by the qualified engineer, has been submitted by the applicant to review the drainage arrangements for the proposed development (**Annex II**).
3.	**Comments of the District Planning Officer/Fanling, Sheung Shui and Yuen Long East, Planning Department (DPO/FSYLE, PlanD)** **(Contact Person: Ms. Andrea YAN; Tel.: 3168 4049)**	
(a)	While the applicant claimed that the open space at the Site is to accommodate the required machineries, equipment, parking and loading/unloading facilities, more justifications/elaborations should be provided to demonstrate why an extensive open space (about 64%) is needed for a warehouse development.	The remaining uncovered area is reserved for the provision of drainage and fire safety facilities. The open area is necessary to comply with fire safety regulations and allows for safe workers pathways and emergency exits, providing clear access for emergency services.
4.	**Comments of the Chief Town Planner/Urban Design and Landscape, Planning Department (CTP/UD&L, PlanD)** **(Contact Person: Mr. Samuel HUI; Tel.: 3565 3957)**	
(a)	Having reviewed the Further Information, it is noted that the filling material in the eastern portion of the Site is revised from concrete to soil. 7 nos. of new trees are proposed along the southern site boundary within the Site. Please find our comments from landscape planning perspective: <u>Landscape Proposal (ver.001) (Annex IV)</u> Considering the species proposed (*Ficus microcarpa*) is large tree species that can grow up to approx. 25m high with wide crown spread and aggressive roots. The applicant is advised to revise the proposed	A revised landscape proposal has been submitted by the applicant to provide landscape mitigation measure for the proposed development (**Annex III**). A total of <u>7</u> Small tree species (i.e. *Polyspora Axillaris*), with continuous soil trench, are proposed to be planted along the southwest portion of the Site as a landscape buffer to the surrounding areas. All these new trees within the Site will be maintained by the applicant during the planning approval period.

	species to small tree species to suit the site context.	
(b)	The applicant is advised to revise the individual tree pits proposed to a continuous soil trench to facilitate growing of tree as far as possible. Relevant description and dimension should be reviewed.	
5. Comments of the Director of Agriculture, Fisheries and Conservation (DAFC) (Contact Person: Ms. WONG Cheuk-ling; Tel.: 2150 6933)		
(a)	The applicant has not provided information on the type of soil to be filled.	Loam would be used for filling of land and pond for the proposed development.

FIRE SERVICES NOTES

1. HOSE REEL SYSTEM

1.1 MODIFIED HOSE REEL SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH THE CODE OF PRACTICE FOR MIN. FIRE SERVICE INSTALLATIONS & EQUIPMENT 2022.

1.2 WATER SUPPLY FOR THE MODIFIED HOSE REEL SYSTEM TO BE SINGLE END FEED FROM THE GOVERNMENT TOWN MAIN.
1.3 NO FIRE SERVICES INLET TO BE PROVIDED FOR THE MODIFIED HOSE REEL SYSTEM.
1.4 A MODIFIED HOSE REEL SYSTEM OF 2,000 LITRES WATER TANK TO BE PROVIDED FOR THE PREMISES AS INDICATED ON PLAN.
1.5 TWO HOSE REEL PUMPS (ONE DUTY & ONE STANDBY) SHALL TO BE PROVIDED AT FS PUMP ROOM.
1.6 SUFFICIENT HOSE REELS SHALL BE PROVIDED TO THE PREMISES AS INDICATED ON PLANS. HOSE REELS SHALL BE PROVIDED TO ENSURE THAT EVERY PART OF THE BUILDING CAN BE REACHED BY A LENGTH OF NOT MORE THAN 30 M OF HOSE REEL TUBING. ONE ACTUATING POINT AND ONE AUDIO WARNING DEVICE TO BE LOCATED AT EACH HR POINT.

2. SPRINKLER SYSTEM

2.1 THE CLASSIFICATION OF THE AUTOMATIC SPRINKLER INSTALLATION TO BE ORDINARY HAZARD GROUP 3.

2.2 AUTOMATIC SPRINKLER SYSTEM SHALL SUPPLIED BY A 135,000L SPRINKLER WATER TANK AND COVERED TO THE ENTIRE WAREHOUSE IN ACCORDANCE WITH LPC RULES INCORPORATING BS EN12845 : 2015 AND FSD CIRCULAR LETTER 5/2020. THE SPRINKLER WATER TANK, SPRINKLER PUMP ROOM, SPRINKLER INLET AND SPRINKLER CONTROL VALVE GROUP SHALL BE AS INDICATED ON PLANS.
2.3 ALL INSTALLED SPRINKLER SHOULD BE PENDENT TYPE AND THE TEMPERATURE RATING OF SPRINKLER HEAD SHALL BE 68°C UNLESS OTHERWISE SPECIFIED.
2.4 ALL INSTALLED SPRINKLER SHOULD BE CONVENTIONAL TYPE AND THE TEMPERATURE RATING OF SPRINKLER HEAD SHALL BE 68°C UNLESS OTHERWISE SPECIFIED.
2.5 ALL SPRINKLER PIPE SIZE SHOULD BE ø32MM UNLESS SPECIFY.
2.6 ALL SPRINKLER PIPE SIZE SHOULD BE ø32MM UNLESS SPECIFY.
2.7 STORAGE BLOCK SHOULD BE SEPARATED BY AISLES NO LESS THAN 2.4M WIDE.
2.8 THE MAXIMUM STORAGE AREA SHALL BE 50m² FOR ANY SINGLE BLOCK.
2.9 TYPE OF STORAGE METHOD FOR THE BUILDING IS AS FOLLOWS:
i) STORAGE CATEGORY : CATEGORY (III)
ii) STORAGE HEIGHT : NOT EXCEEDING 2.1M
iii)STORAGE : ST1

3. FIRE ALARM SYSTEM

3.1 FIRE ALARM SYSTEM SHALL BE PROVIDED THROUGHOUT THE ENTIRE COVERED AREA OF WAREHOUSE IN ACCORDANCE WITH BS 5839-1 : 2017 AND FSD CIRCULAR LETTER 6/2021. ONE ACTUATING POINT AND ONE AUDIO WARNING DEVICE SHOULD BE LOCATED AT EACH HOSE REEL POINT. THE ACTUATION POINT SHOULD INCLUDE FACILITIES FOR HOSE REEL PUMP START AND AUDIO / VISUAL WARNING DEVICE INITIATION.

3.2 AN ADDRESSABLE TYPE FIRE ALARM PANEL TO BE PROVIDED AND LOCATED IN FRONT OF THE MAIN ENTRANCE OF WAREHOUSE ON G/F.
3.3 AN ADDRESSABLE TYPE FIRE ALARM PANEL TO BE PROVIDED AND LOCATED IN FRONT OF THE MAIN ENTRANCE OF WAREHOUSE ON G/F.

4. EMERGENCY LIGHTING

4.1 SUFFICIENT EMERGENCY LIGHTING SHALL BE PROVIDED THROUGHOUT THE COVERED AREA OF WAREHOUSE IN ACCORDANCE WITH BS 5266-1:2016 AND BS EN 1838:2013 AND FSD CIRCULAR LETTER 4/2021.

4.2 SELF-CONTAINED TYPE EMERGENCY LIGHTING SYSTEM COMPLYING WITH H.K.F.S.D.'S CODE OF PRACTICE AS WELL AS BS 5266-1 : 2011 + BS EN 1838 : 2013 WILL BE PROVIDED, AND PERMANENTLY MAINTAINED IN EFFECTIVE WORKING ORDER FROM NORMAL SUPPLY & TO BE PROVIDED.
4.3 EMERGENCY LIGHTING SHALL BE PROVIDED THROUGHOUT THE ENTIRE WAREHOUSE AND ALL EXIT ROUTES LEADING TO EXIT OF BUILDING.

5. EXIT SIGN

5.1 SUFFICIENT DIRECTIONAL & EXIT SIGNS SHALL BE PROVIDED IN ACCORDANCE WITH BS5266-1:2016 & THE FSD CIRCULAR LETTER NO. 5/2018.

5.2 SELF-CONTAINED TYPE DIRECTIONAL AND EXIT SIGNS TO ENSURE THAT ALL EXIT ROUTES FROM ANYWHERE WITHIN THE WAREHOUSE ARE CLEARLY INDICATED AS REQUIRED BY THE CONFIGURATION OF EXIT ROUTE SERVING THE BUILDING.

6. EMERGENCY GENERATOR

6.1 NO EMERGENCY GENERATOR TO BE PROVIDED FOR SERVING THE EMERGENCY POWER. A.C. SUPPLY SOURCE WITH SECONDARY SUPPLY SHALL FEED BEFORE MAIN SWITCH.
6.2 DUPLICATED POWER SUPPLIES FOR ALL FIRE SERVICES INSTALLATIONS COMPRISING A CABLE CONNECTED FROM ELECTRICITY MAINS DIRECTLY BEFORE THE MAIN SWITCH.

7 PORTABLE HAND-OPERATED APPROVED APPLIANCE

7.1 PORTABLE FIRE EXTINGUISHER WITH SPECIFIED TYPE AND CAPACITY TO BE PROVIDED AT LOCATIONS AS INDICATED ON PLANS.

8 STATIC OR DYNAMIC SMOKE EXTRACTION SYSTEM

8.1 SMOKE EXTRACTION SYSTEM SHALL NOT BE PROVIDED AS THE AGGREGATE AREA OF OPENABLE WINDOWS OF THE COMPARTMENT SHALL PROVIDE MORE THAN 6.25% OF THE FLOOR AREA OF THAT COMPARTMENT.

9 VENTILATION/AIR CONDITIONING CONTROL SYSTEM

9.1 WHEN A VENTILATION/ AIR CONDITIONING CONTROL SYSTEM TO A BUILDING IS PROVIDED, IT SHALL STOP MECHANICALLY INDUCED AIR MOVEMENT WITHIN A DESIGNATED FIRE COMPARTMENT.

LEGEND (FOR LAYOUT PLAN)

- H.R. — HOSE REEL W/ LOCKABLE GLASS FRONTED NOZZLE BOX, STRIKER, C/W FIRE ALARM BELL & BREAK GLASS UNIT
- 150mm FIRE ALARM BELL
- BREAK GLASS UNIT
- SPRINKLER HEAD
- FLOW SWITCH
- MONITORED GATE VALVE
- SPRINKLER ZONE SUBSIDIARY CONTROL VALVE ASSEMBLY INCLUDES ZONE SUBSIDIARY CONTROL VALVE, FLOW SWITCH, TEST GATE VALVE AND DRAIN VALVE
- GATE VALVE
- NON RETURN VALVE
- VORTEX INHIBITOR
- BALL FLOAT VALVE
- P — PRESSURE SWITCH
- SPRINKLER PIPE
- HOSE REEL PIPE
- SPRINKLER CONTROL VALVE SET
- CHECK METER POSITION
- SPRINKLER / F.S. INLET
- F.E.$_{Co2}$ — 5Kg CO2 TYPE FIRE EXTINGUISHER
- F.E.$_{D.P}$ — 4Kg DRY POWDER TYPE FIRE EXTINGUISHER
- PUMP
- 150mm WATER ALARM GONG
- EMERGENCY LIGHTING
- EXIT — EXIT SIGN
- FAP — FIRE ALARM PANEL
- PUMP CONTROL PANEL
- SELF-CONTAINED EMERGENCY FLUORESCENT LIGHTING UNIT
- F. S. INSTALLTION
- FLASH LIGHT

ABBREVIATION

SPR.	SPRINKLER
F.H.	FIRE HYDRANT
H.R.	HOSE REEL
F.E.	FIRE EXTINGUISHER
CO_2	CARBON DIOXIDE
L.P.C.	LOSS PREVENTION COUNCIL
F.S.I.	FIRE SERVICES INSTALLATION
H/L	HIGH LEVEL
M/L	MID LEVEL
L/L	LOW LEVEL
F/A	FROM ABOVE
F/B	FROM BELOW
T/A	TO ABOVE
T/B	TO BELOW
U/G	UNDERGROUND
F.S.	FIRE SERVICES

LEGEND (FOR SCHEMATIC DIAGRAM)

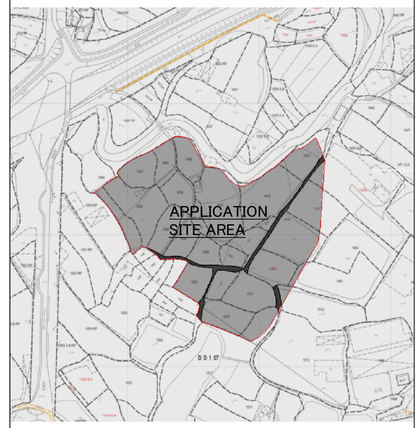
- HOSE REEL W/ LOCKABLE GLASS FRONTED NOZZLE BOX, STRIKER, C/W FIRE ALARM BELL & BREAK GLASS UNIT
- 150mm FIRE ALARM BELL
- BREAK GLASS UNIT
- FAST RESPONSE TYPE SPRINKLER HEAD
- FLOW SWITCH
- MONITORED GATE VALVE
- SPRINKLER ZONE SUBSIDIARY CONTROL VALVE ASSEMBLY INCLUDES ZONE SUBSIDIARY CONTROL VALVE, FLOW SWITCH, TEST GATE VALVE AND DRAIN VALVE
- GATE VALVE
- NON RETURN VALVE
- VORTEX INHIBITOR
- BALL FLOAT VALVE
- P — PRESSURE SWITCH
- PRESSURE GAUGE WITH COCK
- A.A.V. — AUTOMATIC AIR VENT WITH COCK
- SPRINKLER / HOSE REEL PIPE
- SPRINKLER CONTROL VALVE SET
- LEVEL SWITCH (HIGH LEVEL SIGNAL & LOW LEVEL SIGNAL)
- FLEXIBLE CONNECTOR
- CHECK METER POSITION
- PLUG
- Y-STRAINER
- SPRINKLER / F.S. INLET
- SPRINKLER PROVING PIPE
- F. S. INSTALLTION
- PUMP SET

DRAWING LIST

DRAWING NO	DESCRIPTION
YL-KTN1023-FS01	FS NOTES, LEGEND, ABBREVIATIONS AND DRAWING LIST
YL-KTN1023-FS02	FIRE SERVICES INSTALLATION LAYOUT PLAN G/F LAYOUT PLAN
YL-KTN1023-FS03	SCHEMATIC DIAGRAM FOR SPRINKLER SYSTEM
YL-KTN1023-FS04	SCHEMATIC DIAGRAM FOR HOSE REEL SYSTEM

COLOUR CODE

PIPE SIZES	COLOUR
ø25mm	LIGHT GREEN
ø32mm	RED
ø40mm	PURPLE
ø50mm	YELLOW
ø65mm	BLUE
ø80mm	GREEN
ø100mm	LIGHT BROWN
ø150mm	DEEP BROWN



BLOCK PLAN

REV	DESCRIPTION	DATE	BY
1	TPB RESUBMISSION	20-11-2024	LH
0	TPB SUBMISSION	05-08-2024	LH

FSI CONTRACTOR
East Power Engineering Limited
Flat A, 7/F., Hop Shing Commercial Building
41 Chi Kiang Street, Tokwawan, Kowloon
Fax. : 2394-3772 Tel. : 2397-3238

PROJECT

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

DRAWING TITLE

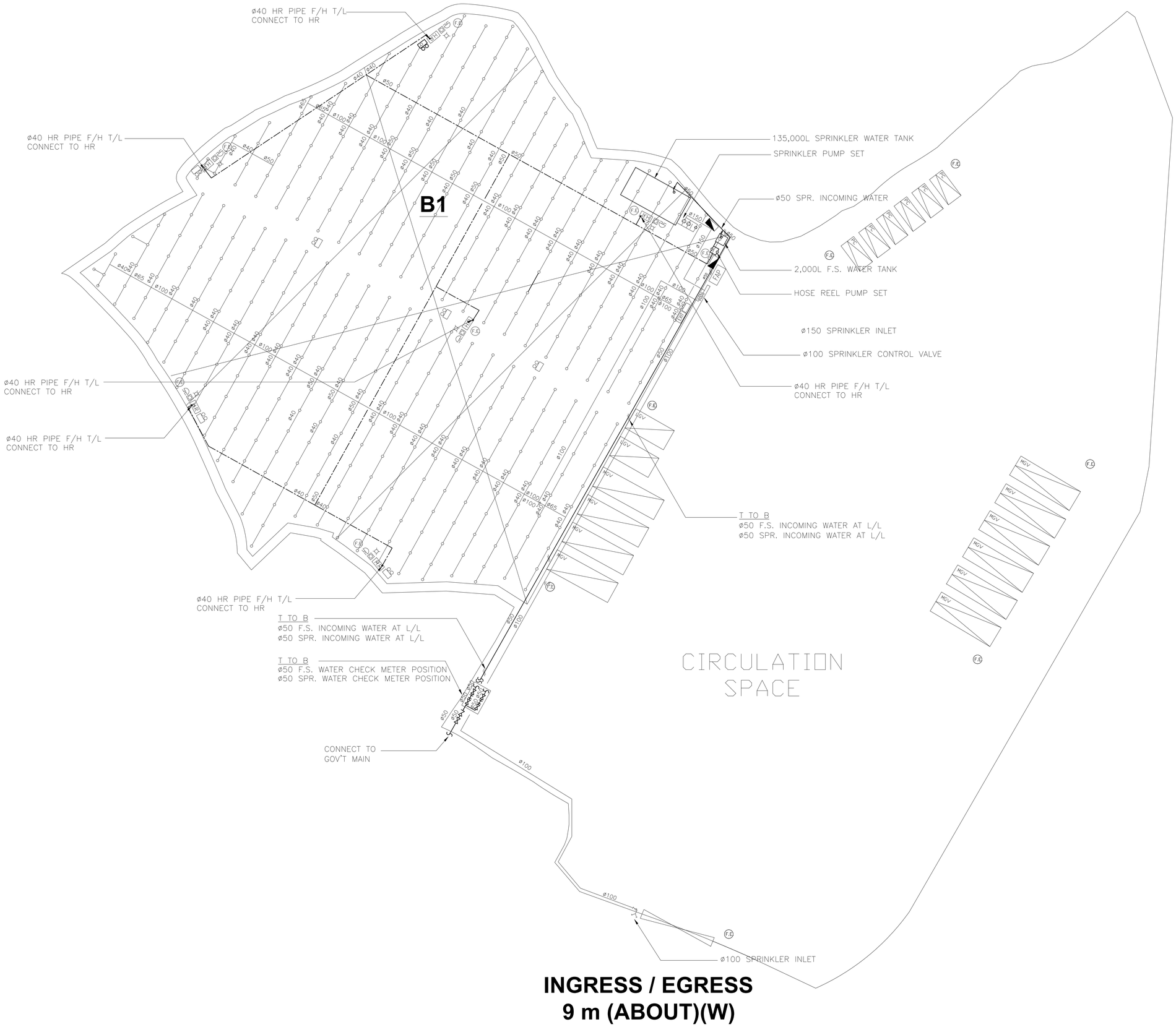
FS NOTES, LEGEND, ABBREVIATIONS AND DRAWING LIST

	INITIAL	DESIGNATION	DATE
DRAWN BY	HY	Eng.T	05-08-2024
DESIGNED BY	HY	Eng.T	05-08-2024
CHECKED BY	CM	PM	05-08-2024
APPROVED BY	-	-	-
PROJECT NO.	A_YL-KTN_1023		
PAPER SIZE	A3		

DRAWING NO.

YL-KTN1023-FS01

SCALE	N. T. S.	REVISION	1



REV	DESCRIPTION	DATE	BY
1	TPB RESUBMISSION	20-11-2024	LH
0	TPB SUBMISSION	05-08-2024	LH

FSI CONTRACTOR

East Power Engineering Limited

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41 Chi Kiang Street, Tokwawan, Kowloon

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PROJECT

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DRAWING TITLE

FIRE SERVICES INSTALLATION LAYOUT PLAN-G/F LAYOUT PLAN

	INITIAL	DESIGNATION	DATE
DRAWN BY	HY	Eng.T	05-08-2024
DESIGNED BY	HY	Eng.T	05-08-2024
CHECKED BY	CM	PM	05-08-2024
APPROVED BY	-	-	-
PROJECT NO.	A_YL-KTN_1023		
PAPER SIZE	A3		

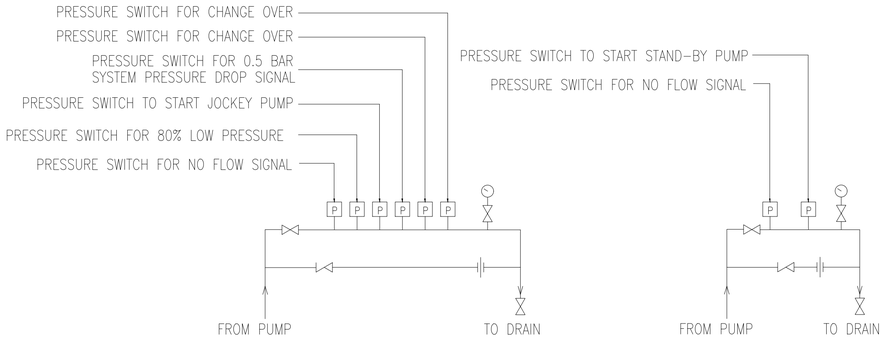
DRAWING NO.

YL-KTN1023-FS02

SCALE	1 : 600	REVISION	0

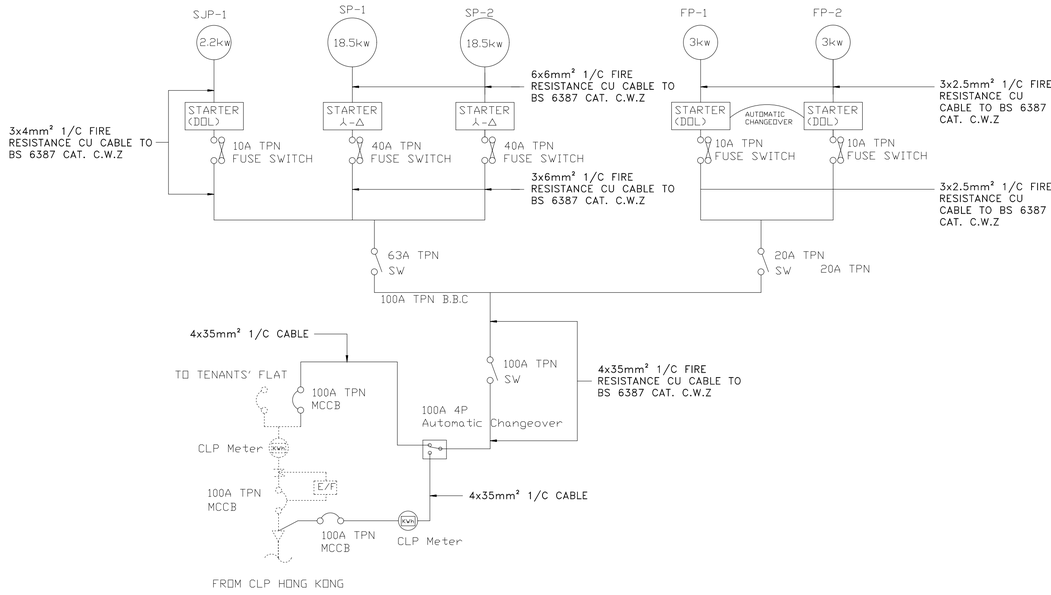
PUMP SCHEDULE

DESCRIPTION	PRESSURE (BAR)	FLOW (L/MIN.)	PUMP SPEED (RPM)	PUMP RATING (KW)	POWER SUPPLY (volts/phases/Hz)
SPRINKLER JOCKEY PUMP (SJP-1)	5	60	2900 MAXIMUM	2.2 KW	380/3/50
TWO SPRINKLER PUMPS (SP-1 AS DUTY & SP-2 AS STAND-BY PUMP)	1.4 / 2.9 / 3.2	2250 / 1350 / 1100	2900 MAXIMUM	18.5 KW	380/3/50

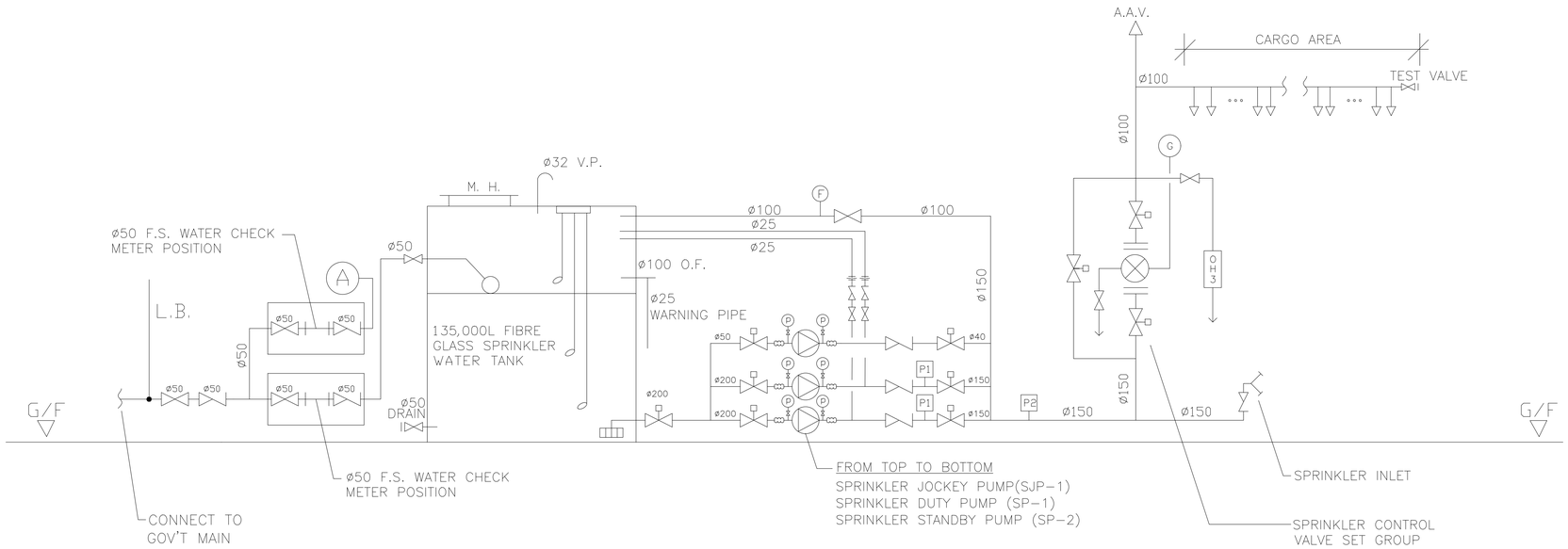


DETAIL ARRANGEMENT FOR 'P2'

DETAIL ARRANGEMENT FOR 'P1'



POWER DISTRIBUTION DIAGRAM FOR SPRINKLER AND FIRE SERVICE PUMPS



SCHEMATIC DIAGRAM FOR SPRINKLER SYSTEM

REV	DESCRIPTION	DATE	BY
1	TPB RESUBMISSION	20-11-2024	LH
0	TPB SUBMISSION	05-08-2024	LH

FSI CONTRACTOR

East Power Engineering Limited

Flat A, 7/F., Hop Shing Commercial Building
41 Chi Kiang Street, Tokwawan, Kowloon
Fax. : 2394-3772 Tel. : 2397-3238

PROJECT

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

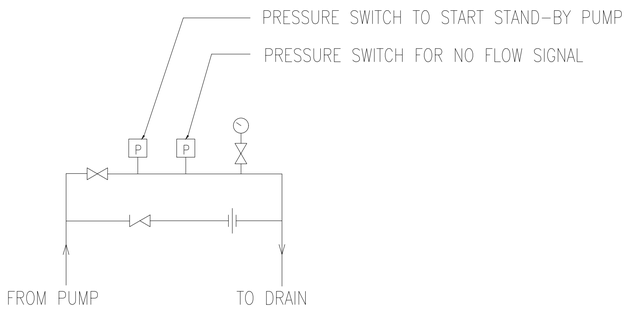
DRAWING TITLE

SCHEMATIC DIAGRAM FOR SPRINKLER SYSTEM

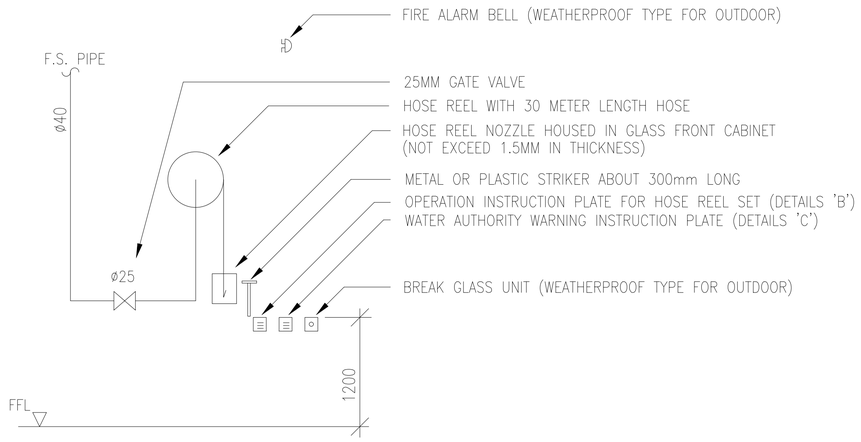
	INITIAL	DESIGNATION	DATE
DRAWN BY	HY	Eng.T	05-08-2024
DESIGNED BY	HY	Eng.T	05-08-2024
CHECKED BY	CM	PM	05-08-2024
APPROVED BY	-	-	-
PROJECT NO.	A_YL-KTN_1023		
PAPER SIZE	A3		
DRAWING NO.	YL-KTN1023-FS03		
SCALE	N. T. S.	REVISION	0

PUMP SCHEDULE

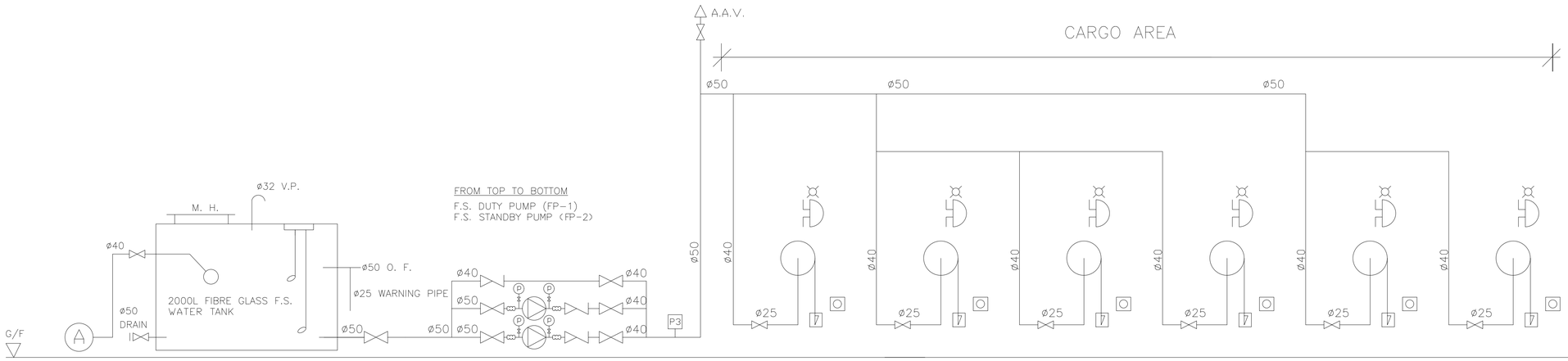
DESCRIPTION	PRESSURE (BAR)	FLOW (L/MIN.)	PUMP SPEED (RPM)	PUMP RATING (KW)	POWER SUPPLY (volts/phases/Hz)
TWO FIRE SERVICES PUMPS (FP-1 AS DUTY & FP-2 AS STANDBY PUMP)	5	60	2900 MAXIMUM	2.2KW	380/3/50



DETAIL ARRANGEMENT FOR 'P3'



TYPICAL ARRANGEMENT OF HOSE REEL



SCHEMATIC DIAGRAM FOR HOSE REEL SYSTEM

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1	TPB RESUBMISSION	20-11-2024	LH
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FSI CONTRACTOR

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Fax. : 2394-3772 Tel. : 2397-3238

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DRAWING TITLE

SCHEMATIC DIAGRAM FOR HOSE REEL SYSTEM

	INITIAL	DESIGNATION	DATE
DRAWN BY	HY	Eng.T	05-08-2024
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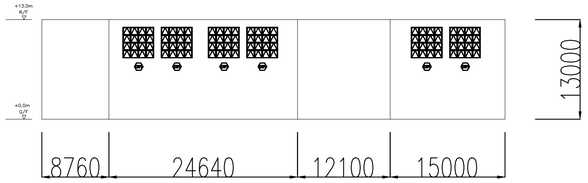
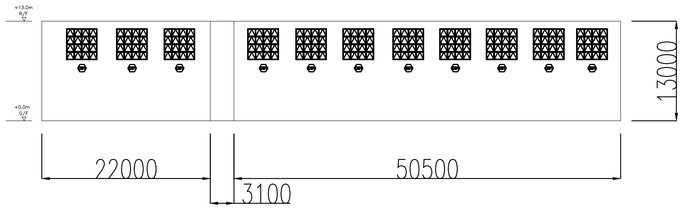
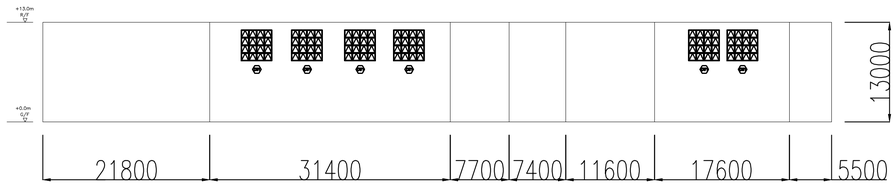
CHECKED BY	CM	PM	05-08-2024
APPROVED BY	-	-	-
PROJECT NO.	A_YL-KTN_1023		
PAPER SIZE	A3		
DRAWING NO.	YL-KTN1023-FS04		
SCALE	N. T. S.	REVISION	0



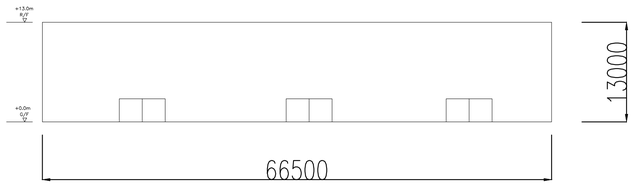
ELEVATION PLAN (ELV 1)



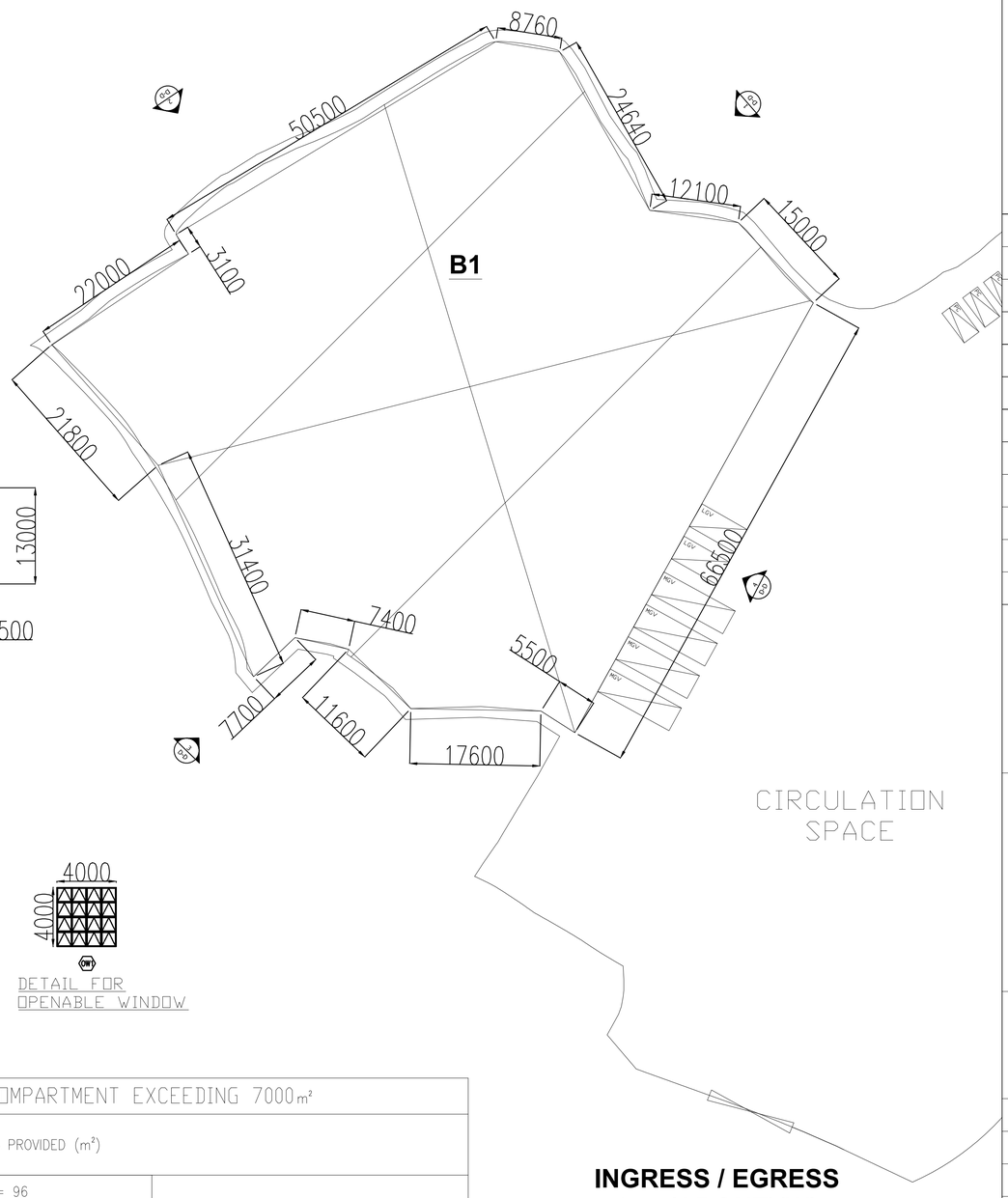
ELEVATION PLAN (ELV 2)



ELEVATION PLAN (ELV 3)



ELEVATION PLAN (ELV 4)



DETAIL FOR OPENABLE WINDOW

OPENABLE WINDOW AREA CALCULATION UNDER F.S.D. REQUIREMENT FOR COMPARTMENT EXCEEDING 7000m²

LOCATION	USABLE FL. AREA (m^2)	OPENABLE WINDOW AREA REQUIRED (m^2)	OPENABLE WINDOW AREA PROVIDED (m^2)	
STRUCTURE B1	5648	5648 X 6.25% = 353	REFER TO ELEVATION 1 = 96 REFER TO ELEVATION 2 = 176 REFER TO ELEVATION 3 = 96	TOTAL = 368 > 353

REV	DESCRIPTION	DATE	BY
1	TPB RESUBMISSION	20-11-2024	LH
0	TPB SUBMISSION	05-08-2024	LH

FSI CONTRACTOR
East Power Engineering Limited
Flat A, 7/F., Hop Shing Commercial Building
41 Chi Kiang Street, Tokwawan, Kowloon
Fax. : 2394-3772 Tel. : 2397-3238

PROJECT

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

DRAWING TITLE

OPENABLE WINDOW AREA CALCULATION FOR STRUCTURE

	INITIAL	DESIGNATION	DATE
DRAWN BY	HY	Eng.T	05-08-2024
DESIGNED BY	HY	Eng.T	05-08-2024
CHECKED BY	CM	PM	05-08-2024
APPROVED BY	-	-	-

PROJECT NO.	A_YL-KTN_1023
PAPER SIZE	A3
DRAWING NO.	A_YL-KTN1023 FS05
SCALE	1 : 800
REVISION	

Excel Link Development Limited

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, 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/1023)

Document No. V1094/01
Issue 2

December 2024

MANNINGS
(Asia) Consultants Limited

V1094/01
Issue 2
December 2024

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, 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/1023)

Approved for Issue by:

Kenny W K Lam RPE (Civil)
FW0275905

Position: Deputy Managing Director

Date: 17 December 2024

Excel Link Development Ltd
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V1094/01
Issue 2
December 2024

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, 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/1023)

Issue	Prepared by	Reviewed by	Date
1	BH	BLE	23 Sep 2024
2	BH	BLE	17 Dec 2024

Content

List of Appendix

Drawing List

List of Tables

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 warehouse (excluding dangerous goods godown) with ancillary facilities for a period of 3 years and associated filling of land and pond 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 15,822m^2 and it is currently covered in grassland with few temporary structures. A 1-storey structure is proposed at the Site for temporary warehouse with total GFA of about 5,648 m^2. The general layout plan and cross sections of the Site are shown on the **Drawing Nos. V1094/001 and V1094/002** 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 Excel Link Development 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
Roof of 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 2-1 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 for minimum steel area : 3.4
- 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 As mentioned in Para. 1.2, the Site is currently covered in grassland with few temporary structures. 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 m3/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,

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

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.

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

Where t_e = time of concentration (min)
L = catchment length (m)
A = catchment area (m2)
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 (td<240), and
a,b,c = storm constants given in table 3 of SDM as below

Table 2-2 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 ranging from +4.2 mPD to +5.2 mPD. In general, the direction of existing surface runoff flows from north to south. Since the 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 are shown in **Drawing No. V1094/005** in **Appendix A**.

Proposed Development

3.3 A 1-storey structure is proposed at the Site for temporary warehouse as stated in Para. 1.2. After completion of the project, the finished ground level of the Site will be raised to approximately +5.7 mPD to +6.2 mPD. Part of the unpaved areas is proposed to be occupied by a new covered structures whilst the remaining unpaved area would be unchanged in regards of the finished surface and continued to be an opened space area. In addition, some of these unpaved opened areas are proposed to be served as access road and parking spaces. A layout plan of the proposed development with **Drawing No. V1094/001** is enclosed in **Appendix A**.

Proposed Drainage

3.4 According to the site survey and observation, there are two existing outfalls located at the north of the Site flowing from south to north and connecting to a 7m wide open channel. The runoff from the Site after development will be discharged into this open channel through the two existing outfall pipes. The photo records of the existing drainage are presented in **Appendix C**.

3.5 The drain on the roof of the proposed structure (i.e. Catchment Area C) will fall to two edges as shown in catchment plan in **Drawing No. V1094/006** in **Appendix A**. Then, the runoff would drain a 525mm dia. downpipe which is mounted on the structure with a 90-degree bend connected to the 525mm dia. elevated drainage pipe to manhole MH3. The proposed 525mm dia. elevated drainage pipe are installed at the side of the existing footbridge across the northern stream of the Site. The 525mm dia. drainage pipe are embedded underground from MH3 to outfall 2. Drainage layout plan and details of drainage are shown in **Drawing Nos. V1094/004** and **V1094/007** in **Appendix A**.

3.6 The 375mm U-channels are proposed at south of the Site. The runoff from the unpaved area in the Site (i.e. Catchment Area Nos. D) would be collected by u-channels and drain to outfall 1 by gravity via 450mm dia. drainage pipes. Drainage layout plan and details of drainage are shown in **Drawing Nos. V1094/003 and V1094/007** in **Appendix A**.

3.7 Calculation of the proposed drainage are presented in Section 4 and enclosed in **Appendix B**.

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

Changes in Land Use and Planned Drainage Works in Adjacent Area

3.9 It is noted that changes of land use might happen at the adjacent area of south-east 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.

3.10 Since the surface runoff of the adjacent area will be collected and discharged to an existing drainage system near Shui Mei Road as shown in **Drawing No. V1094/101**, **103** and **104** 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 The Site is currently covered in grassland with few temporary structures. After completion of the project, the Site will remain as an unpaved area except the proposed structure. Runoff coefficient 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 paged 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 No flood storage was found near the Site.

Changes in Timing of Peak runoff

4.4 Changes of time of concentration of Outfall 1and Outfall 2 before and after development are summarized in below table. The calculation is attached in **Appendix B**.

Outfall	**Time of concentration (min)**	
	Before Development	**After Development**
Outfall 1	24.39	22.20
Outfall 2	19.86	19.99

Hydraulic Bankfull Capacity of the Proposed Drainage System

4.5 The proposed drainage system mentioned in Para. 3.3 to Para 3.5 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.

Proposed U-Channel	**Design Runoff (m^3/s)**	**Capacity (m^3/s)**	**Utilization**
UC1 to UC2	0.119	0.146	0.82
UC3 to UC7	0.115	0.146	0.79

4.7 The design runoff, capacity and utilization of the 375mm gutter mounted on structure are summarized in below table.

Proposed Gutter	**Design Runoff (m^3/s)**	**Capacity (m^3/s)**	**Utilization**
375mm Gutter	0.181	0.230	0.78

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

Proposed Pipe	**Design Runoff (m^3/s)**	**Capacity (m^3/s)**	**Utilization**
To Outfall 1:			
CP7 to MH1	0.114	0.156	0.73
MH1 to MH2	0.114	0.156	0.73
MH2 to Outfall 1	0.113	0.156	0.72
To Outfall 2:			
450mm Elevated Pipe	0.202	0.241	0.84
525mm Downpipe	0.360	1.195	0.30
MH3 to MH4	0.358	0.528	0.68
MH4 to Outfall 2	0.358	0.446	0.80

Changes in Peak Runoff and Peak Velocity at Critical Locations (Outfalls)

4.9 Below table shows the comparison of the peak runoff and peak velocity of the two outfalls before and after the development. Detailed calculation is attached in **Appendix B**.

	Outfall 1		**Outfall 2**	
	Peak Runoff (m^3/s)	**Peak Velocity (m/s)**	**Peak Runoff (m^3/s)**	**Peak Velocity (m/s)**
Before Development	0.269	1.079	0.014	1.052
After Development	0.330	1.079	0.274	1.052

Potential Drainage Impact to Existing Drainage System

4.10 The proposed drainage systems are proposed to discharge to two existing outfalls as mentioned in Para. 3.3. Flows to the two outfalls will be increased.

4.11 For the existing drainage system, the two existing outfall pipes located at the north of the Site are checked. Both outfall pipes 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 4-1.

Table 4-1 Estimated Runoff and Capacities of Existing Drainage

Existing Drainage	**Estimated runoff (m^3/s)**	**Capacity (m^3/s)**	**Utilization**
Outfall 1	0.330	0.429	0.77
Outfall 2	0.274	0.418	0.65

Temporary Drainage during Construction

4.12 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

4.13 Proposed drainage systems are connecting to Outfall 1 and Outfall 2 as shown in **Drawing No. V1094/003** and **004** in **Appendix A**.

Potential Drainage Impacts to Other Land Users

4.14 All runoff in the Site will be collected and drain to existing drainage system as stated in Para. 3.3, 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 no 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

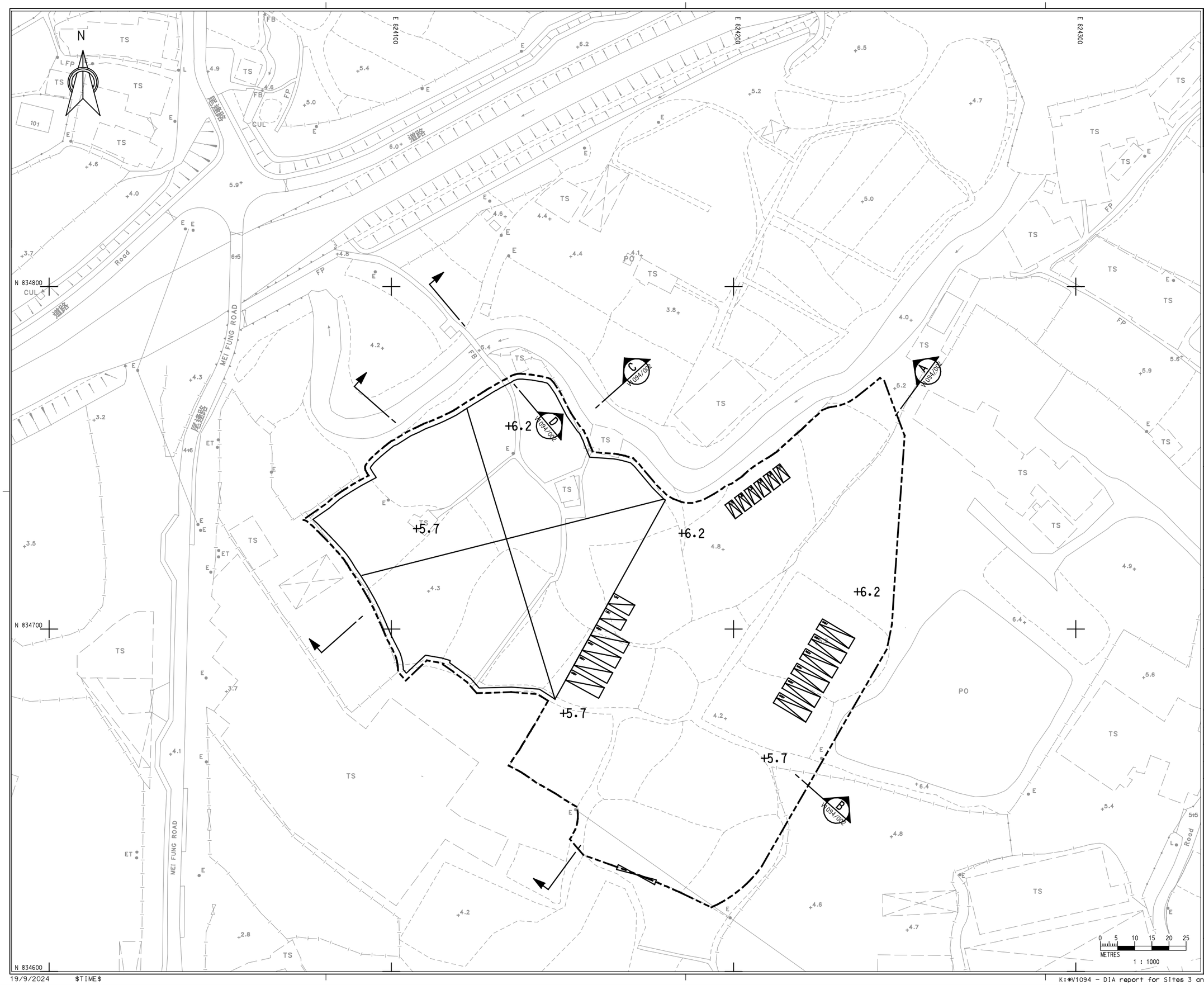
Type / location of monitoring	Minimum Frequency	Action by
Prepare method statements	Before the start of any works that could impact on drainage	Contractor
Inspect existing drainage systems and all construction drainage systems for blockages or breakages	Daily, Weekly, Before every rainstorm warning After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

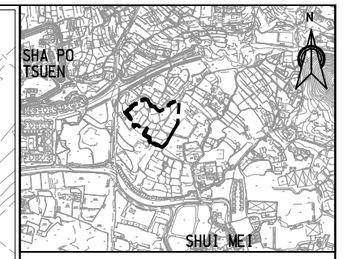
7.0 Conclusion

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
- STRUCTURE
- PARKING SPACE
- L/UL SPACE
- INGRESS / EGRESS
- +6.4 PROPOSED SITE LEVEL

Rev.	Description of Revision	Date	Ckd.

Client

EXCEL LINK DEVELOPMENT LIMITED

Consultants

MANNINGS (Asia) Consultants Limited

Scale in A3: AS SHOWN		Date: SEP 2024
Designed: EM	Drawn: KAM	Checked: BLE
Design Team Leader: SC		Date: SEP 2024
Approved: KTC		Date: SEP 2024

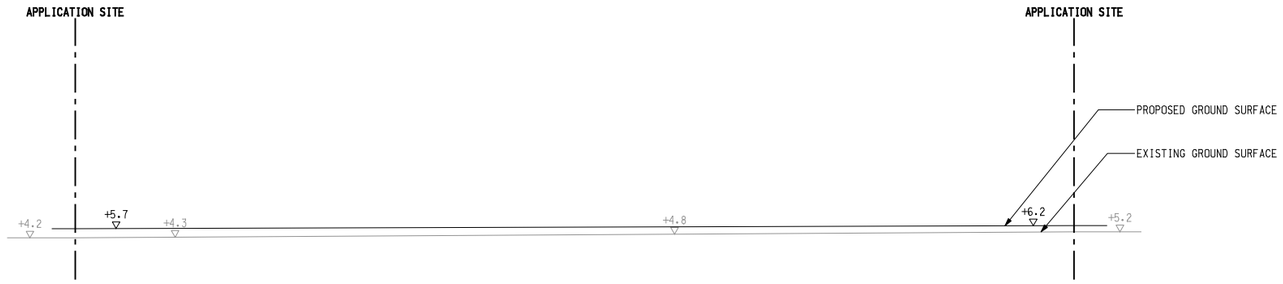
Project

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

Title

LAYOUT PLAN

Drawing No.	Stage	Rev.
V1094/001	P	-



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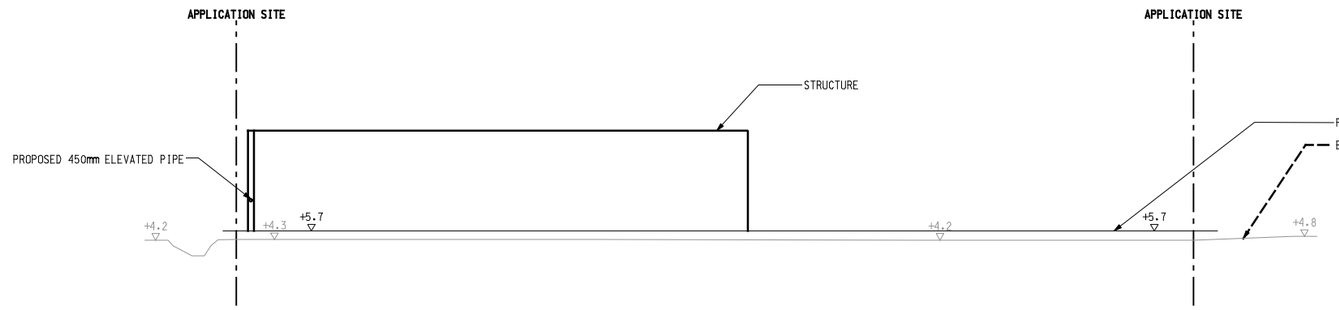

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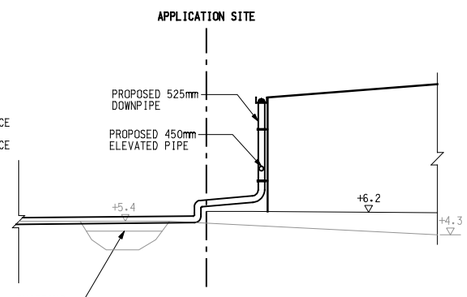

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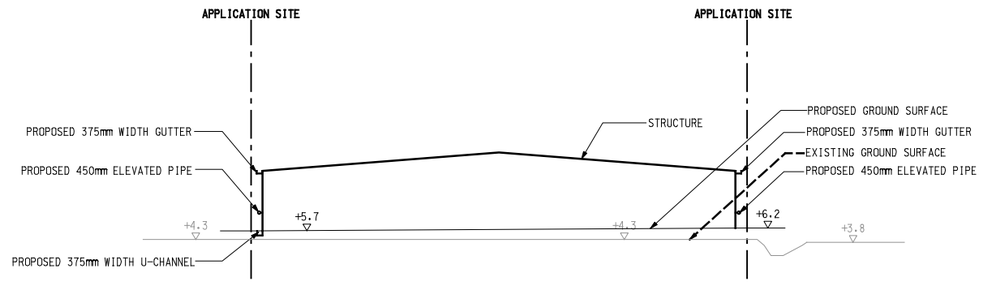

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Rev.	Description of Revision	Date	Ckd.

Client

EXCEL LINK DEVELOPMENT LIMITED

Consultants

MANNINGS (Asia) Consultants Limited

Scale in A3 AS SHOWN	Date SEP 2024
Designed EM	Drawn KAM / Checked BLE
Design Team Leader SC	Date SEP 2024
Approved KTC	Date SEP 2024

Project

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

Title

CROSS SECTION

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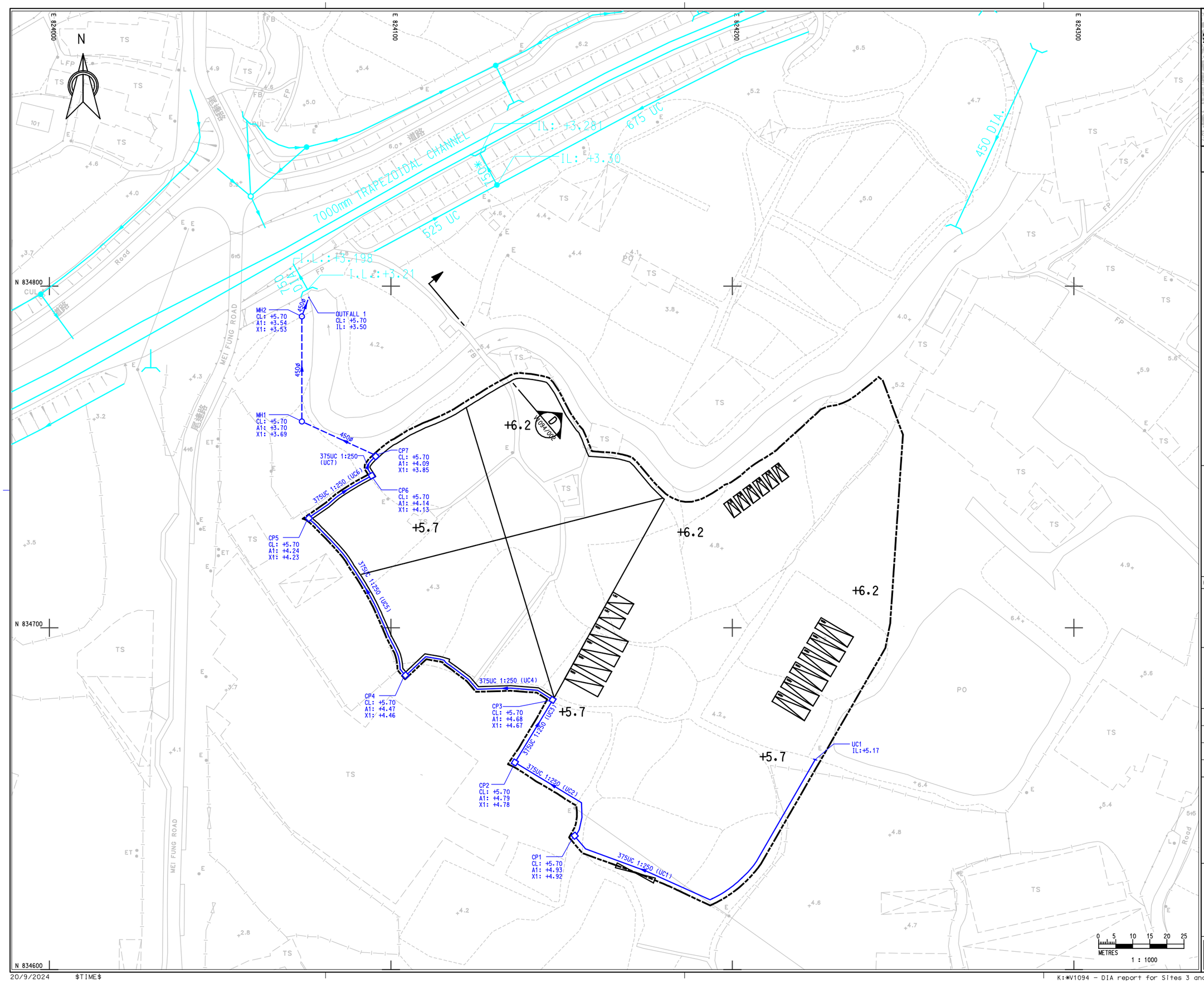
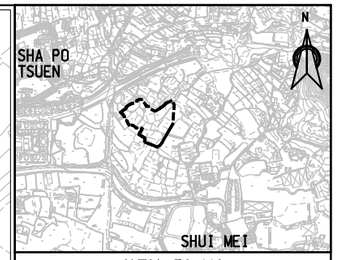
V1094/002	P	-





KEY PLAN
SCALE 1:20000

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LEGEND :

- APPLICATION SITE
- STRUCTURE
- PARKING SPACE
- L/UL SPACE
- INGRESS / EGRESS
- PROPOSED U-CHANNEL
- PROPOSED PIPE
- EXISTING DRAINAGE PIPE/ U-CHANNEL
- PROPOSED CATCHPIT
- PROPOSED MANHOLE
- EXISTING MANHOLE

Rev.	Description of Revision	Date	Ckd.

Client

EXCEL LINK DEVELOPMENT LIMITED

Consultants

MANNINGS (Asia) Consultants Limited

Scale In A3: AS SHOWN		Date: SEP 2024
Designed: EM	Drawn: KAM	Checked: BLE
Design Team Leader: SC		Date: SEP 2024
Approved: KTC		Date: SEP 2024

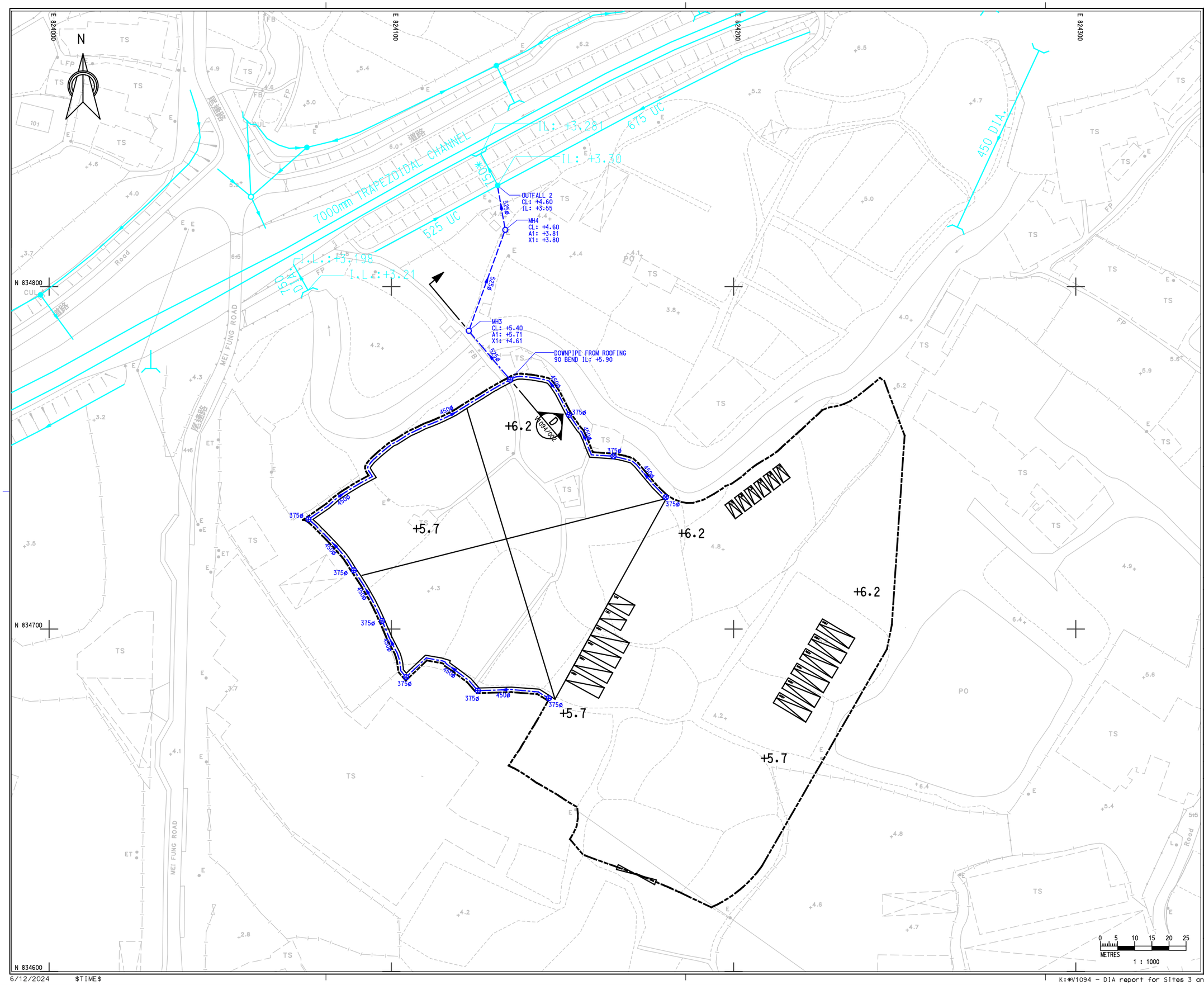
Project

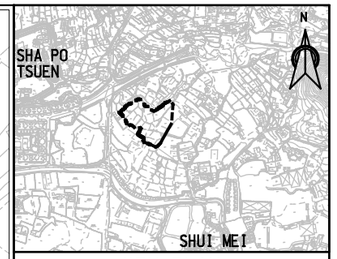
PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

Title

DRAINAGE LAYOUT PLAN - UNPAVED AREA

Drawing No.	Stage	Rev.
V1094/003	P	-





KEY PLAN
SCALE 1:20000

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LEGEND :

- APPLICATION SITE
- STRUCTURE
- PARKING SPACE
- L/UL SPACE
- INGRESS / EGRESS
- PROPOSED ELEVATED PIPE
- PROPOSED PIPE
- EXISTING DRAINAGE PIPE/ U-CHANNEL
- PROPOSED DOWNPIPE
- PROPOSED MANHOLE
- EXISTING MANHOLE

Rev.	Description of Revision	Date	Ckd.

Client

EXCEL LINK DEVELOPMENT LIMITED

Consultants

MANNINGS (Asia) Consultants Limited

Scale in A3: AS SHOWN		Date: SEP 2024
Designed: EM	Drawn: KAM	Checked: BLE
Design Team Leader: SC		Date: SEP 2024
Approved: KTC		Date: SEP 2024

Project

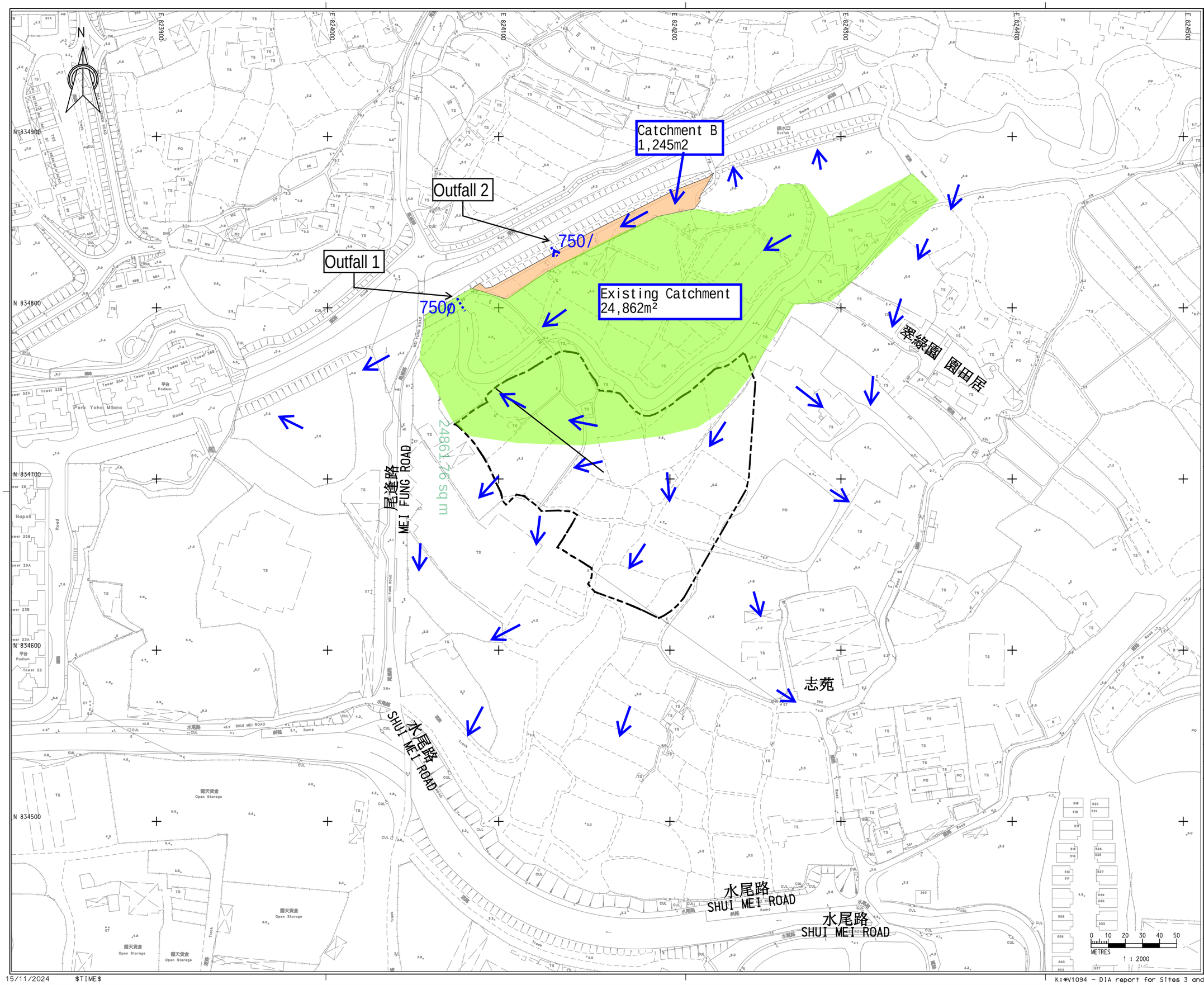
PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

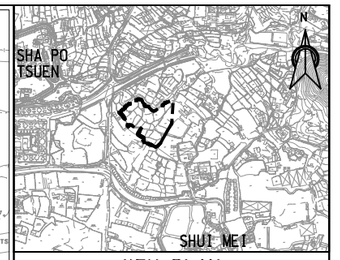
Title

DRAINAGE LAYOUT PLAN - STRUCTURE ROOFING

Drawing No.	Stage	Rev.
V1094/004	P	-

0 5 10 15 20 25 METRES
1 : 1000





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

RUNOFF DIRECTION

Rev.	Description of Revision	Date	Ckd.
A	GENERAL REVISION	NOV 24	-

Client

EXCEL LINK DEVELOPMENT LIMITED

Consultants

MANNINGS (Asia) Consultants Limited

Scale in A3 AS SHOWN		Date SEP 2024
Designed EM	Drawn KAM	Checked BLE
Design Team Leader SC		Date SEP 2024
Approved KTC		Date SEP 2024

Project

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

Title

CATCHMENT PLAN - BEFORE DEVELOPMENT

Drawing No.	Stage	Rev.
V1094/005	P	A

Catchment B
1,245m2

Outfall 2

Outfall 1

750ø

750ø

Catchment A
19,500m2

2,824m2

2,824m2

Catchment C
5,648m2

Catchment D
10,174m2

MEI FUNG ROAD 尾豐路

翠綠園 園田居

志苑

SHUI MEI ROAD 水尾路

水尾路 SHUI MEI ROAD

水尾路 SHUI MEI ROAD

N 834900
N 834800
N 834700
N 834600
N 834500

E 823900
E 824000
E 824100
E 824200
E 824300
E 824400
E 824500

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
- L/UL SPACE
- INGRESS / EGRESS
- +6.4 PROPOSED SITE LEVEL
- RUNOFF DIRECTION

Rev.	Description of Revision	Date	Ckd.

Client

EXCEL LINK DEVELOPMENT LIMITED

Consultants

MANNINGS (Asia) Consultants Limited

Scale in A3	Date
AS SHOWN	SEP 2024

Designed	Drawn	Checked
EM	KAM	BLE

Design Team Leader	Date
SC	SEP 2024

Approved	Date
KTC	SEP 2024

Project

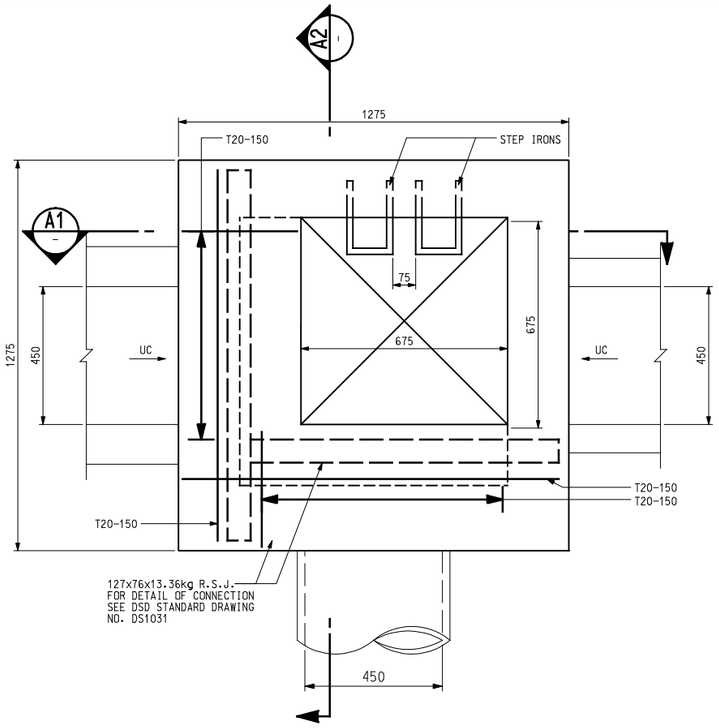
PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

Title

CATCHMENT PLAN - AFTER DEVELOPMENT

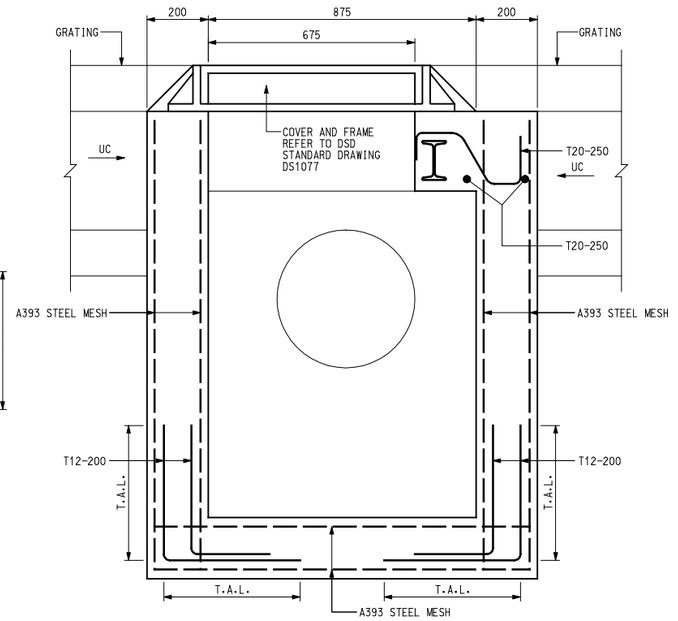
Drawing No.	Stage	Rev.
V1094/006	P	-

0 10 20 30 40 50
METRES
1 : 2000

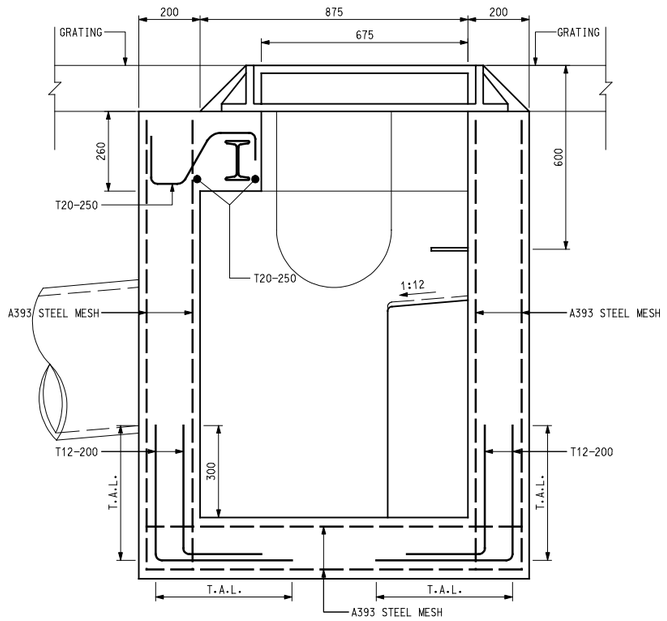


TYPICAL DETAILS OF CATCHPIT TYPE A

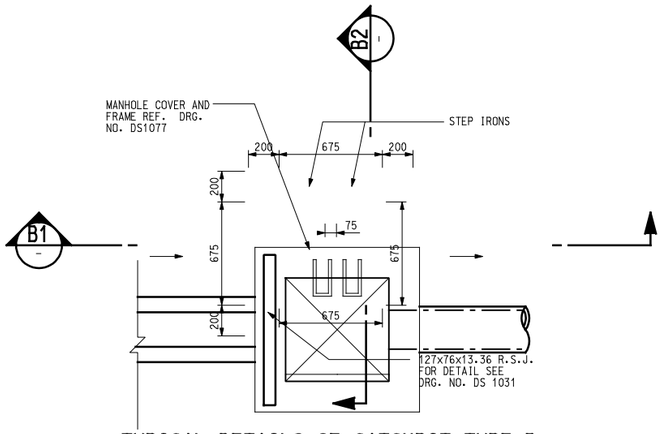
SCALE 1:20



SECTION A1
SCALE 1:20

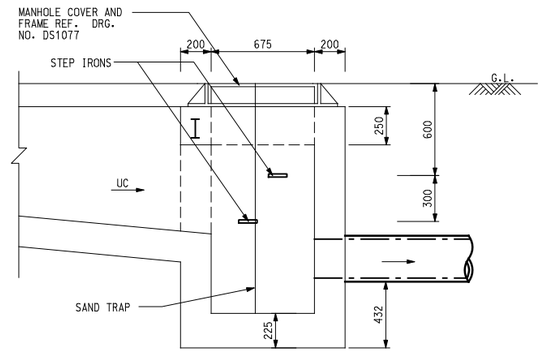


SECTION A2
SCALE 1:20

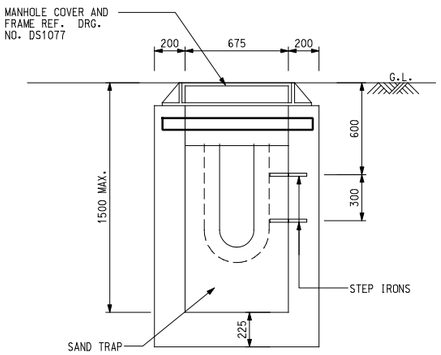


TYPICAL DETAILS OF CATCHPIT TYPE B

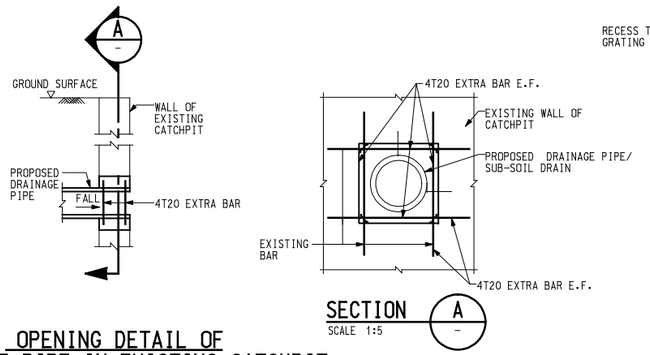
SCALE 1:40



SECTION B1
SCALE 1:40

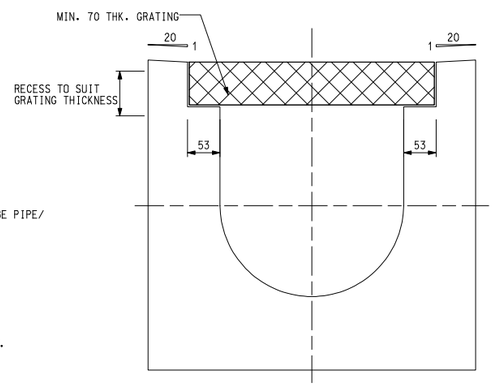


SECTION B2
SCALE 1:40



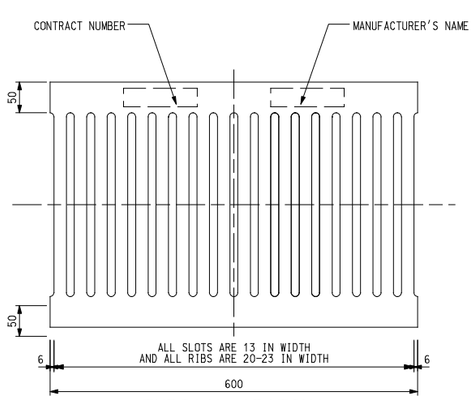
SECTION A
SCALE 1:5

OPENING DETAIL OF DRAINAGE PIPE IN EXISTING CATCHPIT



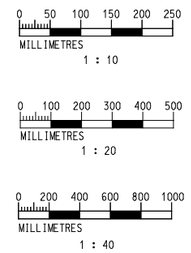
TYPICAL CROSS SECTION OF CHANNEL

SCALE 1:10



TYPICAL GRATING

SCALE 1:10



NOTES :

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Rev.	Description of Revision	Date	Ckd.

Client

EXCEL LINK DEVELOPMENT LIMITED

Consultants

MANNINGS (Asia) Consultants Limited

Scale in A3	Date
AS SHOWN	AUG 2024

Designed	Drawn	Checked
EM	KAM	BLE

Design Team Leader	Date
SC	AUG 2024
Approved	Date
KTC	AUG 2024

Project

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

Title

TYPICAL DETAILS OF DRAINAGE

Drawing No.	Stage	Rev.
V1094/007	P	-

Appendix B

Design Calculations

Existing Scenario

Mannings (Asia) Consultants Ltd.	Job No.	Sheet No.	Rev.
Calculation Sheet	Member / Location		
Job Tilte: Proposed Temporary Warehouse(Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories	Drg. Ref.		
	Made By NHL	Date	Chd.

The drainage design is referring to DSD's SDM 2018 & Corrigendum No. 1/2022 and Corrigendum No. 1/2024
1 in 50 year design return period is taken.

Rational method is used for calculation of the peak runoff. The formula is extracted from Section 7.5.2 (a) of SDM.
Qp = 0.278 C i A
Where Qp = peak runoff in m^3/s
I = rainfall intensity in mm/hr
A = catchment area in km^2

Runoff Estimation for Outfall 1 (Existing Scenario)

	Natural Catch. (m^2)	**Longest flow path (m)**	**Gradient (m per 100m)**	**to (min) = 0.14465L/ ($H^{0.2}A^{0.1}$)**	**Runoff coeff.**	**Total Catch. Area (m^2)**	**50 year Intensity (mm/hr)**	**50 year design runoff = 0.278CiA (m^3/s)**
Existing Catchment	24862	160	0.005	24.27	0.25	24862	155.75	0.269

Runoff Estimation for Outfall 2 (Existing Scenario)

	Natural Catch. (m^2)	**Longest flow path (m)**	**Gradient (m per 100m)**	**to (min) = 0.14465L/ ($H^{0.2}A^{0.1}$)**	**Runoff coeff.**	**Total Catch. Area (m^2)**	**50 year Intensity (mm/hr)**	**50 year design runoff = 0.278CiA (m^3/s)**
Existing Catchment	1245	100	0.006	19.73	0.25	1245	166.02	0.014

Draninage Impact Assessment

Existing Scenario

Outfall (Existing Pipe)		Catchment Area		Length (m)	Nominal Diameter (mm)	Gradient, S_f		Roughness Coefficient (m)	Velocity (m/s)	Time of Flow (min)	Rainfall Duration (min)	50 year Intensity (mm/hr)	Runoff Coeff.	50 year Runoff (m^3/s)	Total Flow (m^3/s)	Capacity (m^3/s)	Adjusted Capacity > Total Flow ?	Cover Level		Invert Level	
		Increment (m^2)	Accu. (m^2)			(%)	1 in											From (mPD)	To (mPD)	From (mPD)	To (mPD)
Outfall 1 (Checking Existing Pipe)																					
Outfall 1	Existing Pipe	24862	24862	8	750	0.3	400.0	3.0	1.079	24.39	24.39	155.50	0.25	0.269	0.269	0.429	Yes	4.30	5.20	3.21	3.19
		0	0										1.00	0.000							
Outfall 2 (Checking Existing Pipe)																					
Outfall 2	Existing Pipe	1245	1245	8	750	0.2	421.1	3.0	1.052	19.86	19.86	165.70	0.25	0.014	0.014	0.418	Yes	4.30	5.20	3.30	3.28
		0	0										1.00	0.000							

Mean Velocity is calculated by Colebrook- White equation

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

Where:
$\overline{V}$ =Mean Velocity (m/s)
R =Hydraulic Diameter (m)
Ks =Surface Roughness (m)
V =Kinematic viscosity (kg/ms)
Sf =Slope of Hydraulic Gradient
g =Gravity (m/s^2)
The Roughness Coefficient Ks is assumed to be 3 for concrete.
Peak Runoff is estimated using rational method according to SDM.

The Roughness Coefficient Ks is assumed to be 3 for concrete, 0.06 for uPVC pipe.

Proposed Drainage System

Mannings (Asia) Consultants Ltd.	Job No.	Sheet No.	Rev.
Calculation Sheet	Member / Location		
Job Tilte: Proposed Temporary Warehouse(Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories	Drg. Ref.		
	Made By NHL	Date	Chd.

The drainage design is referring to DSD's SDM 2018 & Corrigendum No. 1/2022 and Corrigendum No. 1/2024
1 in 50 year design return period is taken.

Rational method is used for calculation of the peak runoff. The formula is extracted from Section 7.5.2 (a) of SDM.
Qp = 0.278 C i A
Where Qp = peak runoff in m^3/s
I = rainfall intensity in mm/hr
A = catchment area in km^2

Runoff Estimation

U-Channel	**Natural Catch. (m^2)**	**Longest flow path (m)**	**Gradient (m per 100m)**	**to (min) = 0.14465L/ ($H^{0.2}A^{0.1}$)**	**Length of U-Channel (m)**	**t_f = L/v (min)**	**tc = to + t_f (min)**	**Runoff coeff.**	**Total Catch. Area (m^2)**	**50 year Intensity (mm/hr)**	**50 year design runoff = 0.278CiA (m^3/s)**
UC1 to UC 2	10174	130	0.014	17.48	90	1.29	18.77	0.25	10174	168.55	0.119
UC3 to UC 7	0	-	-	-	160	2.30	21.07	0.25	10174	162.72	0.115

Runoff Estimation (Structure Roofing)

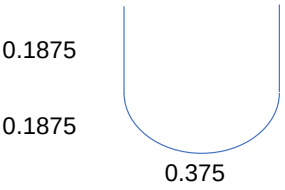
Roofing	**Natural Catch. (m^2)**	**Longest flow path (m)**	**Gradient (m per 100m)**	**to (min) = 0.14465L/ ($H^{0.2}A^{0.1}$)**	**Length of Ditch (m)**	**t_f = L/v (min)**	**tc = to + t_f (min)**	**Runoff coeff.**	**Total Catch. Area (m^2)**	**50 year Intensity (mm/hr)**	**50 year design runoff = 0.278CiA (m^3/s)**
Roofing Gutter	2824	26	0.010	4.27	180	1.63	5.90	1	2824	229.99	0.181

Mannings (Asia) Consultants Ltd.	Job No.	Sheet No.	Rev.
Calculation Sheet	Member / Location		
Job Tilte: Proposed Temporary Warehouse(Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories	Drg. Ref.		
	Made By NHL	Date	Chd.

Checking of Capacity (UC1 and UC2)

Input Data

Width of UC	=	0.375	m
Height of UC	=	0.375	m
Design Runoff	=	0.119 ($Q_{discharge}$)	m^3/s



Flow capacity, Q

$$Q = \frac{A \times r^{2/3} \times s^{1/2}}{n}$$

where A = cross sectional area of flow (m^2) = 0.125536 m^2

r = hydraulic radius (m)

s = slope of the water surface or the linear hydraulic head loss (m/m)

n = Manning coefficient of roughness

Hydraulic radius

$$r = \frac{A}{P}$$

p = wetted perimeter (m) = 0.96 m

r = 0.13 *m*

Slope

s = 0.004 m/m

Manning coefficient of roughness

n = 0.014

Therefore,

Q = 0.146 m^3/s **> Design runoff, OK!**

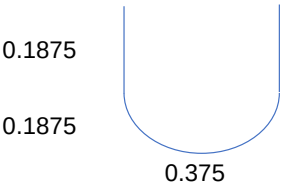
V = Q/A = 1.16 m/s

Mannings (Asia) Consultants Ltd.	Job No.	Sheet No.	Rev.
Calculation Sheet	Member / Location		
Job Tilte: Proposed Temporary Warehouse(Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories	Drg. Ref.		
	Made By NHL	Date	Chd.

Checking of Capacity (UC3 to UC7)

Input Data

Width of UC	=	0.375	m
Height of UC	=	0.375	m
Design Runoff	=	0.115 ($Q_{discharge}$)	m^3/s



Flow capacity, Q

$$Q = \frac{A \times r^{2/3} \times s^{1/2}}{n}$$

where A = cross sectional area of flow (m^2) = 0.125536 m^2

r = hydraulic radius (m)

s = slope of the water surface or the linear hydraulic head loss (m/m)

n = Manning coefficient of roughness

Hydraulic radius

$$r = \frac{A}{P}$$

p = wetted perimeter (m) = 0.96 m

r = 0.13 *m*

Slope

s = 0.004 m/m

Manning coefficient of roughness

n = 0.014

Therefore,

Q = 0.146 m^3/s **> Design runoff, OK!**

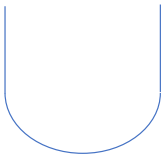
V = Q/A = 1.16 m/s

Mannings (Asia) Consultants Ltd.	Job No.	Sheet No.	Rev.
Calculation Sheet	Member / Location		
Job Tilte: Proposed Temporary Warehouse(Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories	Drg. Ref.		
	Made By NHL	Date	Chd.

Checking of Capacity (Gutter)

Input Data

Width of UC	=	0.375	m	0.1875
Height of UC	=	0.375	m	
Design Runoff	=	0.181 ($Q_{discharge}$)	m^3/s	0.1875



Flow capacity, Q

$$Q = \frac{A \times r^{2/3} \times s^{1/2}}{n}$$

where A = cross sectional area of flow (m^2) = 0.125536 m^2

r = hydraulic radius (m)

s = slope of the water surface or the linear hydraulic head loss (m/m)

n = Manning coefficient of roughness

Hydraulic radius

$$r = \frac{A}{P}$$

p = wetted perimeter (m) = 0.96 m

r = 0.13 *m*

Slope

s = 0.010 m/m

Manning coefficient of roughness

n = 0.014

Therefore,

Q = 0.230 m^3/s **> Design runoff, OK!**

V = Q/A = 1.84 m/s

Stormwater Drainage Design

Manhole		Catchment Area		Length (m)	Nominal Diameter (mm)	Gradient, S_f		Roughness Coefficient (m)	Velocity (m/s)	Time of Flow (min)	Rainfall Duration (min)	50 year Intensity (mm/hr)	Runoff Coeff.	50 year Runoff (m^3/s)	Total Flow (m^3/s)	Capacity (m^3/s)	Adjusted Capacity > Total Flow ?	Cover Level		Invert Level	
From	To	Increment (m^2)	Accu. (m^2)			(%)	1 in											From (mPD)	To (mPD)	From (mPD)	To (mPD)
Unpaved Area																					
CP7	MH 1	0	10174	30	450	0.5	200.0	3.0	1.093	0.46	21.53	161.65	0.25	0.114	0.114	0.156	Yes	5.70	4.30	3.85	3.70
		0	0										1.00	0.000							
MH 1	MH 2	0	10174	30	450	0.5	200.0	3.0	1.093	0.46	21.98	160.61	0.25	0.114	0.114	0.156	Yes	4.30	4.30	3.69	3.54
		0	0										1.00	0.000							
MH 2	Outfall 1	0	10174	6	450	0.5	200.0	3.0	1.093	0.09	22.08	160.40	0.25	0.113	0.113	0.156	Yes	4.30	5.20	3.53	3.50
		0	0										1.00	0.000							
Checking Existing Pipe																					
Outfall 1	Existing Pipe	19500	29674	8	750	0.3	400.0	3.0	1.079	0.12	22.20	160.13	0.25	0.330	0.330	0.429	Yes	4.30	5.20	3.21	3.19
		0	0										1.00	0.000							
Structure Roofing																					
450 Elevated Pipe	525 DOWNPIPE	0	0	45	450	0.5	200.0	0.06	1.683	0.45	3.45	256.83	0.25	0.000	0.202	0.241	Yes	6.20	5.20	-	-
		2824	2824										1.00	0.202							
525 DOWNPIPE	MH 3	0	0	18	525	1.1	94.7	0.06	2.730	0.11	6.01	229.02	0.25	0.000	0.360	0.532	Yes	5.20	5.40	5.90	5.71
		5648	5648										1.00	0.360							
MH 3	MH 4	0	0	32	525	2.5	40.0	3.0	2.709	0.20	6.21	227.32	0.25	0.000	0.357	0.528	Yes	5.40	4.60	4.61	3.81
		0	5648										1.00	0.357							
MH 4	Outfall 2	0	0	14	525	1.8	56.0	3.0	2.289	0.10	6.31	226.46	0.25	0.000	0.356	0.446	Yes	4.60	4.60	3.80	3.55
		0	5648										1.00	0.356							
Checking Existing Pipe																					
Outfall 2	Existing Pipe	1245	1245	8	750	0.2	421.1	3.0	1.052	0.13	19.99	165.38	0.25	0.014	0.274	0.418	Yes	4.30	5.20	3.30	3.28
		0	5648										1.00	0.260							

Mean Velocity is calculated by Colebrook- White equation

Where:

$\bar{V}$ =Mean Velocity (m/s)
R =Hydraulic Diameter (m)
Ks =Surface Roughness (m)
V =Kinematic viscosity (kg/ms)
Sf =Slope of Hydraulic Gradient
g =Gravity (m/s^2)

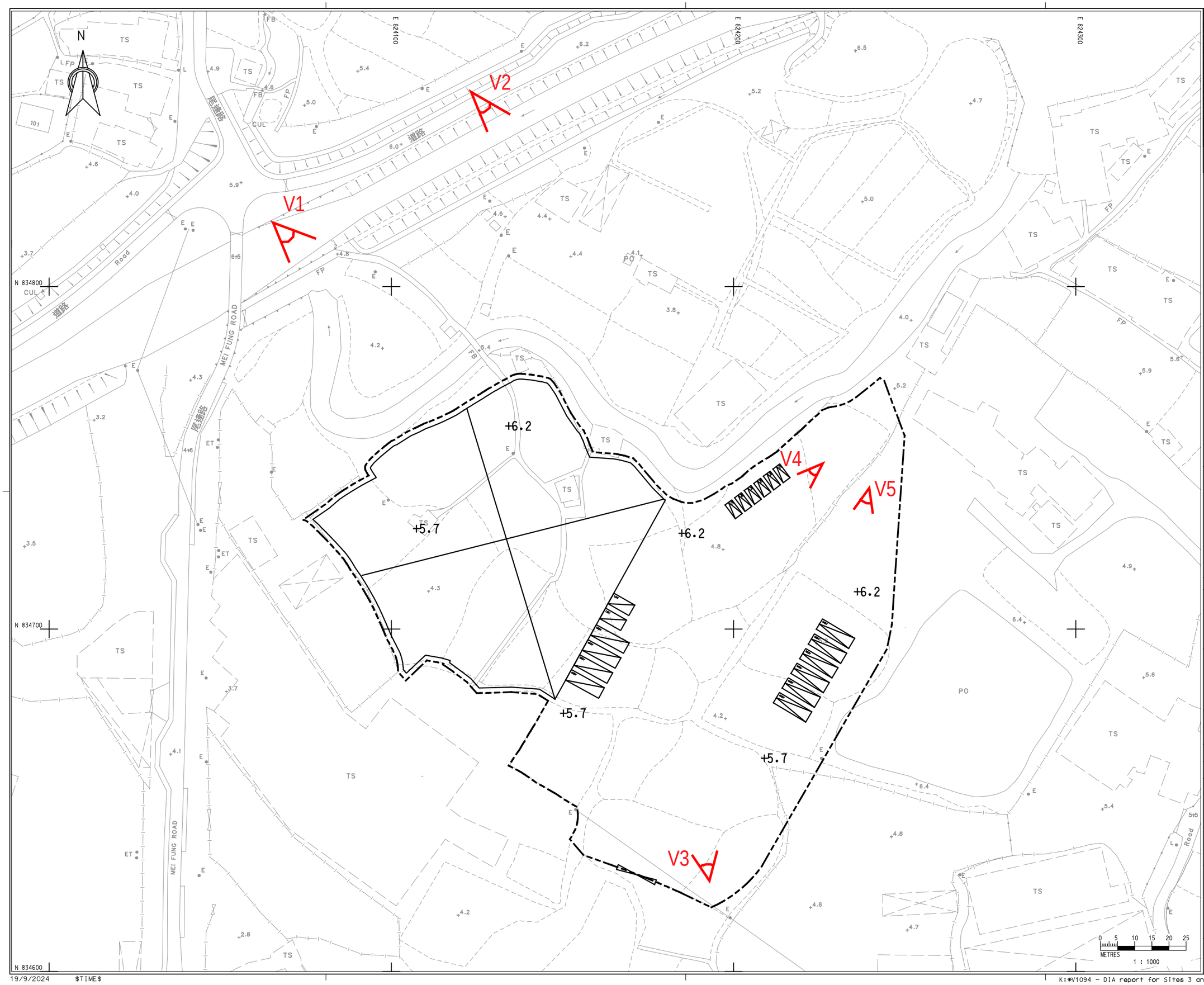
$$\bar{V} = -\sqrt{32gRS_f}\log\left[\frac{k_s}{14.8R} + \frac{1.255\nu}{R\sqrt{32gRS_f}}\right]$$

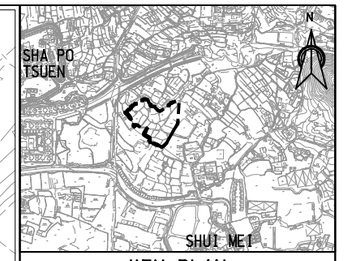
The Roughness Coefficient Ks is assumed to be 3 for concrete.
Peak Runoff is estimated using rational method according to SDM.

The Roughness Coefficient Ks is assumed to be 3 for concrete, 0.06 for uPVC pipe.

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
- STRUCTURE
- PARKING SPACE
- L/UL SPACE
- INGRESS / EGRESS
- +6.4 PROPOSED SITE LEVEL

Rev.	Description of Revision	Date	Ckd.

Client

EXCEL LINK DEVELOPMENT LIMITED

Consultants

MANNINGS (Asia) Consultants Limited

Scale in A3: AS SHOWN		Date: SEP 2024
Designed: EM	Drawn: KAM	Checked: BLE
Design Team Leader: SC		Date: SEP 2024
Approved: KTC		Date: SEP 2024

Project

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

Title

SITE PHOTO PLAN

Drawing No.	Stage	Rev.
-	P	-

Photo V1

Photo V2

Photo V3

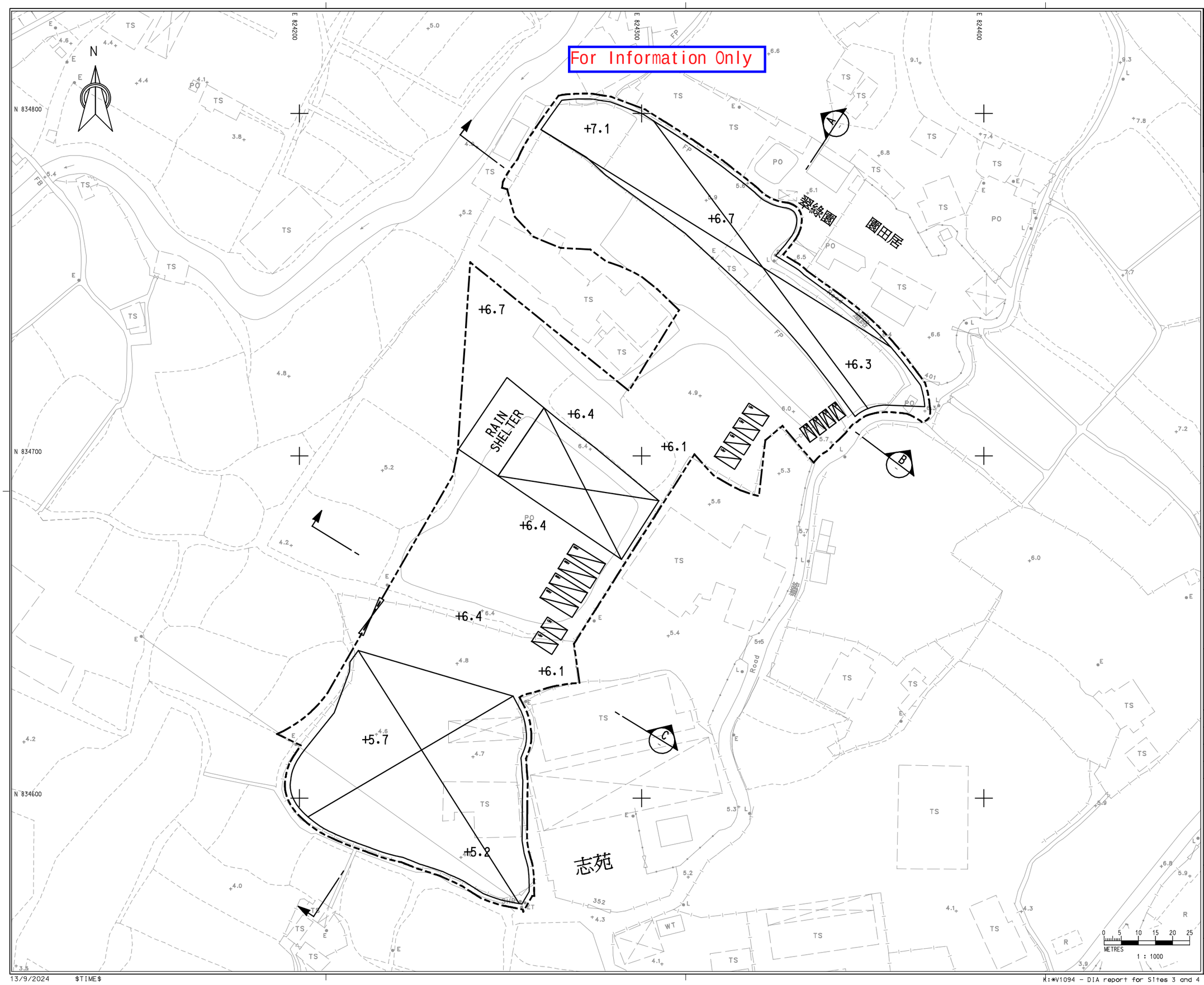
Photo V4

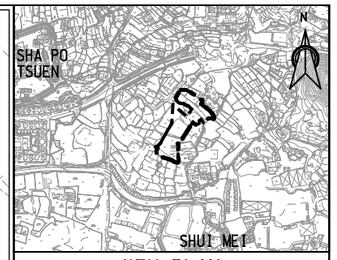
Photo V5

Appendix D

Layout Plans of Future Development for Adjacent Area

For Information Only





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 :

- STRUCTURE
- PARKING SPACE (PC)
- L/UL SPACE (LGV)
- L/UL SPACE (MGV)
- INGRESS / EGRESS
- +6.4 PROPOSED SITE LEVEL

Rev.	Description of Revision	Date	Ckd.

Client

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Scale in A3	Date
AS SHOWN	SEP 2024

Designed	Drawn	Checked
EM	KAM	BLE

Design Team Leader	Date
SC	SEP 2024
Approved	Date
KTC	SEP 2024

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Title

LAYOUT PLAN

Drawing No.	Stage	Rev.
V1094/101	P	-

For Information Only

N

E 824200

E 824300

E 824400

N 834800

N 834700

+7.1

+6.7

+6.7

+6.3

+6.4

+6.4

+6.4

+6.1

+6.1

+5.7

RAIN SHELTER

450UC 1:133 (U1)

CP 1
CL:6.40
A1:6.10 450UC
X1:6.10 450UC

450UC 1:250(U2)

CP 2
CL:6.30
A1:5.85 450UC
X1:5.85 450UC

450UC 1:250 (U3)

CP 3
CL:6.30
A1:5.70 450UC
X1:5.70 450UC

450UC 1:250 (U4)

450UC 1:250 (U5)

450UC 1:250 (U6)

CP 4
CL:6.30
A1:5.64 450UC
X1:5.64 450UC

CP 5
CL:6.10
A1:5.55 450UC
X1:5.55 450UC

CP 6
CL:6.10
A1:5.46 450UC
X1:5.46 450UC

450UC 1:250 (U7)

450UC 1:250 (U8)

CP 7
CL:6.10
A1:5.39 450UC
A2:5.65 450UC
X1:5.39 450UC

450UC 1:250 (U9)

450UC 1:250 (U10)

CP 8
CL:6.10
A1:5.30 450UC
A2:5.65 450UC
X1:5.30 450UC

450UC 1:250 (U11)

CP 9
CL:6.10
A2:5.19 450UC
X1:5.19 450UC

450UC 1:250 (U12)

CP 10
CL:6.10
A2:5.14 450UC
X1:5.14 450UC

450UC 1:250 (U13)

CP 11
CL:6.30
A2:5.08 450UC
X1:5.08 450UC

450UC 1:250 (U14)

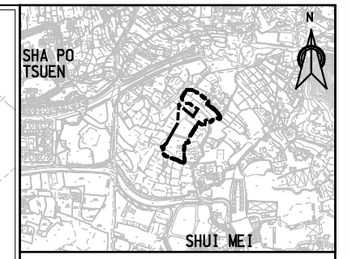
450UC 1:250 (U15)

CP 12
CL:5.70
A1:5.12 450UC
X1:5.10 450UC

MATCH LINE
SEE DRAWING NO. V1094/104

Road

0 5 10 15 20 25
METRES
1 : 1000



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
- STRUCTURE
- PARKING SPACE (PC)
- L/UL SPACE (LGV)
- L/UL SPACE (MGV)
- INGRESS / EGRESS
- +6.4 PROPOSED SITE LEVEL
- PROPOSED U-CHANNEL
- PROPOSED PIPE
- PROPOSED MANHOLE
- PROPOSED CATCHPIT

Rev.	Description of Revision	Date	Ckd.

Client

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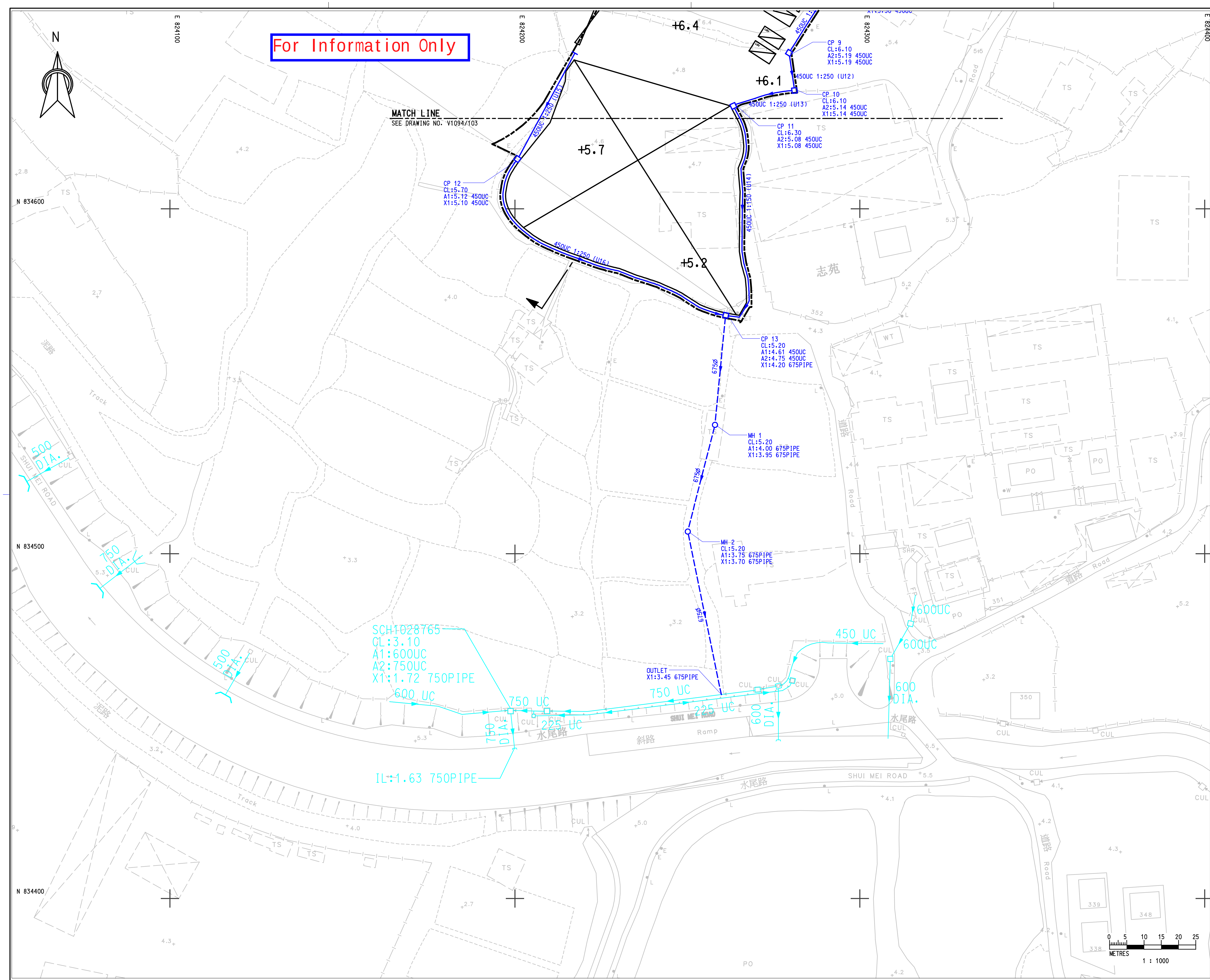
PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

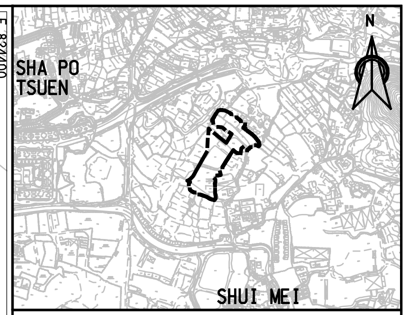
Title

DRAINAGE LAYOUT PLAN

(SHEET 1 OF 2)

Drawing No.	Stage	Rev.
V1094/103	P	-





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
- STRUCTURE
- PARKING SPACE (PC)
- L/UL SPACE (LGV)
- L/UL SPACE (MGV)
- INGRESS / EGRESS
- +6.4 PROPOSED SITE LEVEL
- PROPOSED U-CHANNEL
- PROPOSED PIPE
- PROPOSED MANHOLE
- PROPOSED CATCHPIT

Rev.	Description of Revision	Date	Ckd.

Client

EXCEL LINK DEVELOPMENT LIMITED

Consultants

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Project

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

Title

DRAINAGE LAYOUT PLAN

(SHEET 2 OF 2)

Drawing No.	Stage	Rev.
V1094/104	P	-

19/9/2024 $TIME$

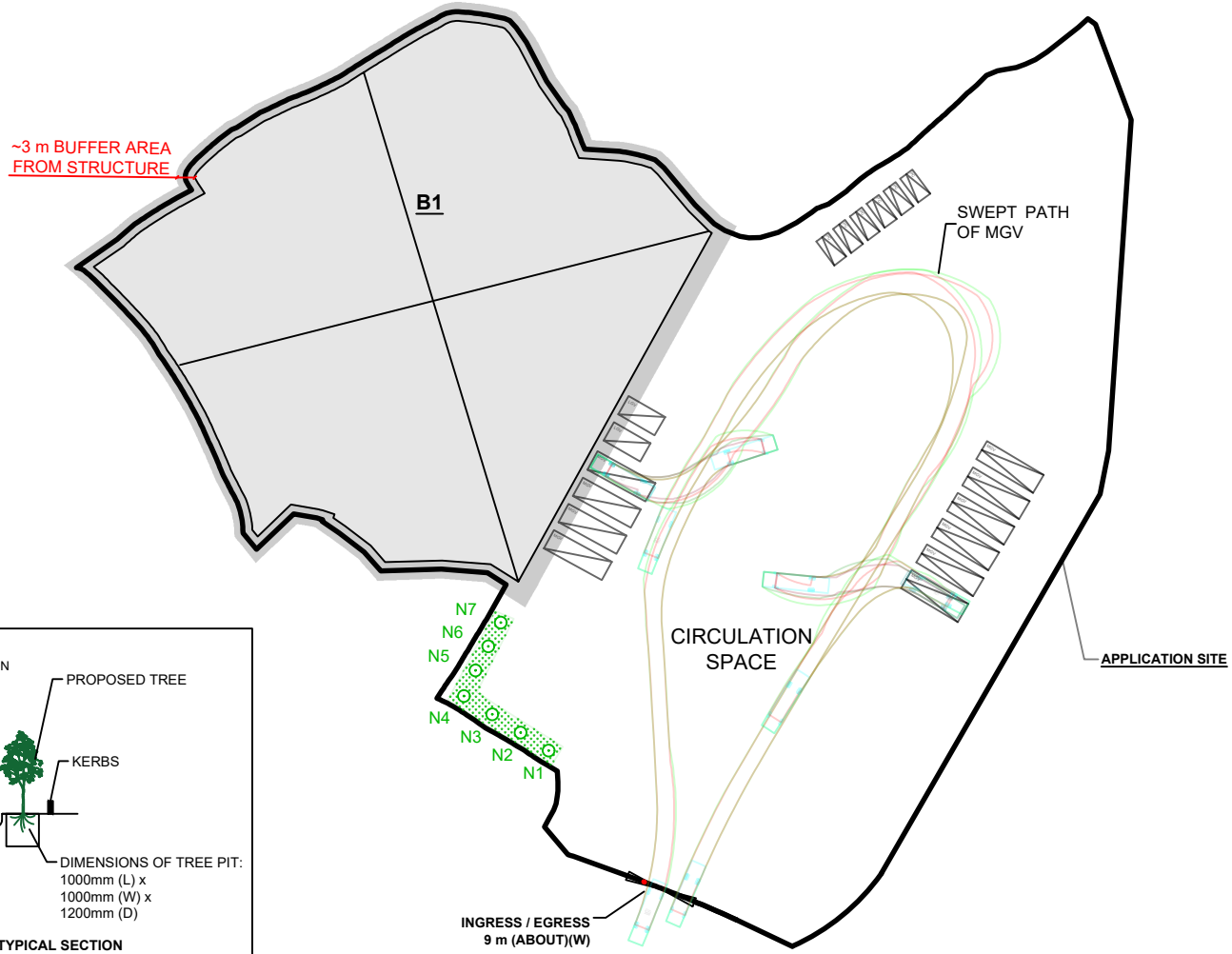
K:¥V1094 - DIA report for Sites 3 and 4 at Fung Kat Heung¥station¥V1094-104.dgn

LANDSCAPE PROPOSAL

APPLICATION SITE AREA	: 15,822 m^2	(ABOUT)
COVERED AREA	: 5,648 m^2	(ABOUT)
UNCOVERED AREA	: 10,174 m^2	(ABOUT)

NO. OF NEW TREES WILL BE PLANTED	: 7 (N1 TO N7)
SPECIES OF NEW TREES	: *POLYSPORA AXILLARIS*
HEIGHT OF NEW TREES	: NO LESS THAN 2.75 m
SPACING OF NEW TREES	: NOT LESS THAN 4 m
DIMENSION OF SOIL TRENCH	: 1.2 m (W) X 1.2 m (D)

STRUCTURE	USE	COVERED AREA	GFA	BUILDING HEIGHT
B1	WAREHOUSE (EXCLUDING D.G.G.) SITE OFFICE AND WASHROOM	5,648 m^2 (ABOUT)	5,648 m^2 (ABOUT)	13 m (ABOUT)(1-STOREY)
	TOTAL	**5,648 m^2 (ABOUT)**	**5,648 m^2 (ABOUT)**	



TYPICAL SECTION
(INDICATIVE ONLY)

LEGEND

- APPLICATION SITE
- STRUCTURE
- PARKING SPACE (PC)
- L/UL SPACE (LGV)
- L/UL SPACE (MGV)
- INGRESS / EGRESS
- MEDIUM GOODS VEHICLE
- SWEPT PATH OF VEHICLE
- PROPOSED NEW TREES
- CONTINUOUS SOIL TRENCH

NOTES:

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

NORTH
W E
S

PLANNING CONSULTANT
R-Riches Property Consultants Ltd.

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

SITE LOCATION
VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE
1 : 1200 @ A4

DRAWN BY	DATE
LT	16.7.2024
REVISED BY	DATE
APPROVED BY	DATE

DWG. TITLE
LANDSCAPE PROPOSAL

DWG NO.	VER.
ANNEX III	001