

寄件者: Louis Tse [REDACTED]  
寄件日期: 2024年09月03日星期二 16:13  
收件者: tpbpd/PLAND  
副本: Andrea Wing Yin YAN/PLAND; Olivia Lam Yan NG/PLAND; Bon Tang; Matthew Ng; Christian Chim; Danny Ng; Grace Wong  
主旨: [Supersede][FI] S.16 Application No. A/YL-KTN/1004 - FI to address departmental comments  
附件: FI5 for A\_YL-KTN\_1004 (20240903).pdf  
類別: Internet Email

Dear Sir,

Attached herewith the FI to **supersede** our previous submissions dated **02/09/2024** (below email) to address departmental comments on 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**

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寄件者: Louis Tse  
寄件日期: 2024年9月2日上午11:23  
收件者: Town Planning Board <tpbpd@pland.gov.hk>  
副本: awyyan@pland.gov.hk <awyyan@pland.gov.hk>; olyng@pland.gov.hk <olyng@pland.gov.hk>; Bon Tang [REDACTED] Matthew Ng [REDACTED] Christian Chim [REDACTED]  
[REDACTED] Danny Ng [REDACTED] Grace Wong [REDACTED]  
主旨: [FI] S.16 Application No. A/YL-KTN/1004 - FI to address departmental comments

Dear Sir,

Attached herewith the further information 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**

Our Ref. : DD107 Lot 1291  
Your Ref. : TPB/A/YL-KTN/1004

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

**By Email**

3 September 2024

Dear Sir,

**5<sup>th</sup> 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,  
Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kam Tin, Yuen Long, New Territories**

**(S.16 Planning Application No. A/YL-KTN/1004)**

We are writing to submit further information to address departmental comments of 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.: Ms. Olivia NG

email: olyng@pland.gov.hk )



**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, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kam Tin, Yuen Long, New Territories**

**(Application No. A/YL-KTN/1004)**

- (i) A revised plan showing the filling of land at the application site (the Site) is provided. The existing site levels range from +12.4mPD to +13.1mPD. The whole Site is proposed to be filled with concrete of not more than 0.4m, with site level ranges from +12.8mPD to +13.3mPD, in order to facilitate a flat surface for site formation and circulation area (**Plan 1** and **Annex I**).
- (ii) A RtoC Table:

| Departmental Comments  |  | Applicant’s Responses   |
|--|--|---|
| <b>1. Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD)</b><br><b>(Contact Person: Mr. Terence TANG; Tel.: 2300 1257)</b> |  |   |
| (a)  | The 300UC in Appendix D Section does not tally with the size given in drainage proposal. | <p>Please note the 300UC in Section 1 of “Appendix D – Section” is UC3 which 300mm U-channel as proposed in Figure 3 (<b>Annex II</b>).</p> <p>Please also note that the existing ground level information is updated as per the most updated available information. Please refer to the page 2 of Appendix B.</p> <p>The proposed levels are updated accordingly in Figure 3, Figure 4 and Appendix D (highlighted in yellow).</p> |

|  |  |   |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
|--|--|---|--------------------------------|---|----------------|--------------------------------|---|---------------------|--------------------------------|---|-----------------|--------------------------------|---|---------------|--------------------------------|---|--------------------------|--------------------------------|---|-------------------------|--------------------------------|---|-------------------|--------------------------------|---|----------------------|--------------------------------|---|----------------------------------|--------------------------------|---|
| Proposed operating hours 擬議營運時間<br>Mondays to Saturdays from 09:00 to 18:00, no operation on Sunday and public holiday.....  |  |   |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| (d) Any vehicular access to the site/subject building?<br>是否有車路通往地盤／有關建築物？   | <p>Yes 是 <input checked="" type="checkbox"/> There is an existing access. (please indicate the street name, where appropriate)<br/>有一條現有車路。(請註明車路名稱(如適用))<br/>Accessible from Fung Kat Heung Road via Mei Fung Road and a local access.....</p> <p>No 否 <input type="checkbox"/> There is a proposed access. (please illustrate on plan and specify the width)<br/>有一條擬議車路。(請在圖則顯示，並註明車路的闊度)</p> <p><input type="checkbox"/></p>   |   |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| (e) Impacts of Development Proposal 擬議發展計劃的影響<br>(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?<br>擬議發展計劃是否包括現有建築物的改動？  | <p>Yes 是 <input type="checkbox"/> Please provide details 請提供詳情<br/>.....<br/>.....</p> <p>No 否 <input checked="" type="checkbox"/></p>   |   |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| (ii) Does the development proposal involve the operation on the right?<br>擬議發展是否涉及右列的工程？   | <p>Yes 是 <input checked="" type="checkbox"/> (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)<br/>(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／範圍)</p> <p><input type="checkbox"/> Diversion of stream 河道改道</p> <p><input checked="" type="checkbox"/> Filling of pond 填塘<br/>Area of filling 填塘面積 ..... 92 ..... sq.m 平方米 <input checked="" type="checkbox"/> About 約<br/>Depth of filling 填塘深度 ..... 0.5 ..... m 米 <input checked="" type="checkbox"/> About 約</p> <p><input checked="" type="checkbox"/> Filling of land 填土<br/>Area of filling 填土面積 ..... 6,968 ..... sq.m 平方米 <input checked="" type="checkbox"/> About 約<br/>Depth of filling 填土厚度 ..... not more than 0.4 ..... m 米 <input type="checkbox"/> About 約</p> <p><input type="checkbox"/> Excavation of land 挖土<br/>Area of excavation 挖土面積..... sq.m 平方米 <input type="checkbox"/> About 約<br/>Depth of excavation 挖土深度 ..... m 米 <input type="checkbox"/> About 約</p> <p>No 否 <input type="checkbox"/></p>  |   |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| (iii) Would the development proposal cause any adverse impacts?<br>擬議發展計劃會否造成不良影響？   | <table border="0"> <tr> <td>On environment 對環境</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On traffic 對交通</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On water supply 對供水</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On drainage 對排水</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On slopes 對斜坡</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Affected by slopes 受斜坡影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Landscape Impact 構成景觀影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Tree Felling 砍伐樹木</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Visual Impact 構成視覺影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Others (Please Specify) 其他 (請列明)</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> </table> <p>.....</p> <p>.....</p> | On environment 對環境                        | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | On traffic 對交通 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | On water supply 對供水 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | On drainage 對排水 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | On slopes 對斜坡 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Affected by slopes 受斜坡影響 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Landscape Impact 構成景觀影響 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Tree Felling 砍伐樹木 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Visual Impact 構成視覺影響 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Others (Please Specify) 其他 (請列明) | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> |
| On environment 對環境   | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| On traffic 對交通   | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| On water supply 對供水  | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| On drainage 對排水  | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| On slopes 對斜坡  | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| Affected by slopes 受斜坡影響   | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| Landscape Impact 構成景觀影響  | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| Tree Felling 砍伐樹木  | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| Visual Impact 構成視覺影響   | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |
| Others (Please Specify) 其他 (請列明)   | Yes 會 <input type="checkbox"/>   | No 不會 <input checked="" type="checkbox"/> |                                |   |                |                                |   |                     |                                |   |                 |                                |   |               |                                |   |                          |                                |   |                         |                                |   |                   |                                |   |                      |                                |   |                                  |                                |   |



Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in “Agriculture” Zone, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kam Tin, Y.L., N.T.

Drainage Appraisal

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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 in “Agriculture” Zone, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kam Tin, Y.L., N.T.

Drainage Appraisal

Aug 2024

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# 1. Introduction

## 1.1 Background

- 1.1.1 The applicant seeks planning permission from the Town Planning Board (the Board) to use Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kam Tin, Yuen Long, New Territories (the Site) for 'Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond' (Proposed Development).
- 1.1.2 This Drainage Proposal is to support the planning application for the proposed use.

## 1.2 The Site

- 1.2.1 The Application Site at Kam Tin North has an area of about 6,968 m<sup>2</sup>. The site is currently an unused grassland with temporary structures and a small dried pond. The site location plan is shown in **Figure 1**.
- 1.2.2 The existing ground level of the site is approx. +12.4 mPD to +13.1 mPD and it is intended to fill to +12.8 mPD to +13.3 mPD. The ground level is gently falling from east to west.
- 1.2.3 There is an existing approx.. 7m width channel about 50m at the south of the site. Existing Drainage Plan and Site Photo of existing 7m width channel are shown in **Figure 2** for reference.
- 1.2.4 Proposed Development Layout plan is shown in **Appendix B** for reference.

## 2. Development Proposal

### 2.1 The Proposed Development

2.1.1 The total site area is approximately 6,968 m<sup>2</sup>. The indicative development schedule is summarized in **Table 1** below for technical assessment purpose. Catchment plan with external catchment is shown in **Figure 4**.

| Proposed Development   |       |
|--|-------|
| Total Site Area (m <sup>2</sup> )  | 6,968 |
| Paved Area (m <sup>2</sup> )   | 6,968 |
| Assume all proposed site area as paved area after development for assessment purpose |       |

**Table 1 - Key Development Parameters**

## 3. Assessment Criteria

3.1.1 The Recommended Design Return Period based on Flood Level from SDM (Table 10) is adopted for this DIA. The recommendation is summarized in **Table 2** below.

| Description   | Design Return Periods |
|---|-----------------------|
| Intensively Used Agricultural Land  | 2 – 5 Years           |
| Village Drainage Including Internal Drainage System under a polder Scheme | 10 Years              |
| Main Rural Catchment Drainage Channels                                    | 50 Years              |
| Urban Drainage Trunk System   | 200 Years             |
| Urban Drainage Branch System  | 50 Years              |

**Table 2– Design Return Periods under SDM**

3.1.2 The proposed village drainage system intended to collect runoff from the internal site and upper catchment to discharge to existing approx. 7m width channel at the south of the site. 1 in 10 years return period is adopted for the drainage design.

3.1.3 Stormwater drainage design will be carried out in accordance with the criteria set out in the Stormwater Drainage Manual published by DSD. The proposed design criteria to be adopted for design of this stormwater drainage system and factors which have been considered are summarised below.

1. Intensity-Duration-Frequency Relationship – The Recommended Intensity-Duration-Frequency relationship is used to estimate the intensity of rainfall. It can be expressed by the following algebraic equation.

$$i = \frac{a}{(t_d + b)^c}$$

The site is located within the HKO Headquarters Rainfall Zone. Therefore, for 10 years return period, the following values are adopted.

|   |   |       |
|---|---|-------|
| a | = | 471.9 |
| b | = | 3.02  |
| c | = | 0.397 |

2. The peak runoff is calculated by the Rational Method  
i.e.  $Q_p = 0.278CiA$

|       |       |   |                                    |
|-------|-------|---|------------------------------------|
| where | $Q_p$ | = | peak runoff in $m^3/s$             |
|       | C     | = | runoff coefficient (dimensionless) |
|       | i     | = | rainfall intensity in mm/hr        |
|       | A     | = | catchment area in $km^2$           |

3. The run-off coefficient (C) of surface runoff are taken as follows:

- Paved Area: C = 0.95
- Unpaved Area: C = 0.35

4. Manning's Equation is used for calculation of velocity of flow inside the channels:

$$\text{Manning's Equation: } v = \frac{R^{\frac{1}{6}}}{n} R^{\frac{1}{2}} S_f^{\frac{1}{2}}$$

Where,

V = velocity of the pipe flow (m/s)

S<sub>f</sub> = hydraulic gradient

n = manning's coefficient

R = hydraulic radius (m)

5. Colebrook-White Equation is used for calculation of velocity of flow inside the pipes:

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

where,

|                |   |                                 |
|----------------|---|---------------------------------|
| V              | = | velocity of the pipe flow (m/s) |
| S <sub>f</sub> | = | hydraulic gradient              |
| k <sub>f</sub> | = | roughness value (m)             |
| v              | = | kinematics viscosity of fluid   |
| D              | = | pipe diameter (m)               |
| R              | = | hydraulic radius (m)            |

## 4. Proposed Drainage System

- 4.1.1 Proposed drainage system are designed for collection of runoff from the application site and external catchment at the north-east. It is proposed to discharge to existing approx. 7m channel at south of the development. The alignment, size and gradient of the proposed drains are shown in **Figure 3**. The catchment plan is shown in **Figure 4**.
- 4.1.2 Where any hoarding or wall to be erected, 100mm separation opening from ground level to be provided along the hoarding/wall.
- 4.1.3 The design calculations of proposed drains are shown in **Appendix A**.
- 4.1.4 The reference standard drawings of drains are shown in **Appendix C**.
- 4.1.5 Design checking of existing downstream approx. 7m channel is shown in **Appendix E**.

## 5. Conclusion

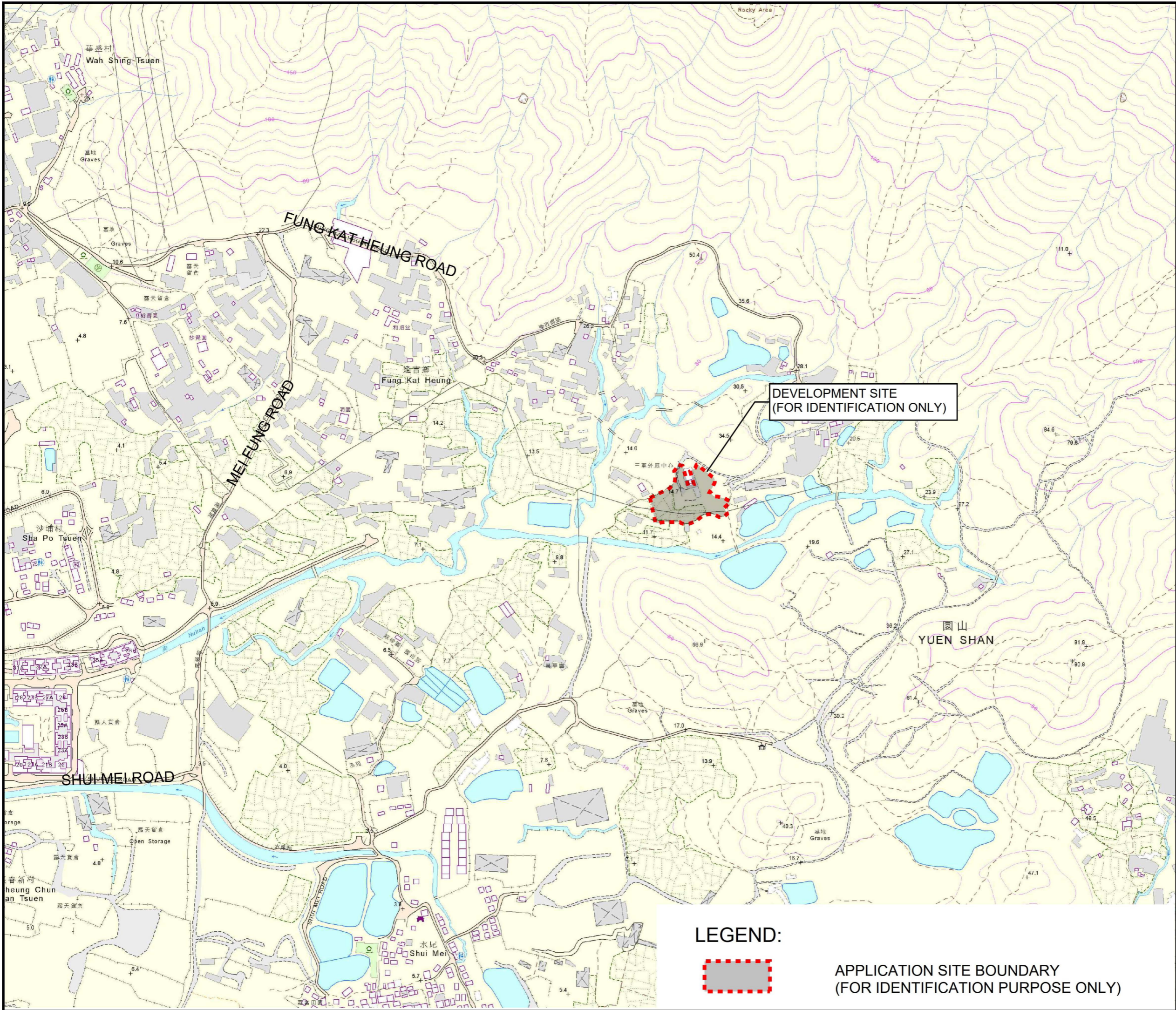
- 5.1.1 A drainage appraisal has been conducted for the Proposed Development. The surface runoff from the Application Site will be collected by the proposed drains and discharged to the existing channel at south.
- 5.1.2 With the proposed drainage system, it is anticipated that there will be no significant drainage impact to the area after the implementation of the development.

- End of Text -

# FIGURES

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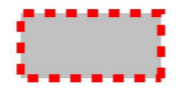




**PROJECT:**  
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kat Tin, Y.L., N.T.

DEVELOPMENT SITE  
 (FOR IDENTIFICATION ONLY)

**LEGEND:**



APPLICATION SITE BOUNDARY  
 (FOR IDENTIFICATION PURPOSE ONLY)

| REV | DESCRIPTION | DATE |
|-----|-------------|------|
|     |             |      |
|     |             |      |

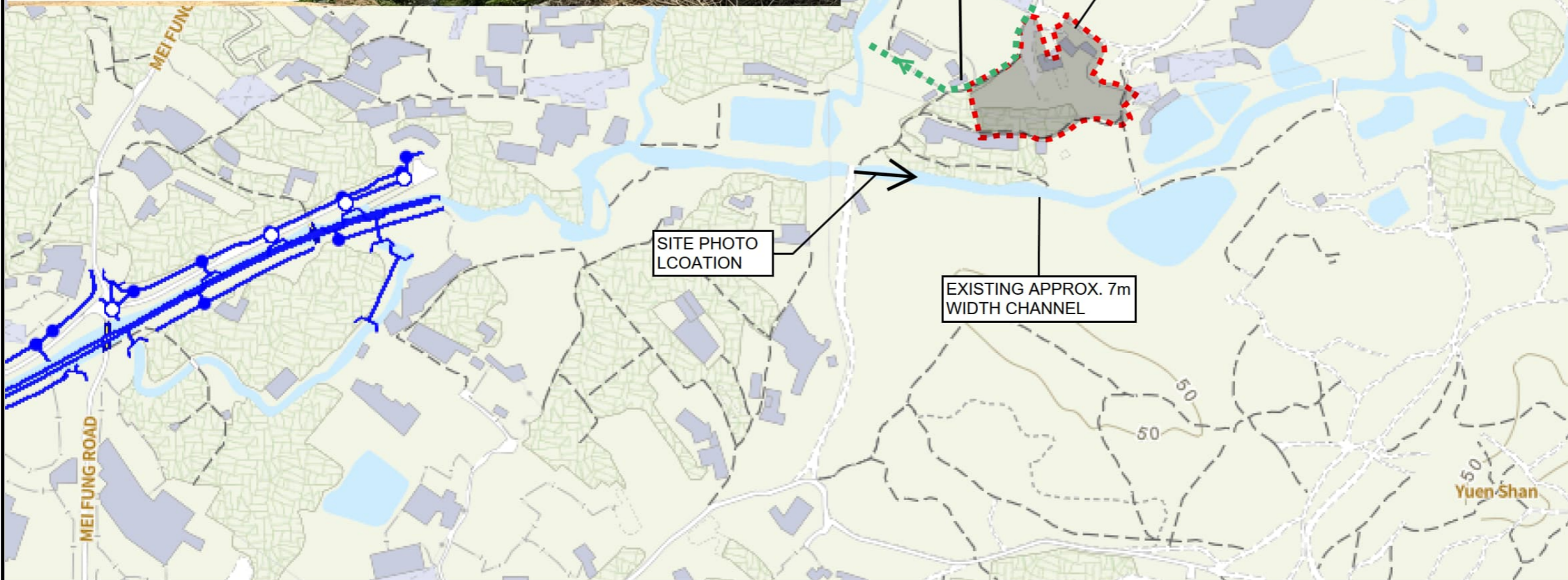
DRAWING TITLE  
 SITE LOCATION PLAN

DRAWING NUMBER  
 FIGURE 1





SITE PHOTO AND EXISTING CONDITIONS



**PROJECT:**  
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kat Tin, Y.L., N.T.

**LEGEND:**

- |                          |                        |  |
|--------------------------|------------------------|--|
| Combined Manhole         | Tapping Point (Sewer)  | Tapping Point (Storm)                  |
| Overflow (Combined)      | Sewer Terminal Manhole | Storm Water Terminal Manhole           |
| Pipe (Combined)          | Catchpit               | Tunnel Protection Zone (100m / 200m)   |
| Interface Valve Chamber  | Inlet                  | Tunnel Protection Zone (General Range) |
| Sewer Manhole            | Storm Water Manhole    | Tunnel / Box Culvert (Sewer)           |
| Oil / Petrol Interceptor | Outlet                 | Tunnel / Box Culvert (Storm)           |
| Overflow (Sewer)         | Pipe (Storm)           |  |
| Pipe (Sewer)             | Sand Trap              | EXISTING U CHANNEL                     |

| REV | DESCRIPTION | DATE |
|-----|-------------|------|
|     |             |      |

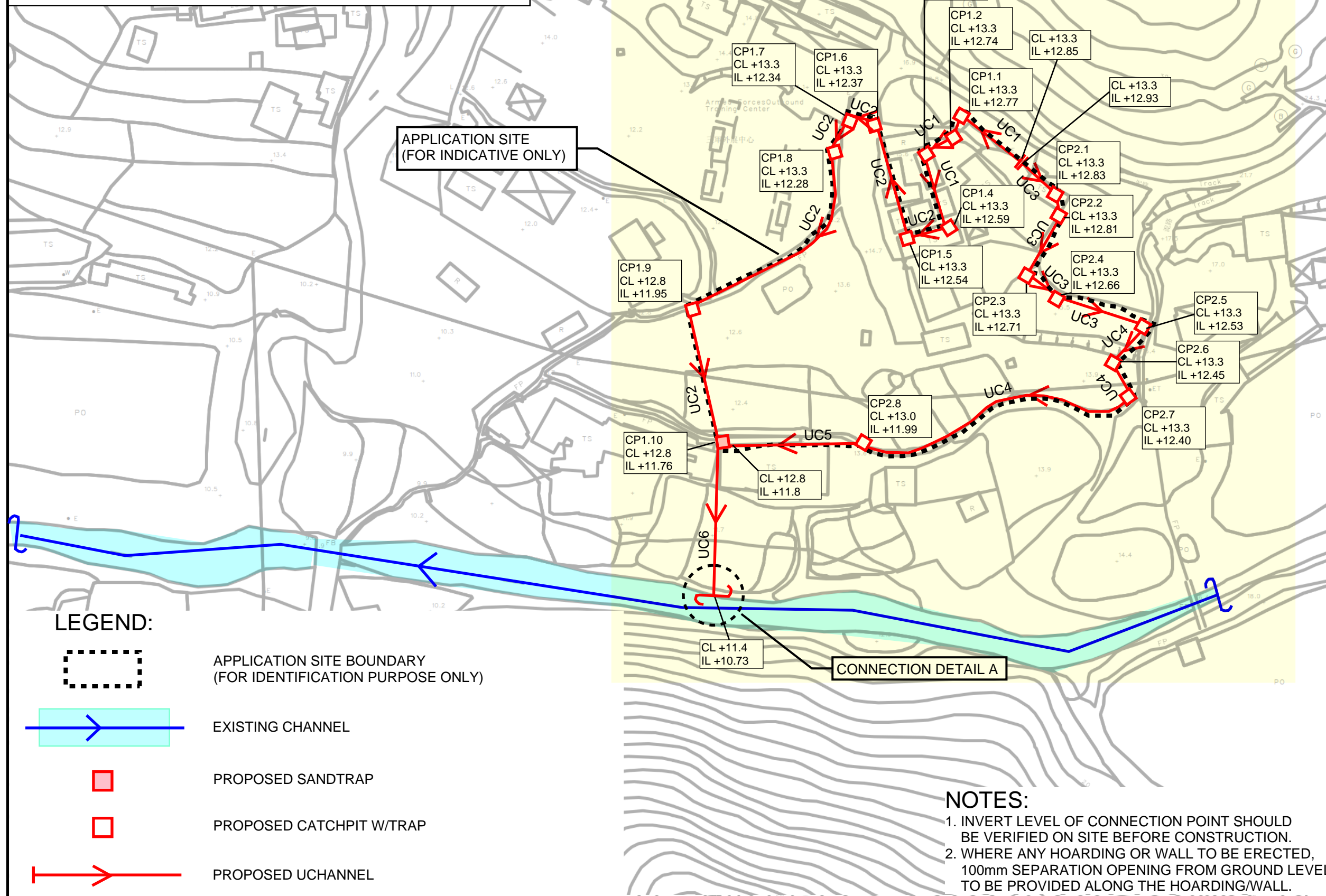
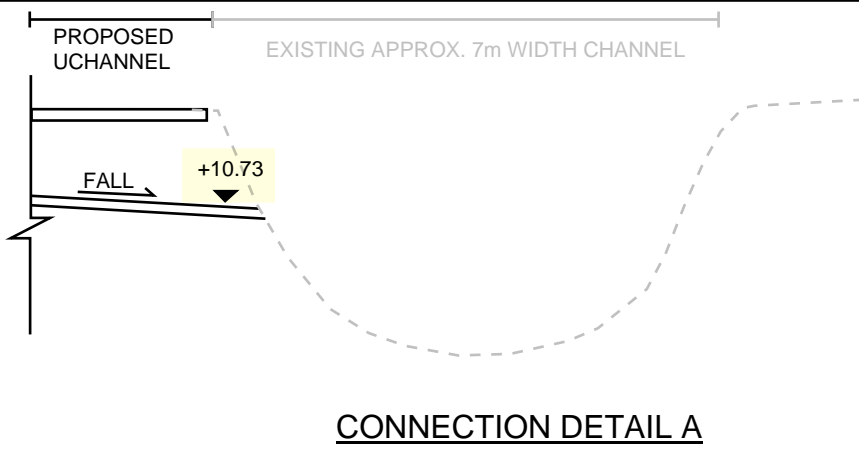
DRAWING TITLE  
**EXISTING DRAINAGE PLAN**

DRAWING NUMBER  
**FIGURE 2A**


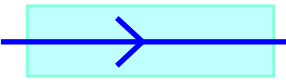





- UCHANNEL TYPE**
- UCHANNEL 1 (UC1) - 375mm, MIN. 1 IN 200
  - UCHANNEL 2 (UC2) - 450mm, MIN. 1 IN 200
  - UCHANNEL 3 (UC3) - 300mm, MIN. 1 IN 200
  - UCHANNEL 4 (UC4) - 450mm, MIN. 1 IN 200
  - UCHANNEL 5 (UC5) - 450mm, MIN. 1 IN 100
  - UCHANNEL 6 (UC6) - 675mm, MIN. 1 IN 200

**PROJECT:**  
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kat Tin, Y.L., N.T.



**LEGEND:**

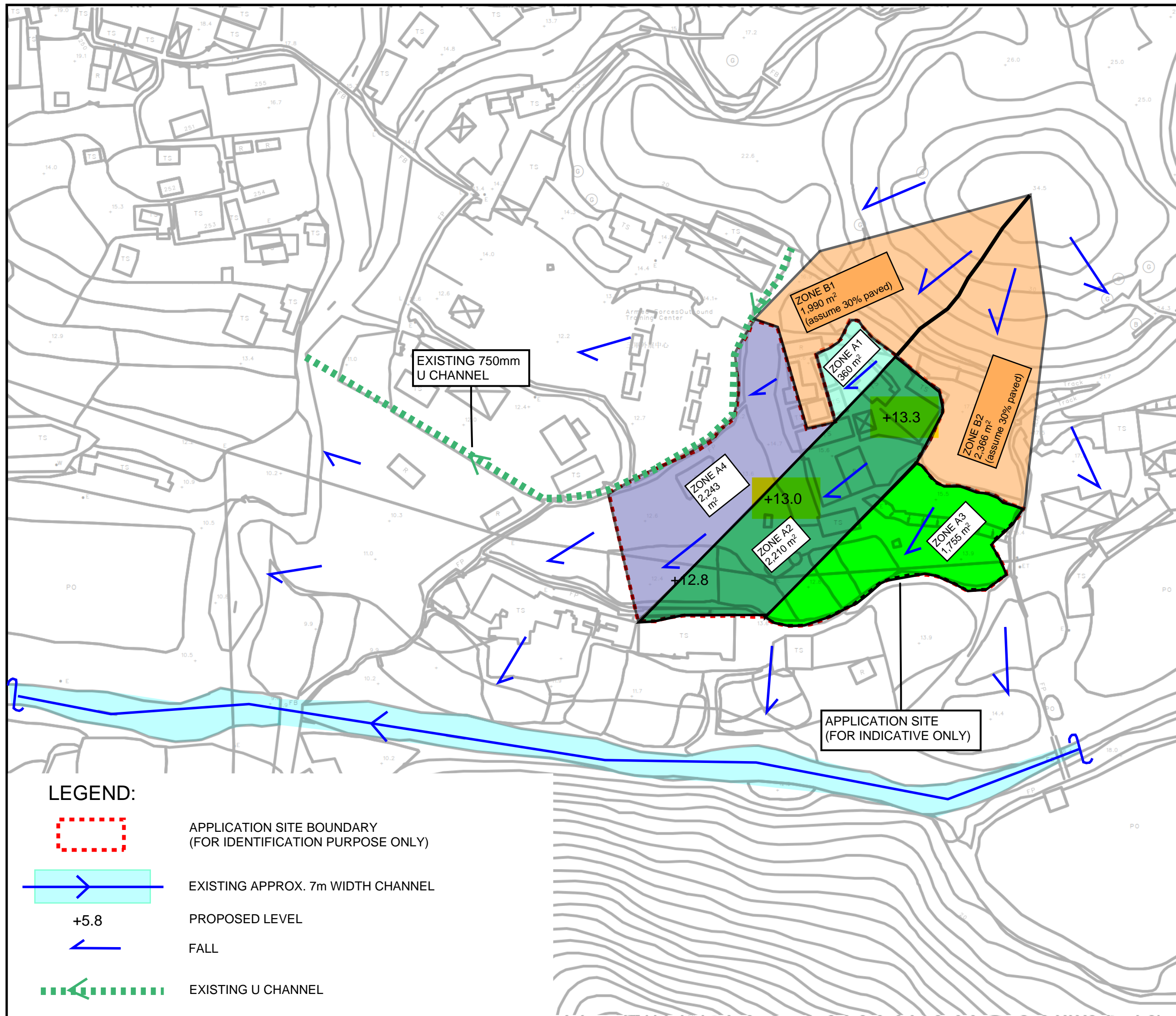
-  APPLICATION SITE BOUNDARY (FOR IDENTIFICATION PURPOSE ONLY)
-  EXISTING CHANNEL
-  PROPOSED SANDTRAP
-  PROPOSED CATCHPIT W/TRAP
-  PROPOSED UCHANNEL

**NOTES:**


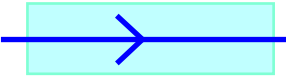



1. INVERT LEVEL OF CONNECTION POINT SHOULD BE VERIFIED ON SITE BEFORE CONSTRUCTION.
2. WHERE ANY HOARDING OR WALL TO BE ERRECTED, 100mm SEPARATION OPENING FROM GROUND LEVEL TO BE PROVIDED ALONG THE HOARDING/WALL.

| REV  | DESCRIPTION | DATE |
|--|-------------|------|
|  |             |      |
| DRAWING TITLE<br><b>PROPOSED DRAINAGE SYSTEM</b> |             |      |
| DRAWING NUMBER<br><b>FIGURE 3D</b>               |             |      |

**PROJECT:**  
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kat Tin, Y.L., N.T.



**LEGEND:**

-  APPLICATION SITE BOUNDARY (FOR IDENTIFICATION PURPOSE ONLY)
-  EXISTING APPROX. 7m WIDTH CHANNEL
-  +5.8 PROPOSED LEVEL
-  FALL
-  EXISTING U CHANNEL

| REV | DESCRIPTION | DATE |
|-----|-------------|------|
|     |             |      |

DRAWING TITLE  
**CATCHMENT PLAN**

DRAWING NUMBER  
**FIGURE 4B**

# Appendix

---



# Appendix A - Design Calculation

## U Channel 1 (Zone A1 + B1)

### Runoff Estimation

|                          |  |      |       |                   |
|--------------------------|--|------|-------|-------------------|
| Design Return Period     |  | 1 in | 10    | years             |
| Paved Area               | $360 + 1990 \times 0.3 =$                  |      | 957   | (m <sup>2</sup> ) |
| Unpaved Area             | $1990 \times 0.7 =$                        |      | 1393  | (m <sup>2</sup> ) |
| Total Equivalent Area    | $957 \times 0.95 + 1393 \times 0.35 =$     |      | 1397  | (m <sup>2</sup> ) |
| Rainfall Intensity, I *  |  |      | 206   | mm/hr             |
| Design Discharge Rate, Q | $0.278 \times 1397 \times 206 / 1000000 =$ |      | 0.080 | m <sup>3</sup> /s |

$$i = \frac{a}{(t_d + b)^c}$$

### U Channel

|                  |  |      |       |                   |
|------------------|--|------|-------|-------------------|
| Channel Size     |  | 1 in | 375   | (mm)              |
| Gradient         |  |      | 200   |                   |
| Area             | $\pi \times 0.38^2 / 8 + 0.38 \times 0.38 / 2 =$ |      | 0.126 | (m <sup>2</sup> ) |
| Wetted Perimeter | $\pi \times 0.38 / 2 + 0.38 / 2 \times 2 =$      |      | 0.964 | (m)               |
| R                | $0.126 / 0.964 =$                                |      | 0.130 | (m)               |
| Velocity         |  |      | 1.30  | m/s               |
| Capacity         |  |      | 0.163 | m <sup>3</sup> /s |

Utilization  $0.08 / 0.163 = 49.22$  %

OK (less than 90%, for 10% siltation allowance)

## U Channel 2 (Zone [A1 + B1] +A4)

### Runoff Estimation

|                          |  |      |       |                   |
|--------------------------|--|------|-------|-------------------|
| Design Return Period     |  | 1 in | 10    | years             |
| Paved Area               | $957 + 2243 \times 1 =$                    |      | 3200  | (m <sup>2</sup> ) |
| Unpaved Area             | $1393 =$                                   |      | 1393  | (m <sup>2</sup> ) |
| Total Equivalent Area    | $3200 \times 0.95 + 1393 \times 0.35 =$    |      | 3528  | (m <sup>2</sup> ) |
| Rainfall Intensity, I *  |  |      | 206   | mm/hr             |
| Design Discharge Rate, Q | $0.278 \times 1393 \times 206 / 1000000 =$ |      | 0.202 | m <sup>3</sup> /s |

$$i = \frac{a}{(t_d + b)^c}$$

### U Channel

|                  |  |      |       |                   |
|------------------|--|------|-------|-------------------|
| Channel Size     |  | 1 in | 450   | (mm)              |
| Gradient         |  |      | 200   |                   |
| Area             | $\pi \times 0.45^2 / 8 + 0.45 \times 0.45 / 2 =$ |      | 0.181 | (m <sup>2</sup> ) |
| Wetted Perimeter | $\pi \times 0.45 / 2 + 0.45 / 2 \times 2 =$      |      | 1.157 | (m)               |
| R                | $0.181 / 1.157 =$                                |      | 0.156 | (m)               |
| Velocity         |  |      | 1.47  | m/s               |
| Capacity         |  |      | 0.265 | m <sup>3</sup> /s |

Utilization  $0.202 / 0.265 = 76.45$  %

OK (less than 90%, for 10% siltation allowance)

## U Channel 3 (Zone B2)

### Runoff Estimation

|                          |  |      |       |                   |
|--------------------------|--|------|-------|-------------------|
| Design Return Period     |  | 1 in | 10    | years             |
| Paved Area               | $2366 \times 0.3 =$                        |      | 710   | (m <sup>2</sup> ) |
| Unpaved Area             | $2366 \times 0.7 =$                        |      | 1656  | (m <sup>2</sup> ) |
| Total Equivalent Area    | $710 \times 0.95 + 1656 \times 0.35 =$     |      | 1254  | (m <sup>2</sup> ) |
| Rainfall Intensity, I *  |  |      | 206   | mm/hr             |
| Design Discharge Rate, Q | $0.278 \times 1254 \times 206 / 1000000 =$ |      | 0.072 | m <sup>3</sup> /s |

$$i = \frac{a}{(t_d + b)^c}$$

### U Channel (Half round to U)

|                  |   |      |       |                   |
|------------------|---|------|-------|-------------------|
| Channel Size     |   | 1 in | 300   | (mm)              |
| Gradient         |   |      | 200   |                   |
| Area             | $\pi \times 0.3^2 / 8 + 0.3 \times 0.3 / 2 =$ |      | 0.080 | (m <sup>2</sup> ) |
| Wetted Perimeter | $\pi \times 0.3 / 2 + 0.3 / 2 \times 2 =$     |      | 0.771 | (m)               |
| R                | $0.08 / 0.771 =$                              |      | 0.104 | (m)               |
| Velocity         |   |      | 1.12  | m/s               |
| Capacity         |   |      | 0.090 | m <sup>3</sup> /s |

Utilization  $0.072 / 0.09 = 80.12$  %

OK (less than 90%, for 10% siltation allowance)

**U Channel 4 (Zone A3 + B2)**

**Runoff Estimation**

|                          |                                |      |       |       |
|--------------------------|--------------------------------|------|-------|-------|
| Design Return Period     |                                | 1 in | 10    | years |
| Paved Area               | 710 + 1755 =                   |      | 2465  | (m2)  |
| Unpaved Area             | 1656 =                         |      | 1656  | (m2)  |
| Total Equivalent Area    | 2465 x 0.95 + 1656 x 0.35 =    |      | 2921  | (m2)  |
| Rainfall Intensity, I *  |                                |      | 206   | mm/hr |
| Design Discharge Rate, Q | 0.278 x 2921 x 206 / 1000000 = |      | 0.168 | m3/s  |

$$i = \frac{a}{(t_d + b)^c}$$

**U Channel**

|                  |  |      |       |      |
|------------------|--|------|-------|------|
| Channel Size     |  | 1 in | 450   | (mm) |
| Gradient         |  |      | 200   |      |
| Area             | $\pi \times 0.45^2 / 8 + 0.45 \times 0.45 / 2 =$ |      | 0.181 | (m2) |
| Wetted Perimeter | $\pi \times 0.45 / 2 + 0.45 / 2 \times 2 =$      |      | 1.157 | (m)  |
| R                | $0.181 / 1.157 =$                                |      | 0.156 | (m)  |
| Velocity         |  |      | 1.47  | m/s  |
| Capacity         |  |      | 0.265 | m3/s |

Utilization = 0.168 / 0.265 = **63.31** %

OK (less than 90%, for 10% siltation allowance)

**U Channel 5 (Zone A2 + [A3 + B2])**

**Runoff Estimation**

|                          |                                |      |       |       |
|--------------------------|--------------------------------|------|-------|-------|
| Design Return Period     |                                | 1 in | 10    | years |
| Paved Area               | 2465 + 2210 x 1 =              |      | 4675  | (m2)  |
| Unpaved Area             | 1656 =                         |      | 1656  | (m2)  |
| Total Equivalent Area    | 4675 x 0.95 + 1656 x 0.35 =    |      | 5021  | (m2)  |
| Rainfall Intensity, I *  |                                |      | 206   | mm/hr |
| Design Discharge Rate, Q | 0.278 x 5021 x 206 / 1000000 = |      | 0.288 | mm/hr |

$$i = \frac{a}{(t_d + b)^c}$$

**U Channel**

|                  |  |      |       |      |
|------------------|--|------|-------|------|
| Channel Size     |  | 1 in | 450   | (mm) |
| Gradient         |  |      | 100   |      |
| Area             | $\pi \times 0.45^2 / 8 + 0.45 \times 0.45 / 2 =$ |      | 0.181 | (m2) |
| Wetted Perimeter | $\pi \times 0.45 / 2 + 0.45 / 2 \times 2 =$      |      | 1.157 | (m)  |
| R                | $0.181 / 1.157 =$                                |      | 0.156 | (m)  |
| Velocity         |  |      | 2.07  | m/s  |
| Capacity         |  |      | 0.375 | m3/s |

Utilization = 0.288 / 0.375 = **76.94** %

OK (less than 90%, for 10% siltation allowance)

**U Channel 6 (Combined: Zone [A1 + A4 + B1] + [A2 + A3 + B2])**

**Runoff Estimation**

|                          |                                |      |       |       |
|--------------------------|--------------------------------|------|-------|-------|
| Design Return Period     |                                | 1 in | 10    | years |
| Paved Area               | 4675 + 3200 =                  |      | 7875  | (m2)  |
| Unpaved Area             | 1656 + 1393 =                  |      | 3049  | (m2)  |
| Total Equivalent Area    | 7875 x 0.95 + 3049 x 0.35 =    |      | 8548  | (m2)  |
| Rainfall Intensity, I *  |                                |      | 206   | mm/hr |
| Design Discharge Rate, Q | 0.278 x 8548 x 206 / 1000000 = |      | 0.781 | mm/hr |

$$i = \frac{a}{(t_d + b)^c}$$

**U Channel**

|                  |  |      |       |      |
|------------------|--|------|-------|------|
| Channel Size     |  | 1 in | 675   | (mm) |
| Gradient         |  |      | 200   |      |
| Area             | $\pi \times 0.68^2 / 8 + 0.68 \times 0.68 / 2 =$ |      | 0.407 | (m2) |
| Wetted Perimeter | $\pi \times 0.68 / 2 + 0.68 / 2 \times 2 =$      |      | 1.735 | (m)  |
| R                | $0.407 / 1.735 =$                                |      | 0.234 | (m)  |
| Velocity         |  |      | 1.92  | m/s  |
| Capacity         |  |      | 0.491 | m3/s |

Utilization = 0.781 / 0.491 = **62.83** %

OK (less than 90%, for 10% siltation allowance)

# Appendix B - Proposed Development Layout Plan (1 of 2)

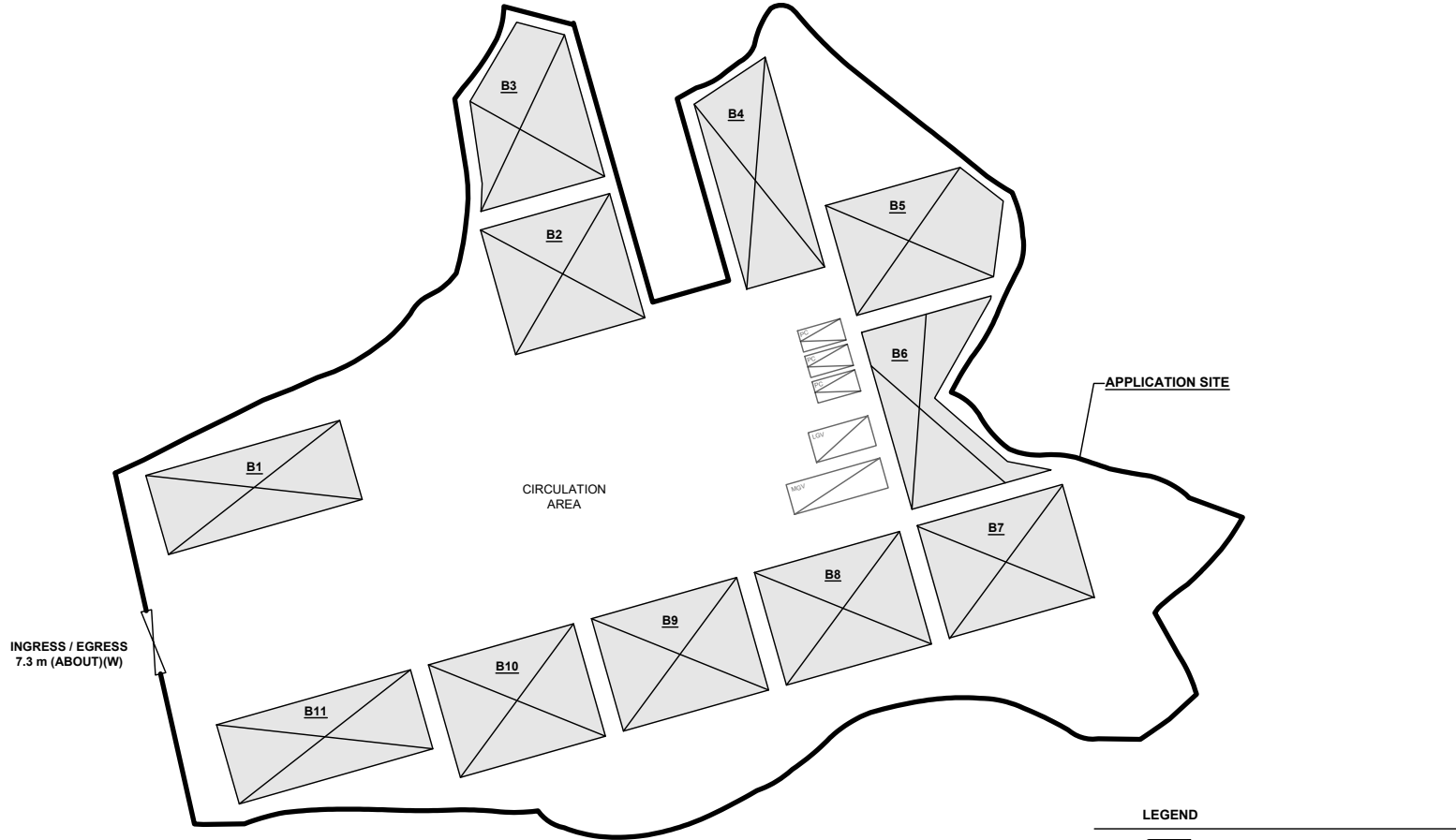
## DEVELOPMENT PARAMETERS

|                       |                        |         |
|-----------------------|------------------------|---------|
| APPLICATION SITE AREA | : 6,968 m <sup>2</sup> | (ABOUT) |
| COVERED AREA          | : 2,407 m <sup>2</sup> | (ABOUT) |
| UNCOVERED AREA        | : 4,561 m <sup>2</sup> | (ABOUT) |
|                       |                        |         |
| PLOT RATIO            | : 0.35                 | (ABOUT) |
| SITE COVERAGE         | : 35 %                 | (ABOUT) |
|                       |                        |         |
| NO. OF STRUCTURE      | : 11                   |         |
| DOMESTIC GFA          | : NOT APPLICABLE       |         |
| NON-DOMESTIC GFA      | : 2,407 m <sup>2</sup> | (ABOUT) |
| TOTAL GFA             | : 2,407 m <sup>2</sup> | (ABOUT) |
|                       |                        |         |
| BUILDING HEIGHT       | : 6 m                  | (ABOUT) |
| NO. OF STOREY         | : 1                    |         |

## STRUCTURE

|     |   |                                    |                                    |                       |
|-----|---|------------------------------------|------------------------------------|-----------------------|
| B1  |   |                                    |                                    |                       |
| B2  |   |                                    |                                    |                       |
| B3  | WAREHOUSE (EXCLUDING D.G.G.)            | 216 m <sup>2</sup> (ABOUT)         | 216 m <sup>2</sup> (ABOUT)         | 6 m (ABOUT)(1-STOREY) |
| B4  | WAREHOUSE (EXCLUDING D.G.G.)            | 212 m <sup>2</sup> (ABOUT)         | 212 m <sup>2</sup> (ABOUT)         | 6 m (ABOUT)(1-STOREY) |
| B5  | WAREHOUSE (EXCLUDING D.G.G.)            | 228 m <sup>2</sup> (ABOUT)         | 228 m <sup>2</sup> (ABOUT)         | 6 m (ABOUT)(1-STOREY) |
|     |   |                                    |                                    |                       |
| B6  | WAREHOUSE (EXCLUDING D.G.G.)            | 212 m <sup>2</sup> (ABOUT)         | 212 m <sup>2</sup> (ABOUT)         | 6 m (ABOUT)(1-STOREY) |
| B7  | WAREHOUSE (EXCLUDING D.G.G.)            | 224 m <sup>2</sup> (ABOUT)         | 224 m <sup>2</sup> (ABOUT)         | 6 m (ABOUT)(1-STOREY) |
| B8  | WAREHOUSE (EXCLUDING D.G.G.)            | 224 m <sup>2</sup> (ABOUT)         | 224 m <sup>2</sup> (ABOUT)         | 6 m (ABOUT)(1-STOREY) |
| B9  | WAREHOUSE (EXCLUDING D.G.G.)            | 224 m <sup>2</sup> (ABOUT)         | 224 m <sup>2</sup> (ABOUT)         | 6 m (ABOUT)(1-STOREY) |
| B10 | WAREHOUSE (EXCLUDING D.G.G.)            | 224 m <sup>2</sup> (ABOUT)         | 224 m <sup>2</sup> (ABOUT)         | 6 m (ABOUT)(1-STOREY) |
|     |   |                                    |                                    |                       |
| B11 | WAREHOUSE (EXCLUDING D.G.G.) AND OFFICE | 211 m <sup>2</sup> (ABOUT)         | 211 m <sup>2</sup> (ABOUT)         | 6 m (ABOUT)(1-STOREY) |
|     |   |                                    |                                    |                       |
|     | <b>TOTAL</b>                            | <b>2,407 m<sup>2</sup> (ABOUT)</b> | <b>2,407 m<sup>2</sup> (ABOUT)</b> |                       |

\*D.G.G. - DANGEROUS GOODS GODOWN



## PARKING AND LOADING / UNLOADING PROVISIONS

|  |                        |
|--|------------------------|
| NO. OF PRIVATE CAR PARKING SPACE           | : 3                    |
| DIMENSION OF L/UL SPACE                    | : 5 m (L) x 2.5 m (W)  |
|  |                        |
| NO. OF L/UL SPACE FOR LIGHT GOODS VEHICLE  | : 1                    |
| DIMENSION OF L/UL SPACE                    | : 7 m (L) x 3.5 m (W)  |
|  |                        |
| NO. OF L/UL SPACE FOR MEDIUM GOODS VEHICLE | : 1                    |
| DIMENSION OF L/UL SPACE                    | : 11 m (L) x 3.5 m (W) |

## LEGEND

|  |                                   |
|--|-----------------------------------|
|  | APPLICATION SITE                  |
|  | STRUCTURE                         |
|  | OPEN STORAGE AREA                 |
|  | PRIVATE CAR PARKING SPACE         |
|  | LOADING / UNLOADING SPACE FOR LGV |
|  | LOADING / UNLOADING SPACE FOR MGV |
|  | INGRESS / EGRESS                  |

PLANNING CONSULTANT



PROJECT

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

SITE LOCATION

LOT 1291 (PART) IN D.D. 107, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE

1 : 800 @ A4

DRAWN BY: MN DATE: 11.1.2024

REVISED BY: DATE:

APPROVED BY: DATE:

DWG. TITLE  
LAYOUT PLAN

DWG. NO.: PLAN 4 VER.: 001

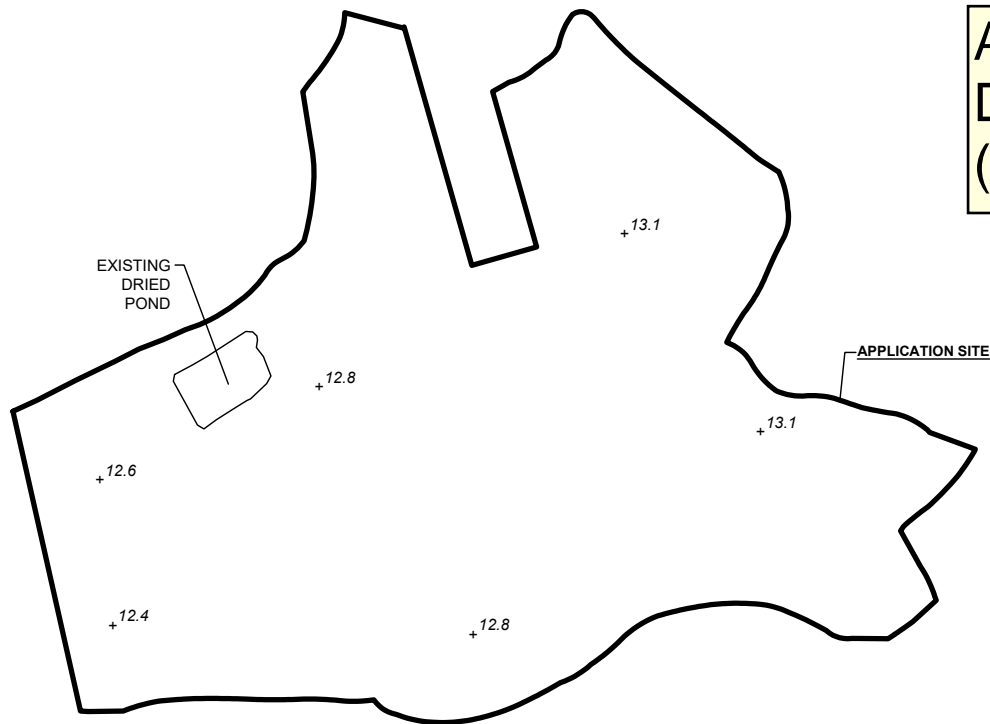


# Appendix B - Proposed Development Layout Plan (2 of 2)

**EXISTING CONDITION OF THE APPLICATION SITE**

APPLICATION SITE AREA : 6,968 m<sup>2</sup> (ABOUT)  
 EXISTING SITE LEVELS : +12.4 mPD - +13.1 mPD (ABOUT)

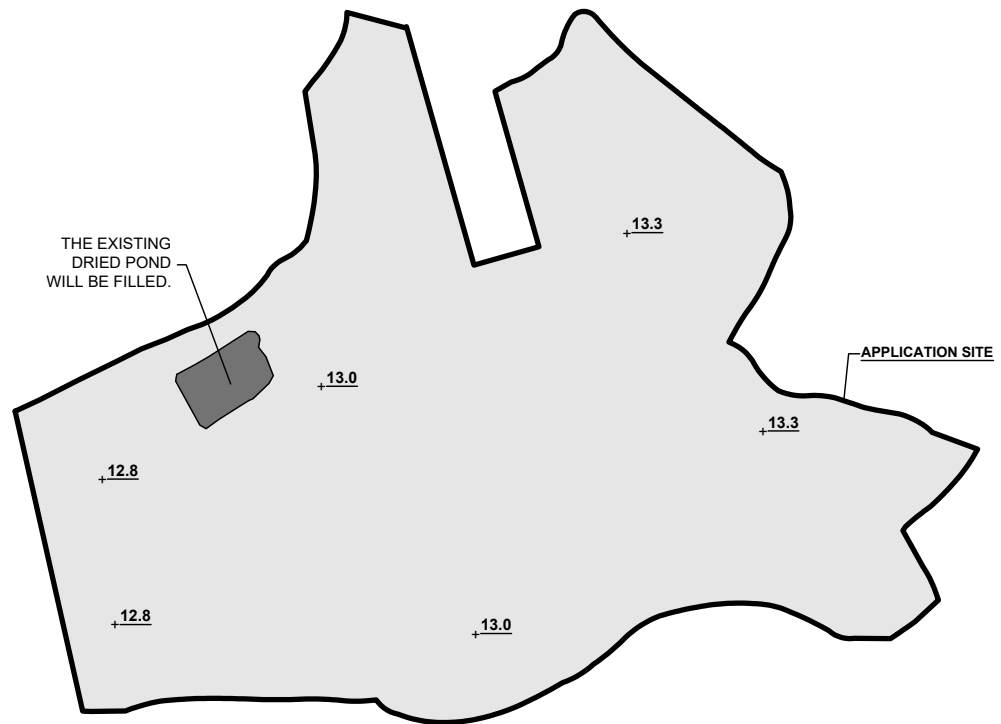
EXISTING POND AT THE APPLICATION SITE  
 AREA OF DRIED POND : 92 m<sup>2</sup> (ABOUT)  
 DEPTH OF POND : 0.5 m (ABOUT)



**LEGEND**  
 [Black Outline] APPLICATION SITE  
 +3.4 EXISTING SITE LEVEL

**PROPOSED FILLING OF LAND AND POND**

APPLICATION SITE AREA : 6,968 m<sup>2</sup> (ABOUT)  
 PROPOSED FILLED AREA : 6,968 m<sup>2</sup> (ABOUT)  
 DEPTH OF LAND FILLING : NOT MORE THAN 0.4 m  
 PROPOSED SITE LEVELS : +12.8 mPD - +13.3 mPD  
 MATERIAL OF LAND FILLING : CONCRETE  
 USE : SITE FORMATION AND CIRCULATION AREA



**LEGEND**  
 [Black Outline] APPLICATION SITE  
 [Light Grey Fill] FILLING OF LAND AREA  
 [Dark Grey Fill] FILLING OF POND AREA  
 +3.4 PROPOSED SITE LEVEL

SITE LEVELS ARE FOR REFERENCE ONLY.

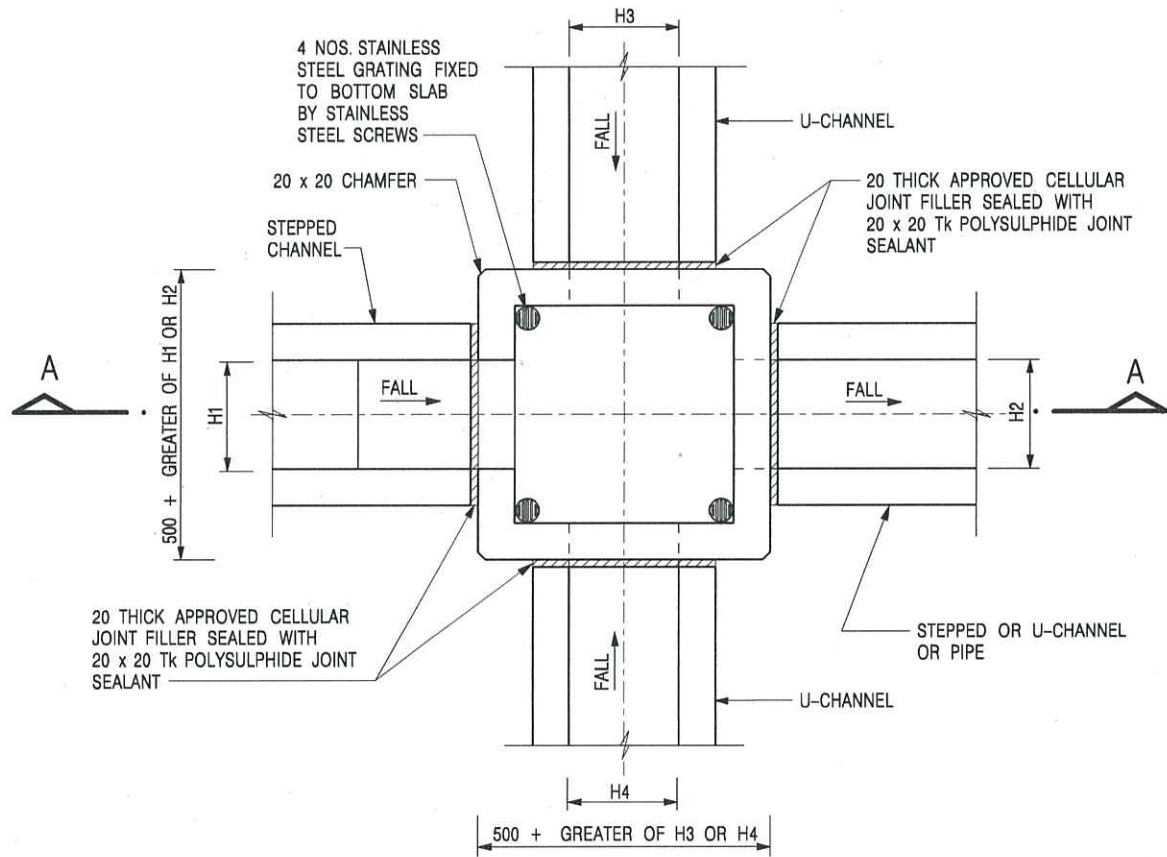
PLANNING CONSULTANT

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

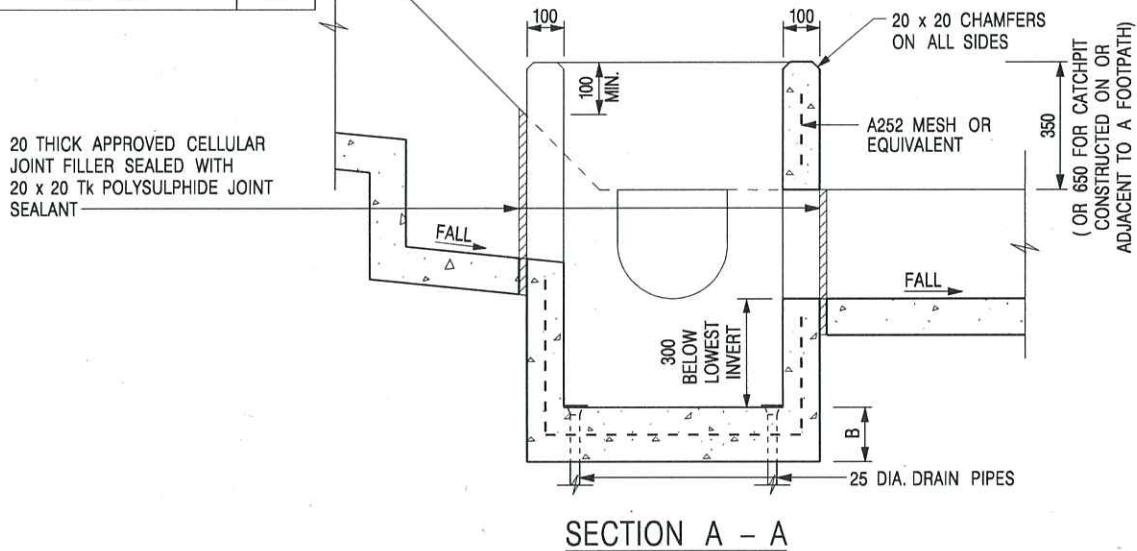
SITE LOCATION  
 LOT 1291 (PART) IN D.D. 107, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

|                               |                   |
|-------------------------------|-------------------|
| SCALE<br>1 : 1000 @ A4        |                   |
| DRAWN BY<br>MN                | DATE<br>29.8.2024 |
| REVISED BY                    | DATE              |
| APPROVED BY                   | DATE              |
| DWG. TITLE<br>FILLING OF LAND |                   |
| DWG NO.<br>PLAN 5             | VER.<br>002       |

# Appendix C - Reference Drawings



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



**NOTES:**

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

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

CATCHPIT WITH TRAP  
(SHEET 1 OF 2)



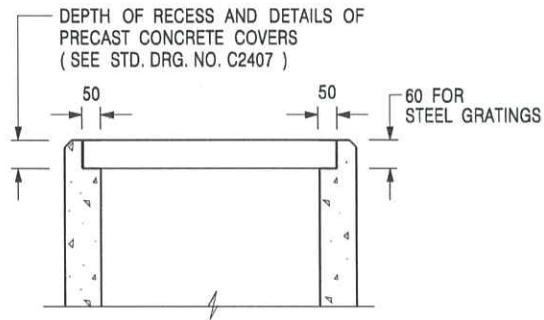
CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT

SCALE 1 : 20

DRAWING NO.

DATE JAN 1991

C2406 /1



ALTERNATIVE TOP SECTION  
FOR PRECAST CONCRETE COVERS / GRATINGS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE SHALL BE GRADE 20 /20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2 OR F2 AS APPROPRIATE.
4. FOR DETAILS OF JOINT, REFER TO STD. DRG. NO. C2413.
5. CONCRETE TO BE COLOURED AS SPECIFIED.
6. UNLESS REQUESTED BY THE MAINTENANCE PARTY AND AS DIRECTED BY THE ENGINEER, CATCHPIT WITH TRAP IS NORMALLY NOT PREFERRED DUE TO PONDING PROBLEM.
7. UPON THE REQUEST FROM MAINTENANCE PARTY, DRAIN PIPES AT CATCHPIT BASE CAN BE USED BUT THIS IS FOR CATCHPITS LOCATED AT SLOPE TOE ONLY AND AS DIRECTED BY THE ENGINEER.
8. FOR CATCHPITS CONSTRUCTED ON OR ADJACENT TO A FOOTPATH, STEEL GRATINGS (SEE DETAIL 'A' ON STD. DRG. NO. C2405 /2 ) OR CONCRETE COVERS (SEE STD. DRG. NO. C2407 ) SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.
9. IF INSTRUCTED BY THE ENGINEER, HANDRAILING (SEE DETAIL 'J' ON STD. DRG. NO. C2405 /5; EXCEPT ON THE UPSLOPE SIDE ) IN LIEU OF STEEL GRATINGS OR CONCRETE COVERS CAN BE ACCEPTED AS AN ALTERNATIVE SAFETY MEASURE FOR CATCHPITS NOT ON A FOOTPATH NOR ADJACENT TO IT. TOP OF THE HANDRAILING SHALL BE 1 000 mm MIN. MEASURED FROM THE ADJACENT GROUND LEVEL.
10. MINIMUM INTERNAL CATCHPIT WIDTH SHALL BE 1 000 mm FOR CATCHPITS WITH A HEIGHT EXCEEDING 1 000 mm MEASURED FROM THE INVERT LEVEL TO THE ADJACENT GROUND LEVEL. AND, STEP IRONS (SEE DSD STD. DRG. NO. DS1043 ) AT 300 c/c STAGGERED SHALL BE PROVIDED. THICKNESS OF CATCHPIT WALL FOR INSTALLATION OF STEP IRONS SHALL BE INCREASED TO 150 mm.
11. FOR RETROFITTING AN EXISTING CATCHPIT WITH STEEL GRATING, SEE DETAIL 'G' ON STD. DRG. NO. C2405 /4.
12. SUBJECT TO THE APPROVAL OF THE ENGINEER, OTHER MATERIALS CAN ALSO BE USED AS COVERS / GRATINGS.

|             |                         |                  |             |
|-------------|-------------------------|------------------|-------------|
| A           | MINOR AMENDMENT.        | Original Signed  | 04.2016     |
| -           | FORMER DRG. NO. C2406J. | Original Signed  | 03.2015     |
| <b>REF.</b> | <b>REVISION</b>         | <b>SIGNATURE</b> | <b>DATE</b> |

CATCHPIT WITH TRAP  
(SHEET 2 OF 2)



**CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT**

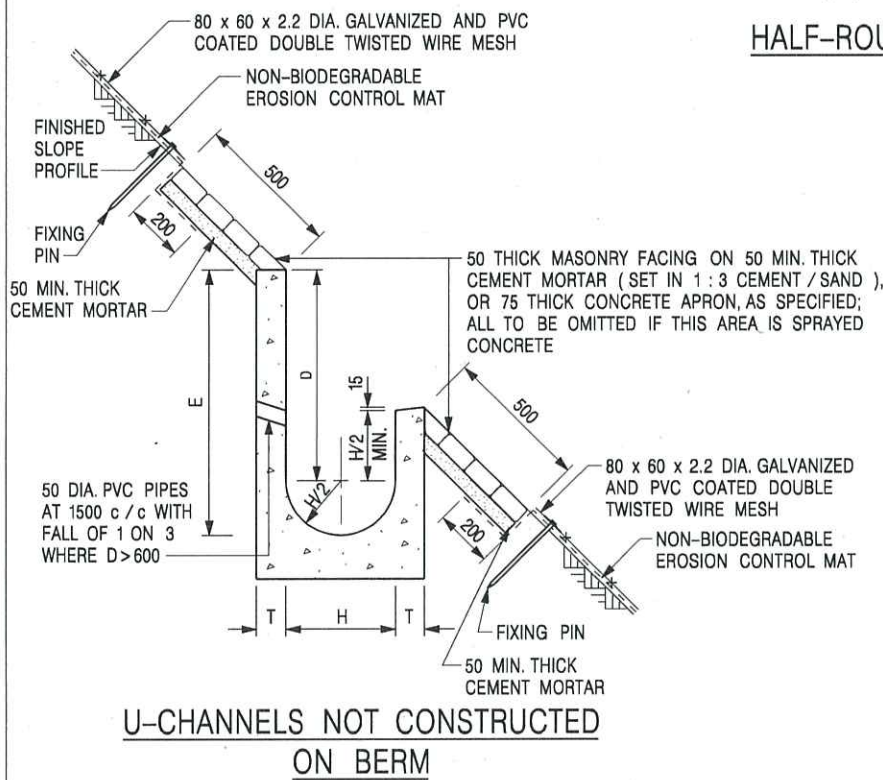
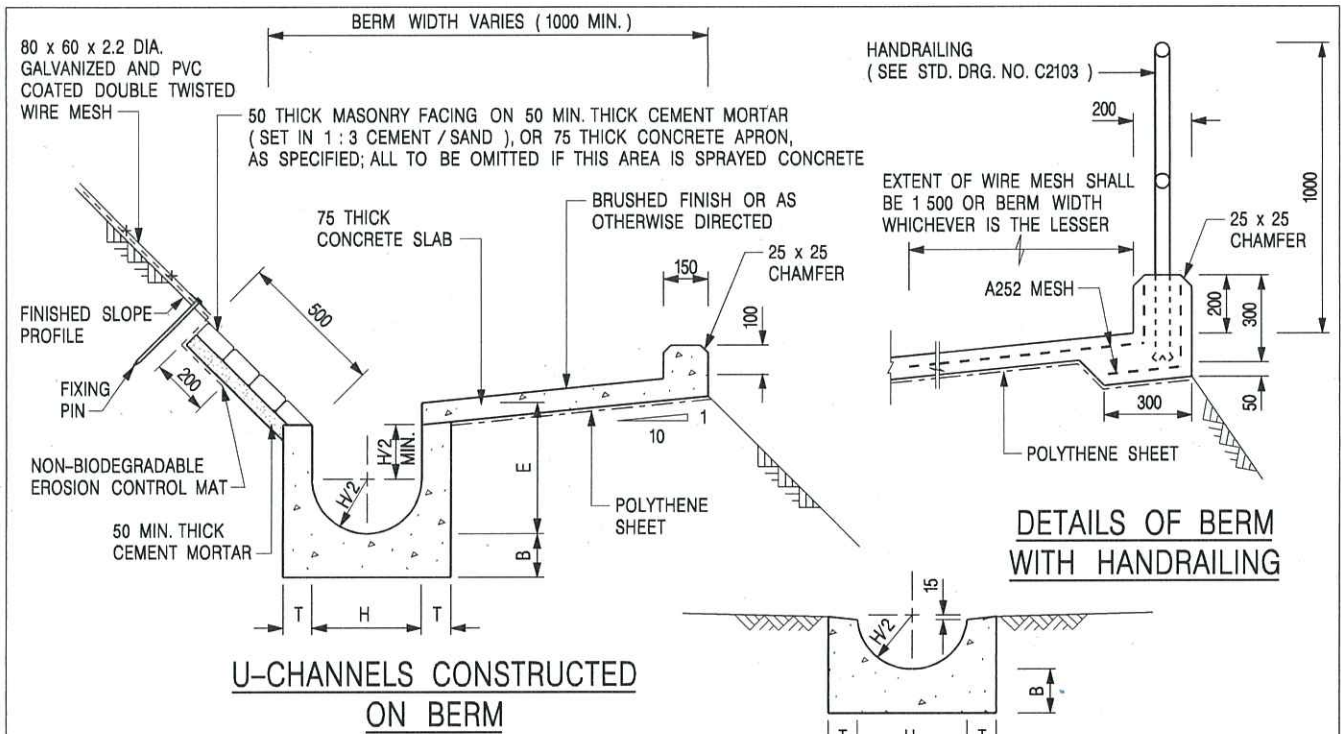
**SCALE** 1 : 20

**DRAWING NO.**

**DATE** JAN 1991

**C2406 /2A**





**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE TO BE GRADE 20 / 20.
3. CONCRETE SURFACE FINISH SHALL BE CLASS U2, F2 OR BRUSHED FINISH AS DIRECTED.
4. SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM, SEE STD. DRG. NO. C2413 FOR DETAILS.
5. JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS, ETC. TO BE ON THE SAME ALIGNMENT.
6. FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
7. BIODEGRADABLE EROSION CONTROL MAT IF REQUIRED, SEE STD. DRG. NO. C2511/E.
8. CONCRETE TO BE COLOURED AS SPECIFIED.
9. CONCRETE U-CHANNEL CAN BE CAST IN-SITU OR PRECAST CONCRETE SUBJECT TO THE ENGINEER'S AGREEMENT ON THE DETAILS.
10. DETAILS OF EROSION CONTROL MAT AND WESH MESH ON BERM. (SEE STD DRG. NO. C2511/E)

| NOMINAL SIZE H | T   | B   | REINFORCEMENT                                     |
|----------------|-----|-----|---|
| 300            | 80  | 100 | A252 MESH PLACED CENTRALLY AND T=100 WHEN E > 650 |
| 375 - 600      | 100 | 150 |   |
| 675 - 900      | 125 | 175 | A252 MESH PLACED CENTRALLY                        |

| I    | MINOR AMENDMENT.                     | Original Signed | 07.2018 |
|------|--------------------------------------|-----------------|---------|
| H    | THICKNESS OF MASONRY FACING AMENDED. | Original Signed | 01.2005 |
| G    | MINOR AMENDMENT.                     | Original Signed | 01.2004 |
| F    | GENERAL REVISION.                    | Original Signed | 12.2002 |
| E    | DRAWING TITLE AMENDED.               | Original Signed | 11.2001 |
| D    | MINOR AMENDMENT.                     | Original Signed | 08.2001 |
| C    | 150 x 100 UPSTAND ADDED AT BERM.     | Original Signed | 6.99    |
| B    | MINOR AMENDMENTS.                    | Original Signed | 3.94    |
| REF. | REVISION                             | SIGNATURE       | DATE    |

DETAILS OF HALF-ROUND AND U-CHANNELS (TYPE A WITH MASONRY APRON)



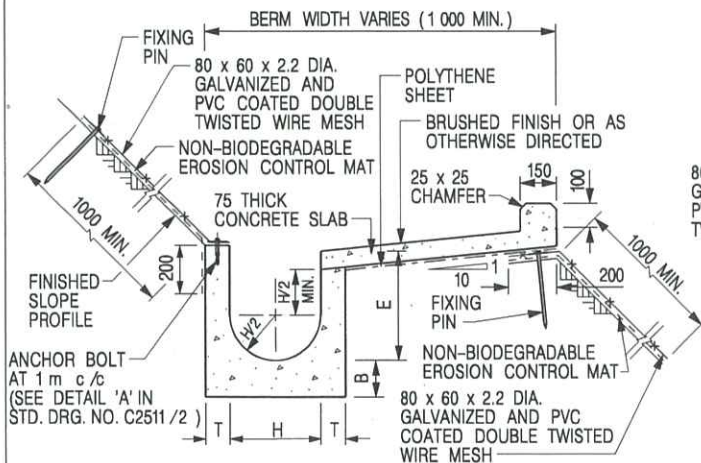
**CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT**

SCALE 1 : 25

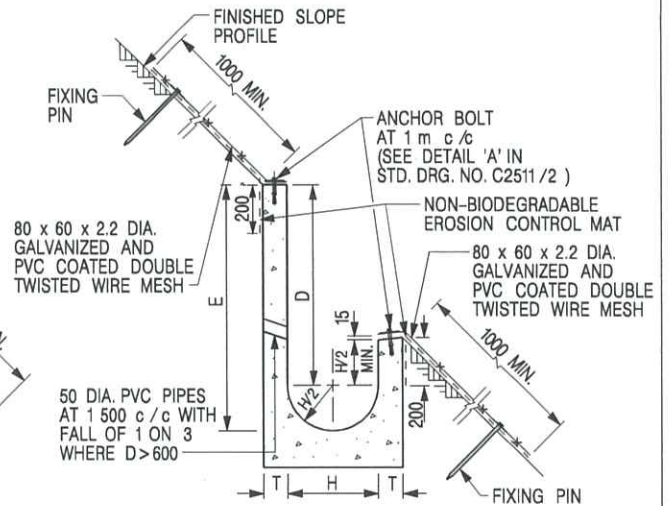
DRAWING NO.

DATE JAN 1991

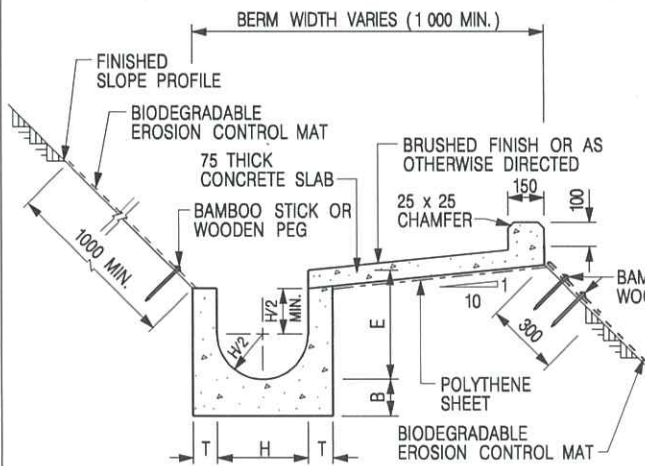
C24091



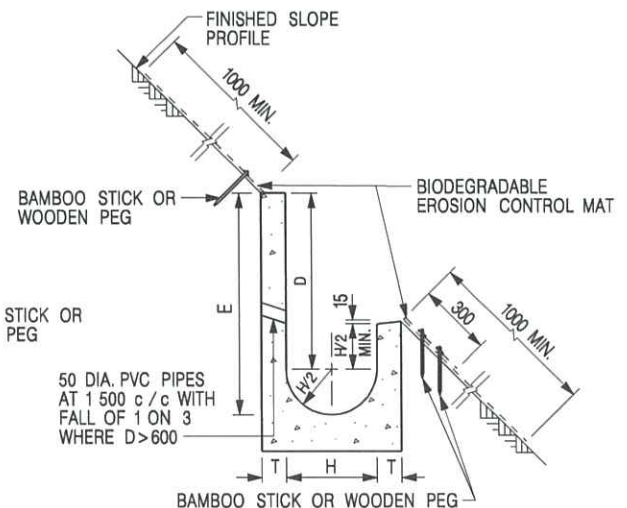
**U-CHANNELS CONSTRUCTED ON BERM WITH NON-BIODEGRADABLE EROSION CONTROL MAT**



**U-CHANNELS NOT CONSTRUCTED ON BERM WITH NON-BIODEGRADABLE EROSION CONTROL MAT**



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



**U-CHANNELS NOT CONSTRUCTED ON BERM WITH BIODEGRADABLE EROSION CONTROL MAT**

**NOTES:**

- ALL DIMENSIONS ARE IN MILLIMETRES.
- ALL CONCRETE TO BE GRADE 20 /20.
- CONCRETE SURFACE FINISH SHALL BE CLASS U2, F2 OR BRUSHED FINISH AS DIRECTED.
- SPACING OF EXPANSION JOINT IN CHANNELS, BERM SLABS AND APRONS TO BE 10 METRES MAXIMUM, SEE STD. DRG. NO. C2413 FOR DETAILS.
- JOINTS FOR CHANNELS, BERM SLABS, APRONS AND WALLS, ETC. TO BE ON THE SAME ALIGNMENT.
- FOR DIMENSIONS T, H, & B, SEE TABLE BELOW.
- FOR TYPICAL FIXING PIN DETAILS, SEE STD. DRG. NO. C2511/2.
- MINIMUM SIZE OF 25 x 50 x 300mm SHALL BE PROVIDED FOR WOODEN PEG.
- MINIMUM SIZE OF 10mm DIAMETER WITH 200mm LONG SHALL BE PROVIDED FOR BAMBOO STICK.
- THE FIXING DETAILS OF NON-BIODEGRADABLE AND BIODEGRADABLE EROSION CONTROL MATS ON EXISTING BERM SHALL REFER TO STD. DRG. NO. C2511/1.

| NOMINAL SIZE H | T   | B   | REINFORCEMENT                                     |
|----------------|-----|-----|---|
| 300            | 80  | 100 | A252 MESH PLACED CENTRALLY AND T=100 WHEN E > 650 |
| 375 - 600      | 100 | 150 |   |
| 675 - 900      | 125 | 175 | A252 MESH PLACED CENTRALLY                        |

| REF. | REVISION   | SIGNATURE       | DATE    |
|------|--|-----------------|---------|
| I    | MINOR AMENDMENT.   | Original Signed | 07.2018 |
| H    | FIXING DETAILS OF BIODEGRADABLE EROSION CONTROL MAT ADDED. | Original Signed | 12.2017 |
| G    | DIMENSION TABLE AMENDED.                                   | Original Signed | 01.2005 |
| F    | MINOR AMENDMENT.   | Original Signed | 01.2004 |
| E    | GENERAL REVISION.  | Original Signed | 12.2002 |
| D    | MINOR AMENDMENT.   | Original Signed | 08.2001 |
| C    | 150 x 100 UPSTAND ADDED AT BERM.                           | Original Signed | 6.99    |
| B    | MINOR AMENDMENT.   | Original Signed | 3.94    |
| A    | MINOR AMENDMENT.   | Original Signed | 10.92   |

**DETAILS OF HALF-ROUND AND U-CHANNELS (TYPE B - WITH EROSION CONTROL MAT APRON)**



**CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT**

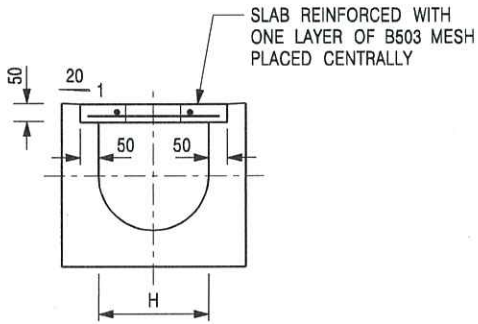
**SCALE** DIAGRAMMATIC

**DRAWING NO.**

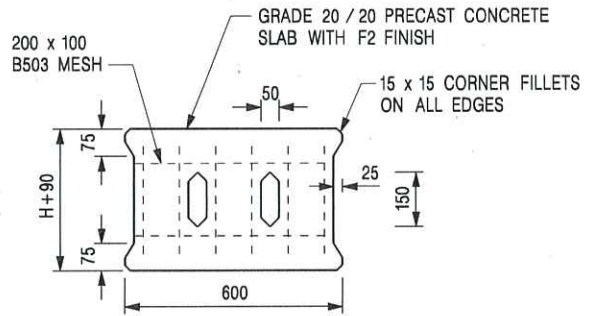
**DATE** JAN 1991

**C24101**





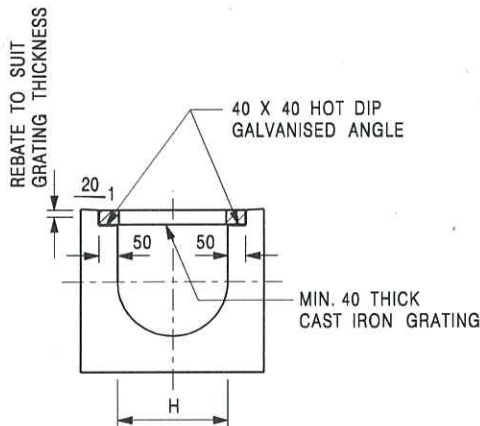
TYPICAL SECTION



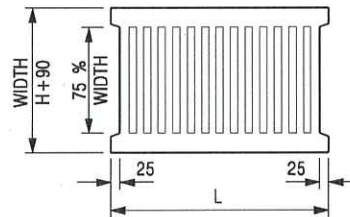
PLAN OF SLAB

U-CHANNELS WITH PRECAST CONCRETE SLABS

(UP TO H OF 525)



TYPICAL SECTION



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

CAST IRON GRATING

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

U-CHANNEL WITH CAST IRON GRATING

(UP TO H OF 525)

NOTES:

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

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

COVER SLAB AND CAST IRON  
GRATING FOR CHANNELS



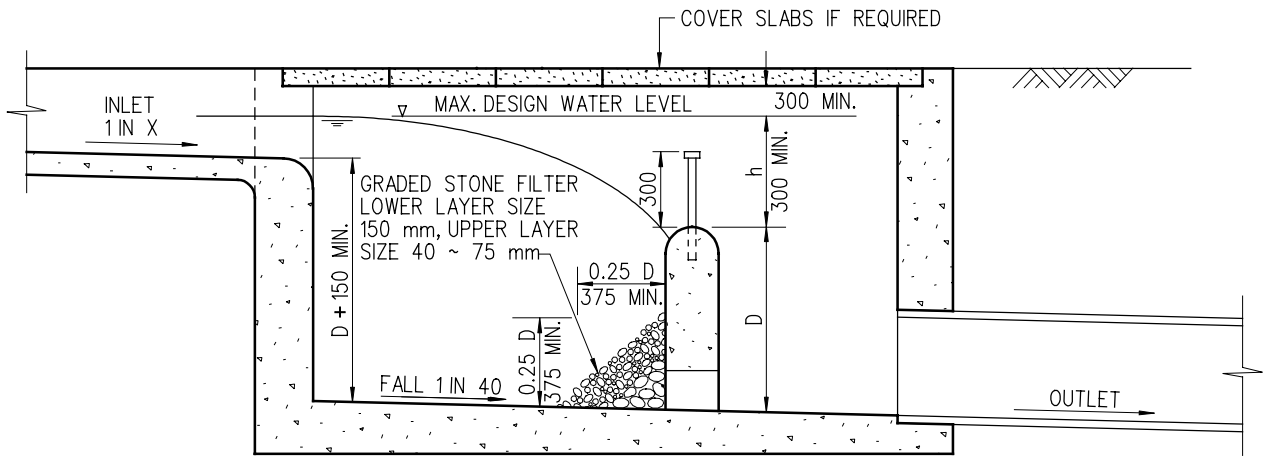
CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT

SCALE 1 : 20

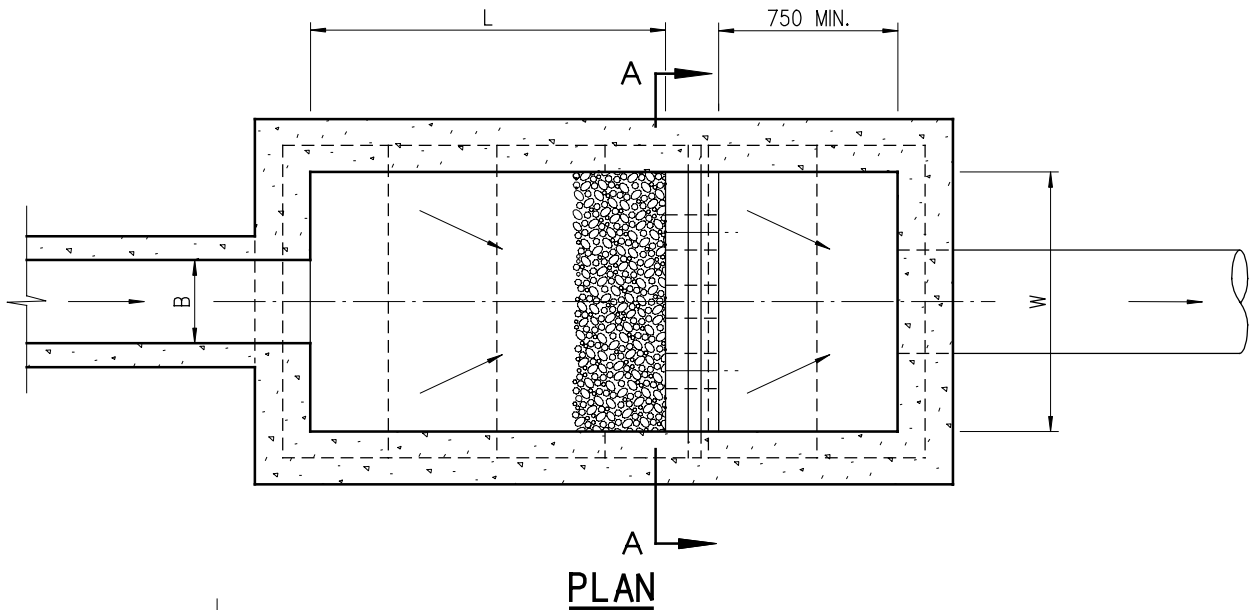
DRAWING NO.

DATE JAN 1991

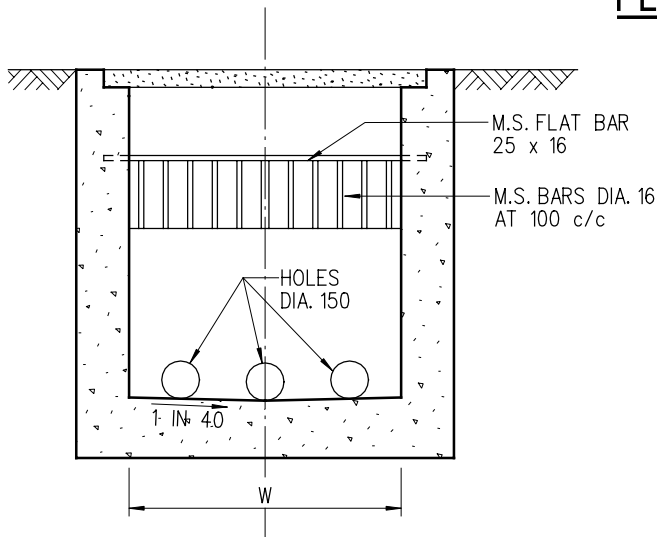
C2412E



**LONGITUDINAL SECTION**



**PLAN**



**SECTION A-A**

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. NORMALLY FOR DRAINS OF 900 mm DIA. AND BELOW. FOR BIGGER DRAINS AND STEEP TERRAIN, SAND TRAP SHOULD BE SPECIALLY DESIGNED.
3. SIZE  
 DEPTH :  $D \leq 750$   
 WIDTH :  $W \geq 3B$   
 LENGTH :  $4.8D^{0.67} h^{0.5} X^{0.5} \geq 4B$
4. GRADED STONE FILTER SHALL BE CRUSHER RUN GRANITE AGGREGATE.
5. CAPACITY  $D W L$  TO BE ACCORDING TO SIZE AND NATURE OF CATCHMENT, PROVIDING DETENTION TIME NOT LESS THAN 5 MINUTES FOR MAX. DESIGN FLOW OF INLET.

|      |                |                 |          |
|------|----------------|-----------------|----------|
| B    | REDRAWN BY CAD | ORIGINAL SIGNED | 8.8.2001 |
| A    | GENERAL REVIEW | ORIGINAL SIGNED | 2.2.2001 |
| REV. | DESCRIPTION    | SIGNATURE       | DATE     |

**SAND TRAP**

**DRAINAGE SERVICES DEPARTMENT**

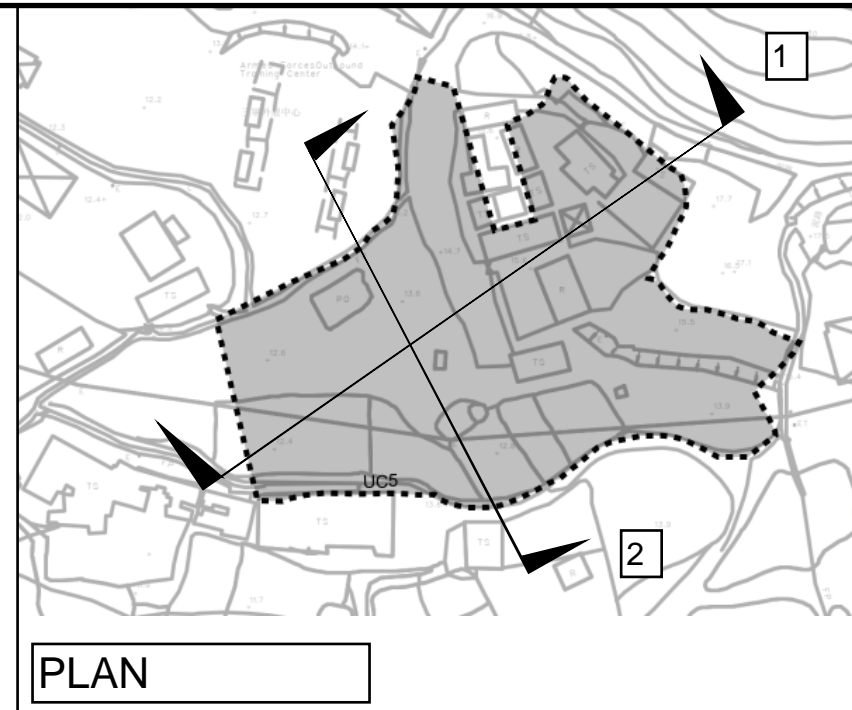
REFERENCE

DRAWING No.

SCALE

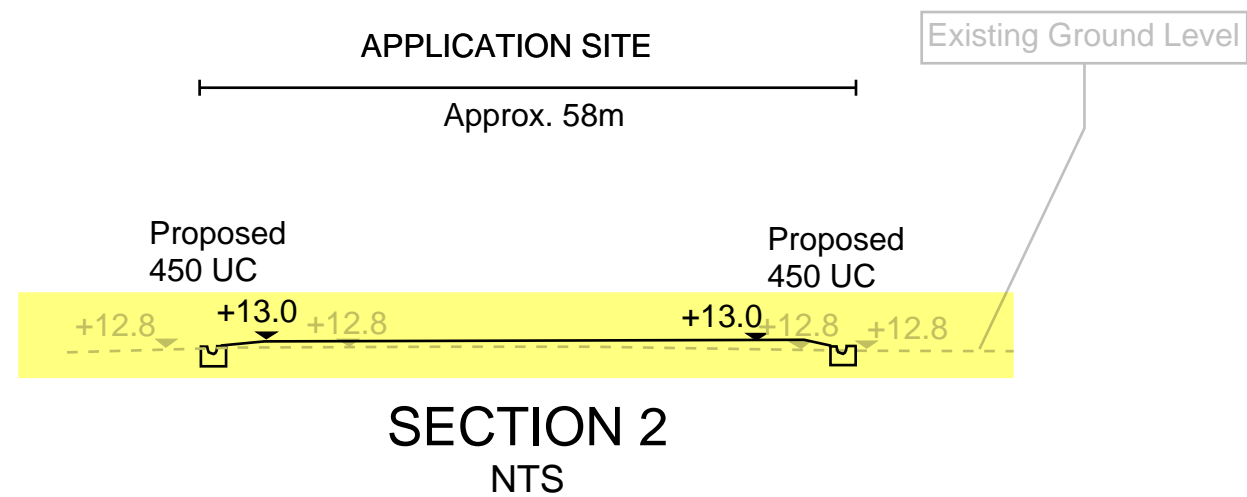
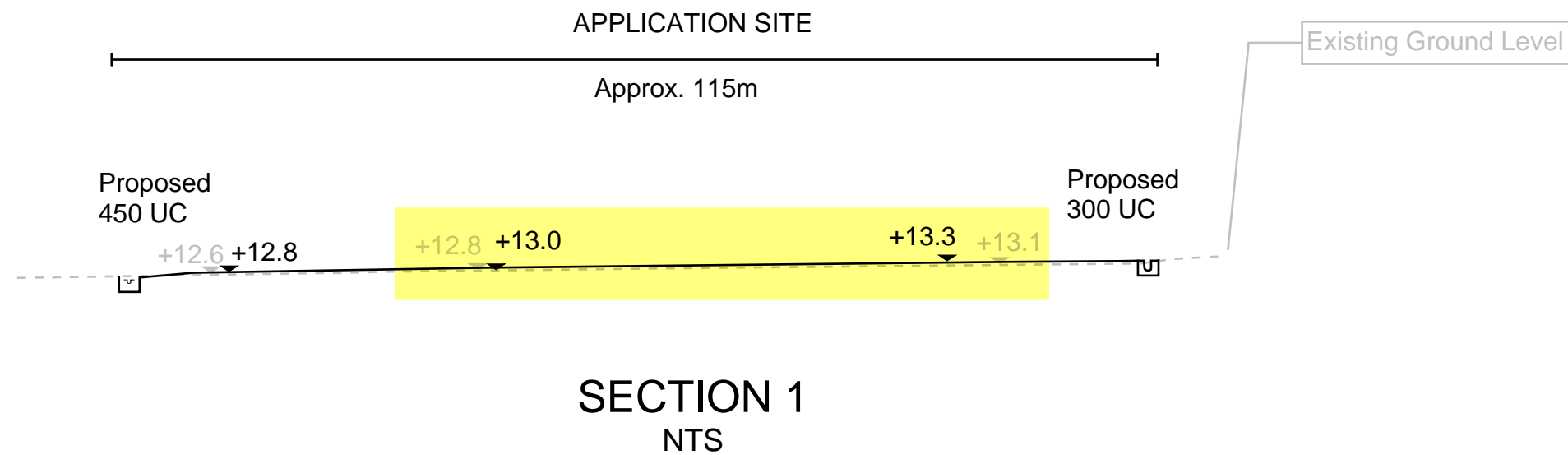
DIAGRAMMATIC

**DS 1025B**



PLAN

**PROJECT:**  
 Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kat Tin, Y.L., N.T.



SECTIONS

Appendix D



## Appendix E Checking of Existing 7m (W) x 3m (D) Channel [Assume width of channel is 3m for Assessment Purpose]

### Runoff Estimation

|                          |                                  |      |         |                   |
|--------------------------|----------------------------------|------|---------|-------------------|
| Design Return Period     |                                  | 1 in | 50      | years             |
| Paved Area               | 136753 =                         |      | 136,753 | (m <sup>2</sup> ) |
| Unpaved Area             | 940087 =                         |      | 940,087 | (m <sup>2</sup> ) |
| Total Equivalent Area    | 136753 x 0.95 + 940087 x 0.35 =  |      | 458,946 | (m <sup>2</sup> ) |
| Rainfall Intensity, I*   |                                  |      | 133     | mm/hr             |
| Design Discharge Rate, Q | 0.278 x 458946 x 133 / 1000000 = |      | 41.701  | mm/hr             |

$$i = \frac{a}{(t_d + b)^c}$$

### U Channel

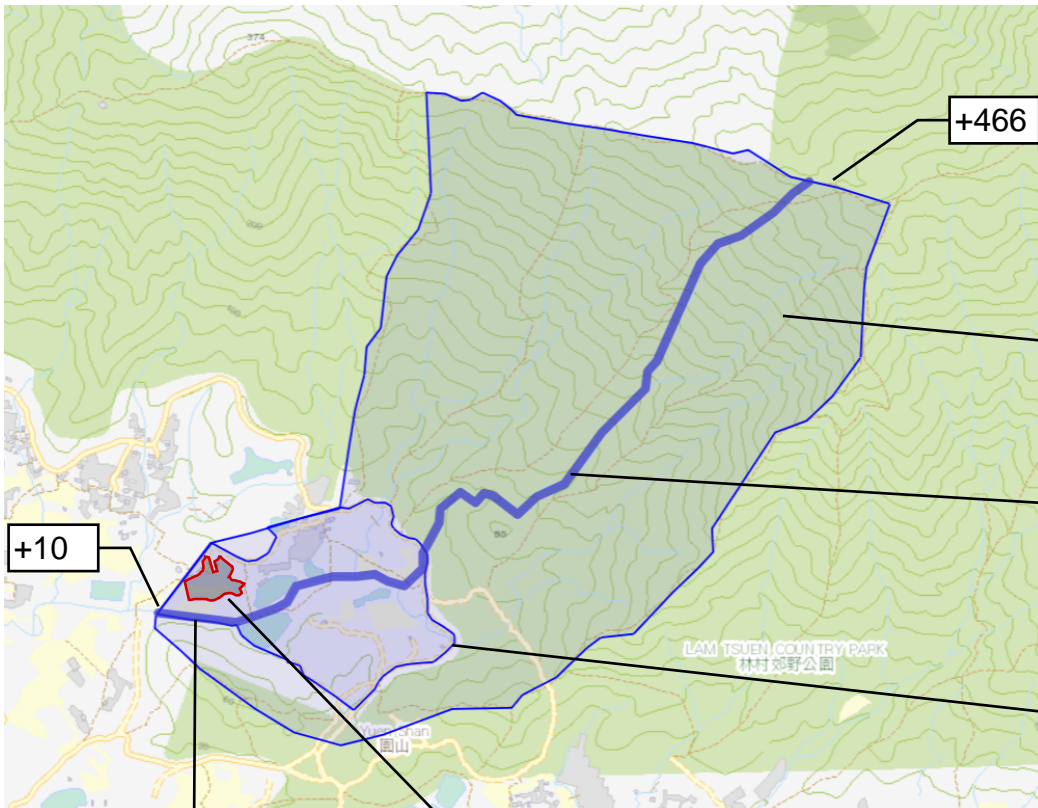
|              |  |      |        |                   |
|--------------|--|------|--------|-------------------|
| Channel Size |  | 1 in | 3000   | (mm)              |
| Gradient     |  |      | 200    |                   |
| Velocity     |  |      | 5.19   | m/s               |
| Capacity     |  |      | 16.966 | m <sup>3</sup> /s |

Assume the existing channel size is 3m only for Assessment Purpose

Utilization  $41.701 / 16.966 = 40.69$  % OK (less than 90%, for 10% siltation allowance)

## Time of Concentration for Catchment of Existing

| Catchment         | Flow Distance | Highest Level | Lowest Level | Gradient (per 100m) | to (min) =                     | tc =    |
|-------------------|---------------|---------------|--------------|---------------------|--------------------------------|---------|
|                   |               |               |              | = (H1-H2)/L x 100   | $0.14465L / (H^{0.2} A^{0.1})$ | to + tf |
| A                 | L             |               |              | H                   |                                |         |
| (m <sup>2</sup> ) | (m)           | (mPD)         | (mPD)        |                     | (min)                          | (min)   |
| 1076839.86        | 1851          | 466           | 10           | 24.635              | 35.172                         | 35.172  |



Catchment Area (unpaved)  
940,087 m<sup>2</sup>

Flow Distance  
1851 m  
(base on stream shown on base)

Catchment Area (paved)  
136,753 m<sup>2</sup>

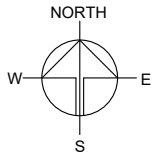
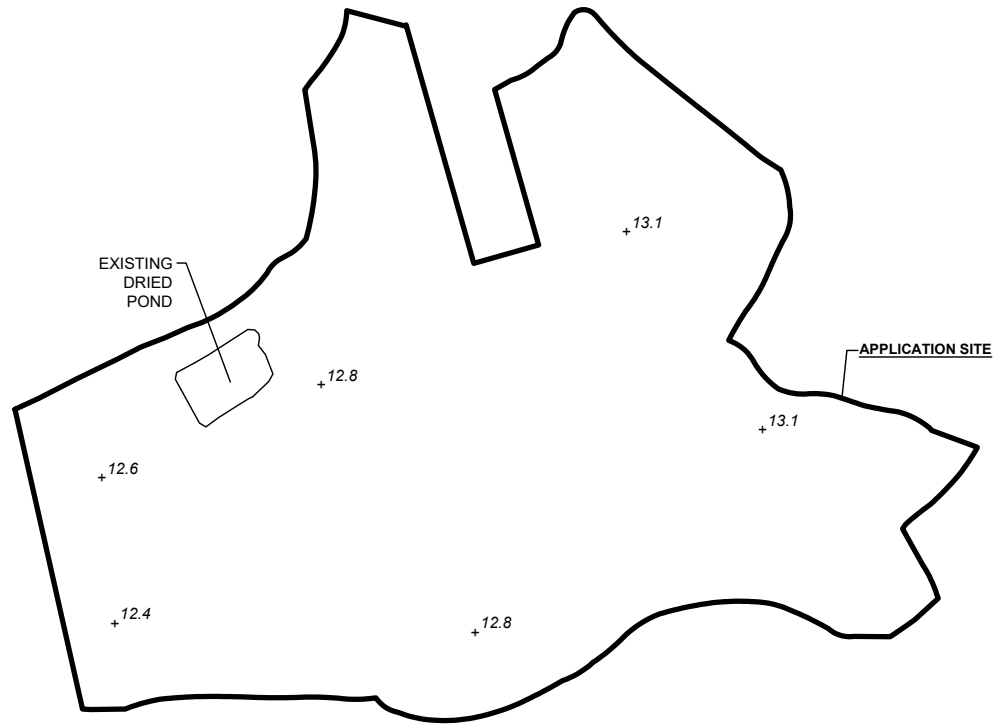
DEVELOPMENT SITE  
(FOR INDICATIVE ONLY)

Existing Approx. 7m width channel

**EXISTING CONDITION OF THE APPLICATION SITE**

APPLICATION SITE AREA : 6,968 m<sup>2</sup> (ABOUT)  
 EXISTING SITE LEVELS : +12.4 mPD - +13.1 mPD (ABOUT)

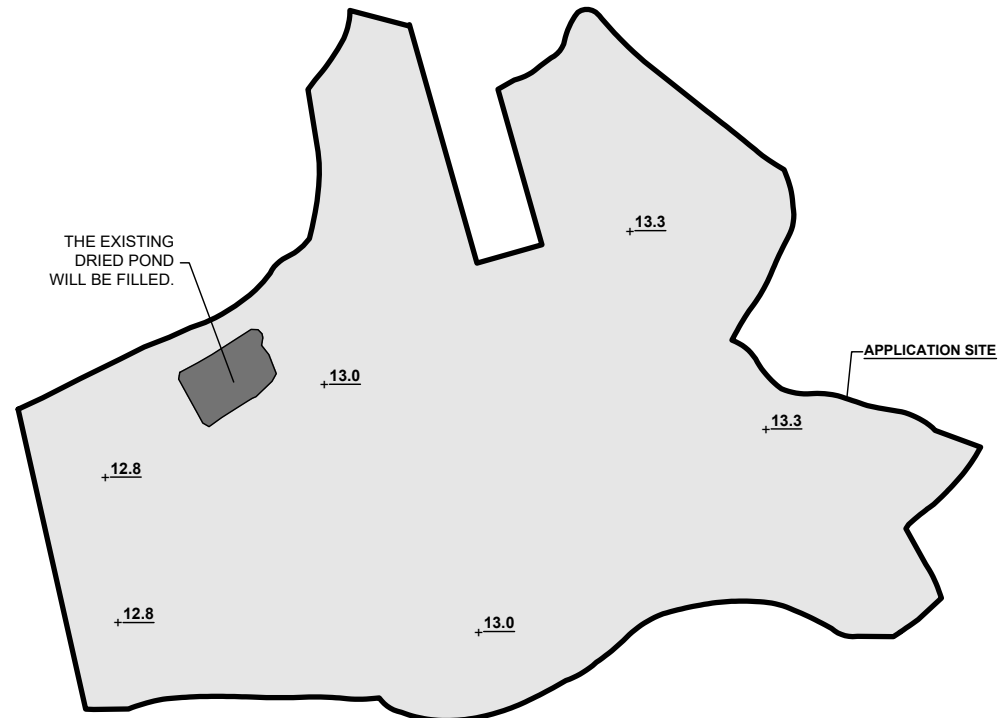
EXISTING POND AT THE APPLICATION SITE  
 AREA OF DRIED POND : 92 m<sup>2</sup> (ABOUT)  
 DEPTH OF POND : 0.5 m (ABOUT)



**PROPOSED FILLING OF LAND AND POND**

APPLICATION SITE AREA : 6,968 m<sup>2</sup> (ABOUT)

PROPOSED FILLED AREA : 6,968 m<sup>2</sup> (ABOUT)  
 DEPTH OF LAND FILLING : NOT MORE THAN 0.4 m  
 PROPOSED SITE LEVELS : +12.8 mPD - +13.3 mPD  
 MATERIAL OF LAND FILLING : CONCRETE  
 USE : SITE FORMATION AND CIRCULATION AREA



**LEGEND**  
 APPLICATION SITE  
 +3.4 EXISTING SITE LEVEL

**LEGEND**  
 APPLICATION SITE  
 FILLING OF LAND AREA  
 FILLING OF POND AREA  
 +3.4 PROPOSED SITE LEVEL

SITE LEVELS ARE FOR REFERENCE ONLY.

PLANNING CONSULTANT



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

LOT 1291 (PART) IN D.D. 107, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE

1 : 1000 @ A4

|                |                   |
|----------------|-------------------|
| DRAWN BY<br>MN | DATE<br>29.8.2024 |
|----------------|-------------------|

|            |      |
|------------|------|
| REVISED BY | DATE |
|------------|------|

|             |      |
|-------------|------|
| APPROVED BY | DATE |
|-------------|------|

DWG. TITLE  
 FILLING OF LAND

|                   |             |
|-------------------|-------------|
| DWG NO.<br>PLAN 1 | VER.<br>002 |
|-------------------|-------------|