此文件在 2025年 7月 14日 收到，城市規劃委員會
只會在收到所有必要的資料及文件後才正式確認收到
申請的日期。

This document is received on 14 JUL 2025
The Town Planning Board will formally acknowledge
the date of receipt of the application only upon receipt
of all the required information and documents.

Form No. S16-III
表格第 S16-III 號

APPLICATION FOR PERMISSION UNDER SECTION 16 OF THE TOWN PLANNING ORDINANCE (CAP. 131)

根據《城市規劃條例》(第131章)第16條遞交的許可申請

Applicable to Proposal Only Involving Temporary Use/Development of Land and/or Building Not Exceeding 3 Years in Rural Areas or Regulated Areas, or Renewal of Permission for such Temporary Use or Development*

適用於祇涉及位於鄉郊地區或受規管地區土地上及/或建築物內進行為期不超過三年的臨時用途/發展或該等臨時用途/發展的許可續期的建議*

****Form No. S16-I should be used for other Temporary Use/Development of Land and/or Building (e.g. temporary use/developments in the Urban Area)and Renewal of Permission for such Temporary Use or Development.***

****其他土地上及/或建築物內的臨時用途/發展 (例如位於市區內的臨時用途或發展)及有關該等臨時用途/發展的許可續期，應使用表格第S16-I號。***

Applicant who would like to publish the notice of application in local newspapers to meet one of the Town Planning Board's requirements of taking reasonable steps to obtain consent of or give notification to the current land owner, please refer to the following link regarding publishing the notice in the designated newspapers: https://www.tpb.gov.hk/en/plan_application/apply.html

申請人如欲在本地報章刊登申請通知，以採取城市規劃委員會就取得現行土地擁有人的同意或通知現行土地擁有人所指定的其中一項合理步驟，請瀏覽以下網址有關在指定的報章刊登通知：https://www.tpb.gov.hk/tc/plan_application/apply.html

General Note and Annotation for the Form
填寫表格的一般指引及註解

"Current land owner" means any person whose name is registered in the Land Registry as that of an owner of the land to which the application relates, as at 6 weeks before the application is made
「現行土地擁有人」指在提出申請前六星期，其姓名或名稱已在土地註冊處註冊為該申請所關乎的土地的擁有人的人

& Please attach documentary proof 請夾附證明文件

^ Please insert number where appropriate 請在適當地方註明編號

Please fill "NA" for inapplicable item 請在不適用的項目填寫「不適用」

Please use separate sheets if the space provided is insufficient 如所提供的空間不足，請另頁說明

Please insert a「✔」at the appropriate box 請在適當的方格內上加上「✔」號

2501282 2025.6.12 by POST

Form No. S16-III 表格第 S16-III 號

For Official Use Only 請勿填寫此欄	Application No. 申請編號	A/NE-FTA/264
	Date Received 收到日期	14 JUL 2025

1. The completed form and supporting documents (if any) should be sent to the Secretary, Town Planning Board (the Board), 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong.
申請人須把填妥的申請表格及其他支持申請的文件 (倘有)，送交香港北角渣華道 333 號北角政府合署 15 樓城市規劃委員會(下稱「委員會」)秘書收。

2. Please read the "Guidance Notes" carefully before you fill in this form. The document can be downloaded from the Board's website at http://www.tpb.gov.hk/. It can also be obtained from the Secretariat of the Board at 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong (Tel: 2231 4810 or 2231 4835), and the Planning Enquiry Counters of the Planning Department (Hotline: 2231 5000) (17/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong and 14/F, Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin, New Territories).
請先細閱《申請須知》的資料單張，然後填寫此表格。該份文件可從委員會的網頁下載 (網址：http://www.tpb.gov.hk/)，亦可向委員會秘書處 (香港北角渣華道 333 號北角政府合署 15 樓 – 電話：2231 4810 或 2231 4835)及規劃署的規劃資料查詢處(熱線：2231 5000) (香港北角渣華道 333 號北角政府合署 17 樓及新界沙田上禾輋路 1 號沙田政府合署 14 樓)索取。

3. This form can be downloaded from the Board's website, and obtained from the Secretariat of the Board and the Planning Enquiry Counters of the Planning Department. The form should be typed or completed in block letters. The processing of the application may be refused if the required information or the required copies are incomplete.
此表格可從委員會的網頁下載，亦可向委員會秘書處及規劃署的規劃資料查詢處索取。申請人須以打印方式或以正楷填寫表格。如果申請人所提交的資料或文件副本不齊全，委員會可拒絕處理有關申請。

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1. Name of Applicant 申請人姓名/名稱

(☐ Mr. 先生 / ☐ Mrs. 夫人 / ☐ Miss 小姐 / ☐ Ms. 女士 / ☑ Company 公司 / ☐ Organisation 機構)

BRILLIANT PROFIT LIMITED

2. Name of Authorised Agent (if applicable) 獲授權代理人姓名/名稱（如適用）

(☐ Mr. 先生 / ☐ Mrs. 夫人 / ☐ Miss 小姐 / ☐ Ms. 女士 / ☑ Company 公司 / ☐ Organisation 機構)

AIKON DEVELOPMENT CONSULTANCY LIMITED

3. Application Site 申請地點

(a) Full address / location / demarcation district and lot number (if applicable) 詳細地址／地點／丈量約份及地段號碼（如適用）	Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(b) Site area and/or gross floor area involved 涉及的地盤面積及／或總樓面面積	☑Site area 地盤面積 16,604 sq.m 平方米 ☑About 約 ☑Gross floor area 總樓面面積 4,927 sq.m 平方米 ☑About 約
(c) Area of Government land included (if any) 所包括的政府土地面積（倘有）	6,886 sq.m 平方米 ☑About 約

(d)	Name and number of the related statutory plan(s) 有關法定圖則的名稱及編號	Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18
(e)	Land use zone(s) involved 涉及的土地用途地帶	"Agriculture" ("AGR")
(f)	Current use(s) 現時用途	Vacant, With Structures (If there are any Government, institution or community facilities, please illustrate on plan and specify the use and gross floor area) (如有任何政府、機構或社區設施，請在圖則上顯示，並註明用途及總樓面面積)

4. "Current Land Owner" of Application Site 申請地點的「現行土地擁有人」

The applicant 申請人 –

☐ is the sole "current land owner"#& (please proceed to Part 6 and attach documentary proof of ownership).
是唯一的「現行土地擁有人」#& (請繼續填寫第 6 部分，並夾附業權證明文件)。

☑ is one of the "current land owners"#& (please attach documentary proof of ownership).
是其中一名「現行土地擁有人」#& (請夾附業權證明文件)。

☐ is not a "current land owner"#.
並不是「現行土地擁有人」#。

☐ The application site is entirely on Government land (please proceed to Part 6).
申請地點完全位於政府土地上（請繼續填寫第 6 部分）。

5. Statement on Owner's Consent/Notification
就土地擁有人的同意/通知土地擁有人的陳述

(a) According to the record(s) of the Land Registry as at 06/06/2025 (DD/MM/YYYY), this application involves a total of 2 "current land owner(s)"#.
根據土地註冊處截至 ..... 年 ..... 月 ..... 日的記錄，這宗申請共牽涉 ..... 名「現行土地擁有人」#。

(b) The applicant 申請人 –

☑ has obtained consent(s) of 1 "current land owner(s)"#.
已取得 ..... 名「現行土地擁有人」#的同意。

Details of consent of "current land owner(s)"# obtained 取得「現行土地擁有人」#同意的詳情		
No. of 'Current Land Owner(s)' 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where consent(s) has/have been obtained 根據土地註冊處記錄已獲得同意的地段號碼／處所地址	Date of consent obtained (DD/MM/YYYY) 取得同意的日期 (日/月/年)
1	351 RP in D.D.87	24/6/2025

(Please use separate sheets if the space of any box above is insufficient. 如上列任何方格的空間不足，請另頁說明)

☐ has notified ..... "current land owner(s)"#
已通知 ..... 名「現行土地擁有人」#。

Details of the "current land owner(s)"# notified 已獲通知「現行土地擁有人」#的詳細資料		
No. of 'Current Land Owner(s)' 「現行土地擁有人」數目	Lot number/address of premises as shown in the record of the Land Registry where notification(s) has/have been given 根據土地註冊處記錄已發出通知的地段號碼／處所地址	Date of notification given (DD/MM/YYYY) 通知日期(日/月/年)

(Please use separate sheets if the space of any box above is insufficient. 如上列任何方格的空間不足，請另頁說明)

☐ has taken reasonable steps to obtain consent of or give notification to owner(s):
已採取合理步驟以取得土地擁有人的同意或向該人發給通知。詳情如下：

Reasonable Steps to Obtain Consent of Owner(s) 取得土地擁有人的同意所採取的合理步驟

☐ sent request for consent to the "current land owner(s)" on _____ (DD/MM/YYYY)#&
於_____(日/月/年)向每一名「現行土地擁有人」#郵遞要求同意書&

Reasonable Steps to Give Notification to Owner(s) 向土地擁有人發出通知所採取的合理步驟

☐ published notices in local newspapers on _____ (DD/MM/YYYY)&
於_____(日/月/年)在指定報章就申請刊登一次通知&

☐ posted notice in a prominent position on or near application site/premises on _____ (DD/MM/YYYY)&
於_____(日/月/年)在申請地點／申請處所或附近的顯明位置貼出關於該申請的通知&

☐ sent notice to relevant owners' corporation(s)/owners' committee(s)/mutual aid committee(s)/management office(s) or rural committee on _____ (DD/MM/YYYY)&
於_____(日/月/年)把通知寄往相關的業主立案法團/業主委員會/互助委員會或管理處，或有關的鄉事委員會&

Others 其他

☐ others (please specify)
其他（請指明）

_____
_____
_____
_____

Note: May insert more than one「✔」.
Information should be provided on the basis of each and every lot (if applicable) and premises (if any) in respect of the application.
註: 可在多於一個方格內加上「✔」號
申請人須就申請涉及的每一地段（倘適用）及處所（倘有）分別提供資料

6. Type(s) of Application 申請類別

(A) Temporary Use/Development of Land and/or Building Not Exceeding 3 Years in Rural Areas or Regulated Areas
位於鄉郊地區或受規管地區土地上及/或建築物內進行為期不超過三年的臨時用途/發展
(For Renewal of Permission for Temporary Use or Development in Rural Areas or Regulated Areas, please proceed to Part (B))
(如屬位於鄉郊地區或受規管地區臨時用途/發展的規劃許可續期，請填寫(B)部分)

(a) Proposed use(s)/development 擬議用途/發展	Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years (Please illustrate the details of the proposal on a layout plan) (請用平面圖說明擬議詳情)
(b) Effective period of permission applied for 申請的許可有效期	☑ year(s) 年 ..... 3 ..... ☐ month(s) 個月 .....

(c) Development Schedule 發展細節表

Proposed uncovered land area 擬議露天土地面積	13,614 sq.m ☑About 約
Proposed covered land area 擬議有上蓋土地面積	2,990 sq.m ☑About 約
Proposed number of buildings/structures 擬議建築物／構築物數目	6
Proposed domestic floor area 擬議住用樓面面積	N/A sq.m ☐About 約
Proposed non-domestic floor area 擬議非住用樓面面積	4,927 sq.m ☑About 約
Proposed gross floor area 擬議總樓面面積	4,927 sq.m ☑About 約

Proposed height and use(s) of different floors of buildings/structures (if applicable) 建築物/構築物的擬議高度及不同樓層的擬議用途 (如適用) (Please use separate sheets if the space below is insufficient) (如以下空間不足，請另頁說明)

Please refer to the attached Planning Statement

Proposed number of car parking spaces by types 不同種類停車位的擬議數目

Private Car Parking Spaces 私家車車位	10
Motorcycle Parking Spaces 電單車車位	
Light Goods Vehicle Parking Spaces 輕型貨車泊車位	
Medium Goods Vehicle Parking Spaces 中型貨車泊車位	
Heavy Goods Vehicle Parking Spaces 重型貨車泊車位	
Others (Please Specify) 其他 (請列明)	

Proposed number of loading/unloading spaces 上落客貨車位的擬議數目

Taxi Spaces 的士車位	
Coach Spaces 旅遊巴車位	
Light Goods Vehicle Spaces 輕型貨車車位	12
Medium Goods Vehicle Spaces 中型貨車車位	
Heavy Goods Vehicle Spaces 重型貨車車位	12
Others (Please Specify) 其他 (請列明)	

Proposed operating hours 擬議營運時間
From 9:00a.m. to 6:00 p.m. from Mondays to Saturdays (Excluding Sundays and Public Holidays)

(d) Any vehicular access to the site/subject building? 是否有車路通往地盤／有關建築物？	Yes 是	☑ There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用)) Kong Nga Po Road
		☐ There is a proposed access. (please illustrate on plan and specify the width) 有一條擬議車路。（請在圖則顯示，並註明車路的闊度）
	No 否	☐

(e) Impacts of Development Proposal 擬議發展計劃的影響
(If necessary, please use separate sheets to indicate the proposed measures to minimise possible adverse impacts or give justifications/reasons for not providing such measures. 如需要的話，請另頁註明可盡量減少可能出現不良影響的措施，否則請提供理據/理由。)

(i) Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動?	Yes 是	☑ Please provide details 請提供詳情 Demolition of existing structures
	No 否	☐
(ii) Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程?	Yes 是	☑ (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用地盤平面圖顯示有關土地／池塘界線，以及河道改道、填塘、填土及／或挖土的細節及/或範圍)
		☐ Diversion of stream 河道改道
		☐ Filling of pond 填塘 Area of filling 填塘面積 ..... sq.m 平方米 ☐About 約 Depth of filling 填塘深度 ..... m 米 ☐About 約
		☑ Filling of land 填土 Area of filling 填土面積 ..16,604.. sq.m 平方米 ☑About 約 Depth of filling 填土厚度 ..not more than 3.. m 米 ☐About 約
		☐ Excavation of land 挖土 Area of excavation 挖土面積..... sq.m 平方米 ☐About 約 Depth of excavation 挖土深度 .....m 米 ☐About 約
	No 否	☐

(iii) Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響？			
	On environment 對環境	Yes 會 ☐	No 不會 ☑
	On traffic 對交通	Yes 會 ☐	No 不會 ☑
	On water supply 對供水	Yes 會 ☐	No 不會 ☑
	On drainage 對排水	Yes 會 ☐	No 不會 ☑
	On slopes 對斜坡	Yes 會 ☐	No 不會 ☑
	Affected by slopes 受斜坡影響	Yes 會 ☐	No 不會 ☑
	Landscape Impact 構成景觀影響	Yes 會 ☐	No 不會 ☑
	Tree Felling 砍伐樹木	Yes 會 ☐	No 不會 ☑
	Visual Impact 構成視覺影響	Yes 會 ☐	No 不會 ☑
	Others (Please Specify) 其他 (請列明)	Yes 會 ☐	No 不會 ☑

	Please state measure(s) to minimise the impact(s). For tree felling, please state the number, diameter at breast height and species of the affected trees (if possible) 請註明盡量減少影響的措施。如涉及砍伐樹木，請說明受影響樹木的數目、及胸高度的樹幹直徑及品種(倘可) ....

(B) Renewal of Permission for Temporary Use or Development in Rural Areas or Regulated Areas 位於鄉郊地區或受規管地區臨時用途/發展的許可續期	
(a) Application number to which the permission relates 與許可有關的申請編號	A/_____/_____
(b) Date of approval 獲批給許可的日期	..... (DD 日/MM 月/YYYY 年)
(c) Date of expiry 許可屆滿日期	..... (DD 日/MM 月/YYYY 年)
(d) Approved use/development 已批給許可的用途／發展	
(e) Approval conditions 附帶條件	☐ The permission does not have any approval condition 許可並沒有任何附帶條件 ☐ Applicant has complied with all the approval conditions 申請人已履行全部附帶條件 ☐ Applicant has not yet complied with the following approval condition(s): 申請人仍未履行下列附帶條件： _____ _____ _____ Reason(s) for non-compliance: 仍未履行的原因： _____ _____ _____ (Please use separate sheets if the space above is insufficient) (如以上空間不足，請另頁說明)
(f) Renewal period sought 要求的續期期間	☐ year(s) 年 ..... ☐ month(s) 個月 .....

7. Justifications 理由

The applicant is invited to provide justifications in support of the application. Use separate sheets if necessary.
現請申請人提供申請理由及支持其申請的資料。如有需要，請另頁說明）。

Please refer to the attached Planning Statement.

8. Declaration 聲明

I hereby declare that the particulars given in this application are correct and true to the best of my knowledge and belief.
本人謹此聲明，本人就這宗申請提交的資料，據本人所知及所信，均屬真實無誤。

I hereby grant a permission to the Board to copy all the materials submitted in this application and/or to upload such materials to the Board's website for browsing and downloading by the public free-of-charge at the Board's discretion.
本人現准許委員會酌情將本人就此申請所提交的所有資料複製及/或上載至委員會網站，供公眾免費瀏覽或下載。

Signature 簽署 ..... ☐ Applicant 申請人 / ☑ Authorised Agent 獲授權代理人

Thomas LUK
Name in Block Letters 姓名（請以正楷填寫）

Planning Consultant
Position (if applicable) 職位 （如適用）

Professional Qualification(s) 專業資格
☐ Member 會員 / ☐ Fellow of 資深會員
☐ HKIP 香港規劃師學會 / ☐ HKIA 香港建築師學會 /
☐ HKIS 香港測量師學會 / ☐ HKIE 香港工程師學會 /
☐ HKILA 香港園境師學會/ ☐ HKIUD 香港城市設計學會
☐ RPP 註冊專業規劃師
Others 其他 .....

on behalf of 代表 AIKON DEVELOPMENT CONSULTANCY LIMITED

☑ Company 公司 / ☐ Organisation Name and Chop (if applicable) 機構名稱及蓋章（如適用）

Date 日期 11/06/2025 (DD/MM/YYYY 日/月/年)

Remark 備註

The materials submitted in this application and the Board's decision on the application would be disclosed to the public. Such materials would also be uploaded to the Board's website for browsing and free downloading by the public where the Board considers appropriate.
委員會會向公眾披露申請人所遞交的申請資料和委員會對申請所作的決定。在委員會認為合適的情況下，有關申請資料亦會上載至委員會網頁供公眾免費瀏覽及下載。

Warning 警告

Any person who knowingly or wilfully makes any statement or furnish any information in connection with this application, which is false in any material particular, shall be liable to an offence under the Crimes Ordinance.
任何人在明知或故意的情況下，就這宗申請提出在任何要項上是虛假的陳述或資料，即屬違反《刑事罪行條例》。

Statement on Personal Data 個人資料的聲明

1. The personal data submitted to the Board in this application will be used by the Secretary of the Board and Government departments for the following purposes:
委員會就這宗申請所收到的個人資料會交給委員會秘書及政府部門，以根據《城市規劃條例》及相關的城市規劃委員會規劃指引的規定作以下用途：
   (a) the processing of this application which includes making available the name of the applicant for public inspection when making available this application for public inspection; and
   處理這宗申請，包括公布這宗申請供公眾查閱，同時公布申請人的姓名供公眾查閱；以及
   (b) facilitating communication between the applicant and the Secretary of the Board/Government departments.
   方便申請人與委員會秘書及政府部門之間進行聯絡。

2. The personal data provided by the applicant in this application may also be disclosed to other persons for the purposes mentioned in paragraph 1 above.
申請人就這宗申請提供的個人資料，或亦會向其他人士披露，以作上述第 1 段提及的用途。

3. An applicant has a right of access and correction with respect to his/her personal data as provided under the Personal Data (Privacy) Ordinance (Cap. 486). Request for personal data access and correction should be addressed to the Secretary of the Board at 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong.
根據《個人資料(私隱)條例》(第 486 章)的規定，申請人有權查閱及更正其個人資料。如欲查閱及更正個人資料，應向委員會秘書提出有關要求，其地址為香港北角渣華道 333 號北角政府合署 15 樓。

Gist of Application 申請摘要

(Please provide details in both English and Chinese as far as possible. This part will be circulated to relevant consultees, uploaded to the Town Planning Board's Website for browsing and free downloading by the public and available at the Planning Enquiry Counters of the Planning Department for general information.)
(請盡量以英文及中文填寫。此部分將會發送予相關諮詢人士、上載至城市規劃委員會網頁供公眾免費瀏覽及下載及於規劃署規劃資料查詢處供一般參閱。)

Application No. 申請編號	(For Official Use Only) (請勿填寫此欄)
Location/address 位置／地址	Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories 新界上水缸瓦甫丈量約份第 87 約地段第 346 號、 347 號 A分段、347 號 B分段、347 號餘段、348 號餘段、349 號餘段、351 號餘段、352 號 B分段餘段、361 號餘段(部分)、366 號餘段及毗鄰政府土地
Site area 地盤面積	16,604 sq. m 平方米 ☑ About 約 (includes Government land of 包括政府土地 6,886 sq. m 平方米 ☑ About 約)
Plan 圖則	Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18 虎地坳及沙嶺分區計劃大綱核准圖（編號：S/NE-FTA/18）
Zoning 地帶	"Agriculture" ("AGR") 「農業」
Type of Application 申請類別	☑ Temporary Use/Development in Rural Areas or Regulated Areas for a Period of 位於鄉郊地區或受規管地區的臨時用途/發展為期 ☑ Year(s) 年 3 ☐ Month(s) 月 _____ ☐ Renewal of Planning Approval for Temporary Use/Development in Rural Areas or Regulated Areas for a Period of 位於鄉郊地區或受規管地區臨時用途/發展的規劃許可續期為期 ☐ Year(s) 年 _____ ☐ Month(s) 月 _____
Applied use/ development 申請用途/發展	Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years 擬議臨時貨倉（危險品倉庫除外）及露天存放建築材料、機械連附屬設施及進行相關填土工程（為期 3 年）

(i)	Gross floor area and/or plot ratio 總樓面面積及／或地積比率		sq.m 平方米		Plot Ratio 地積比率	
		Domestic 住用	N.A.	☐ About 約 ☐ Not more than 不多於	N.A.	☐About 約 ☐Not more than 不多於
		Non-domestic 非住用	4,927	☑ About 約 ☐ Not more than 不多於	0.29	☑About 約 ☐Not more than 不多於
(ii)	No. of blocks 幢數	Domestic 住用	N.A.			
		Non-domestic 非住用	6			
(iii)	Building height/No. of storeys 建築物高度／層數	Domestic 住用	N.A.		m 米 ☐ (Not more than 不多於)	
			N.A.		Storeys(s) 層 ☐ (Not more than 不多於)	
		Non-domestic 非住用	15		m 米 ☑ (Not more than 不多於)	
			2		Storeys(s) 層 ☑ (Not more than 不多於)	
(iv)	Site coverage 上蓋面積	18		%	☑ About 約	
(v)	No. of parking spaces and loading / unloading spaces 停車位及上落客貨車位數目	Total no. of vehicle parking spaces 停車位總數 Private Car Parking Spaces 私家車車位 Motorcycle Parking Spaces 電單車車位 Light Goods Vehicle Parking Spaces 輕型貨車泊車位 Medium Goods Vehicle Parking Spaces 中型貨車泊車位 Heavy Goods Vehicle Parking Spaces 重型貨車泊車位 Others (Please Specify) 其他 (請列明) _____ _____			10 10	
		Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數 Taxi Spaces 的士車位 Coach Spaces 旅遊巴車位 Light Goods Vehicle Spaces 輕型貨車車位 Medium Goods Vehicle Spaces 中型貨車位 Heavy Goods Vehicle Spaces 重型貨車車位 Others (Please Specify) 其他 (請列明) _____ _____			24 12 12	

Submitted Plans, Drawings and Documents 提交的圖則、繪圖及文件	Chinese 中文	English 英文
Plans and Drawings 圖則及繪圖		
Master layout plan(s)/Layout plan(s) 總綱發展藍圖／布局設計圖	☐	☑
Block plan(s) 樓宇位置圖	☐	☐
Floor plan(s) 樓宇平面圖	☐	☐
Sectional plan(s) 截視圖	☐	☐
Elevation(s) 立視圖	☐	☐
Photomontage(s) showing the proposed development 顯示擬議發展的合成照片	☐	☐
Master landscape plan(s)/Landscape plan(s) 園境設計總圖／園境設計圖	☐	☐
Others (please specify) 其他（請註明）	☐	☑
Location plan, Lot Index Plan extract, Outline Zoning Plan extract, Land Filling Plan		
Site photos		
Reports 報告書		
Planning Statement/Justifications 規劃綱領/理據	☐	☑
Environmental assessment (noise, air and/or water pollutions) 環境評估（噪音、空氣及／或水的污染）	☐	☐
Traffic impact assessment (on vehicles) 就車輛的交通影響評估	☐	☐
Traffic impact assessment (on pedestrians) 就行人的交通影響評估	☐	☐
Visual impact assessment 視覺影響評估	☐	☐
Landscape impact assessment 景觀影響評估	☐	☐
Tree Survey 樹木調查	☐	☐
Geotechnical impact assessment 土力影響評估	☐	☐
Drainage impact assessment 排水影響評估	☐	☐
Sewerage impact assessment 排污影響評估	☐	☐
Risk Assessment 風險評估	☐	☐
Others (please specify) 其他（請註明）	☐	☑
Traffic Review Report, Drainage Proposal		

Note: May insert more than one「✔」. 註：可在多於一個方格內加上「✔」號

Note: The information in the Gist of Application above is provided by the applicant for easy reference of the general public. Under no circumstances will the Town Planning Board accept any liabilities for the use of the information nor any inaccuracies or discrepancies of the information provided. In case of doubt, reference should always be made to the submission of the applicant.

註： 上述申請摘要的資料是由申請人提供以方便市民大眾參考。對於所載資料在使用上的問題及文義上的歧異，城市規劃委員會概不負責。若有任何疑問，應查閱申請人提交的文件。

Tel 電話：
Fax 傳真：
Email 電郵：
Web 網址：

Date : 13th February, 2026
Our Ref. : ADCL/PLG-10315/L013

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

By Email

Dear Sir/Madam,

Re: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(Planning Application No. A/NE-FTA/264)

We refer to our submission dated 11.6.2025, 26.6.2025 and 18.7.2025 as well as the previously submitted Further Information (FI) dated 19.9.2025, 14.10.2025, 17.12.2025, 15.1.2026, 2.2.2026 and 5.2.2026 which address comments from various government departments.

To facilitate the processing of the captioned application by the Town Planning Board, we herewith submit a consolidated Planning Statement including the finalised versions of Traffic Impact Assessment, Drainage Impact Assessment, and Response to Comment tables, along with other further information provided to supersedes the aforementioned submissions.

Thank you for your kind attention and should you have any queries, please do not hesitate to contact our Mr. Thomas LUK at .

Yours faithfully,
For and on behalf of
Aikon Development Consultancy Limited

Thomas LUK

Encl.
c.c. Client

Address 地址：

Consolidated Planning Statement and Further Information

Appendix I	Revised Planning Statement, Drawings and Illustrations and Memorandum of Understanding with the Existing Operator of the Pigsty
Appendix II	Revised Traffic Impact Assessment
Appendix III	Revised Drainage Impact Assessment
Appendix IV	Response to Comment Tables and Further Information provided (dated 19.9.2025, 14.10.2025, 17.12.2025, 14.1.2026, 2.2.2026, 5.2.2026)

Appendix I

Revised Planning Statement, Drawings and Illustrations and Memorandum of Understanding with the Existing Operator of the Pigsty

Ref.: ADCL/PLG-10315/R001

Section 16 Planning Application

Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years

Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Planning Statement

Address:
[redacted]

Tel :
Fax :
Email : [redacted]

Prepared by
Aikon Development Consultancy Limited

June 2025

EXECUTIVE SUMMARY

(In case of discrepancy between English and Chinese versions, English shall prevail)

This Planning Statement is submitted to the Town Planning Board (hereinafter referred to as "the Board") in support of a planning application (hereinafter referred to as "the current application") for **Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years** (hereinafter referred to as "the proposed use") at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories (hereinafter referred to "the application site"). The Planning Statement serves to provide background information and planning justifications in support of the proposed use in order to facilitate consideration by the Board.

The application site falls with an area zoned "Agriculture" ("AGR") on the Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18 gazetted on 19.04.2024. As detailed throughout this Planning Statement, the proposed use is well justified on the grounds that:-

(a) the proposed use would facilitate the relocation of brownfield operations affected by the New Development Areas by offering timely relocation solutions, ensuring a smooth transition of brownfield operations at a strategic location;
(b) it would capitalize on development opportunities by phasing out pigsty operations, optimizing land use resources in the area, and contributing to the overall upgrade of the locality;
(c) the proposed use falls under Category 2 areas as per the Town Planning Board Guidelines (TPB PG-No. 13G);
(d) the proposed use is considered compatible with the surrounding land uses;
(e) the proposed use is temporary in nature. Approval of the current application would not jeopardise the long-term planning intention of the "AGR" zone or any planned infrastructural developments at the application site and its neighbourhood;
(f) no adverse traffic, drainage, infrastructural or environmental impacts arising from the proposed use is anticipated; and
(g) the proposed use will not set an undesirable precedent as similar applications are identified in the close vicinity of the application site.

In view of the above and the list of detailed planning justifications in the Planning Statement, it is sincerely hoped that the Board will give sympathetic consideration to approve the current application for the proposed use for a temporary period of 3 years.

行政摘要

(如內文與其英文版本有差異，則以英文版本為準)

此規劃報告書旨在支持一宗遞交予城市規劃委員會（以下簡稱「城規會」）的規劃申請（以下簡稱「該申請」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築材料、機械連附屬設施及進行相關填土工程（為期 3 年）（以下簡稱「擬議用途」）。該申請涉及的地點位於新界上水缸瓦甫丈量約份第 87 約地段第 346 號、 347 號 A 分段、347 號 B 分段、347 號餘段、348 號餘段、349 號餘段、351 號餘段、352 號 B 分段餘段、361 號餘段（部分）、366 號餘段及毗鄰政府土地（以下簡稱「申請地點」）。此規劃報告書提供該申請的背景及規劃理據以支持擬議用途予城規會考慮。

根據 2024 年 4 月 29 日刊憲之虎地坳及沙嶺分區計劃大綱核准圖（編號：S/NE-FTA/18）（以下簡稱為「大綱核准圖」），申請地點坐落於「農業」地帶。根據大綱核准圖的註釋說明，有關用途或發展即使圖則沒有作出規定，城規會仍可批給作不超過三年屬臨時性質的用途。此規劃報告書詳細闡述該申請的規劃理據，當中包括：-

(一) 擬議用途可為受新發展區影響的棕地作業提供及時的搬遷方案，確保在策略性地點順利過渡；
(二) 透過淘汰現時養豬場運作，善用區內的土地資源，有助提升區內的整體質素，從而把握發展機遇；
(三) 根據城市規劃委員會指引(TPB PG-No. 13G)，擬議用途屬於第二類地區；
(四) 擬議用途與周圍土地用途相容；
(五) 擬議用途為臨時用途。擬議用途不會妨礙落實大綱核准圖中「農業」地帶的長遠規劃意向，亦不會妨礙申請地點及其附近的任何已規劃的基礎設施發展；
(六) 擬議用途不會對交通、排水、基建或環境造成不良影響；及
(七) 考慮到附近已有類似該申請的規劃申請獲批准，擬議用途並不會立下不良先例。

鑑於以上及此規劃報告書所提供的詳細規劃理據，敬希城規會各委員酌情考慮批准該申請作臨時三年擬擬用途。

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1. INTRODUCTION

1.1 Purpose

1.1.1 Pursuant to section 16 of the Town Planning Ordinance (Cap. 131), this *Planning Statement* is submitted to the Town Planning Board (hereinafter referred to as "the Board") in support of a planning application (hereinafter referred to as "the current application") for **Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years** (hereinafter referred to as "the proposed use") at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories (hereinafter referred to "the application site"). The application site has an area of about 16,604m^2 (including about 6,886m^2 of Government land). This Planning Statement serves to provide background information and planning justifications in support of the proposed use in order to facilitate consideration by the Board. The location of the application site is shown in **Figure 1** whilst **Figure 2** indicates the relevant private lots and Government land in which the application site involves.

1.1.2 The application site currently falls within an area zoned "Agriculture" ("AGR") on the Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18 gazetted on 19.04.2024 (hereinafter referred to as "the Current OZP") (**Figure 3** refers). As stipulated in the Notes of the Current OZP, "*…temporary use or development of any land or building not exceeding a period of three years requires permission from the Town Planning Board. Notwithstanding that the use or development is not provided for in terms of the Plan, the Town Planning Board may grant permission, with or without conditions, for a maximum period of three years…*". The Remarks of "AGR" zone of the Current OZP also stated *"...any filling of land shall not be undertaken...without the permission from the Town Planning Board..."*. In this connection, a planning permission is wished to be sought from the Board for the proposed use on a temporary basis for a period of three years.

1.1.3 Prepared on behalf of *Brilliant Profit Limited* (hereinafter referred to as "the Applicant"), *Aikon Development Consultancy Limited* has been commissioned to prepare and submit the current application.

1.2 Background

1.2.1 The development of the Northern Metropolis is underway, featuring numerous projects in New Development Areas. With land resumption progressing, existing brownfield operations are being impacted. The application site is strategically located in Kong Nga Po, benefiting from the adjoining Kong Nga Po Police Training Facilities and its developed infrastructure. In light of this development opportunity, the applicant has liaised with the existing operator of the pigsty at the application site and entered into a Memorandum of Understanding to cease pigsty operations and

utilize the site for the proposed use (**Appendix I** refers). The current application aims to phase out the existing pigsty operation and transform the application site into an organized, safe venue to support local logistics and construction industry, leveraging its strategic location and infrastructure. Additionally, the current application seeks to optimize land use resources in the area and contribute to the overall upgrade of the locality.

1.2.2 By allowing the current application, the applicant could provide timely solutions for relocation options for the affected brownfield operations, facilitating the smooth transition of existing operations. The applicant has been in contact with potential operators and tenants. Upon approval of the current application, suitable tenants will be arranged to utilize the proposed use at the application site for the intended purpose. It is believed that the proposed use, with its substantial site area and strategic location as well as infrastructural support, will be a favorable option for facilitating future relocations of brownfield operations in the New Territories, thus allowing smooth implementation of the New Development Areas whilst ensuring the continuity of local businesses.

1.3 Objectives

1.3.1 The current application strives to achieve the following objectives:-

(a) To offer timely relocation solutions for brownfield operations affected by the NDAs, ensuring a smooth transition of brownfield operations at a strategic location;

(b) To phase out current incompatible use and optimize land use resources in the area, contributing to the overall upgrade of the locality;

(c) To fully utilise the land resources falling within "AGR" zone for temporary uses that are beneficial to the community, viable in operation, and compatible with the character of the surrounding environment without hindering the long-term planning intention of "AGR" zone; and

(d) To induce no additional adverse traffic, environmental or infrastructural impacts on the surrounding areas.

1.4 Structure of the Planning Statement

1.4.1 This Planning Statement is divided into 6 chapters. **Chapter 1** is the above introduction outlining the purpose and background of the current application. **Chapter 2** gives background details of the application site in terms of the current land-use characteristics and neighbouring developments. Planning context of the application site is reviewed in **Chapter 3** whilst **Chapter 4** provides details of the proposed use. A full list of planning justifications is given in **Chapter 5** whilst **Chapter 6** summarises the concluding remarks for the proposed use.

2. SITE PROFILE

2.1 Location and Current Conditions of the Application Site

2.1.1 The application site is located at Kong Nga Po and is directly accessible via a local track connecting to Kong Nga Po Road (**Figure 1** refers). **Figure 2** indicates the private lots and government land involved. The application site is mostly hard paved and fenced off. The northern and southern portion of the application site are occupied by pigsties which has ceased operation.

2.2 Surrounding Land-use and Characteristics

2.2.1 To the west of the application site is the Kong Nga Po police training facilities. The new facilities, which cover 19 hectares will provide modern and efficacious training facilities for the Hong Kong Police Force. With the commencement of the project, the surrounding infrastructures have been significantly upgraded. The surrounding areas of the application site are intermixed with warehouse, open storages/storage yards, pigsties, temporary domestic structure, fallow agricultural land, vacant land and tree clusters. **Illustration 1-I and 1-II** indicates the current conditions of the application site and its surrounding areas.

3. PLANNING CONTEXT

3.1 Statutory Planning Context

3.1.1 The application site falls within an area zoned "AGR" on the Current OZP (**Figure 3** refers). According to the Notes of the Current OZP, "AGR" zone is intended primarily to '*retain and safeguard good quality agricultural land/farm/fish ponds for agricultural purpose*'. It is also intended to "*retain fallow arable land with good potential for rehabilitation for cultivation and other agricultural purposes*".

3.1.2 As stipulated in the Notes of the Current OZP, "…*temporary use or development of any land or building not exceeding a period of three years requires permission from the Town Planning Board. Notwithstanding that the use or development is not provided for in terms of the Plan, the Town Planning Board may grant permission, with or without conditions, for a maximum period of three years*…". The Remarks of "AGR" zone of the Current OZP also stated *"...any filling of land shall not be undertaken...without the permission from the Town Planning Board..."*. In this connection, the applicant wishes to seek planning permission from the Board for the proposed use on a temporary basis of three years.

3.2 Previous Application

3.2.1 There is no previous application for the application site.

3.3 Similar Applications

3.3.1 In the past five years, there are similar applications for similar uses within the "AGR" zone(s) on the Fu Tei Au and Sha Ling Outline Zoning Plan. Details of the similar applications are tabulated in **Table 2** below. Approval of the current application will not set an undesirable precedent as similar applications are identified in the close vicinity of the application site.

Table 2: Similar Planning Applications in the Past Five Years

Application No.	Proposed Use(s)	Zoning(s)	Decisions (Date)
A/NE-FTA/199	Temporary Cargo Handling and Forwarding Facility (Logistics Centre) for a Period of 3 Years	"AGR"	Approved with condition(s) on a temporary basis (05/02/2021)
A/NE-FTA/220	Proposed Temporary Cold Storage for Poultry and Distribution Centre for a Period of 3 Years and Filling of Land for Site Formation Works	"AGR"	Approved with condition(s) on a temporary basis (10/11/2023)
A/NE-FTA/236	Temporary Logistics Warehouse for a Period of 3 Years	"AGR"	Approved with condition(s) on a temporary basis (26/01/2024)
A/NE-FTA/244	Proposed Temporary Open Storage of Construction Materials for a Period of 3 Years and Associated Filling of Land	"AGR"	Approved with condition(s) on a temporary basis (06/12/2024)
A/NE-FTA/246	Proposed Temporary Open Storage of Construction Material and Machinery for a Period of 3 Years and Associated Filling of Land	"AGR"	Approved with condition(s) on a temporary basis (25/10/2024)
A/NE-FTA/249	Temporary Cargo Handling and Forwarding Facility for a Period of 3 Years	"AGR"	Approved with condition(s) on a temporary basis (06/12/2024)
A/NE-FTA/251	Proposed Temporary Open Storage of Construction Materials and Machineries for a Period of 3 Years and Associated Filling of Land	"AGR"	Approved with condition(s) on a temporary basis (04/10/2024)

3.4 Town Planning Board Guidelines (TPB PG-No. 13G)

3.4.1 The application site entirely falls under Category 2 areas in the Town Planning Board Guidelines for Application for Open Storage and Port Back-up Uses under Section 16 of the Town Planning Ordinance (TPB PG-No. 13G) promulgated by the Board in April 2023.

3.4.2 According to the TPB PG-No.13G, "Category 2 are areas mostly without clear planning intention or fixed development programme; areas to be affected by major upcoming infrastructural projects; areas within or close to clusters of open storage, port back-up or other types of brownfield sites/ temporary uses. In addition, the areas should not be subject to high flooding risk. Technical assessments, where appropriate or if required, should be submitted to demonstrate that the proposed uses would not have adverse drainage, traffic, visual, landscaping and environmental impacts on the surrounding areas. Subject to no adverse departmental comments and local objections, or the concerns of the departments and local residents can be addressed through the implementation of approval conditions, planning permission could be granted on a temporary basis up to a maximum period of 3 years".

4. THE DEVELOPMENT PROPOSAL

4.1 Site Configuration and Layout

4.1.1 The application site has a total area of about 16,604m^2 (including about 6,886m^2 of Government land). The application site consists of six temporary structures (including 5 nos. of enclosed structures and one open-sided structure), with a maximum height of 15m, providing a gross floor area (GFA) of about 4,927m^2 for the proposed use. The uncovered land area would be served as open storage purposes and circulation/manoeuvring space as well as provision of 10 parking spaces for private cars, 12 loading and unloading (L/UL) bay for light goods vehicles (LGVs) and 12 L/UL bays for medium/heavy goods vehicles (M/HGVs). The Indicative Layout Plan is shown in **Figure 5** whilst the key development parameters for the proposed use are detailed in **Table 3**.

4.1.2 Access to the application site will be provided through an ingress/egress point (in about 11m) located at the northwestern boundary (**Figure 5** refers), which is connected to a local access leading to Kong Nga Po Road (**Figure 1** refers). Should the current application be approved, the existing fencing will be adjusted, and new fencing of about 3m will be erected along the periphery of the application site. The proposed use would make use of the internal circulation road to supports distribution and efficient vehicle maneuvering.

4.1.3 A majority part of the application site has been paved to serve the pigsty, and it is proposed to raise the ground level feasible traffic flow and heavy vehicle access. Considering the existing topographic profile of the application site, the current level of the site ranges from about +22.1mPD to about +27.8mPD, with the majority portion being approximately 1 to 4m lower than Kong Nga Po Road the access road to the south. The ground level is proposed to be raised to a level between +24.0mPD to 27.0mPD. The application site will be filled with soil and concrete, covering the entire application site (16,604m^2) and with a depth of not more than 3m. (**Figure 4** refers).

4.1.4 The western and eastern portions of the application site is currently connected by a platform structure with pipe underneath to maintain streamflow (**Illustration 1-III** refers). According to the applicant, this structure has been in place since the pigsty operation. To facilitate future operation and ensure safety, the structured platform area is proposed to be filled. An 800mm diameter concrete pipe is proposed to replace the existing concrete pile and install underneath a structured platform to ensure no disturbance to the existing drainage performance of the drainage system. (**Appendix III** refers).

4.2 Operation

4.2.1 The proposed use (i.e. temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities)

will provide a well-managed venue for storage of goods and construction materials and machinery.

4.2.2 Structure A and Structure C are designated as warehouses of not more than 2-storey for storage of goods. All goods stored within the application site will be non-polluted and non-dangerous in nature and will remain stagnant all the time. The operation hours of the proposed use are from 9:00a.m. to 6:00p.m. from Mondays to Saturdays and there will be no operations on Sundays and public holidays. Structures B, D and E are designated as ancillary office and storeroom to support the proposed use. Open area with sufficient manoeuvring space will be served as open storage purposes.

4.2.3 Regarding the implementation of the development proposal, the Applicant stands ready to apply to the Lands Department for the Short-Term Tenancy (STT) and the Short-Term Waiver (STW) for occupying the Government land, and permitting the structures to be erected or to regularise any irregularities on site, once the current application is approved.

Table 3: Key Development Parameters

Proposed Use	Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years
Operation Hours	From 9:00a.m. to 6:00 p.m. from Mondays to Saturdays (Excluding Sundays and Public Holidays)
Site Area	16,604m^2 (including about 6,886m^2 of Government land)
Covered Area	About 2,990m^2 (About 18%)
Uncovered Area	About 13,614m^2 (About 82%)
Temporary Structure No(s). No. of Storey Maximum Height Total Floor Area	 6 Not More than 2 Storey Not More than 15m About 4,927m^2
No. of Parking Spaces Private Car (5m(L) x 2.5m(W))	10 10
No. of Loading/Unloading (L/UL) Bays HGVs (11m(L) x 3.5m(W)) LGVs (7m(L) x 3.5m(W))	24 12 12
Filling of Land Area of Filling Depth of Filling Type of Filling Materials Existing Ground Level (about) Proposed Ground Level (about)	 16,604 m^2 Not more than 3 m Soil and Concrete +26.5mPD (Northeast portion) +24.0mPD (Southwest portion) +27.0 mPD (Northeast portion) +24.5 mPD (Southwest portion)

Table 4: Key Development Parameters for the Proposed Structures

Structure	Uses	Roof Area (About)	Floor Area (About)	Building Height
Structure A	Warehouse	737 m^2	1,474 m^2	15m (2 storey)
Structure B	Ancillary Site Office/General Storage Uses	220 m^2	220 m^2	7m (1 storey)
Structure C	Warehouse	1,200 m^2	2,400 m^2	15m (2 storey)
Structure D	Ancillary Site Office/General Storage Uses	220 m^2	220 m^2	7m (1 storey)
Structure E	Ancillary Site Office/General Storage Uses	220 m^2	220 m^2	7m (1 storey)
Structure F	General Storage Uses	393 m^2	393 m^2	7m (1 storey)
	Total	2,990 m^2	4,927 m^2	NA

4.3 Proposed Traffic Arrangement

4.3.1 The application site can be accessed via an unnamed access road leading to Kong Nga Po Road. The proposed use features an 11m-wide access point, which is well-suited for the proposed types of vehicles. This entry width supports safe and efficient vehicle maneuvering, minimizing the risk of congestion or accidents. Within the application site, 10 parking spaces for private cars, 12 L/UL bay for LGVs, and 12 L/UL bays for M/HGVs are provided.

4.3.2 The proposed use is designed to meet regulatory standards and optimise operational efficiency without substantially impacting local traffic. A traffic impact assessment was conducted (**Appendix II** refers), and it is concluded that, the proposed use, strategically situated near key roadways, its development traffic will not cause adverse traffic impact onto the local road network.

4.3.3 To further minimise any potential traffic impact, several operational arrangements have been proposed, including a low-intensity operation model, restricted operating hours, vehicle management measures to schedule operations outside peak times, and safety design features. With the proposed traffic arrangements, the proposed use is designed to meet regulatory standards and optimise operational efficiency without substantially impacting the surrounding road network.

4.4 Landscape and Visual Consideration

4.4.1 A majority of the application sites have been paved for previous uses (about 45%) and there is no existing tree within the application site. Most of the area was used as a pigsty and is covered by extensive structures from that previous use. The applicant has very low agricultural value at present and the proposed development would induce no significant landscape impact.

4.4.2 It is proposed that the application site will be fenced off to prevent direct visual contact from outside. Compared to the adjoining Police Training Facilities, the scale of the proposed use is considered to be minimal, and not visual intrusive. The proposed use is expected to have no or minimal adverse visual impacts on the surrounding land uses and the overall neighborhood.

4.5 Environmental Consideration

4.5.1 The goods to be stored within the application site will be non-polluted and non-dangerous in nature and will remain stagnant all the time. The Applicant will strictly follow Environmental Protection Department (EPD)'s latest "Code of Practice on Handling Environmental Aspects of Temporary Uses and Open Storage Sites (CoP)" and comply with all environmental protection/ pollution control ordinances, during construction and operation stages of the proposal, should the application be approved. As such, no adverse environmental impact and misuse of the proposed use is anticipated.

4.6 Drainage Consideration

4.6.1 According to the Drainage Proposal (**Appendix III**), a new drainage system within the subject lots is proposed after the site formation works to raise the ground level to be uniform. The proposed drainage system has been checked to be sufficient to handle stormwater surface runoff within the subject site area and not affecting the adjacent footpath and carriageway to minimize the potential risks of overland flows and flooding by rainfall event. As such, no significant adverse drainage impact is anticipated.

5. PLANNING JUSTIFICATIONS

5.1 Facilitating Relocation of Brownfield Operations

5.1.1 The Northern Metropolis is currently under active implementation, with various projects with resumption and clearance underway in New Development Areas. As land resumption continues, many existing brownfield operations are being affected. Notably, significant amount of private land was reverted to the government in April 2024 for Kwu Tung North and Fanling North New Development Area. To continue existing operation, a considerable amount of time is required for the extensive site search process. In addition to identifying and reviewing suitable sites, time and resources may be needed to seek planning approvals and implement suitable land use from virgin sites.

5.1.2 The application site is strategically positioned in Kong Nga Po, benefiting from nearby Police Training Facilities and established infrastructure. To capitalize on these development opportunities, the applicant intends to develop the application site to offer timely relocation solutions, ensuring a smooth transition for brownfield operations. The applicant has liaised with potential operators and tenants. Upon approval of the current application, the applicant will arrange suitable tenants to utilize the proposed use at the application site as intended. It is believed that the proposed use, with its substantial site area and strategic location as well as infrastructural support, will be a favorable option for facilitating future relocations of brownfield operations in the New Territories, thus allowing smooth implementation of the New Development Areas whilst ensuring the continuity of local businesses.

5.2 Capitalizing Development Opportunities and Upgrade of the Locality

5.2.1 The application previously served as a pigsty. As the area gradually upgrades with more infrastructure and facilities, the pigsty is deemed incompatible due to hygiene concerns. The applicant has liaised with the existing operator of the pigsty at the application site and entered into a Memorandum of Understanding to cease pigsty operations and utilize the site for the proposed use.

5.2.2 The proposed use will phase out the existing pigsty operation while transforming the application site into an organized and safe venue to support local logistics and the construction industry with a strategic location and infrastructure support. The current application would also optimize land use resource in the area and contribute to the overall upgrade of the locality.

5.3 Not Contrary to the Town Planning Board Guidelines (TPB PG-No. 13G)

5.3.1 The application site falls under Category 2 areas in the TPB PG-No. 13G promulgated by the Board in April 2023. According to the TPB PG-No.13G, Category 2 areas are areas mostly without clear planning intention or fixed development programme; areas to be affected by major upcoming infrastructural projects; areas within or close

to clusters of open storage, port back-up or other types of brownfield sites/ temporary uses. In addition, the areas should not be subject to high flooding risk. Technical assessments, where appropriate or if required, should be submitted to demonstrate that the proposed uses would not have adverse drainage, traffic, visual, landscaping and environmental impacts on the surrounding areas. Subject to no adverse departmental comments and local objections, or the concerns of the departments and local residents can be addressed through the implementation of approval conditions, planning permission could be granted on a temporary basis up to a maximum period of 3 years.

5.3.2 Considering that the proposed use is well-justified with no adverse impacts on traffic, landscape, visual, drainage, sewerage and environmental aspects in the surrounding areas, the current application is considered not contrary to the TPB PG-No. 13G.

5.4 Compatible with Land Uses of the Surrounding Areas

5.4.1 The surrounding areas of the application site are in rural inland plain landscape character and predominately occupied by open storages, warehouses, temporary structures, tree clusters, active/fallow farmlands and vegetated areas. The proposed use is therefore considered to be compatible with the land uses of the surrounding areas. The proposed use is considered to fully commensurate with its local geographical settings and is ideal to attain the utmost land use maximisation without giving rise to detrimental impacts on the surrounding areas.

5.5 Not Jeopardizing the Planning Intention of "AGR" Zone

5.5.1 Considering the close proximity of various adjacent open storage and warehouse uses to the application site, the planning intention of "AGR" zone may hardly be materialized in short term until the surrounding characteristics are entirely and compulsorily required to be utilized for agricultural activities again. In contrast, approving the proposed temporary use under the current application would facilitate ongoing and flexible adaptation to meet the changing demands of land use.

5.5.2 The temporary nature of the proposed use under the current application will by no means jeopardize the long-term planning intention of the "AGR" zone, considering that the proposed use under the current application is only being applied for a period of 3 years.

5.6 No Adverse Traffic Impact

5.6.1 The proposed use is designed to meet regulatory standards and optimise operational efficiency without substantially impacting local traffic. According to the Traffic Impact Assessment (**Appendix II** refers), the proposed use, strategically situated near key roadways, its development traffic will not cause adverse traffic impact onto the local road network.

5.6.2 To further minimise any potential traffic impact, several operational arrangements have been proposed, including a low-intensity operation model, restricted operating hours, vehicle management measures to schedule operations outside peak times, and safety design features. With the proposed traffic arrangements, the proposed use is designed to meet regulatory standards and optimise operational efficiency without substantially impacting the surrounding road network.

5.7 No Adverse Visual nor Landscape Impacts

5.7.1 The application site has been paved and there is no existing tree within the application site. The application site has very low agricultural value at present and the proposed development would induce no significant landscape impact.

5.7.2 It is proposed that the application site will be fenced off to prevent direct visual contact from outside. This design ensures compatibility with the surrounding land uses, which predominantly consists of open storages and warehouses. Compared to the adjoining Police Training Facilities, the scale of the proposed use is considered to be minimal, and not visual intrusive. The proposed use is expected to have no or minimal adverse visual impacts on the surrounding land uses and the overall neighborhood.

5.8 No Adverse Infrastructural nor Environmental Impacts

5.8.1 The goods to be stored within the application site will be non-polluted and non-dangerous in nature and will remain stagnant all the time. The Applicant is committed to implementing good site practices and adhering to the latest "CoP" and comply with all environmental protection/ pollution control ordinances, throughout the construction and operation stages of the proposed development, should the application be approved. It is ensured that the proposed development will not generate any unacceptable environmental impacts (including air quality, noise, water quality and waste management), during both the construction and operation phases. Therefore, no adverse environmental impact or misuse of the proposed use is anticipated.

5.9 No Adverse Drainage Impact

5.9.1 According to the Drainage Proposal (**Appendix III**), a new drainage system within the subject lots is proposed after the site formation works to raise the ground level to be uniform. The proposed drainage system has been checked to be sufficient to handle stormwater surface runoff within the subject site area and not affecting the adjacent footpath and carriageway to minimize the potential risks of overland flows and flooding by rainfall event. As such, no significant adverse drainage impact is anticipated.

5.10 Not Setting an Undesirable Precedent

5.10.1 Considering the similar applications being approved by the Board on the same OZP

as discussed in **Section 3.3**, no undesirable precedent is expected should the current application be approved.

6. CONCLUSION

6.1 This Planning Statement is submitted to the Board in support of the current application for the proposed use at the application site. This Planning Statement serves to provide background information and planning justifications in support of the proposed use to facilitate consideration by the Board.

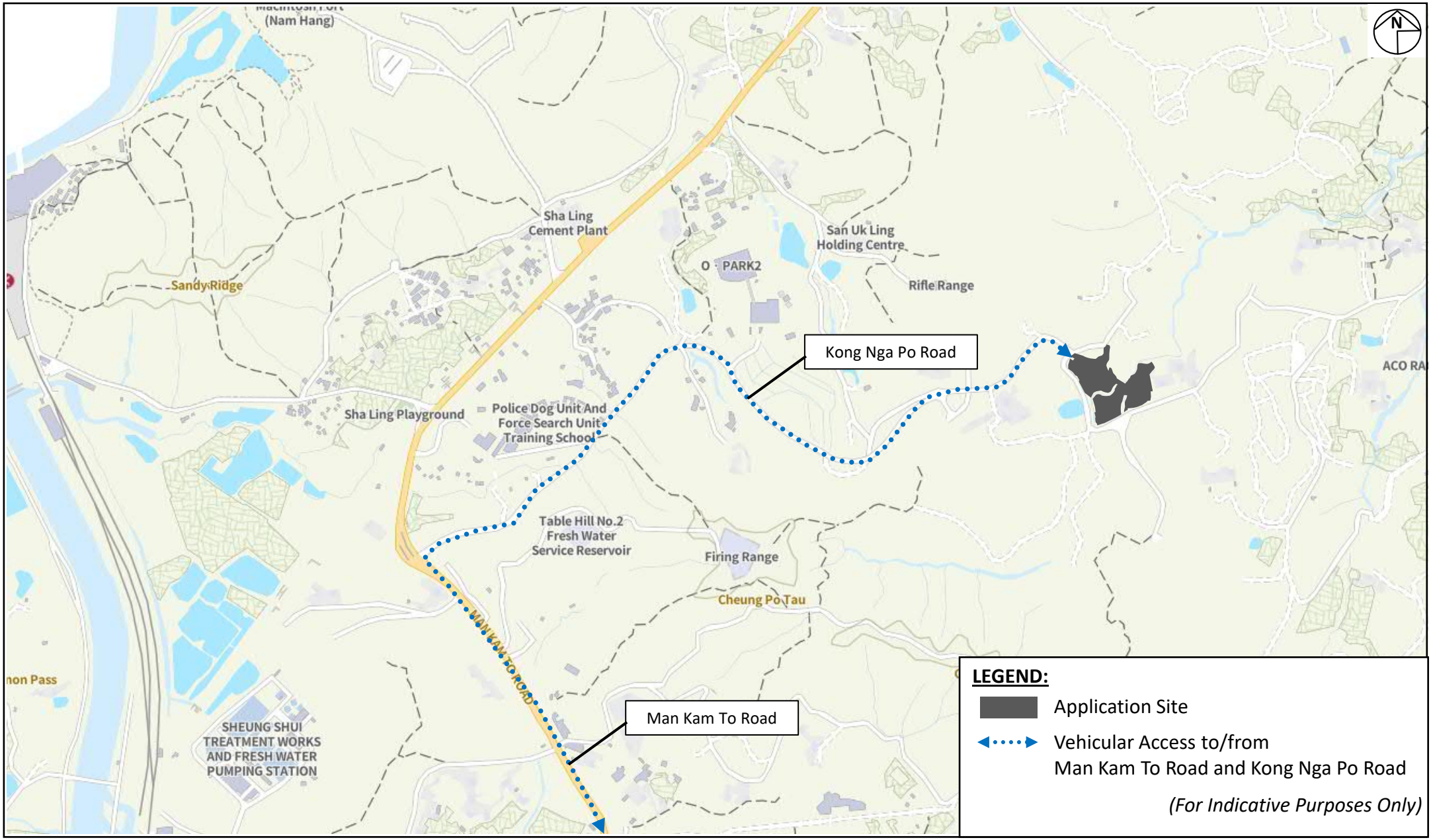
6.2 The application site falls with an area zoned "AGR" on Current OZP. As detailed throughout this Planning Statement, the proposed use is well justified on the grounds that:-

(a) the proposed use would facilitate the relocation of brownfield operations affected by the New Development Areas by offering timely relocation solutions, ensuring a smooth transition of brownfield operations at a strategic location;
(b) it would capitalize on development opportunities by phasing out pigsty operations, optimizing land use resources in the area, and contributing to the overall upgrade of the locality;
(c) the proposed use falls under Category 2 areas as per the Town Planning Board Guidelines (TPB PG-No. 13G);
(d) the proposed use is considered compatible with the surrounding land uses;
(e) the proposed use is temporary in nature. Approval of the current application would not jeopardise the long-term planning intention of the "AGR" zone or any planned infrastructural developments at the application site and its neighbourhood;
(f) no adverse traffic, drainage, infrastructural or environmental impacts arising from the proposed use is anticipated; and
(g) the proposed use will not set an undesirable precedent as similar applications are identified in the close vicinity of the application site.

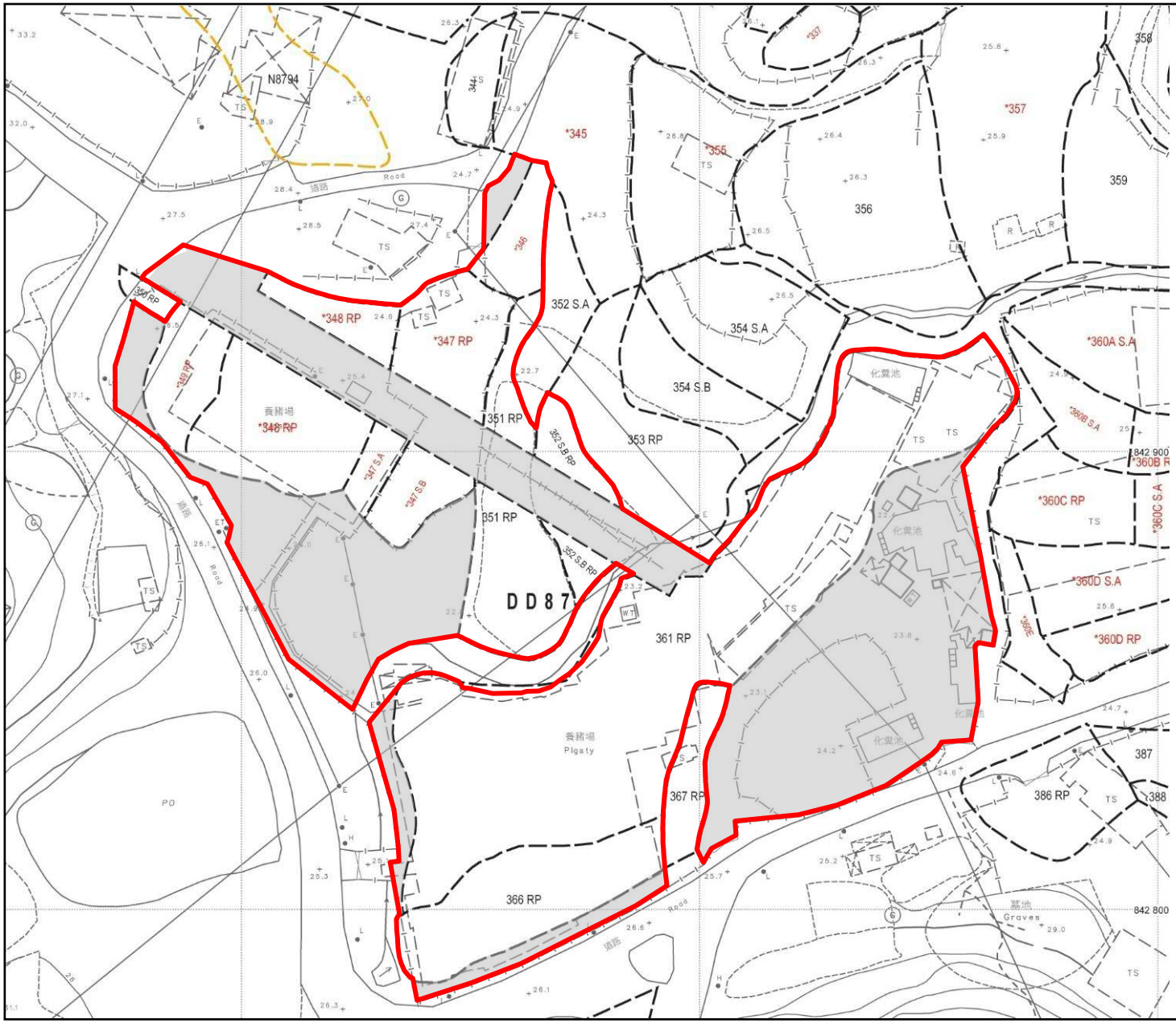
6.3 In view of the above and the list of detailed planning justifications in the Planning Statement, it is sincerely hoped that the Board will give sympathetic consideration to approve the current application for the proposed use for a temporary period of 3 years.

List of Figures

Figure 1	Location Plan
Figure 2	Extract of Lot Index Plan (No. ags_ S00000141570_0001)
Figure 3	Extract of Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18
Figure 4	Proposed Land Filling
Figure 5	Indicative Layout Plan



Project: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories	**Title:** Location Plan *Ref.: ADCL/PLG-10315-R001/F001*	**Figure:** 1 **Scale:** Not to Scale **Date:** Jun 2025	AIKON DEVELOPMENT CONSULTANCY LTD.



LEGEND:

Application Site (About 16,604m^2)

Government Land (About 6,886m^2)

(For Indicative Purposes Only)

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Extract of Lot Index Plan
(No. ags_S00000141570_0001)

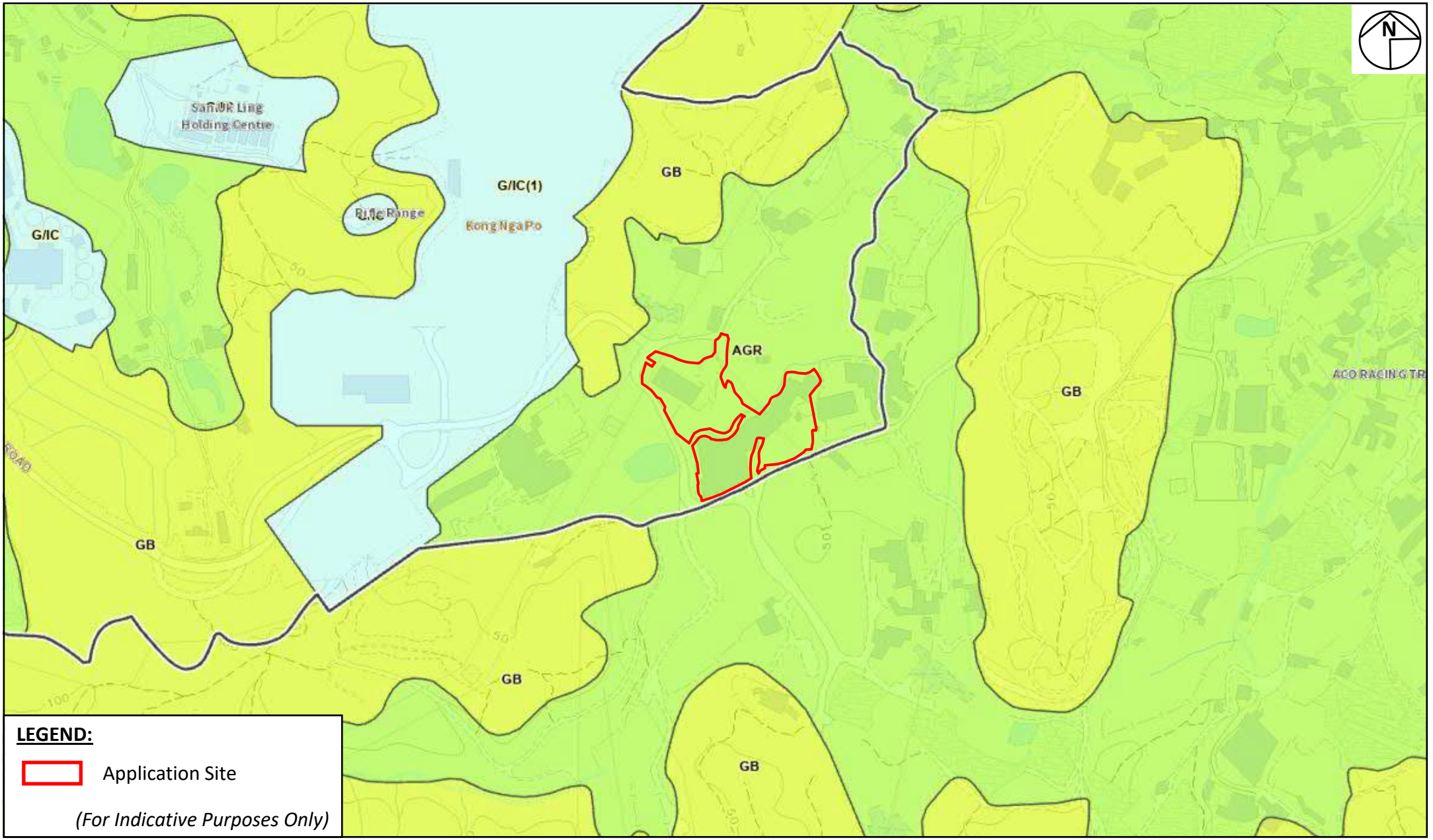
Ref.: ADCL/PLG-10315-R001/F002

Figure:
2

Scale:
Not to Scale

Date:
Jun 2025

AIKON DEVELOPMENT CONSULTANCY LTD.



Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Extract of Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18

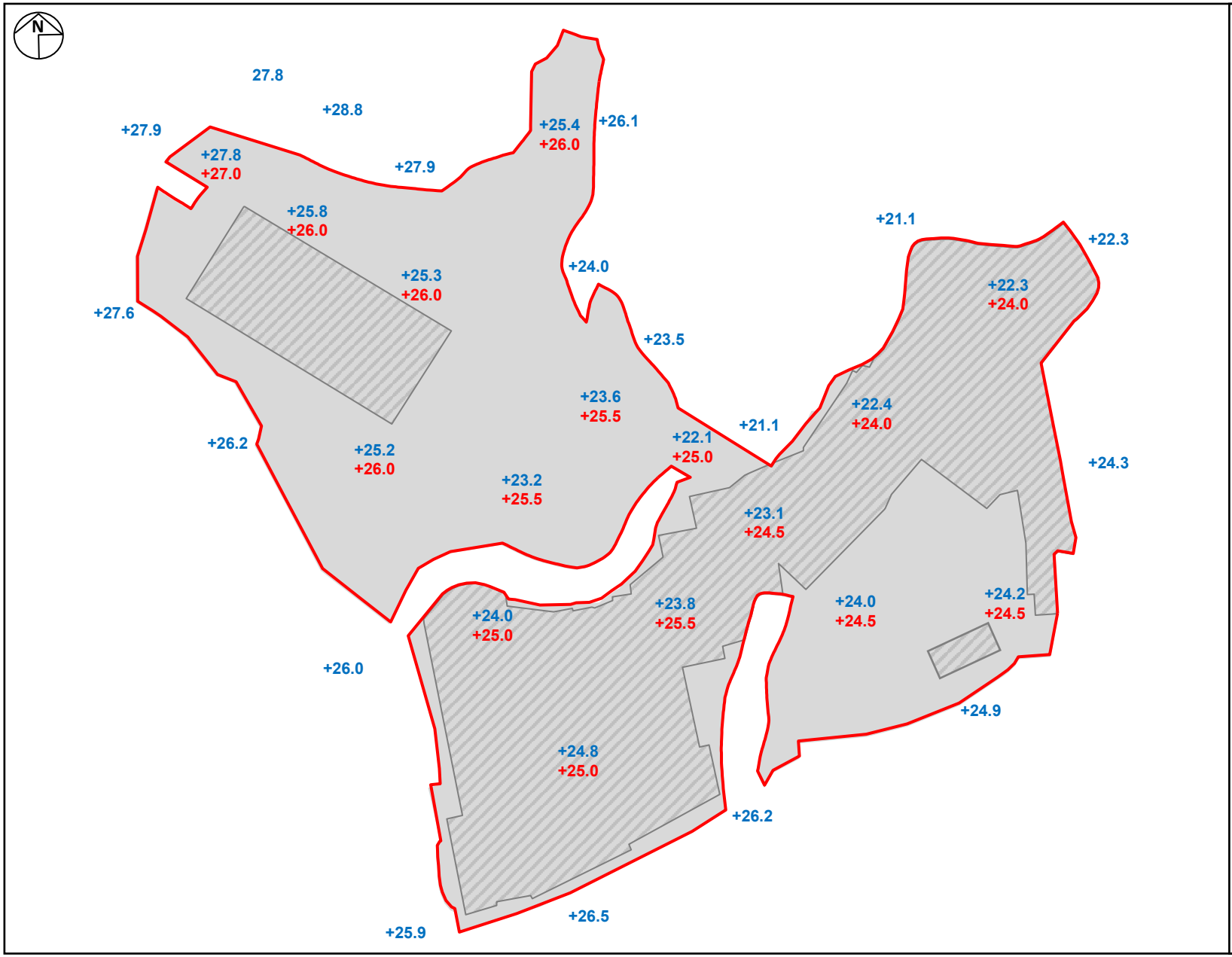
Ref.: ADCL/PLG-10286-R001/F003

Figure:
3

Scale:
Not to Scale

Date:
Jun 2025

AIKON DEVELOPMENT CONSULTANCY LTD.



LEGEND:

- Application Site
- Filling of Land (Depth: not more than 3m) (about 16,604m²)
- Existing Paved Area (about 7,448m²)
- +22.3 Existing Level (about)
- +24.0 Proposed Level (about)

(For Identification Only)

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Proposed Land Filling

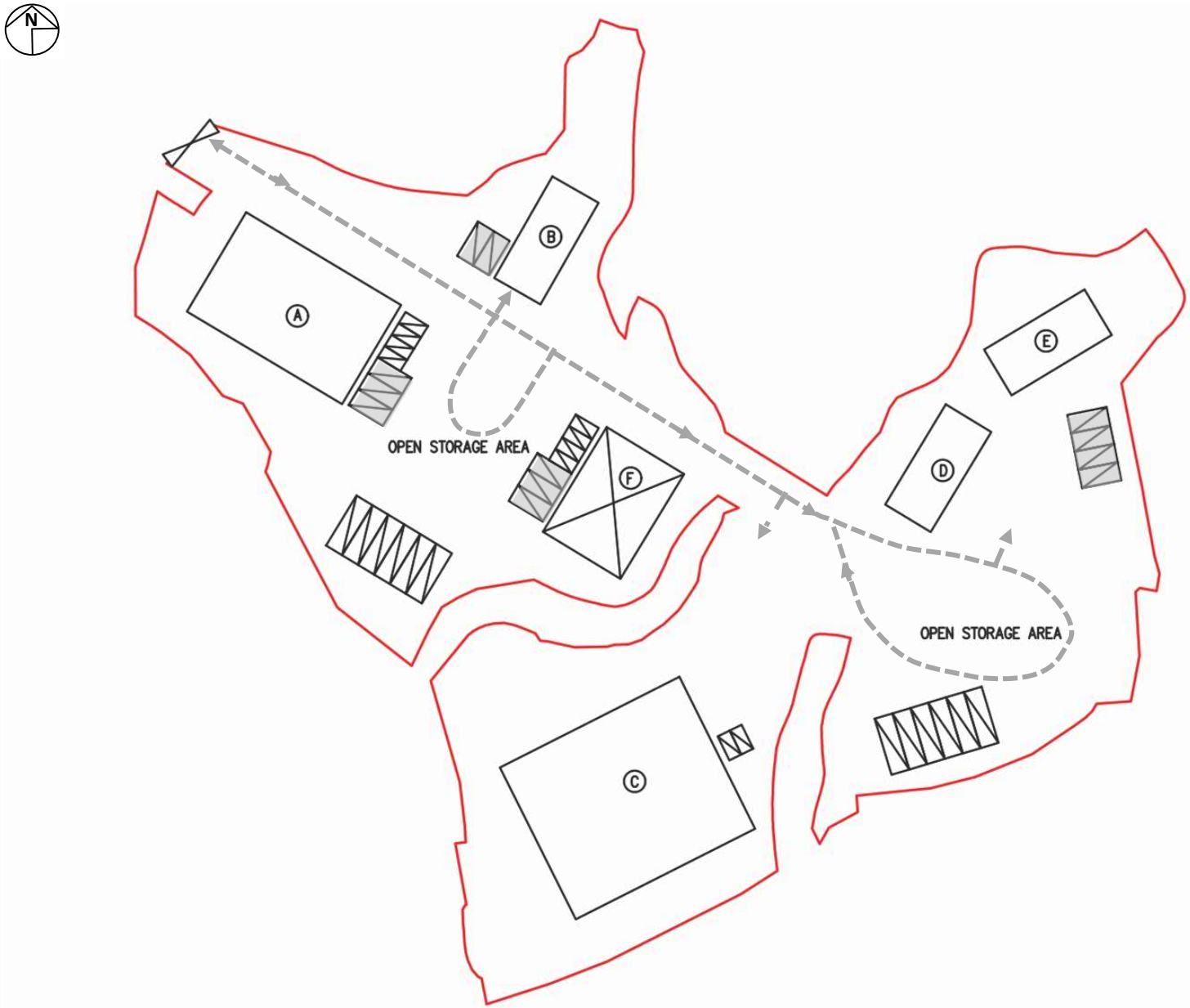
Ref.: ADCL/PLG-10315-R001/F004

Figure:
4

Scale:
Not to Scale

Date:
Jun 2025

AIKON DEVELOPMENT CONSULTANCY LTD.



LEGEND:

- Application Site (About 16,604m²)
- Structure
  A: 1,474 m² (about) (2-storey)
  B: 220m² (about) (1-storey)
  C: 2,400 m² (about) (2-storey)
  D: 220 m² (about) (1-storey)
  E: 220 m² (about) (1-storey)
- Open-Sided Structure
  F: 393 m² (about) (1-storey)
- Loading and Unloading Bay for Heavy Goods Vehicle (11m(L) x 3.5m(W)) (12 nos.)
- Loading and Unloading Bay for Light Goods Vehicle (7m(L) x 3.5m(W)) (12 nos.)
- Private Car Parking Space (5m(L) x 2.5m(W)) (10nos.)
- Ingress/Egress (About 11m wide)
- Internal Vehicular Flow

(For Identification Only)

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Indicative Layout Plan

Ref.: ADCL/PLG-10315-R001/F005

Figure:
5

Scale:
Not to Scale

Date:
Jun 2025

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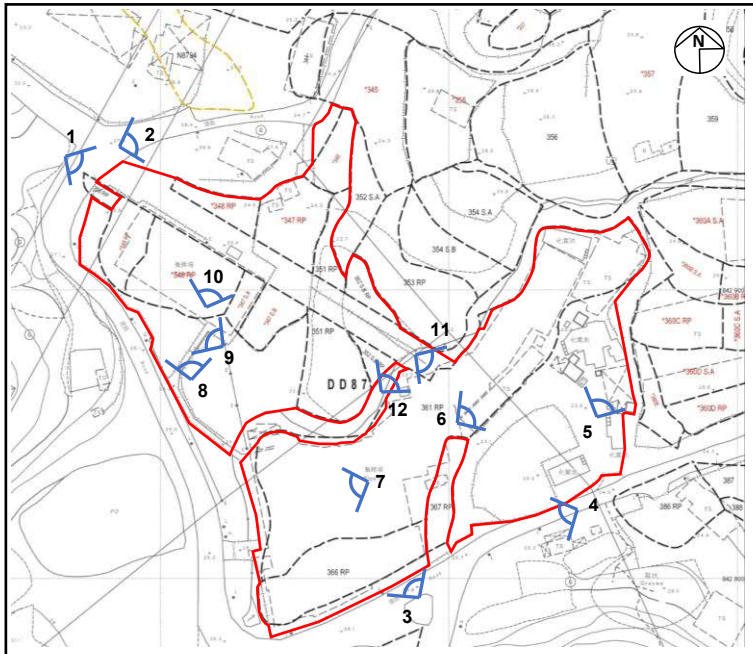
List of Illustration

Illustration 1-I	Existing Condition of the Application Site and the Surrounding Areas
Illustration 1-II	Existing Condition of the Application Site and the Surrounding (Cont'd)
Illustration 1-III	Existing Condition of the Application Site and the Surrounding (Cont'd)



LEGEND:

The Application Site

Viewpoint

(For Identification Only)









Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Existing Condition of the Application Site and the Surrounding Areas

Ref.: ADCL/PLG-10315-R001/I001-I

Illustration:
1-I

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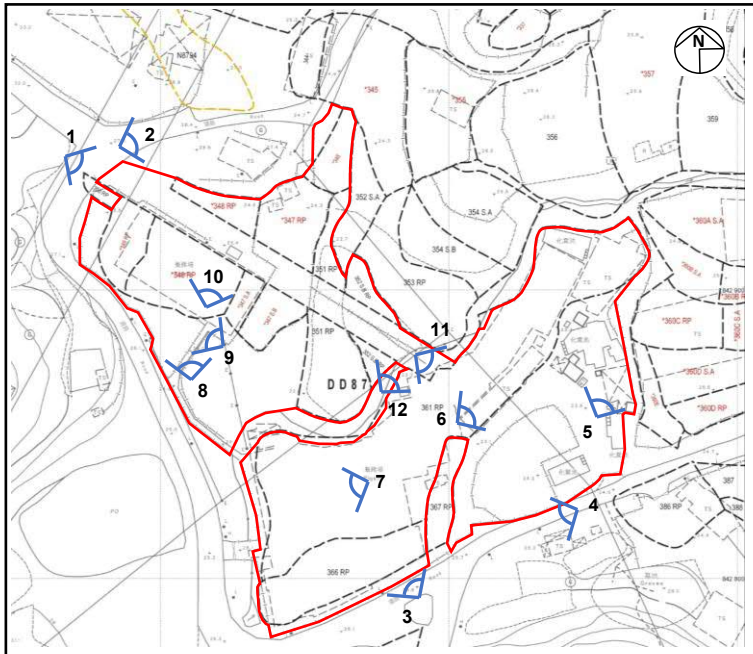
Date:
Jun 2025

AIKON DEVELOPMENT CONSULTANCY LTD.



LEGEND:

The Application Site

Viewpoint

(For Identification Only)









Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Existing Condition of the Application Site and the Surrounding Areas (Cont'd)

Ref.: ADCL/PLG-10315-R001/I001-II

Illustration:
1-II

Scale:
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Date:
Jun 2025

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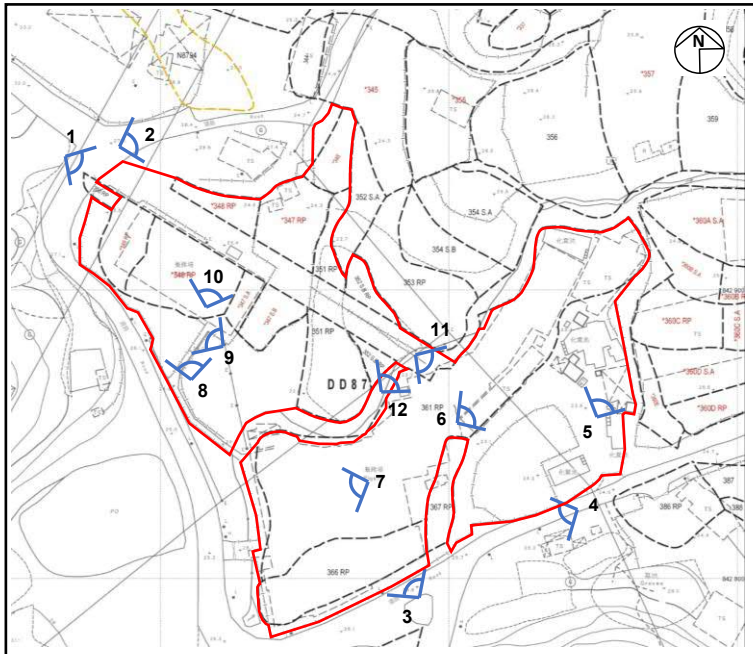

LEGEND:

The Application Site

Viewpoint

(For Identification Only)









Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Existing Condition of the Application Site and the Surrounding Areas (Cont'd)

Ref.: ADCL/PLG-10315-R001/I001-III

Illustration:
1-III

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N.A.

Date:
Jun 2025

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Appendix I

Memorandum of Understanding with the Existing Operator of the Pigsty

BRILLIANT PROFIT LIMITED 與 CHARM GRAND LIMITED
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 BRILLIANT PROFIT LIMITED（下稱「**甲方**」）與 CHARM GRAND LIMITED（下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2025 年 5 月 10 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、 347 號 A 分段、347 號 B 分段、347 號餘段、348 號餘段、349 號餘段、351 號餘段、352 號 B 分段餘段、361 號餘段、366 號餘段（下稱「**申請地點**」）之現行土地擁有人；

(二) **乙方**為按《公眾衞生(動物及禽鳥)(禽畜飼養的發牌)規例》下的飼養禽畜牌照持牌人，獲批准在新界打鼓嶺恐龍坑李屋村第 87 約地段 348 號、349 號餘段、361 號餘段、366 號餘段及政府土地上飼養禽畜。考慮到**乙方**未來將難以繼續在有關地段飼養禽畜，並有意搬遷至多層的現代化環保養豬場以改善營運模式；以及

(三) **甲方**擬根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請（下稱「**規劃申請**」），擬議在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築材料、機械連附屬設施（為期 3 年）及進行相關填土工程。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作臨時貨倉（危險品倉庫除外）及露天存放建築材料、機械連附屬設施（為期 3 年）及進行相關填土工程；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，停止現時飼養禽畜處所的營運及搬遷，以協助**甲方**能盡快進行相關工程。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

Authorized Signature(s)

(_____)

代表 甲方（BRILLIANT PROFIT LIMITED）
商業登記證號碼：[redacted]

For and on behalf of
CHARM GRAND LIMITED

Authorized Signature(s)

(_____)

代表 乙方（CHARM GRAND LIMITED）
商業登記證號碼：[redacted]

香港法例第139L章
《公眾衞生 (動物及禽鳥) (禽畜飼養的發牌) 規例》
Public Health (Animals and Birds)
(Licensing of Livestock Keeping) Regulation, Cap. 139L

飼養禽畜牌照
LIVESTOCK KEEPING LICENCE

持牌人相片
Photo of Licensee

(只適用於個人持牌人)
(For individual licensee only)

飼養禽畜牌照編號：[redacted]
Livestock Keeping Licence No.

~~現批准*~~ _____ ~~先生 / 女士~~
~~Permission is hereby granted to Mr. / Ms.*~~

~~香港身份證號碼* (首4個字母連數字)：~~ _____
~~Hong Kong Identity Card No.* (First 4 alphanumeric characters)~~

現批准* CHARM GRAND LIMITED (公司/機構名稱)
Permission is hereby granted to * (Name of Company/Organisation)

商業／機構登記號碼 (首8位數字) [redacted]
Business / Organisation Registration No. (First 8 digits)

獲授權代表姓名 謝志洪 先生／~~女士~~
Name of Authorised Representative (Mr. / ~~Ms.~~)

飼養 4000隻 ~~雞~~／豬／~~其他~~，請註明：_____
to keep ~~chickens~~ / pigs / ~~others, please specify~~

於* [redacted] 。
at*

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The approved livestock waste treatment system is

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The premises licensed for livestock keeping (the Approved Premises)** are coloured red on the farm plan attached. A photograph of the licensee is attached at the top right hand corner.

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(MA Wai-chung, Peter)

漁農自然護理署署長(馬惠忠 代行)
for *Director of Agriculture, Fisheries and Conservation*

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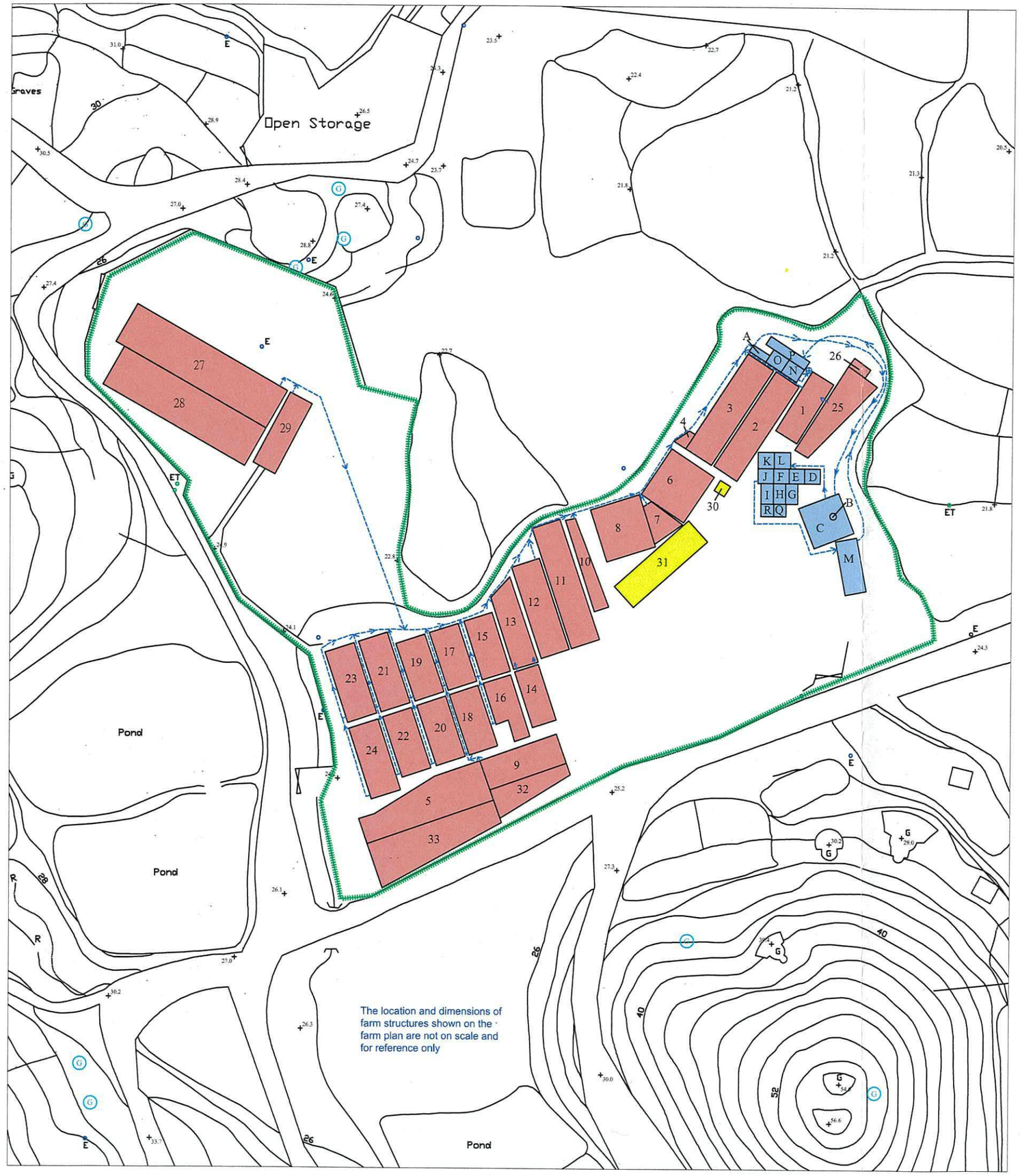

農場圖則

農場編號 : LK 148

持牌公司 : Charm Grand Limited

農場地址 : 新界打鼓嶺恐龍坑李屋村第87約348RP, 349RP, 361RP, 366RP號地段及政府土地

測量圖編號 : 3-NW-22A / 22B

序號	農用構築物編號	用途	尺寸
1	* Nil	豬屋	6.10 米 x 17.15 米
2	* Nil	豬屋	6.80 米 x 27.90 米
3	* Nil	豬屋	7.50 米 x 27.90 米
4	* Nil	豬屋	10.50 平方米
5	* Nil	豬屋	290.00 平方米
6	* Nil	豬屋	12.60 米 x 13.50 米
7	* Nil	豬屋	49.25 平方米
8	* Nil	豬屋	12.60 米 x 13.40 米
9	* Nil	豬屋	20.00 米 x 7.60 米
10	* Nil	豬屋	73.24 平方米
11	* Nil	豬屋	7.25 米 x 31.15 米
12	* Nil	豬屋	7.25 米 x 23.60 米
13	* Nil	豬屋	126.38 平方米
14	* Nil	豬屋	6.15 米 x 14.40 米
15	* Nil	豬屋	7.25 米 x 15.10 米
16	* Nil	豬屋	95.84 平方米
17	* Nil	豬屋	7.40 米 x 14.95 米
18	* Nil	豬屋	7.40 米 x 15.60 米
19	* Nil	豬屋	7.50 米 x 14.95 米
20	* Nil	豬屋	7.50 米 x 15.60 米
21	* Nil	豬屋	7.45 米 x 18.20 米
22	* Nil	豬屋	7.45 米 x 15.60 米
23	* Nil	豬屋	7.55 米 x 18.20 米
24	* Nil	豬屋	7.55 米 x 18.25 米
25	* Nil	豬屋	151.72 平方米
26	* Nil	豬屋	2.50 米 x 5.00 米
27	* Nil	豬屋	10.67 米 x 42.68 米
28	* Nil	豬屋	10.67 米 x 40.24 米
29	* Nil	豬屋	6.10 米 x 19.52 米
30	* Nil	農用貯物室	2.90 米 x 2.95 米
31	* Nil	農用貯物室	6.95 米 x 24.40 米
32	* Nil	豬屋	104.00 平方米
33	* Nil	豬屋	286.00 平方米

編序	廢物處理設施	尺寸
A	收集池	4.85 米 x 1.90 米 x 1.00 米
B	固液分離機	1台
C	廢物貯藏所	110.67 平方米 x 4.00 米
D	凝聚池	3.83 米 x 3.70 米 x 2.50 米
E	凝聚池	3.83 米 x 3.70 米 x 2.50 米
F	兼氣池	3.83 米 x 3.70 米 x 2.50 米
G	兼氣池	5.00 米 x 3.03 米 x 2.50 米
H	兼氣池	5.00 米 x 3.03 米 x 2.50 米
I	兼氣池	5.00 米 x 3.03 米 x 2.50 米
J	兼氣池	3.83 米 x 3.70 米 x 2.50 米
K	調節池	16.08 平方米 x 2.50 米
L	調節池	16.08 平方米 x 2.50 米
M	曝氣池	13.40 米 x 5.30 米 x 5.00 米
N	曝氣池	4.52 米 x 3.70 米 x 4.94 米
O	曝氣池	4.52 米 x 3.70 米 x 4.94 米
P	曝氣池	11.35 米 x 2.30 米 x 5.44 米
Q	凝聚池	9.69 平方米 x 2.50 米
R	凝聚池	9.69 平方米 x 2.50 米

說明：

- 飼養禽畜農用構築物
- 非飼養禽畜之農用構築物
- 廢物處理設施
- 管道
- 排放點
- 農場邊界

* 未獲政府批准而搭建的農舍，將來仍可能會被政府有關部門清拆

授權批准人：

漁農自然護理署署長
(馬惠忠代行)

Appendix II

Revised Traffic Impact Assessment

S.16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

TRAFFIC IMPACT ASSESSMENT

Reference: 80115-R01-02
Date: September 2025
Prepared by: 8FM Consultancy Limited

8FM Consultancy Limited

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1 INTRODUCTION

1.1 Background

The Applicant intends to seek planning permission for the Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos. 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories ("Project Site").

The location of the Project Site is shown in **Figure 1**.

8FM Consultancy Limited was commissioned as the traffic consultant to carry out a Traffic Impact Assessment (TIA) Study in support of this planning application.

1.2 Study Objectives

The objectives of this TIA are listed as follows:

- To review the existing traffic conditions in the vicinity of the Project Site;
- To present and evaluate the internal transport facilities;
- To estimate the traffic forecasts of the adopted design year and assess the future traffic situation in the surrounding network;
- To evaluate the potential traffic impact of the proposed development; and
- To suggest traffic improvement proposals, if necessary.

1.3 Report Structure

The report is structured as follows:

- Chapter 2 -Proposed Development

  Describing the project site, vehicular access arrangement, development schedule and the proposed internal transport facilities;
- Chapter 3 -Existing Traffic Situation

  Presenting the existing traffic context, the traffic survey, and the traffic assessment of the existing traffic conditions;
- Chapter 4 -Development Traffic Generation

  Estimating the traffic flows arising from the proposed development;
- Chapter 5 -Future Traffic Situation

Describing the traffic forecast methodology and presenting the traffic assessment results under reference and design scenarios;

- Chapter 6 -Summary and Conclusion

  Summarizing the findings and conclusion of this traffic impact assessment study.

2 PROPOSED DEVELOPMENT

2.1 The Site Location

The Project Site is located in Kong Nga Po, Sheung Shui, and it can be accessible from Kong Nga Po Road via a local track. The location of the Project Site is shown in **Figure 1**.

2.2 The Development Schedule

The project site is proposed to be utilised as warehouse, open storage for construction materials and equipment and ancillary office on a temporary basis of 3 years. Based on the planning statement, the operation hours of the proposed use are from 9:00 a.m. to 6:00 p.m. from Mondays to Saturdays, and there will be no operation on Sundays and public holidays.

In accordance with the planning statement, the project site has a total area of about 16,604m^2, including (i). uncovered area for open storage purposes, circulation/manoeuvring space and provision of 10 parking spaces for private cars, 12 loading and unloading (L/UL) bay for light goods vehicles (LGVs) and 12 L/UL bays for medium/heavy goods vehicles (M/HGVs)\; and (ii). covered area with six double/single-storey temporary structures. The layout of the project site is shown in **Figure 2.1**. Key development parameters of the proposed use are tabulated in **Table 2.1**. The details of the temporary structures in the site are tabulated in **Table 2.2**.

Table 2.1 Key Development Parameters

Proposed Use	Temporary Open Storage of Construction Materials and Equipment and Ancillary Office
Operation Hours	9:00am - 6:00pm (Mondays – Saturdays, Except Sundays and Public Holidays)
Total Site Area	16,604m^2 (including about 6,886m^2 of Government land)
Covered Area	About 2,990m^2 (Warehouse and Ancillary Use)
Uncovered Area	About 13,614m^2 (including Open Storage Area, Maneuvering Space and Parking Space)

Table 2.2 Details of the Temporary Structures

Structure	Uses	Floor Area (about)	Building Height
Structure A	Warehouse	1,474m^2	15m (2 storey)
Structure B	Ancillary Site Office/General Storage Uses	220m^2	7m (1 storey)
Structure C	Warehouse	2,400m^2	15m (1 storey)
Structure D	Ancillary Site Office/General Storage Uses	220m^2	7m (1 storey)
Structure E	Ancillary Site Office/General Storage Uses	220m^2	7m (1 storey)
Structure F	General Storage Uses	393m^2	7m (1 storey)

2.3 Vehicle Access Arrangement

Access to the project site will be provided through an about 11m-wide ingress/egress point located at the northwestern boundary, which is connected to a local track leading to Kong Nga Po Road. The vehicle access arrangement is presented in **Figure 2.1** for reference.

Swept path analysis is conducted for the 11m-wide ingress/egress point, internal manoeuvring space, and the loading/unloading spaces. **Figure 2.2A, Figure 2.3A,** and **Figure 2.4A** demonstrate that the ingress/egress point and parking space arrangement are adequate for manoeuvring 11m HGVs, 7m LGVs, and 5m Private Cars, respectively.

2.4 Internal Transport Facilities

The internal transport facilities to be provided in the project site are summarised in **Table 2.3**. As there are no specific parking and loading/unloading requirements for temporary open storage development in accordance with HKPSG, ancillary transport facilities are provided based on the Applicant's requirements to meet operational needs.

Table 2.3 Internal Transport Facilities

Type of Ancillary Transport Facilities	Size	Provision based on Applicant's Operational Needs
Private Car Parking Spaces	5m(L) x 2.5m(W)	10
L/UL Bays for LGVs	7m(L) x 3.5m(W)	12
L/UL Bays for HGVs	11m(L) x 3.5m(W)	12

3 EXISTING TRAFFIC SITUATION

3.1 Study Area

To assess the junctions potentially affected by the Proposed Development, the Area of Influence (AOI) has been defined to cover the junctions located along the major vehicular access routes of the project. The AOI adopted for the TIA study is shown in **Figure 3.4**.

3.2 Existing Road Network

As indicated in **Figure 1**, the project site is located at the east of Kong Nga Po Road, and it can be accessible from Kong Nga Po Road via a local unnamed road. The existing condition of the connecting carriageways is summarised as follows:

- Unnamed Road 1 is a single-track access road connecting Kong Nga Po Road in the west to Ping Che Road in the east. It acts as a single carriageway with 1-lane 2-way operation.
- Kong Nga Po Road is a rural road acting as a single carriageway with 2-lane 2-way operation. It connects Man Kam To Road in the west and Kong Nga Po in the east.
- Man Kam To Road is a rural road with 3 to 4 lanes and 2-way operation. It connects Man Kam To Control Point in the north and Jockey Club Road in the south.

3.3 Public Transport Facilities

The project site cannot be immediately accessible by taking public transportation. The nearest franchised bus and GMB services are around 2.3km away from the site, operating along Man Kam To Road. Details of these public transport services are presented in **Table 3.1** and **Figure 3.1**.

Table 3.1 Franchised Bus and GMB Services Close to Project Site

Route	Routing	Peak Frequency (minutes)
KMB 73K	Sheung Shui ↔Man Kam To (San Uk Ling)	10-15
GMB 59K	Sheung Shui Station ↔Lin Ma Hang	15

3.4 Traffic Survey

In order to evaluate the existing traffic conditions in the vicinity, the classified traffic surveys were conducted on 7 May 2025 (Wednesday) from 7:00 to 10:00 in the morning and from 16:00 to 19:00 in the evening. The key junctions of the study area are indicated in **Figure 3.2.**

The traffic flows collected during the traffic surveys have been converted to passenger car units (PCU) based on the PCU factors as indicated in Volume 2 of the Transport Planning and Design Manual (TPDM).

The results of the traffic survey identified that the AM and PM peak hours occur during 7:30 to 8:30 and 16:45 to 17:45, respectively. The 2025 observed peak hours traffic flows in the study area are presented in **Figure 3.3**.

3.5 Existing Traffic Condition

Based on the observed traffic flows, the performance of the key junctions in the vicinity of the project site during the AM and PM peak hours was assessed.

3.5.1 Existing Junction Capacity Assessment

The results of junction performance are indicated in **Table 3.2** and detailed junction calculation sheets are given in **Appendix A**.

Table 3.2 Existing Junction Capacity Assessment

Jn No.	Junction Location	Type/ Capacity Index	AM Peak	PM Peak
A	Unnamed Rd 1 / Kong Nga Po Rd	Priority / DFC(i)	0.17	0.14
B	Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	Roundabout / DFC	0.20	0.14
C	Man Kam To Rd / Kong Nga Po Rd	Priority / DFC	0.62	0.60

**Notes:*

(i) DFC - Design Flow / Capacity Rati. The performance of a priority junction or roundabout is normally measured by its Design Flow / Capacity (DFC) ratio. A DFC ratio less than 1.0 indicates that the junction is operating within design capacity. A DFC ratio greater than 1.0 indicates that the junction is overloaded, resulting in traffic queues and longer delay time to the minor arm traffic.

As shown in Table 3.2, all of the surveyed junctions perform satisfactorily during peak hours with adequate reserve capacities.

4 DEVELOPMENT TRAFFIC GENERATION

4.1 Estimated Development Flows

With reference to the Planning Statement, the proposed development will make use of heavy goods vehicles (HGV), light goods vehicles (LGV), and private cars to travel to/from the application site.

As the proposed development will be operated as warehouses and ancillary site office/general storage uses, the trip generation & attraction arising from the operational needs will be estimated respectively based on the different land use.

4.1.1 Warehouse/Open Storage

With reference to **Table 2.2**, Structures A & C will be proposed as warehouses, while the uncovered area (excluding the parking space and maneuvering space) will be used as open storage. The trip generation & attraction of warehouses and open storage area in the proposed development is estimated with reference to the trip rates of industrial use under TPDM Vol 1, which are tabulated in **Table 4.1**. Mean level is adopted for a conservative estimation of the trip assessment.

Table 4.1 Traffic Rates for Industrial Building

Land Use	Unit	Upper Limit/ Mean/ Lower Limit	AM Peak		PM Peak	
			Generation Rate	Attraction Rate	Generation Rate	Attraction Rate
Industrial Building	(pcu/hr/100 sqm GFA)	Upper Limit	0.1153	0.1727	0.1648	0.1260
		Mean	**0.0926**	**0.1386**	**0.1350**	**0.1049**
		Lower Limit	0.0698	0.1044	0.1053	0.0808

The calculated traffic generation & attraction arising from the operation of warehouses during the identified peak hours are estimated in **Table 4.2**.

Table 4.2 Estimated Traffic Generation & Attraction Arising from Warehouse

Land Use	Area	Unit	AM Peak		PM Peak	
			Generation	Attraction	Generation	Attraction
Warehouse/Open Storage Area	13,932m^2	pcu/hr	13	20	19	15

4.1.2 Ancillary Site Office/General Storage Uses

With reference to **Table 2.2**, Structures B, D，E & F will be proposed as ancillary site office/general storage. The trip generation & attraction of the ancillary site office/general storage uses is estimated with reference to the trip rate for office in the TPDM Vol 1, which is tabulated in **Table 4.3**. The trip rates of both

industrial/office uses under TPDM Vol 1 would be applicable as the structures serve two purposes. For a conservative approach, the mean level of trip rates for office use is adopted.

Table 4.3 Traffic Rates for Office Development

Land Use	Unit	Upper Limit/ Mean/ Lower Limit	AM Peak		PM Peak	
			Generation Rate	Attraction Rate	Generation Rate	Attraction Rate
Office	(pcu/hr/100 sqm GFA)	Upper Limit	0.2361	0.3257	0.1928	0.1510
		Mean	**0.1703**	**0.2452**	**0.1573**	**0.1175**
		Lower Limit	0.1045	0.1646	0.1217	0.084

The calculated traffic generation & attraction arising from the operation of site office during the identified peak hours are estimated in **Table 4.4**.

Table 4.4 Estimated Traffic Generation & Attraction Arising from Ancillary Site Office/General Storage Uses

Land Use	Area	Unit	AM Peak		PM Peak	
			Generation	Attraction	Generation	Attraction
Ancillary Site Office/General Storage Uses	1053m^2	pcu/hr	2	3	2	2

4.1.3 Estimated Development Flow

With the trip generation & attraction estimated for different land use, the development flow is summarized in **Table 4.5.**

Table 4.5 Estimated Development Flow

Unit	AM Peak (pcu/hr)		PM Peak (pcu/hr)	
	Generation	Attraction	Generation	Attraction
pcu/hr	15	23	21	17
Total	38 pcu/hr		38 pcu/hr	

4.2 Traffic Routing for the Project Site

The anticipated routes for project-related vehicles travelling to and from the project site are indicated in **Figure 4.1** and described as follows:

4.2.1 Ingress route

The project vehicles are expected to travel to the project site from Man Kam To Control Point and various locations across the 18 districts. Considering operational needs and accessibility, the vehicle distribution from these origins is estimated to be 50/50.

4.2.2 Egress route

The project vehicles are expected to disperse from the project site and arrive at Man Kam To Control Point and various locations across the 18 districts. Considering operational needs and accessibility, the vehicle distribution to these destinations is estimated to be 50/50.

5 FUTURE TRAFFIC SITUATION

5.1 Design Year

The planning application for the Proposed Temporary Warehouse and Open Storage with Ancillary Facilities and Associated Filling of Land development involves a period of 3 years, it is assumed that the end year for the Project Site would be year 2028. Therefore, the year 2028 is adopted as the design year of this study.

5.2 Traffic Forecast Methodology

To conduct the traffic forecast on the road networks in the vicinity of the project site, the existing traffic flows will be adjusted with the following factors considered:

- Historical traffic data from Annual Traffic Census (ATC) by Transport Department;
- The forecast population and employment from the 2021-based Territorial Population and Employment Data Matrices (TPEDM) planning data by the Planning Department;
- Committed and planned developments adjacent to the project site.

5.3 Regional Traffic Growth

5.3.1 Annual Traffic Census (ATC)

Reference has been made to the ATC reports from year 2019 to 2023. The historical traffic data of the surrounding road links are based on the Annual Average Daily Traffic (AADT) extracted from ATC issued by the Transport Department. The relevant AADT data from year 2019 to 2023 are summarized in **Table 5.1**.

Table 5.1 AADT Extracted from Annual Traffic Census

Station	Road	From	To	2019	2020	2021	2022	2023	Growth Rate p.a.
5465	Man Kam To Rd	Jockey Club Rd	Boundary	16,900	17,270	17,960	17,410	17,820	1.33%
					2.19	4.00	-3.06	2.35	
5218	Jockey Club Rd	Po Shek Wu Rd	Man Kam To Rd	26,450	25,180	26,400	25,230	22,510	-3.95%
					-4.80	4.85	-4.43	-10.78	
6018	Po Shek Wu Rd	Choi Yuen Rd	Jockey Club Rd	37,910	36,090	37,850	33,260	34,190	-2.55%
					-4.80	4.88	-12.13	2.80	
			Total	81,260	78,540	82,210	75,900	74,520	**-2.14%**

Table 5.1 indicates that the overall average annual growth rate of the adjacent road network is -2.14%.

5.3.2 Projected Population Data

Reference has been made to the 2021-based Territorial Population and Employment Data Matrices (TPEDM) planning data provided by the Planning Department. The population data in the North District for the years 2021, 2026, and 2031 are presented in **Table 5.2**.

Table 5.2 2021-Based TPDEM Data for North District

Item	TPDEM Estimation/Projection			Annual Growth Rate		
	2021	2026	2031	2021 to 2026	2026 to 2031	2021 to 2031
Population	309,650	352,000	435,550	2.60%	**4.35%**	3.47%

Source: 2021-based TPEDM by Planning Department

Table 5.2 indicates that the highest annual growth rate for population is 4.35%.

Based on the findings of the above two tables, a conservative growth rate of **4.35%** per annum was adopted to estimate the background traffic growth from 2025 to 2028.

5.4 Planned and Committed Development

Planned and committed developments in the vicinity of the Project Site, which are expected to be completed and in operation within the assessment period (up to 2028), have been identified and considered in the traffic forecast. A summary of the identified developments is presented in **Table 5.3**, and the locations of the planned developments are illustrated in **Figure 5.1**.

Table 5.3 Traffic Generation of Planned Developments

Land Use	GFA	AM Peak (pcu/hr)		PM Peak (pcu/hr)	
		Generation	Attraction	Generation	Attraction
Kong Nga Po Police Training Facilities	35,000m^2	60	86	55	41

Traffic generated by the above major planned and committed developments has been included in the traffic forecast for the design year 2028.

5.5 2028 Traffic Flows

The growth factor will be applied to the 2025 observed peak hours traffic flows to estimate the 2028 reference flows.

The reference and design flows of the design year 2028 are calculated from the following formula:

2028 Reference Flows (Fig. 5.2) = 2025 Observed Flows (Fig 3.3) x $(1+4.35\%)^3$

2028 Design Flows (Fig. 5.3) = 2025 Reference Flows (Fig. 5.2) + Net Change in Development Traffic Flows

Figure 5.2 shows the 2028 Reference Peak Hours Flows in the area. By adding the net development traffic, **Figure 5.3** shows the 2028 Design Peak Hours Traffic Flows.

5.6 Future Traffic Impact Assessment

The traffic impact assessments for design year 2028 were conducted for the key junctions and road links in the vicinity of the project site for both the Reference and Design scenarios.

5.6.1 Future Year Junction Capacity Assessment

Based on the Reference Flows and Design Flows, junction capacity assessments for design year 2028 are carried out and the results are presented in **Table 5.4**, with detailed calculation sheets given in **Appendix A**.

Table 5.4 Future Year Junction Capacity Assessment

Jun No.	Junction Location	Type/ Capacity Index	2028 Reference Scenario		2028 Design Scenario	
			AM	PM	AM	PM
A	Unnamed Rd 1 / Kong Nga Po Rd	Priority / DFC(i)	0.22	0.18	0.25	0.21
B	Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	Roundabout / DFC	0.27	0.17	0.29	0.18
C	Man Kam To Rd / Kong Nga Po Rd	Priority / DFC	0.82	0.80	0.84	0.85

**Notes: DFC - Design Flow / Capacity Ratio*

(i) The performance of a priority junction or roundabout is normally measured by its Design Flow / Capacity (DFC) ratio. A DFC ratio less than 1.0 indicates that the junction is operating within design capacity. A DFC ratio greater than 1.0 indicates that the junction is overloaded, resulting in traffic queues and longer delay time to the minor arm traffic.

Table 5.4 reveals that all the junctions will operate satisfactorily with ample junction capacity in both the 2028 reference and 2028 design scenarios during peak hours.

6 Summary and Conclusion

6.1 Summary

The Applicant intends to seek the Town Planning Board permission to utilise the Project Site as temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities for a period of 3 years and associated filling of land.

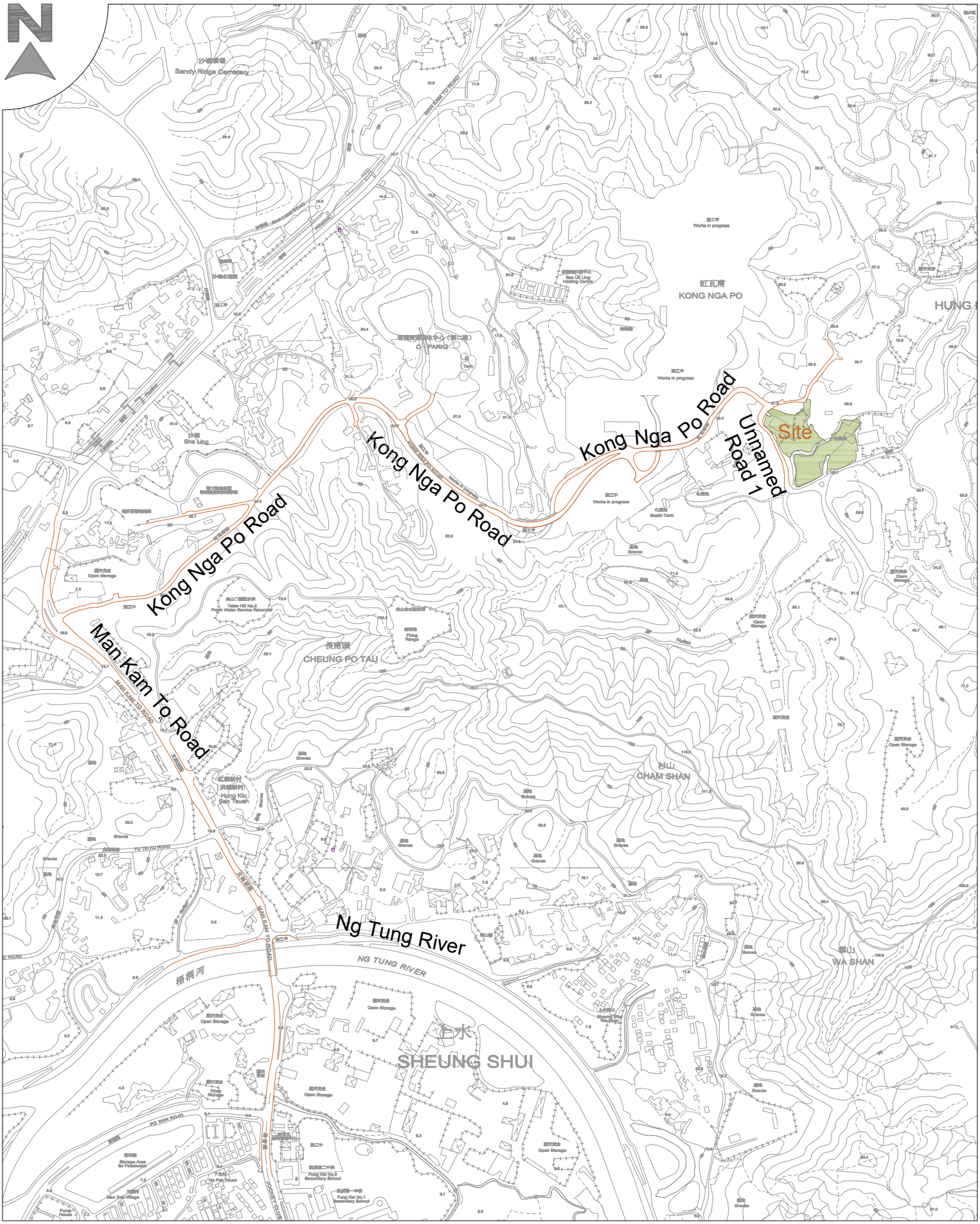
In order to appraise the existing traffic conditions, classified turning movement count surveys have been carried out at the key junctions and road links in the vicinity of project site on 7 May 2025 from 7:00 to 10:00 in the morning and 16:00 to 19:00 in the evening. The morning and evening peak hours of the road network have been identified as 7:30am to 8:30am and 16:45pm to 17:45pm, respectively.

Year 2028 is used as the design year for the traffic impact assessment. Based on the historical data and the future planning data, an annual growth rate of 4.35% was adopted for this study. This growth factor has been applied to the observed traffic flows in 2025 to determine the anticipated traffic flows in design year 2028.
The assessment results reveal that the key junctions identified are expected to operate satisfactorily with sufficient capacity in both 2028 reference and 2028 design scenarios during peak hours.

6.2 Conclusion

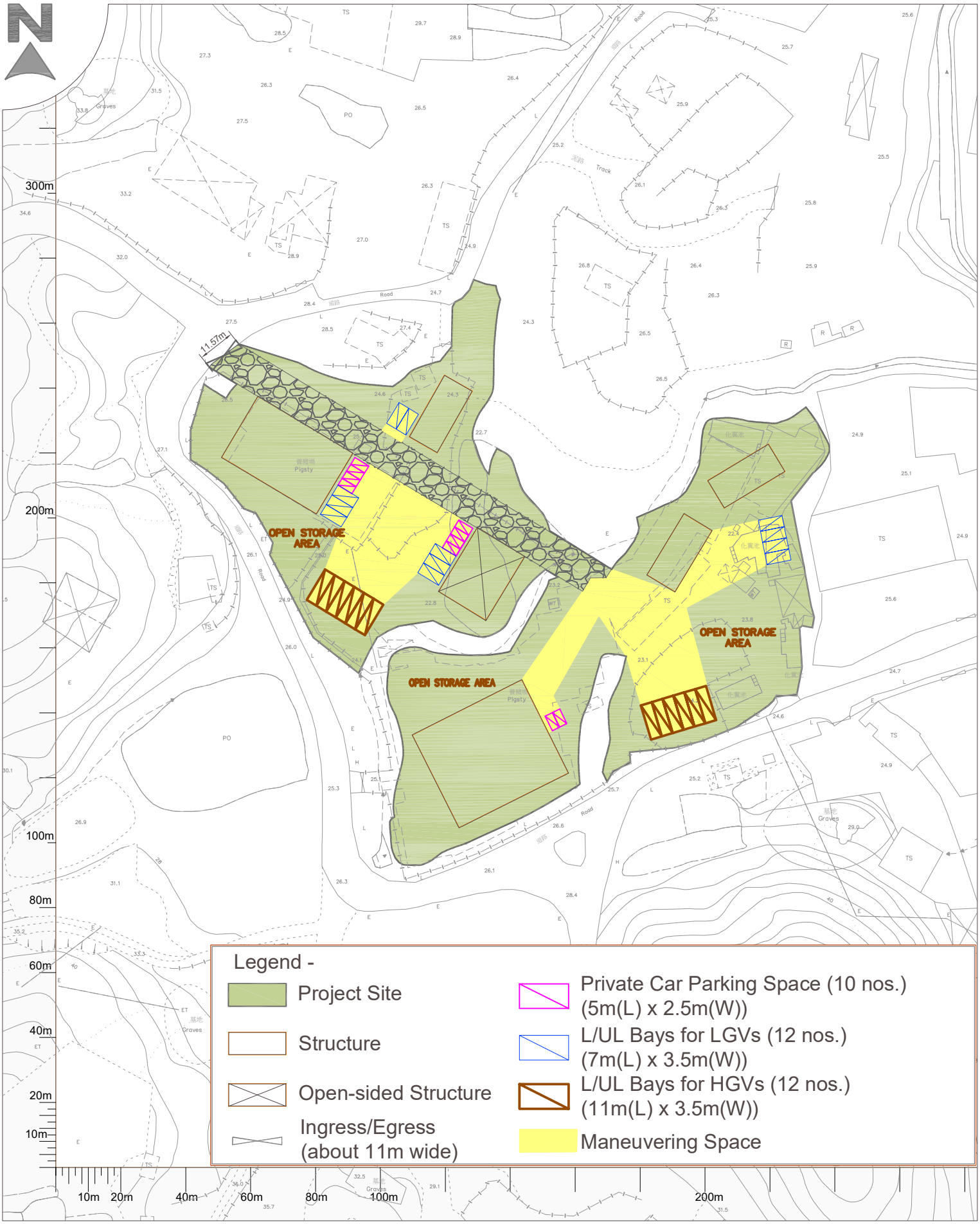
The findings of this study show that the development traffic will not cause adverse traffic impact onto the local road network. The proposed development is therefore supported from the traffic engineering point of view at this stage.

Figures



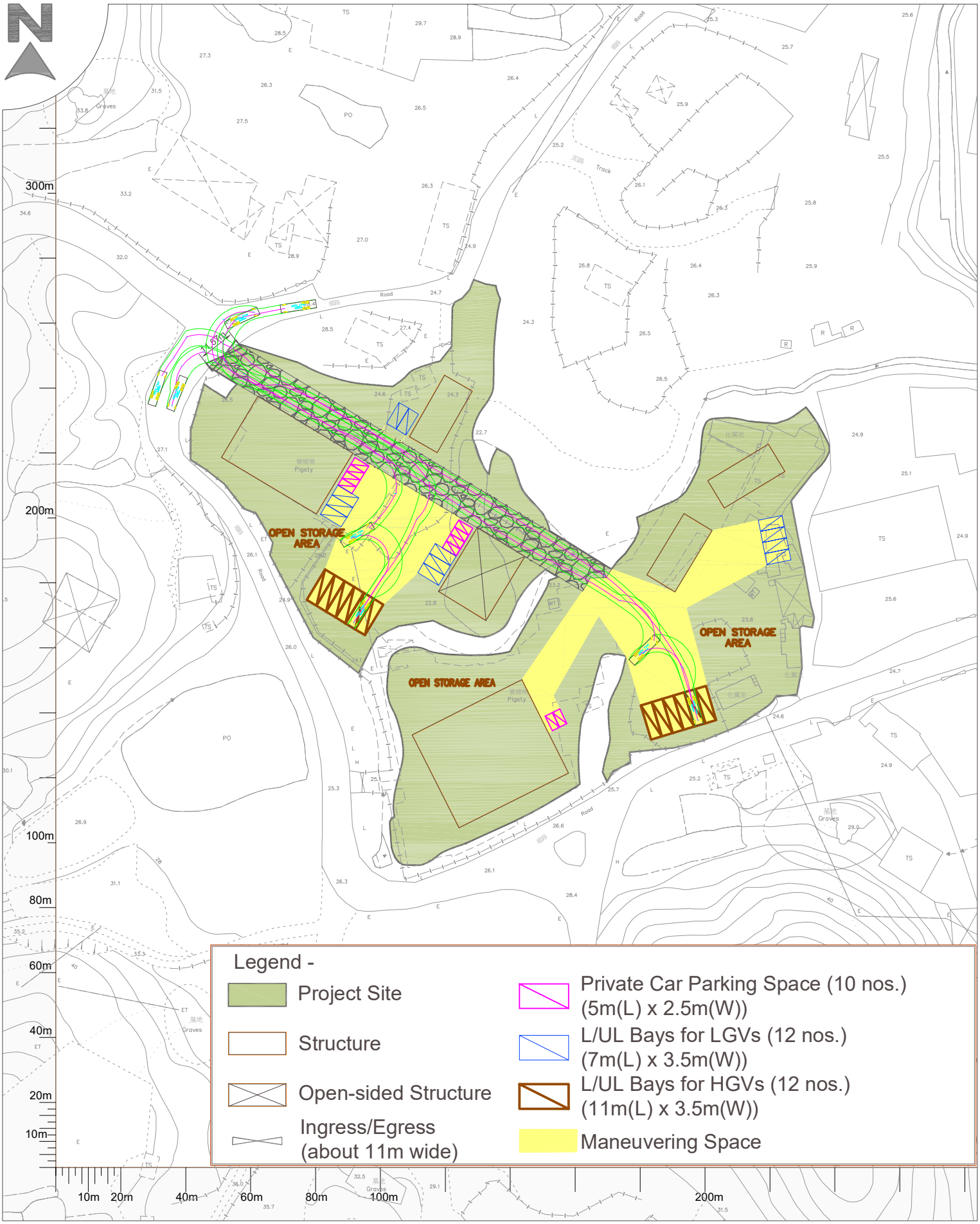
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 1.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Location of the Project Site	Dwg No. - Figure 1	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	



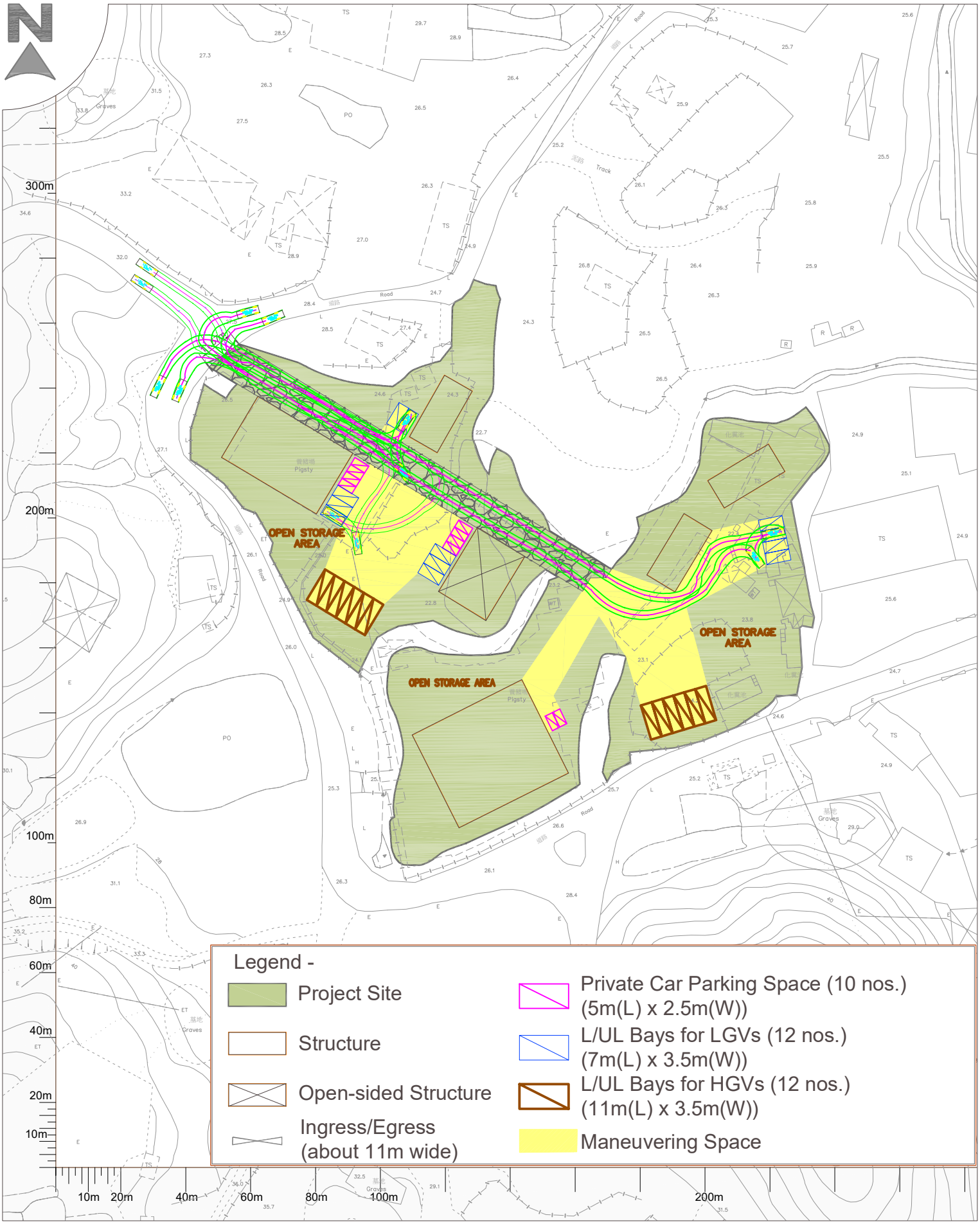
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 2.1A.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Layout of Project Site	Dwg No. - Figure 2.1	Rev. A	8FM CONSULTANCY LIMITED
	Scale - 1:1500@A4	Date - Aug 2025	



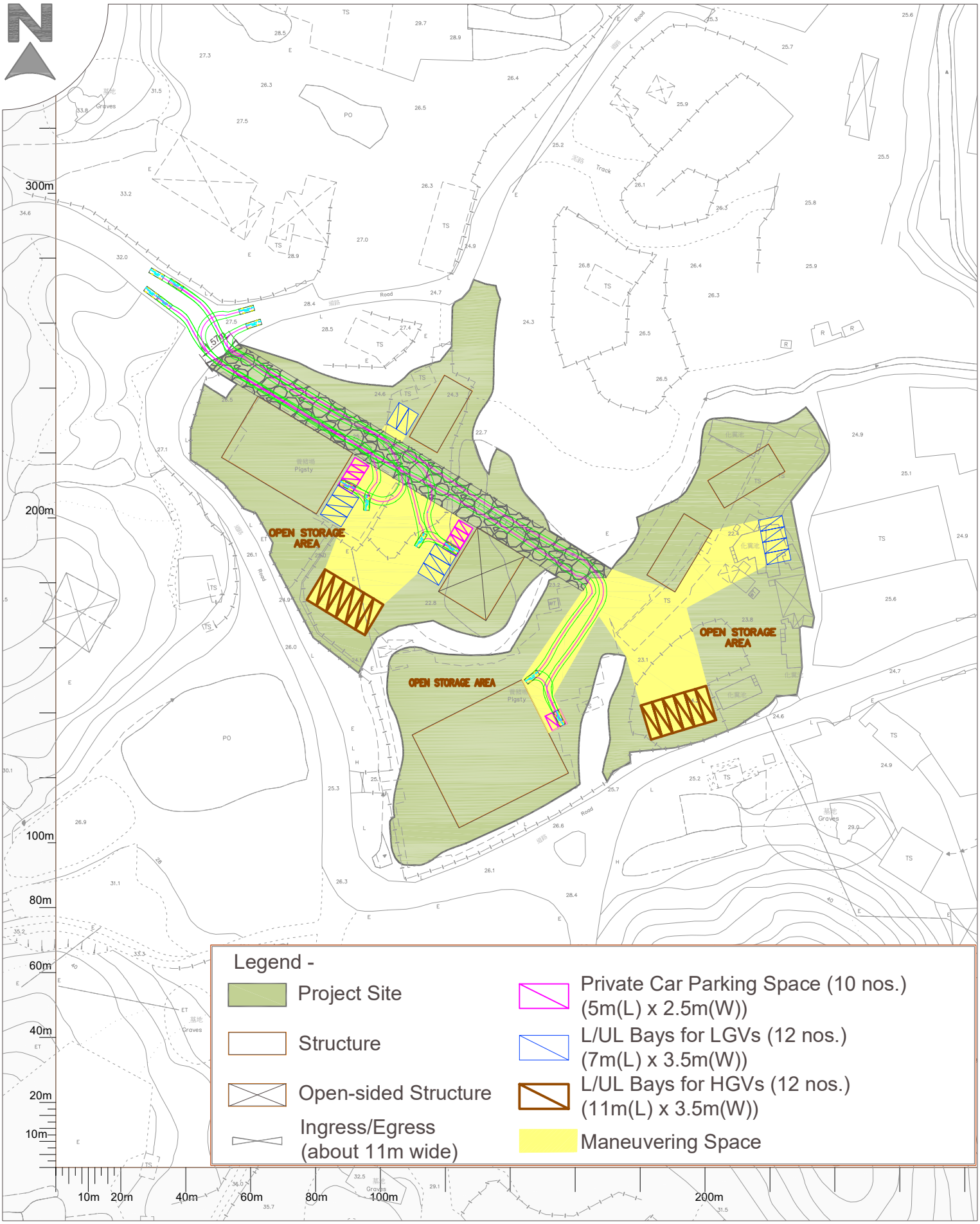
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 2.2A SWEPT PATH FOR HGV.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Swept Path Analysis for 11m HGV	Dwg No. - Figure 2.2	Rev. A	8FM CONSULTANCY LIMITED
	Scale - 1:1500@A4	Date - Aug 2025	



C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 2.3A SWEPT PATH FOR LGV.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Swept Path Analysis for 7m LGV	Dwg No. - Figure 2.3	Rev. A	8FM CONSULTANCY LIMITED
	Scale - 1:1500@A4	Date - Aug 2025	



C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 2.4A SWEPT PATH FOR PC.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Swept Path Analysis for 5m Private Car	Dwg No. - Figure 2.4	Rev. A	8FM CONSULTANCY LIMITED
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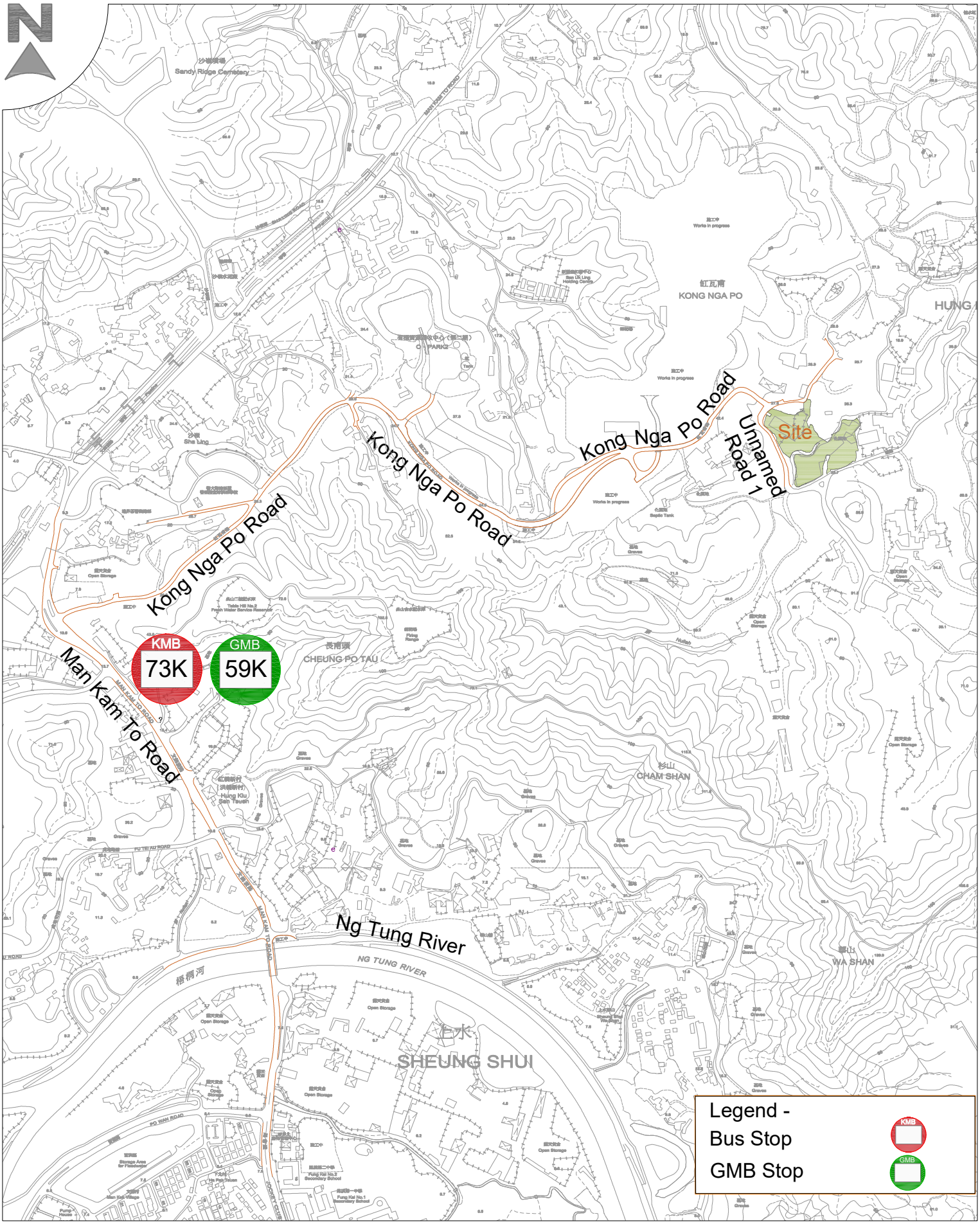
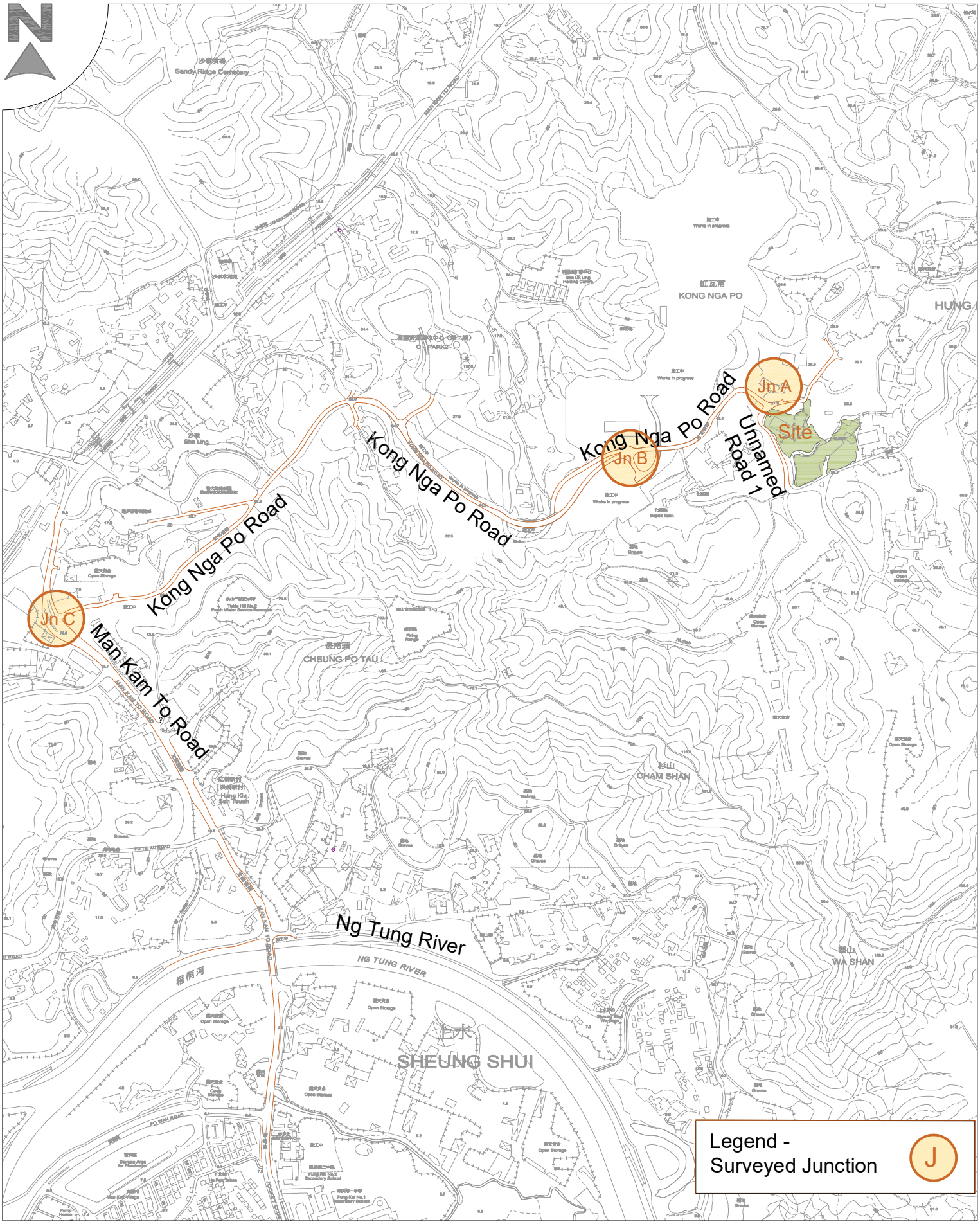


Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Public Transport Facilities	Dwg No. - Figure 3.1	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	

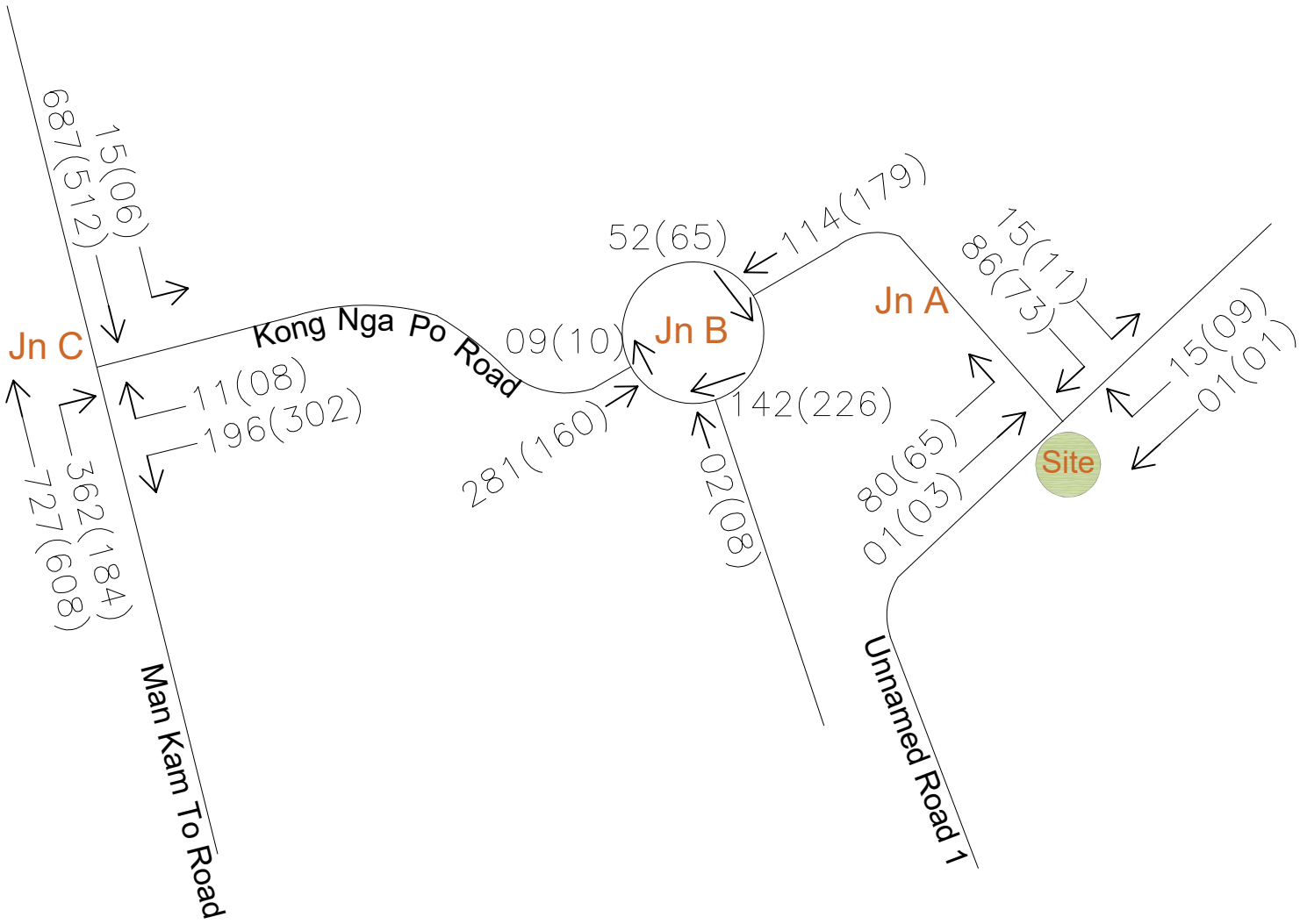
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 3.1.DWG



Proposal -	PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT		
Drawing Title - Key Junction	Dwg No. - Figure 3.2	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 3.2.DWG

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 3.3.DWG



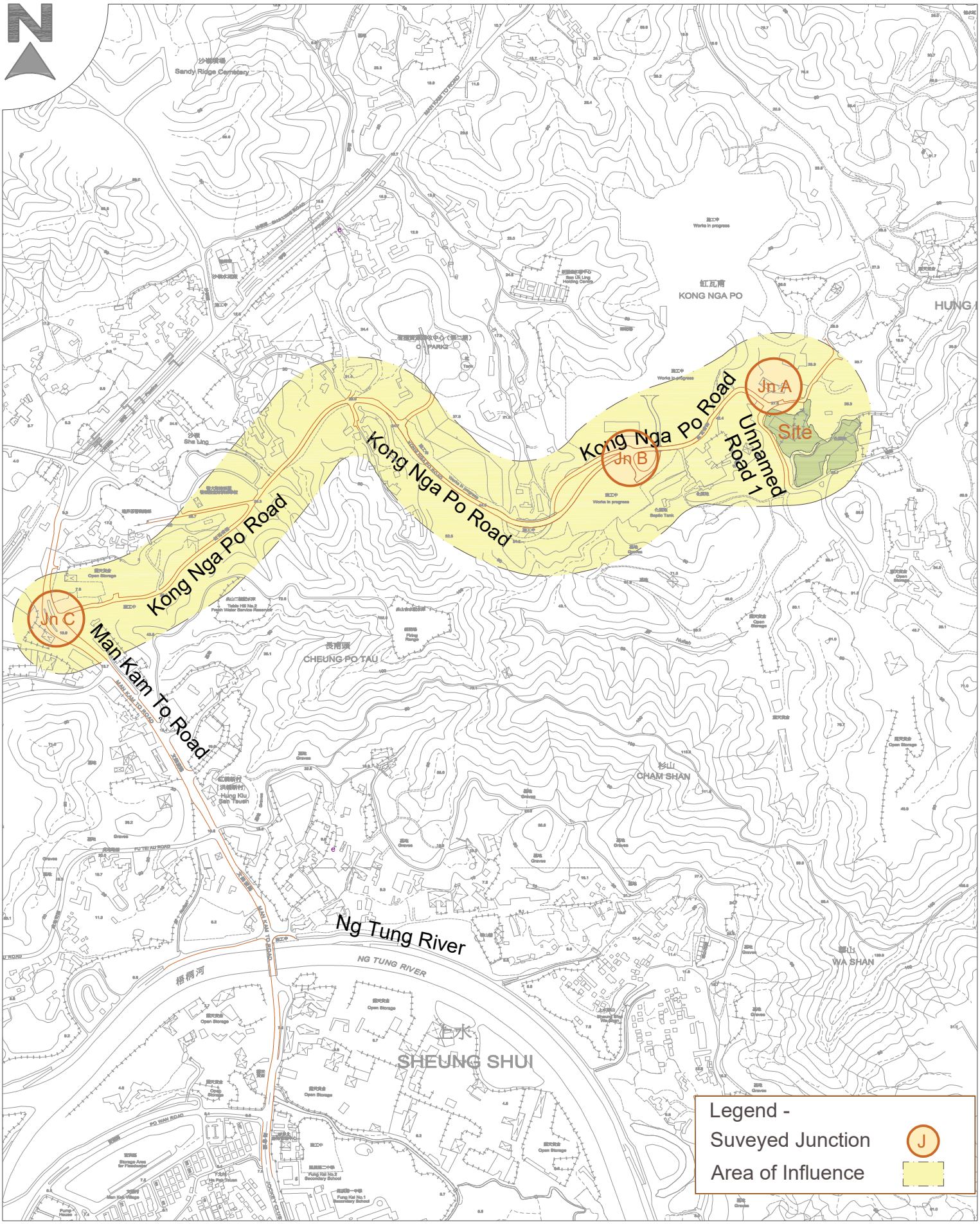
Legend -

Traffic Flows at AM Peak Hr (PCU/HR)

Traffic Flows at PM Peak Hr (PCU/HR)

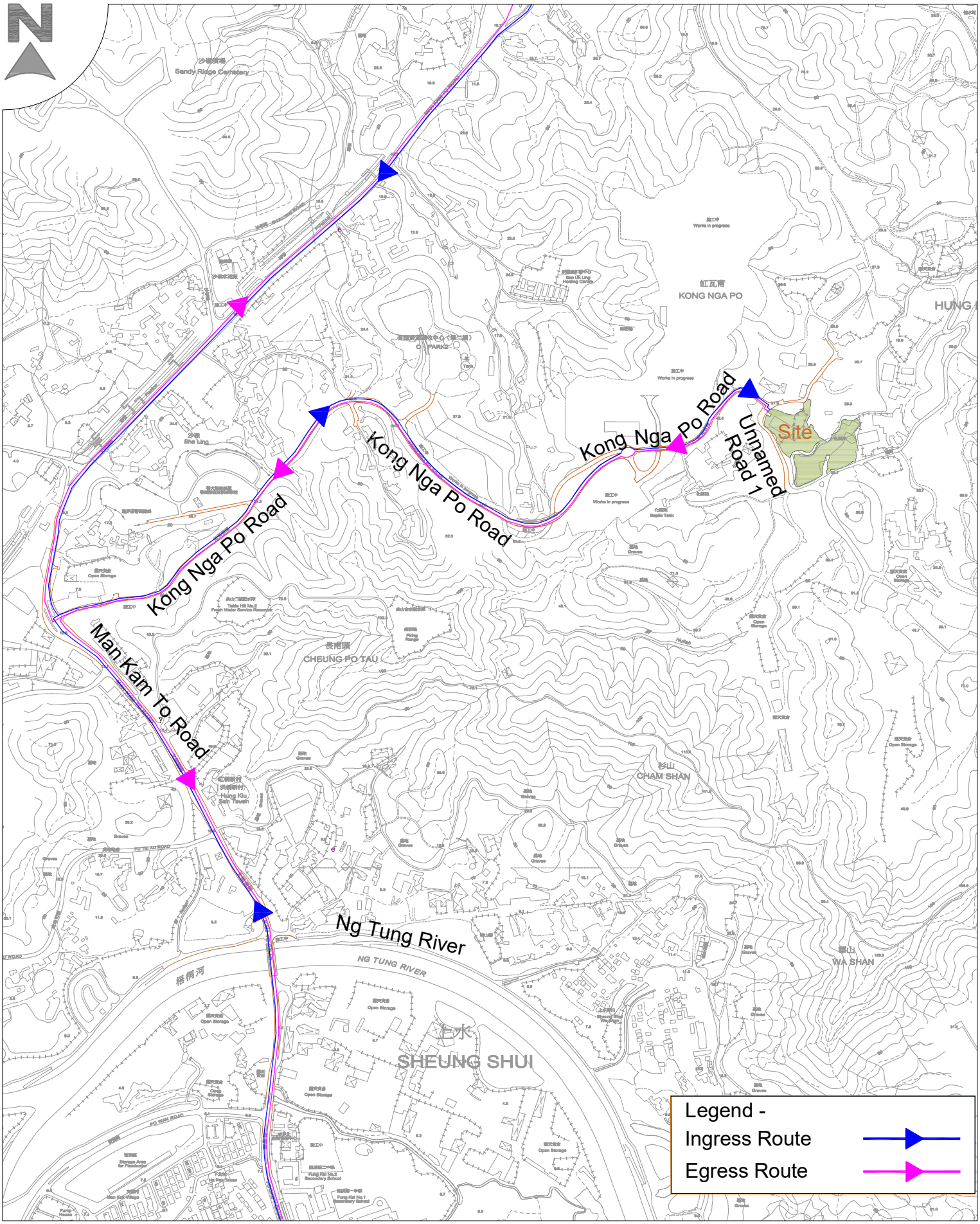
100(100)

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Observed Flows during AM & PM Peak Hours	Dwg No. - Figure 3.3	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - ---	Date - May 2025	



C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 3.4.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Area of Influence	Dwg No. - Figure 3.4	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - Sep 2025	



Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Vehicular Ingress and Egress Route	Dwg No. - Figure 4.1	Rev. - ---	8FM CONSULTANCY LIMITED
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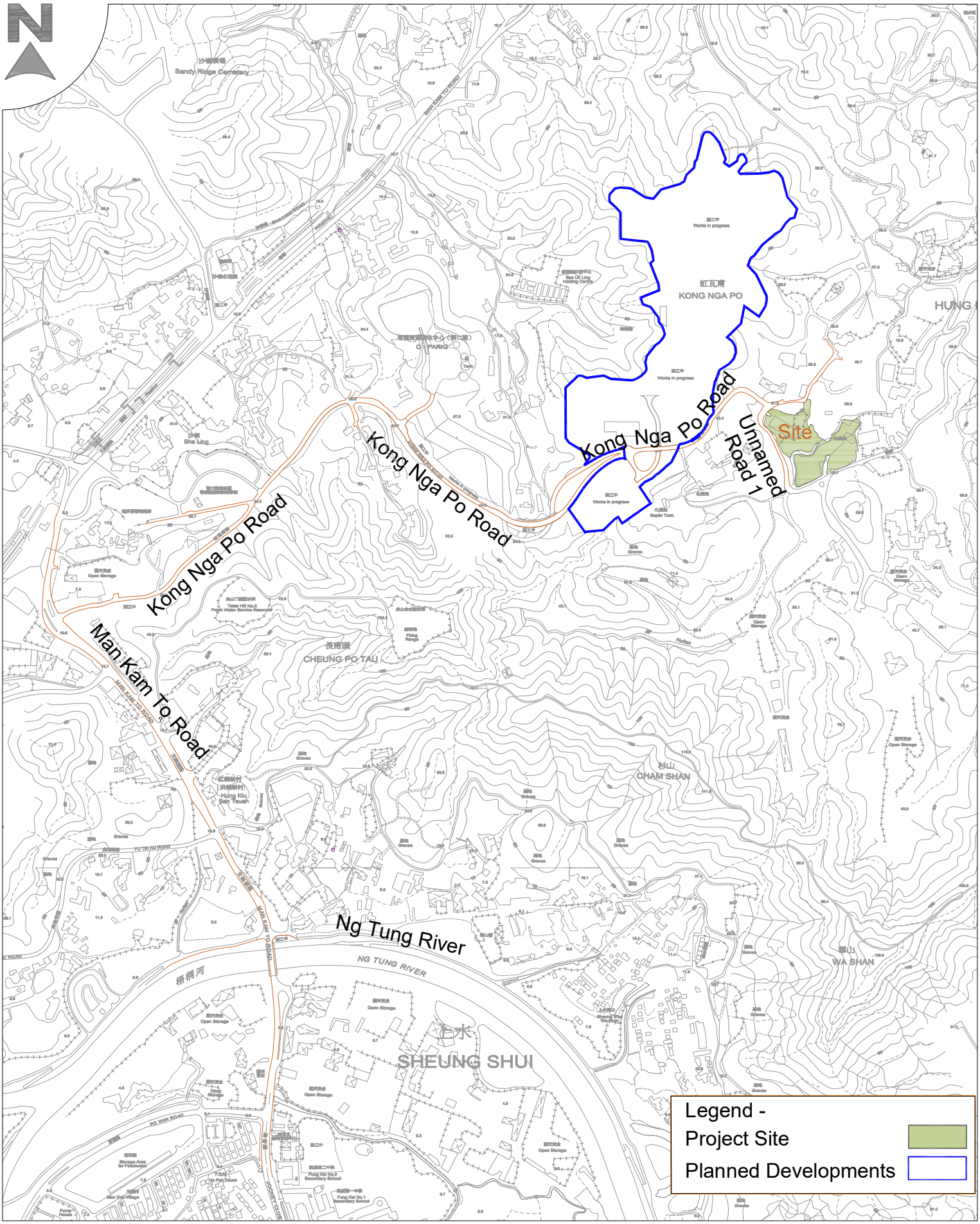
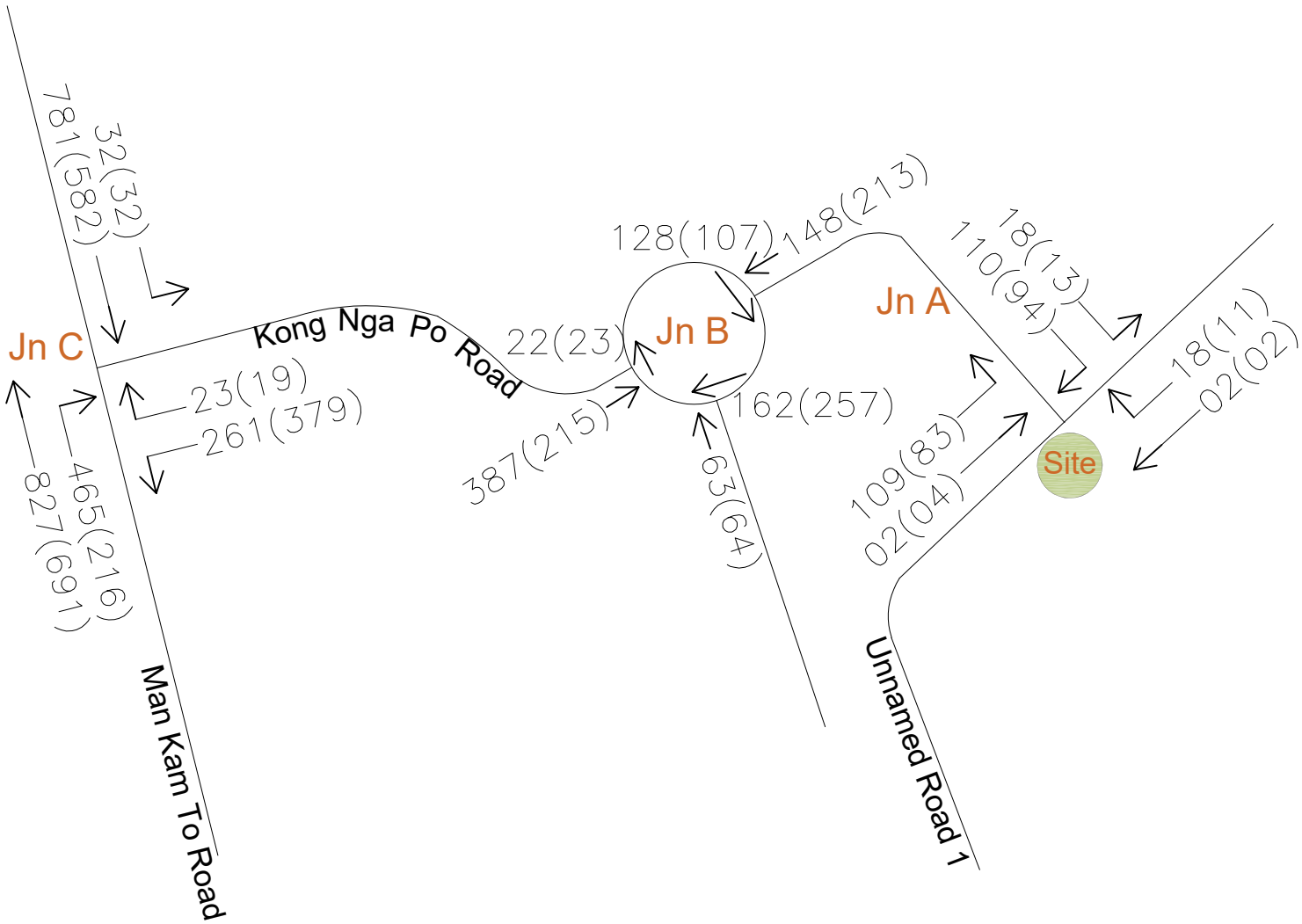
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 4-2.DWG



C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 5.1.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Location of Planned Developments	Dwg No. - Figure 5.1	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 5.2.DWG



Legend -

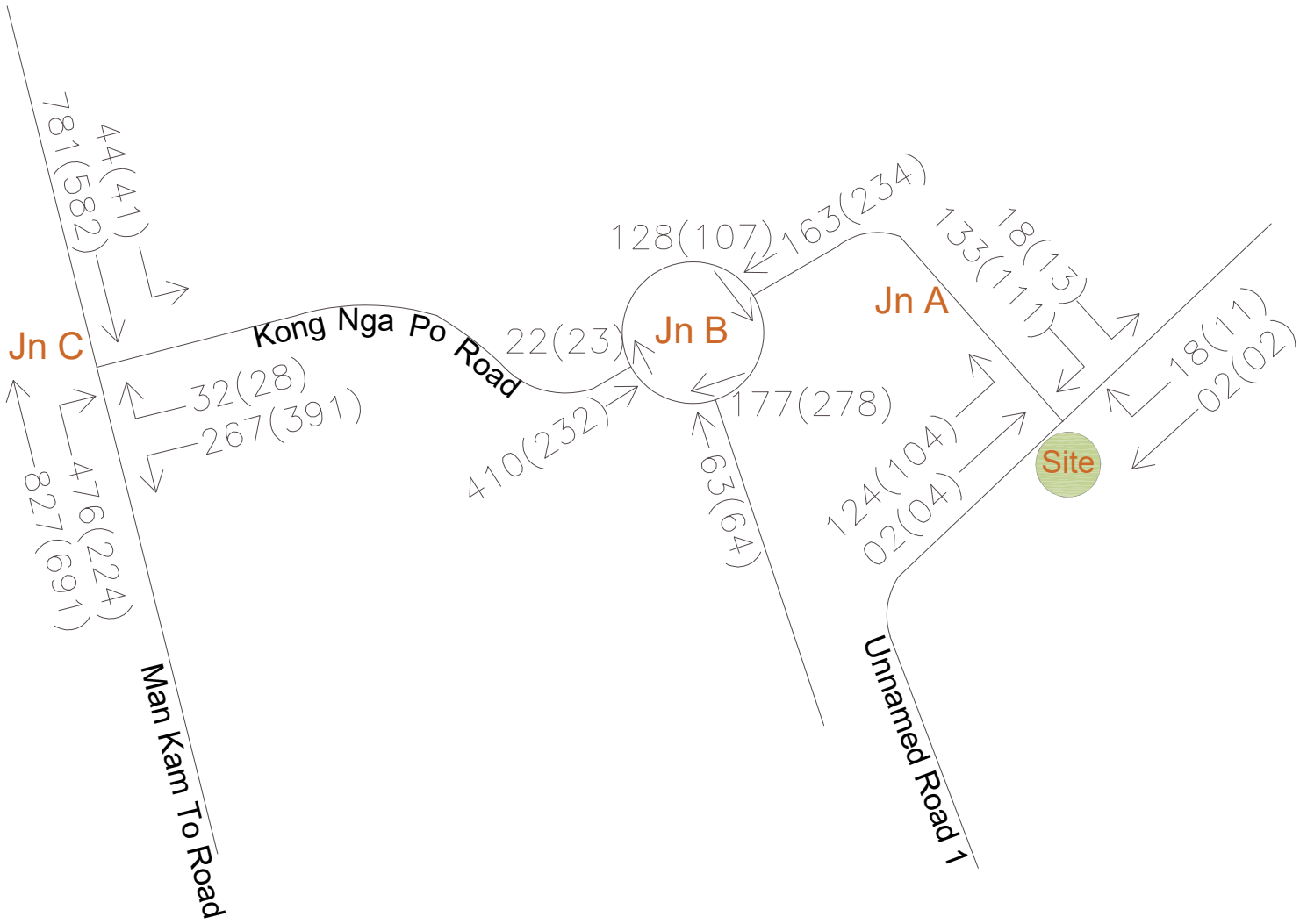
Traffic Flows at AM Peak Hr (PCU/HR)

Traffic Flows at PM Peak Hr (PCU/HR)

100(100)

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - 2028 Reference Traffic Flows during Peak Hours	Dwg No. - Figure 5.2	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - ---	Date - May 2025	

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 5.3A.DWG



Legend -

Traffic Flows at AM Peak Hr (PCU/HR)

Traffic Flows at PM Peak Hr (PCU/HR)

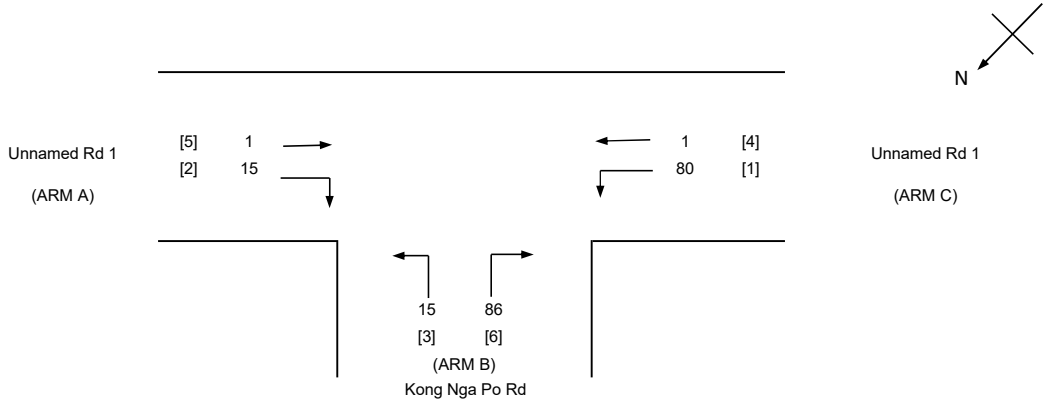
100(100)

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - 2028 Design Traffic Flows during Peak Hours	Dwg No. - Figure 5.3	Rev. A	8FM CONSULTANCY LIMITED
	Scale - ---	Date - Sep 2025	

Appendix A

Junction Calculation Sheets

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2025 Observed - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	15	(pcu/hr)
q a-c	=	1	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	1	(pcu/hr)
q c-b	=	80	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	15	(pcu/hr)
q b-c	=	86	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.85

THE CAPACITY OF MOVEMENT :

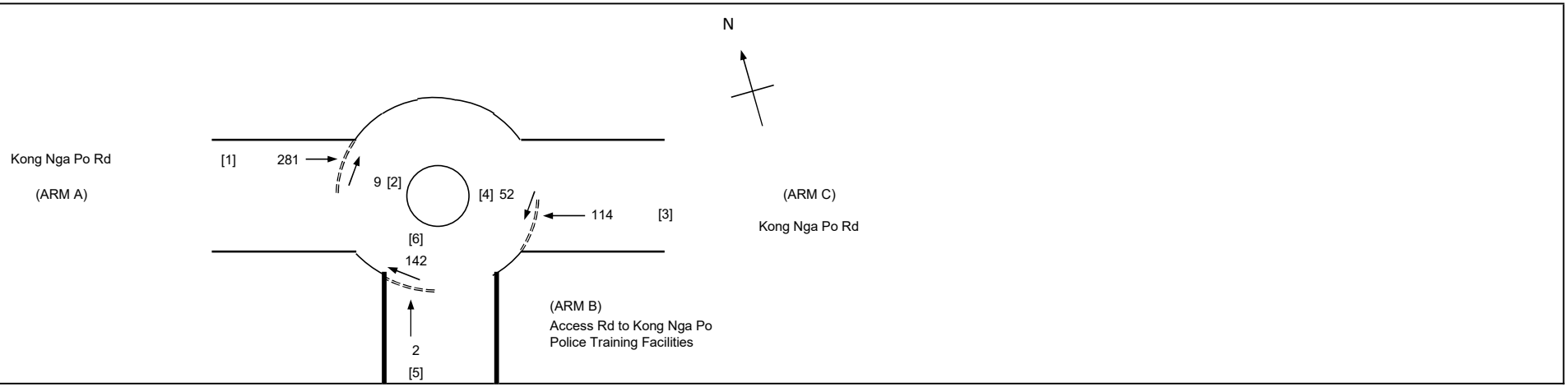
Q b-a	=	464	(pcu/hr)
Q b-c	=	619	(pcu/hr)
Q c-b	=	663	(pcu/hr)
Q b-ac	=	589	(pcu/hr)
Q c-a	=	1583	(pcu/hr)
TOTAL FLOW	=	198	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0328
DFC b-c	=	0.1386
DFC c-b	=	0.1204
DFC b-ac	=	0.1714
(Share Lane)		
DFC c-a	=	0.0006

CRITICAL DFC = 0.17

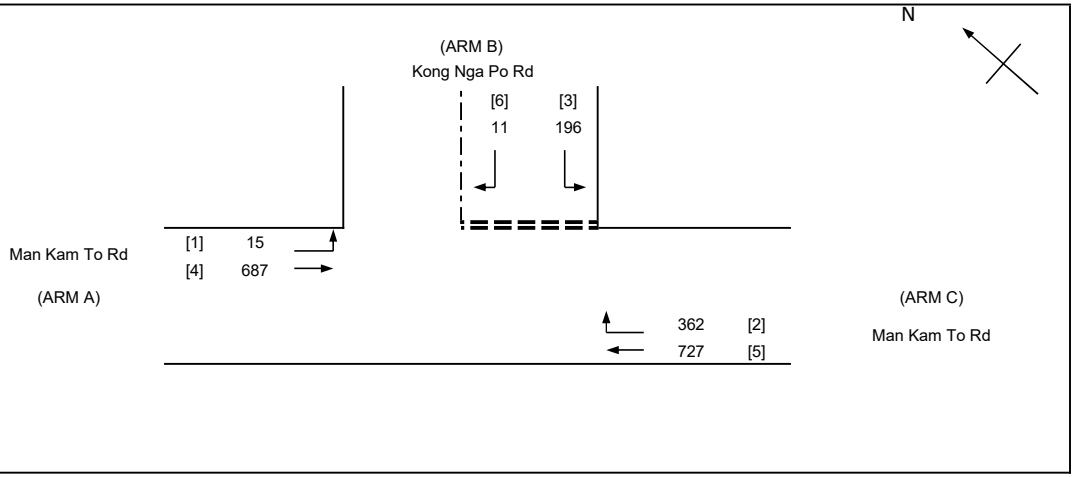
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2025 Observed - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		281	2	114
Qc	=	Circulating flow across entry (pcu/h)		9	142	52
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1417	1338	1308
DFC	=	Design flow/Capacity = Q/Qe		0.20	0.00	0.09

TOTAL FLOW = 599 (pcu/hr)
CRITICAL DFC = 0.20

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2025 Observed - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	15	(pcu/hr)
q a-c	=	687	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	727	(pcu/hr)
q c-b	=	362	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	11	(pcu/hr)
q b-c	=	196	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.949

THE CAPACITY OF MOVEMENT :

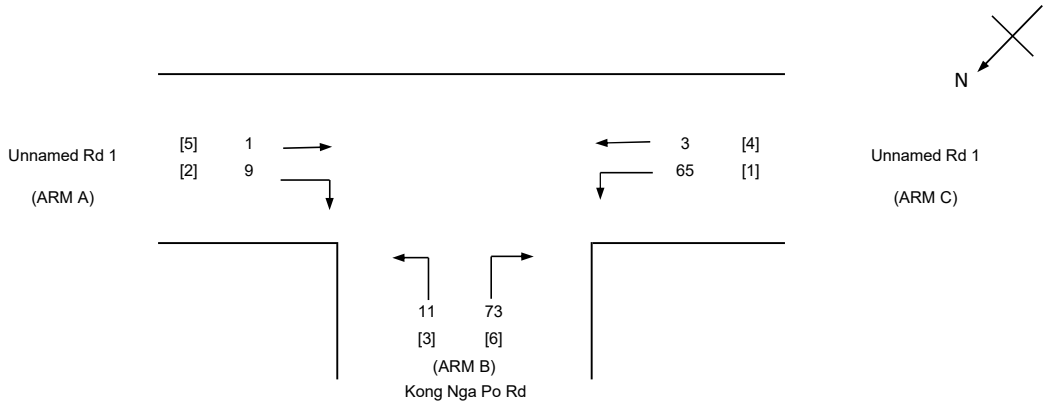
Q b-a	=	306	(pcu/hr)
Q b-c	=	496	(pcu/hr)
Q c-b	=	587	(pcu/hr)
Q b-ac	=	481	(pcu/hr)
TOTAL FLOW	=	1997	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0346
DFC b-c	=	0.3948
DFC c-b	=	0.6160
DFC b-ac (Share Lane)	=	0.4294

CRITICAL DFC = 0.62

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2025 Observed - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	9	(pcu/hr)
q a-c	=	1	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	3	(pcu/hr)
q c-b	=	65	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	11	(pcu/hr)
q b-c	=	73	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.865

THE CAPACITY OF MOVEMENT :

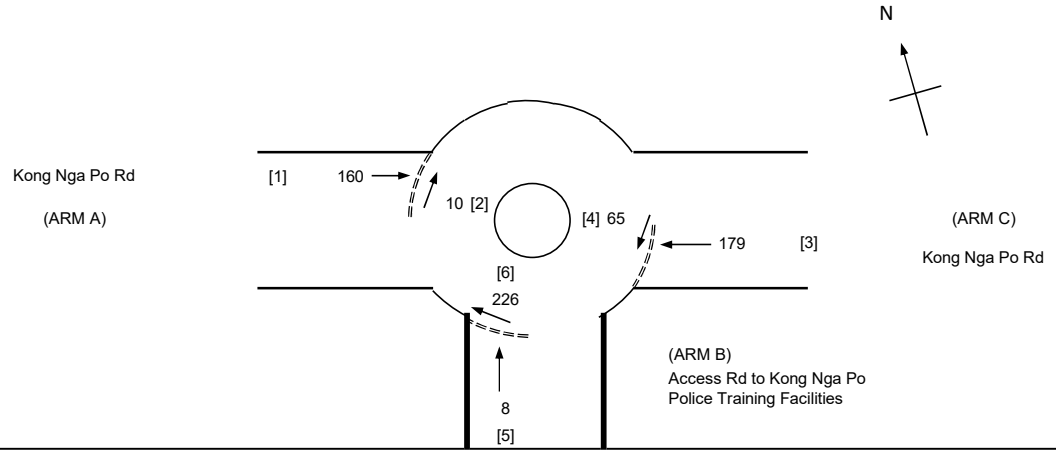
Q b-a	=	468	(pcu/hr)
Q b-c	=	620	(pcu/hr)
Q c-b	=	664	(pcu/hr)
Q b-ac	=	594	(pcu/hr)
Q c-a	=	1625	(pcu/hr)
TOTAL FLOW	=	162	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0244
DFC b-c	=	0.1177
DFC c-b	=	0.0973
DFC b-ac	=	0.1421
(Share Lane)		
DFC c-a	=	0.0017

CRITICAL DFC = 0.14

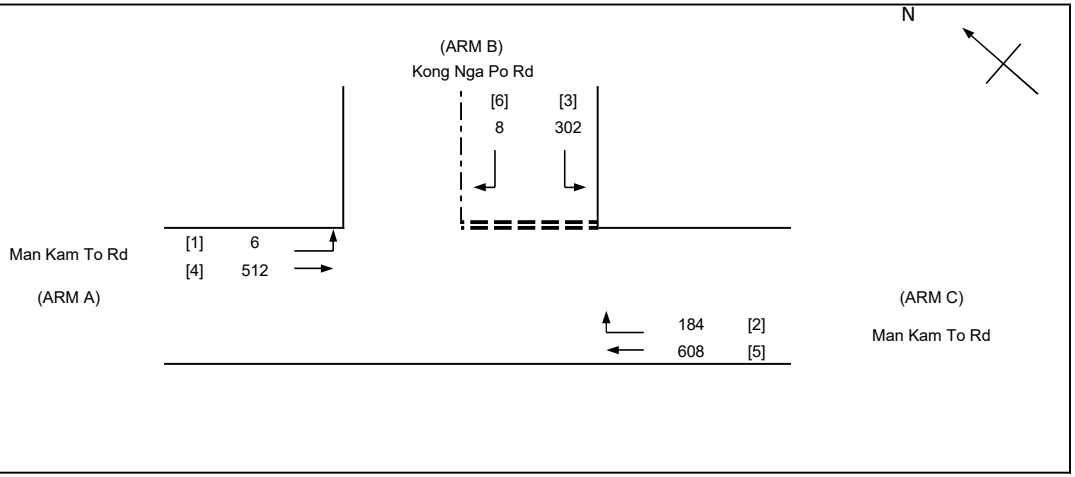
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2025 Observed - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		160	8	179
Qc	=	Circulating flow across entry (pcu/h)		10	226	65
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1416	1287	1300
DFC	=	Design flow/Capacity = Q/Qe		0.11	0.01	0.14

TOTAL FLOW = 648 (pcu/hr)
CRITICAL DFC = 0.14

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2025 Observed - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	6	(pcu/hr)
q a-c	=	512	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	608	(pcu/hr)
q c-b	=	184	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	8	(pcu/hr)
q b-c	=	302	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.974

THE CAPACITY OF MOVEMENT :

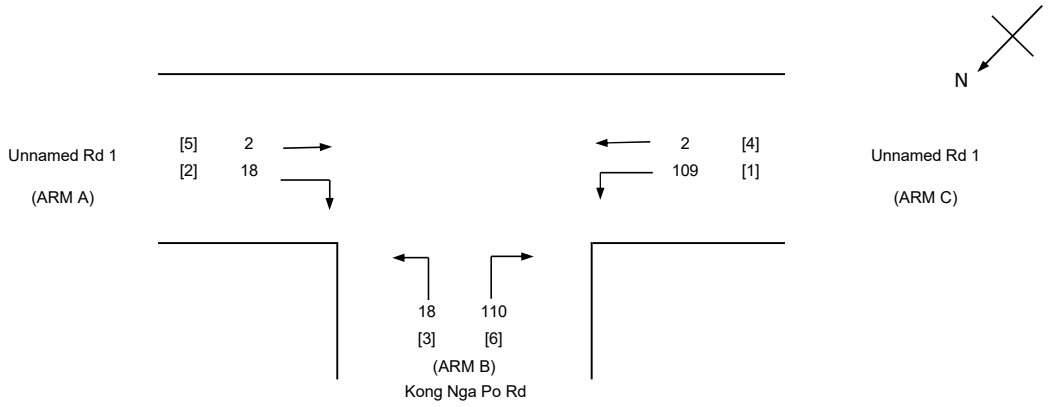
Q b-a	=	380	(pcu/hr)
Q b-c	=	523	(pcu/hr)
Q c-b	=	621	(pcu/hr)
Q b-ac	=	518	(pcu/hr)
TOTAL FLOW	=	1620	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0211
DFC b-c	=	0.5782
DFC c-b	=	0.2960
DFC b-ac (Share Lane)	=	0.5993

CRITICAL DFC = 0.60

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Reference - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	18	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	2	(pcu/hr)
q c-b	=	109	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	18	(pcu/hr)
q b-c	=	110	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.859

THE CAPACITY OF MOVEMENT :

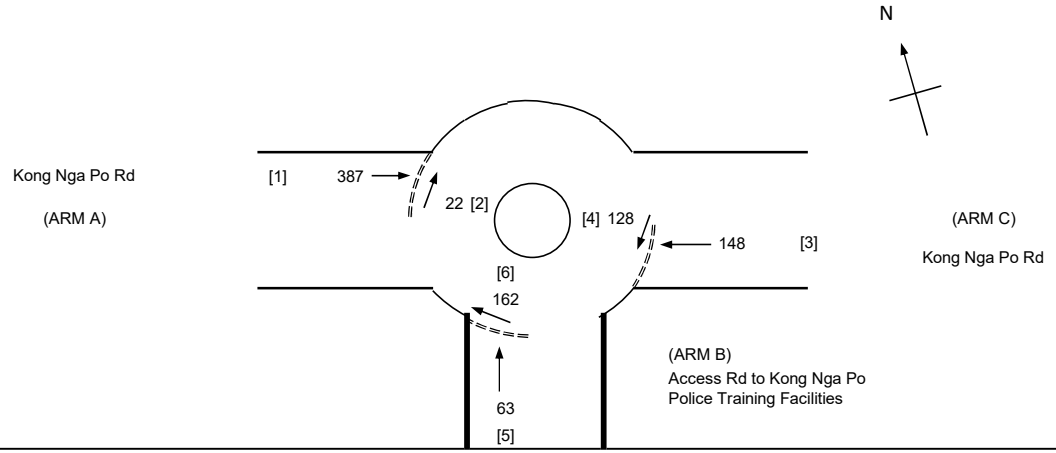
Q b-a	=	455	(pcu/hr)
Q b-c	=	619	(pcu/hr)
Q c-b	=	662	(pcu/hr)
Q b-ac	=	589	(pcu/hr)
Q c-a	=	1504	(pcu/hr)
TOTAL FLOW	=	259	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0396
DFC b-c	=	0.1777
DFC c-b	=	0.1647
DFC b-ac	=	0.2173
(Share Lane)		
DFC c-a	=	0.0013

CRITICAL DFC = 0.22

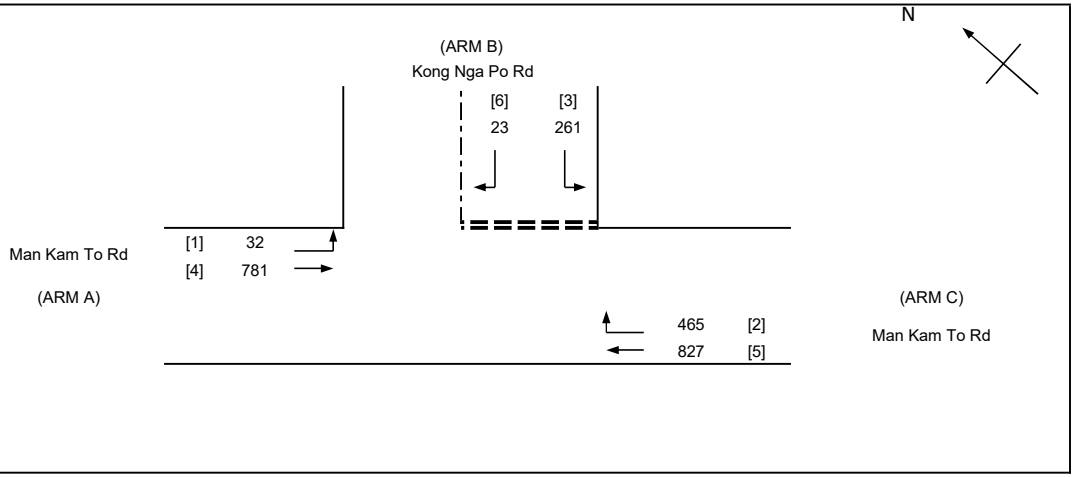
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Reference - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		387	63	148
Qc	=	Circulating flow across entry (pcu/h)		22	162	128
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1409	1326	1264
DFC	=	Design flow/Capacity = Q/Qe		0.27	0.05	0.12

TOTAL FLOW = 910 (pcu/hr)
CRITICAL DFC = 0.27

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Reference - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	32	(pcu/hr)
q a-c	=	781	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	827	(pcu/hr)
q c-b	=	465	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	23	(pcu/hr)
q b-c	=	261	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.919

THE CAPACITY OF MOVEMENT :

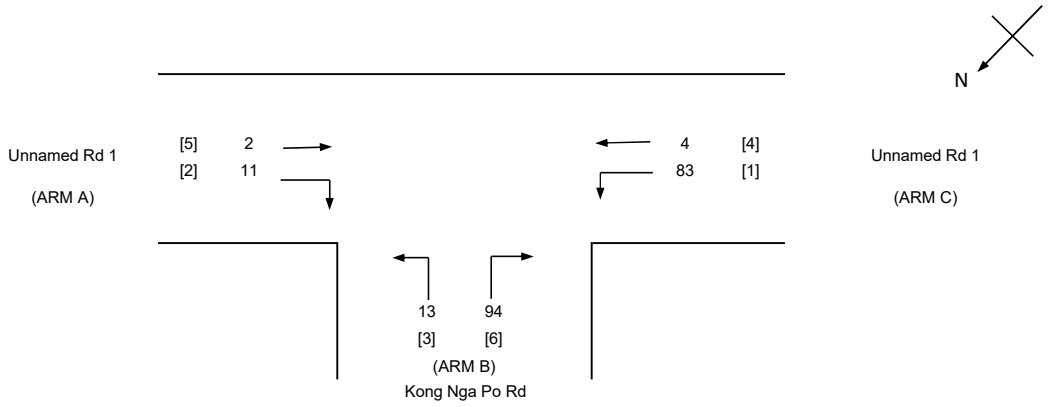
Q b-a	=	261	(pcu/hr)
Q b-c	=	481	(pcu/hr)
Q c-b	=	567	(pcu/hr)
Q b-ac	=	450	(pcu/hr)
TOTAL FLOW	=	2389	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0881
DFC b-c	=	0.5426
DFC c-b	=	0.8201
DFC b-ac (Share Lane)	=	0.6307

CRITICAL DFC = 0.82

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Reference - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	11	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	4	(pcu/hr)
q c-b	=	83	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	13	(pcu/hr)
q b-c	=	94	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.879

THE CAPACITY OF MOVEMENT :

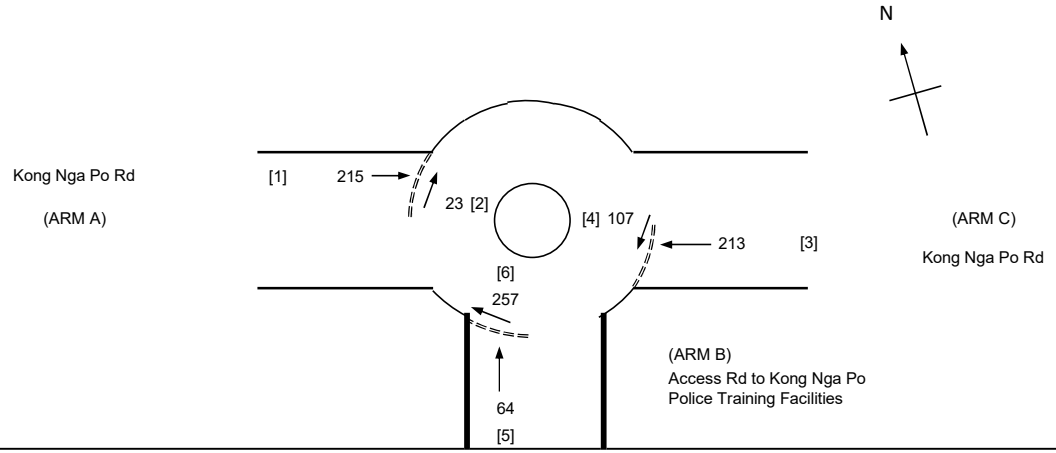
Q b-a	=	462	(pcu/hr)
Q b-c	=	620	(pcu/hr)
Q c-b	=	663	(pcu/hr)
Q b-ac	=	595	(pcu/hr)
Q c-a	=	1575	(pcu/hr)
TOTAL FLOW	=	207	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0281
DFC b-c	=	0.1516
DFC c-b	=	0.1252
DFC b-ac	=	0.1798
(Share Lane)		
DFC c-a	=	0.0025

CRITICAL DFC = 0.18

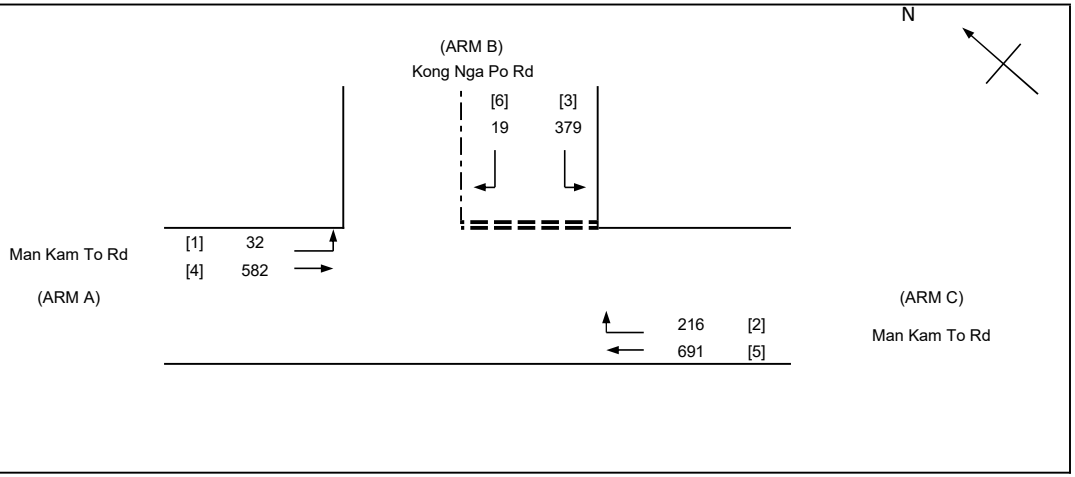
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Reference - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		215	64	213
Qc	=	Circulating flow across entry (pcu/h)		23	257	107
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1408	1269	1276
DFC	=	Design flow/Capacity = Q/Qe		0.15	0.05	0.17

TOTAL FLOW = 879 (pcu/hr)
CRITICAL DFC = 0.17

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Reference - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	32	(pcu/hr)
q a-c	=	582	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	691	(pcu/hr)
q c-b	=	216	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	19	(pcu/hr)
q b-c	=	379	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.952

THE CAPACITY OF MOVEMENT :

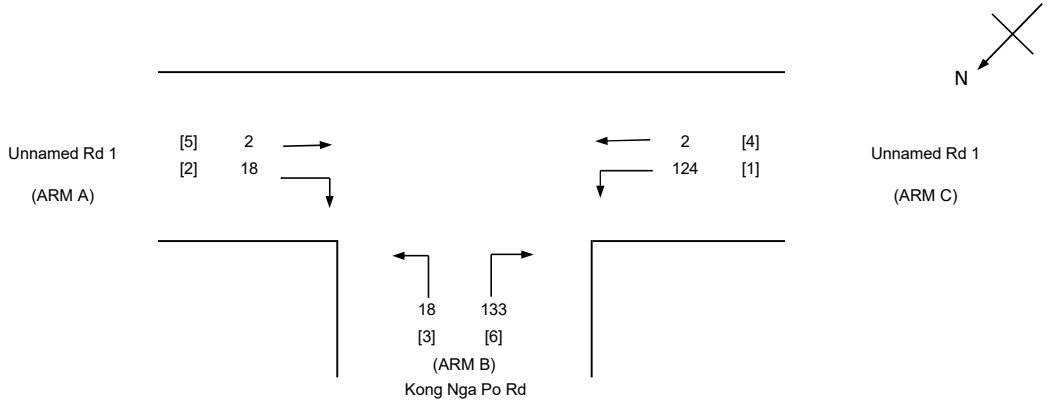
Q b-a	=	354	(pcu/hr)
Q b-c	=	511	(pcu/hr)
Q c-b	=	603	(pcu/hr)
Q b-ac	=	500	(pcu/hr)
TOTAL FLOW	=	1919	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0537
DFC b-c	=	0.7417
DFC c-b	=	0.3582
DFC b-ac (Share Lane)	=	0.7954

CRITICAL DFC = 0.80

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Design - AM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	18	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	2	(pcu/hr)
q c-b	=	124	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	18	(pcu/hr)
q b-c	=	133	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.881

THE CAPACITY OF MOVEMENT :

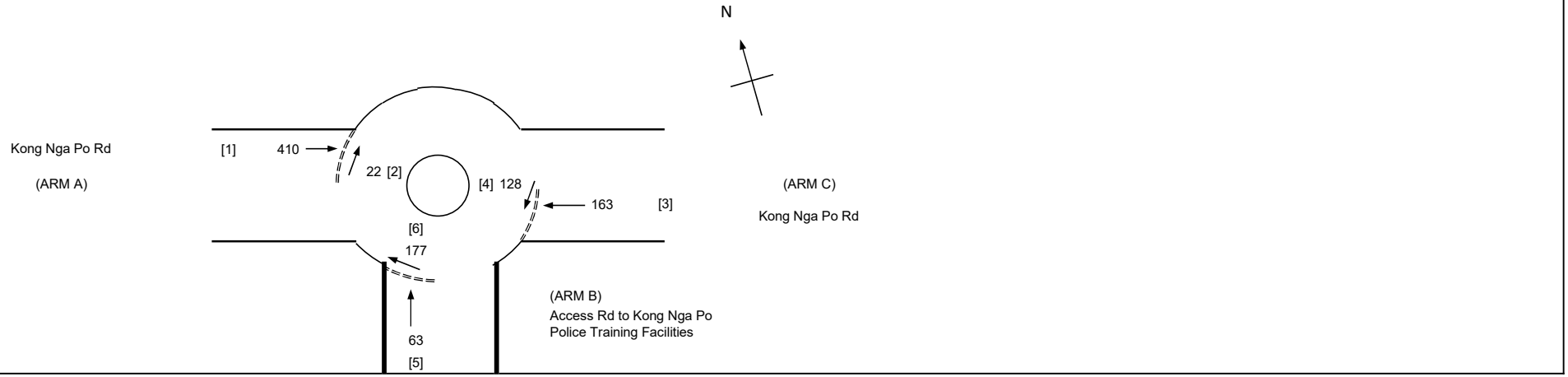
Q b-a	=	450	(pcu/hr)
Q b-c	=	619	(pcu/hr)
Q c-b	=	662	(pcu/hr)
Q b-ac	=	592	(pcu/hr)
Q c-a	=	1463	(pcu/hr)
TOTAL FLOW	=	297	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0400
DFC b-c	=	0.2149
DFC c-b	=	0.1873
DFC b-ac	=	0.2549
(Share Lane)		
DFC c-a	=	0.0014

CRITICAL DFC = 0.25

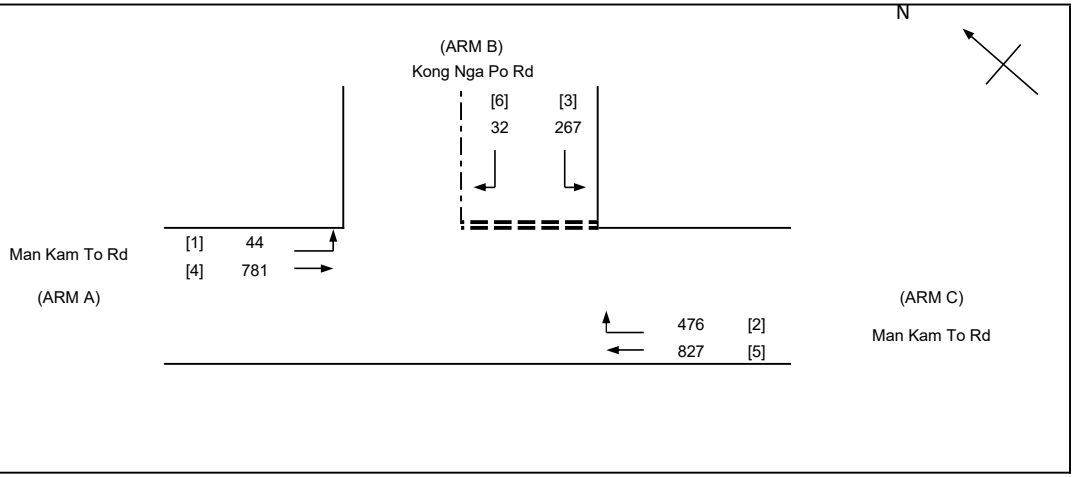
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Design - AM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		410	63	163
Qc	=	Circulating flow across entry (pcu/h)		22	177	128
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1409	1317	1264
DFC	=	Design flow/Capacity = Q/Qe		0.29	0.05	0.13

TOTAL FLOW = 963 (pcu/hr)
CRITICAL DFC = 0.29

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Design - AM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	44	(pcu/hr)
q a-c	=	781	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	827	(pcu/hr)
q c-b	=	476	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	32	(pcu/hr)
q b-c	=	267	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.893

THE CAPACITY OF MOVEMENT :

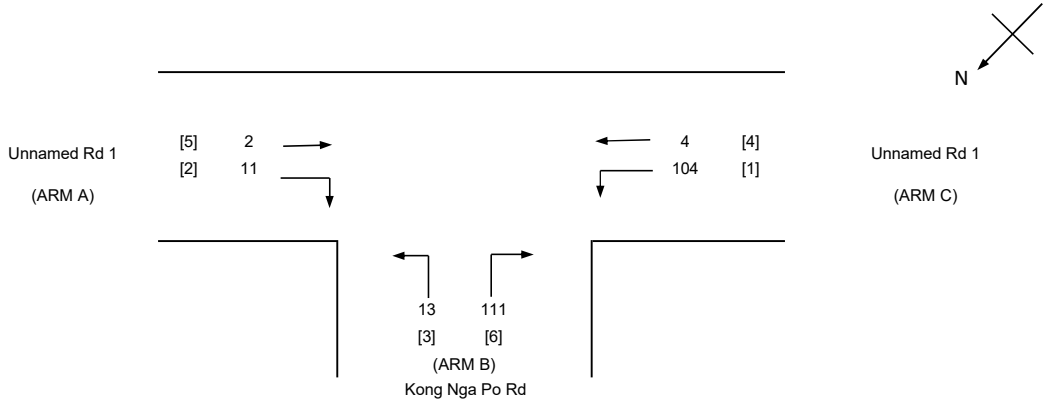
Q b-a	=	258	(pcu/hr)
Q b-c	=	480	(pcu/hr)
Q c-b	=	565	(pcu/hr)
Q b-ac	=	440	(pcu/hr)
TOTAL FLOW	=	2427	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1240
DFC b-c	=	0.5563
DFC c-b	=	0.8425
DFC b-ac (Share Lane)	=	0.6803

CRITICAL DFC = 0.84

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Design - PM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	11	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	4	(pcu/hr)
q c-b	=	104	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	13	(pcu/hr)
q b-c	=	111	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.895

THE CAPACITY OF MOVEMENT :

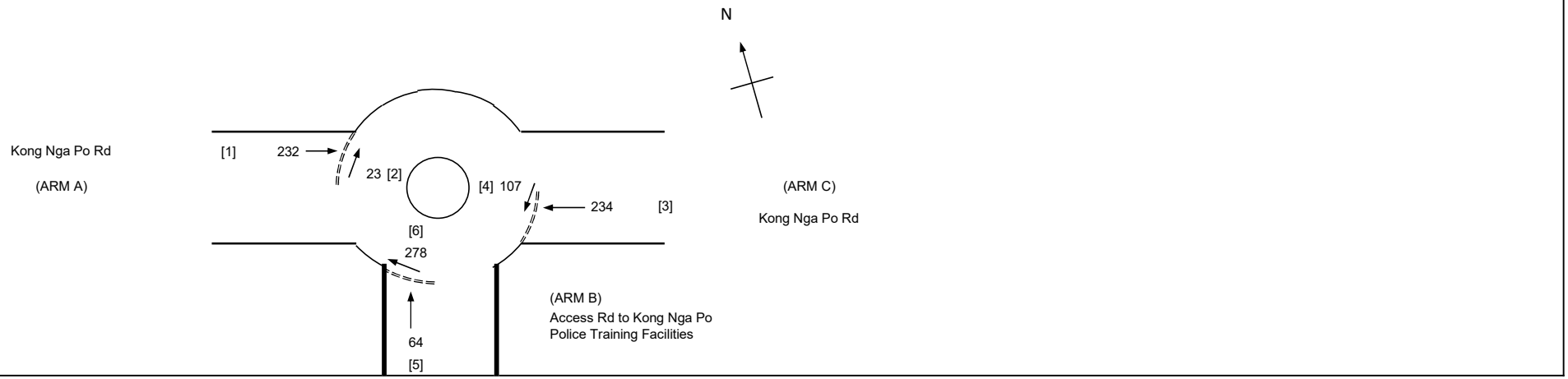
Q b-a	=	456	(pcu/hr)
Q b-c	=	620	(pcu/hr)
Q c-b	=	663	(pcu/hr)
Q b-ac	=	597	(pcu/hr)
Q c-a	=	1518	(pcu/hr)
TOTAL FLOW	=	245	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0285
DFC b-c	=	0.1790
DFC c-b	=	0.1569
DFC b-ac	=	0.2075
(Share Lane)		
DFC c-a	=	0.0026

CRITICAL DFC = 0.21

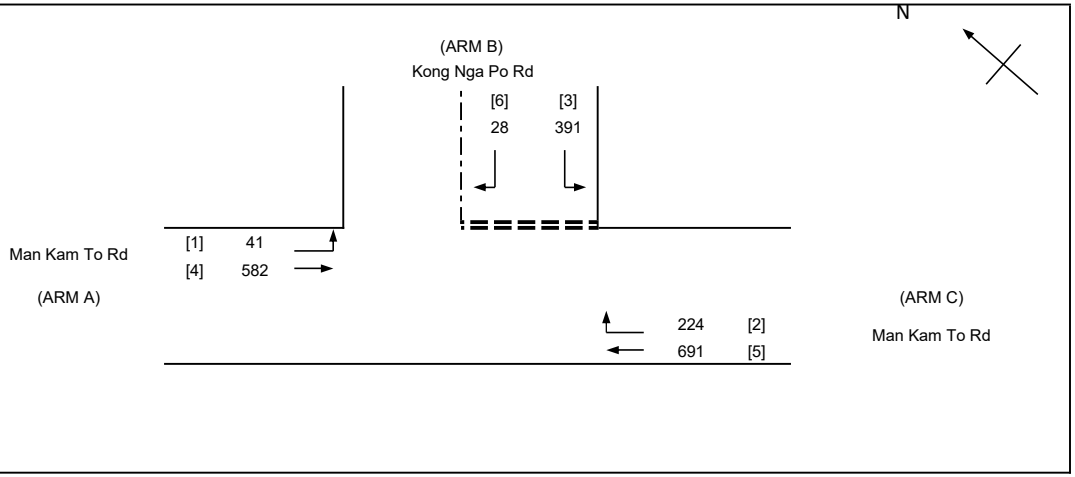
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Design - PM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		232	64	234
Qc	=	Circulating flow across entry (pcu/h)		23	278	107
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1408	1256	1276
DFC	=	Design flow/Capacity = Q/Qe		0.16	0.05	0.18

TOTAL FLOW = 938 (pcu/hr)
CRITICAL DFC = 0.18

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Design - PM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	41	(pcu/hr)
q a-c	=	582	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	691	(pcu/hr)
q c-b	=	224	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	28	(pcu/hr)
q b-c	=	391	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.933

THE CAPACITY OF MOVEMENT :

Q b-a	=	352	(pcu/hr)
Q b-c	=	510	(pcu/hr)
Q c-b	=	602	(pcu/hr)
Q b-ac	=	495	(pcu/hr)
TOTAL FLOW	=	1957	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0795
DFC b-c	=	0.7667
DFC c-b	=	0.3721
DFC b-ac (Share Lane)	=	0.8462

CRITICAL DFC = 0.85

Appendix III

Revised Drainage Impact Assessment

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

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Drainage Impact Assessment (Rev.3)

Prepared by: Matthew Poon
Date: 15/1/2026

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22 Hung To Road,
Kwun Tong, Kowloon
Hong Kong



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2. SITE DESCRIPTION
3 DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE
4. HYDRAULIC MODELLING AND DRAINAGE IMPACT ASSESSMENT METHODOLOGY
5. POTENTIAL DRAINAGE IMPACT AND MITIGATION MEASURES
6. CONCLUSION

APPENDICE

Appendix A	Photo Record
Appendix B	Topography Survey Record
Appendix C	Drainage Design Calculation
Appendix D	Design Drawings
Appendix E	InfoWorks result: Drainage Condition – Existing
Appendix F	InfoWorks result: Drainage Condition – Proposed Drainage System
Appendix G	InfoWorks result: Drainage Condition – Proposed Drainage System (With improvement measure)
Appendix H	CEDD Standard Drawing C1006C – Chain Link Fence

1. INTRODUCTION

1.1 Background

The drainage proposal is under the application of Section 16 Planning Application. The proposed uses of the subject lots are temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities for a period of 3 years at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories.

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

1.2 Scope and Objectives

The objective of this Drainage Impact Assessment Report (DIA) is to assess the drainage impact of the proposed drainage system to existing drainage facilities in the area, ensuring the downstream have sufficient capacity for the proposed development. Assessing the drainage impact and suggest mitigation measures required for the existing drainage network, if necessary. The proposed drainage system within the lot will be checked in the calculation. The surrounding catchments and overall impact to downstream river will be checked by Infowork model.

2. SITE DESCRIPTION

2.1 The general views of the application area can be referred to in the figures below. The combined parts of the lot cover an area of about 16,604m^2.



Figure-2.1 Lot information of the Subject Site

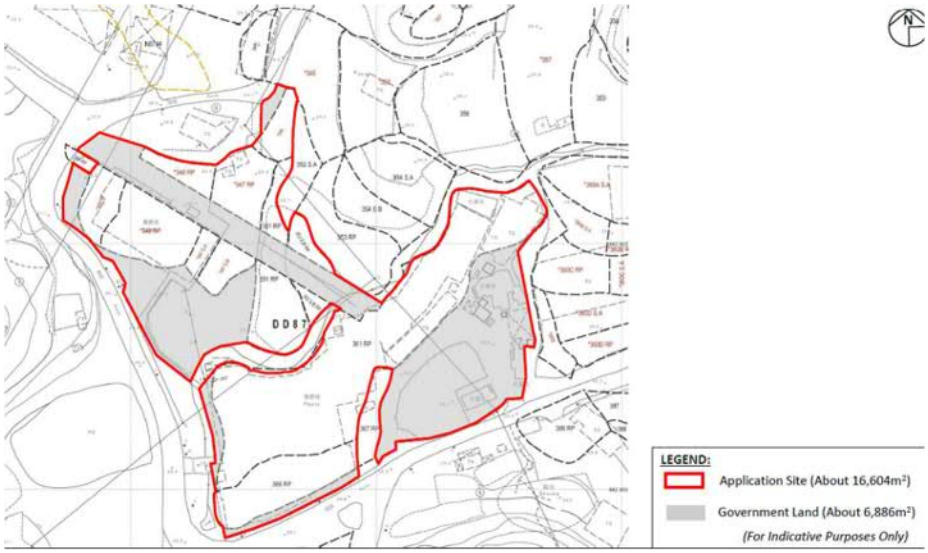


Figure-2.2 Boundary of the Subject Site surrounded by fencing

2.3 The figure below shows the proposed layout of the structures and parking provision within the boundary of the fencing. The subject site consists of six single-storey temporary structures, including 5 nos. of enclosed structures and 1 open-sided structure. No permanent structures and buildings will be placed within the subject site, the flow direction will not be affected by any blockage. All proposed structures will be placed 3m away from the existing stream course.

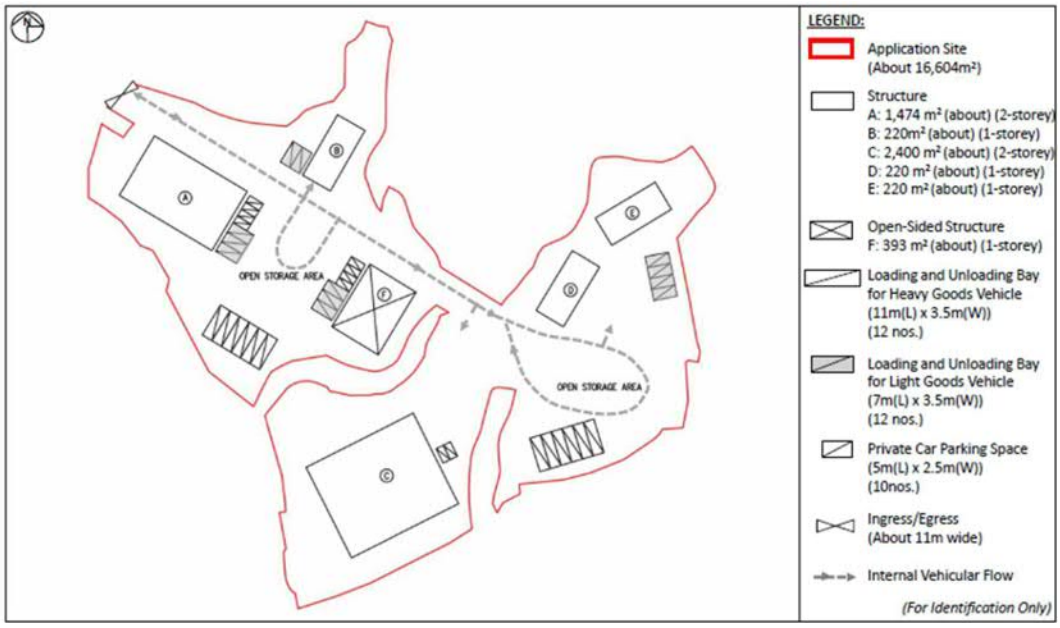


Figure-2.3 Location of the structures and parking areas inside the Subject Site

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

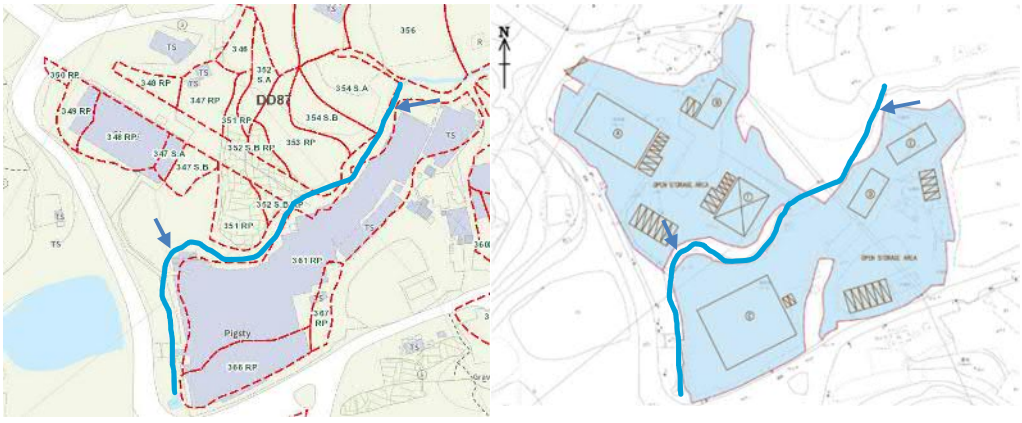


Figure-2.4 Existing drainage features inside the Subject Site

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

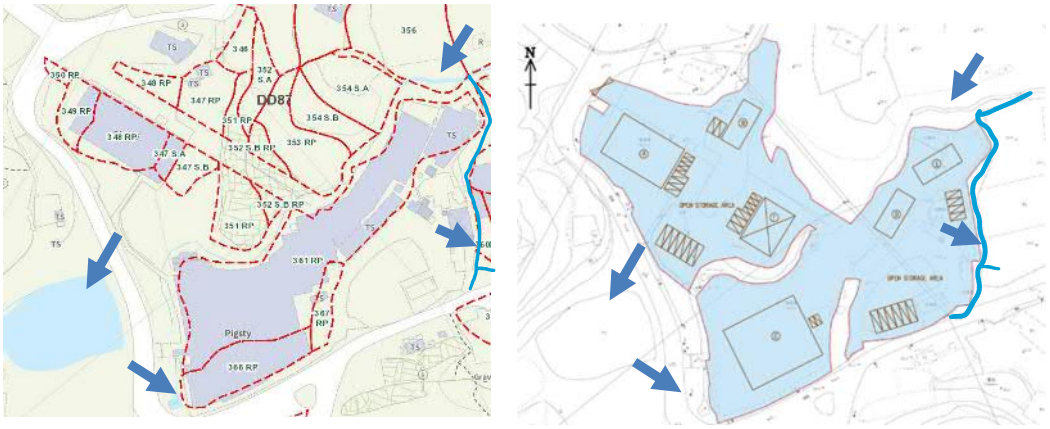


Figure-2.5 Existing drainage features outside the Subject Site

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

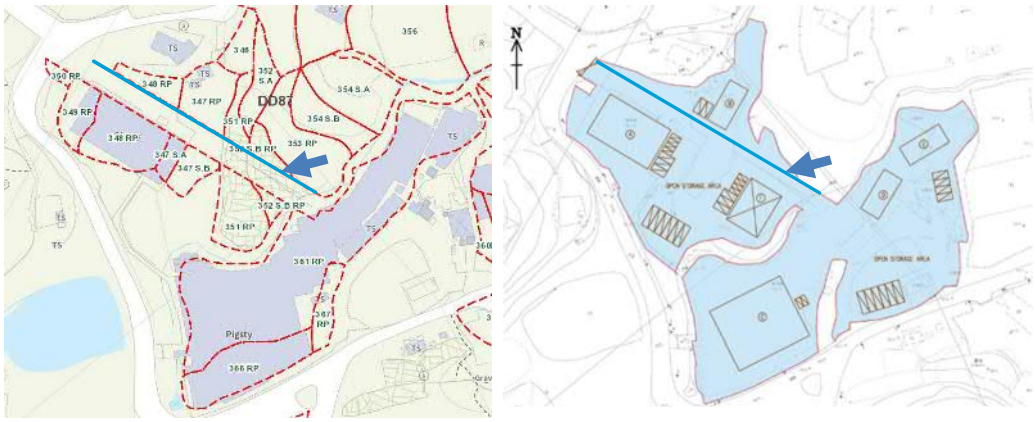


Figure-2.6 Existing U-Channels inside the Subject Site

3. DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE

3.1 General Planning

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

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

3.2 Identification of the Effective Catchment Area

Referring to the location plan and the existing ground level, the considered effective catchment area of surface runoff includes: the area of the subject lots and the adjacent area with higher cover level (including uphill and carriageway).

The other adjacent area will be determined as the anticipated catchment areas of runoff which are not affecting the subject site, in case, those areas separate with the subject lots by existing drainage utilities (culvert and channels), carriageway, fencing, and level difference.

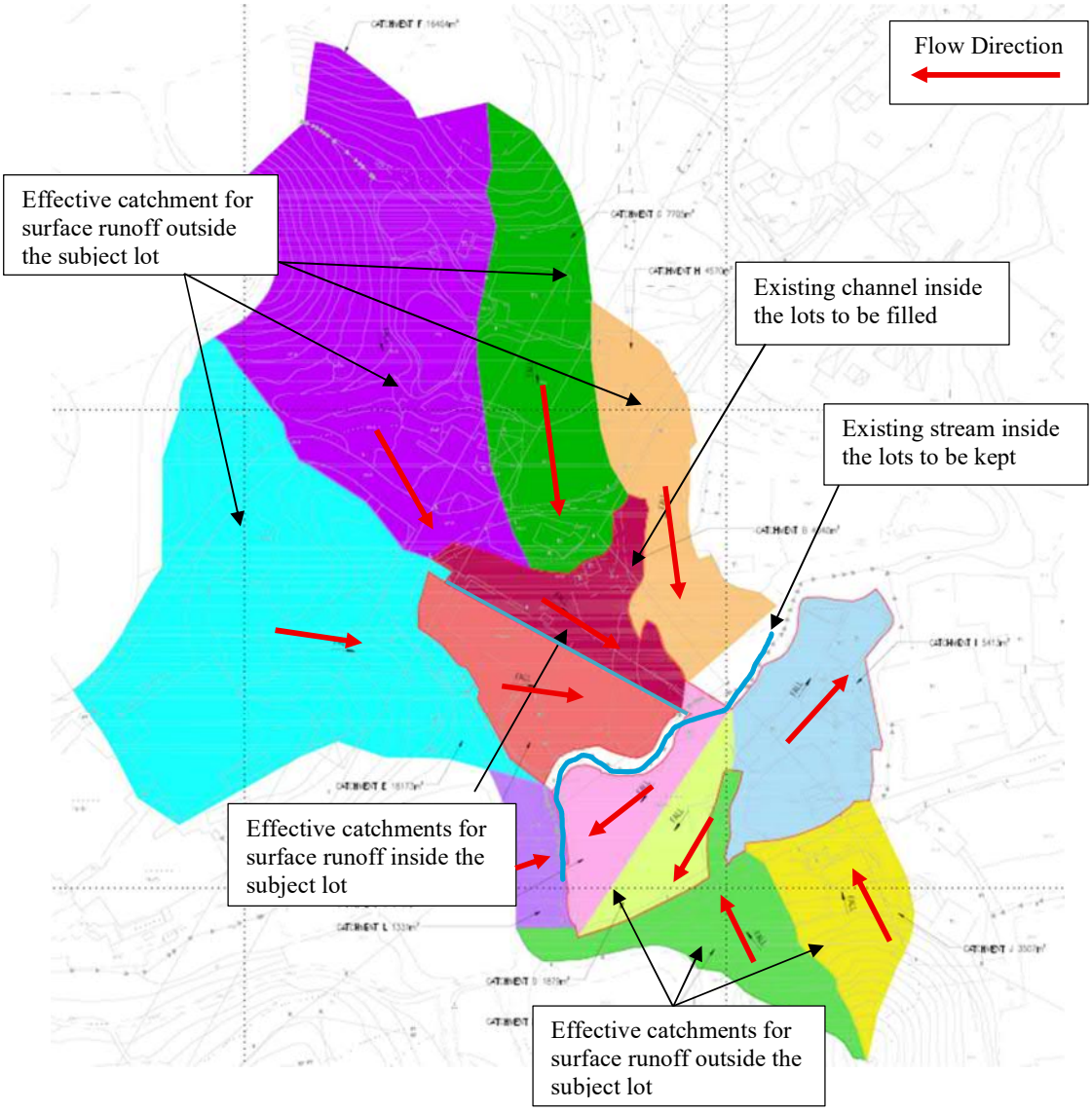


Figure-3.1 Flow Direction of the Effective Catchment Area inside the Subject Site

3.3 Existing Drainage System

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

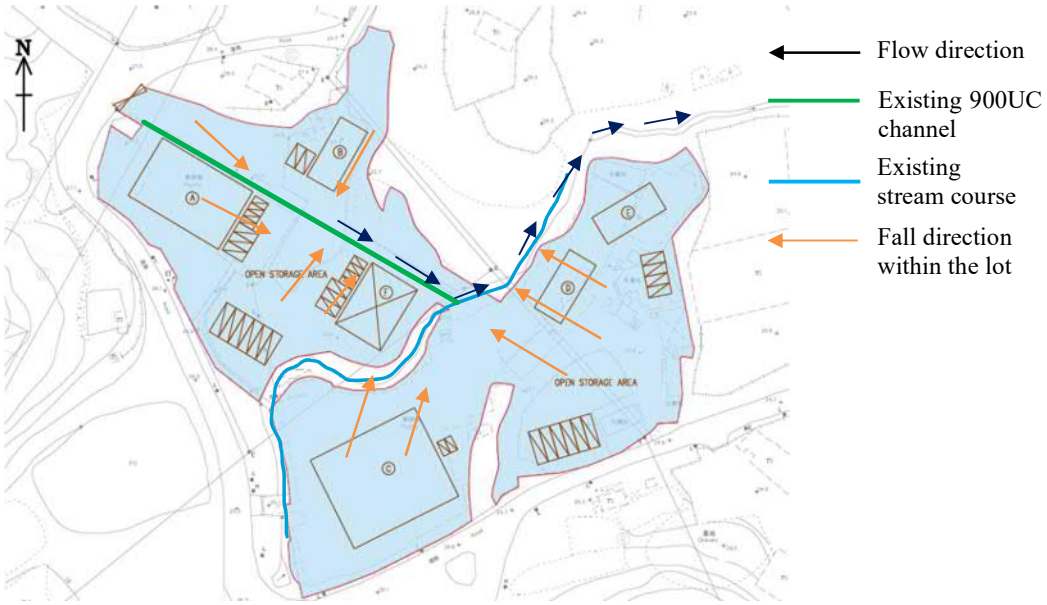


Figure-3.2 Original drainage network inside the Subject Site

Due to changes in ground levels and land profile from the proposed development, the existing channel within the lot boundary will no longer meet the site's drainage requirements and will be removed. A new peripheral drainage network has been designed to ensure adequate runoff conveyance and discharge into the downstream stream course. Refer to **Appendix C** and **D** for detailed calculation and drawings.

3.4 Filling the subject site to rearrange cover level

The area inside the lots will be completely filled up to create a flat surface with slight gradient to provide falls to drainage features and **match the existing road surface** outside the lot boundary. Preventing any obstruction to the **existing overland flow paths**.

The existing concrete pipe at the connection point between the northwest and southeast sections of the lot are proposed to be replaced with a new 3m(W) x 3.5m(H) concrete box culvert. Connecting the upstream and downstream sections. The design checking for the concrete pipe can be found in **Appendix C**.

The ground level is proposed to be raised to a level between +24.0mPD and +27.0mPD for feasible traffic flow and heavy vehicle access. The cover level at the lot boundary will be between +24.0mPD and +27.0mPD matching the existing road level. The details of the cover levels and the flow direction of the surface runoff can be referred to the drawings and the figure below.

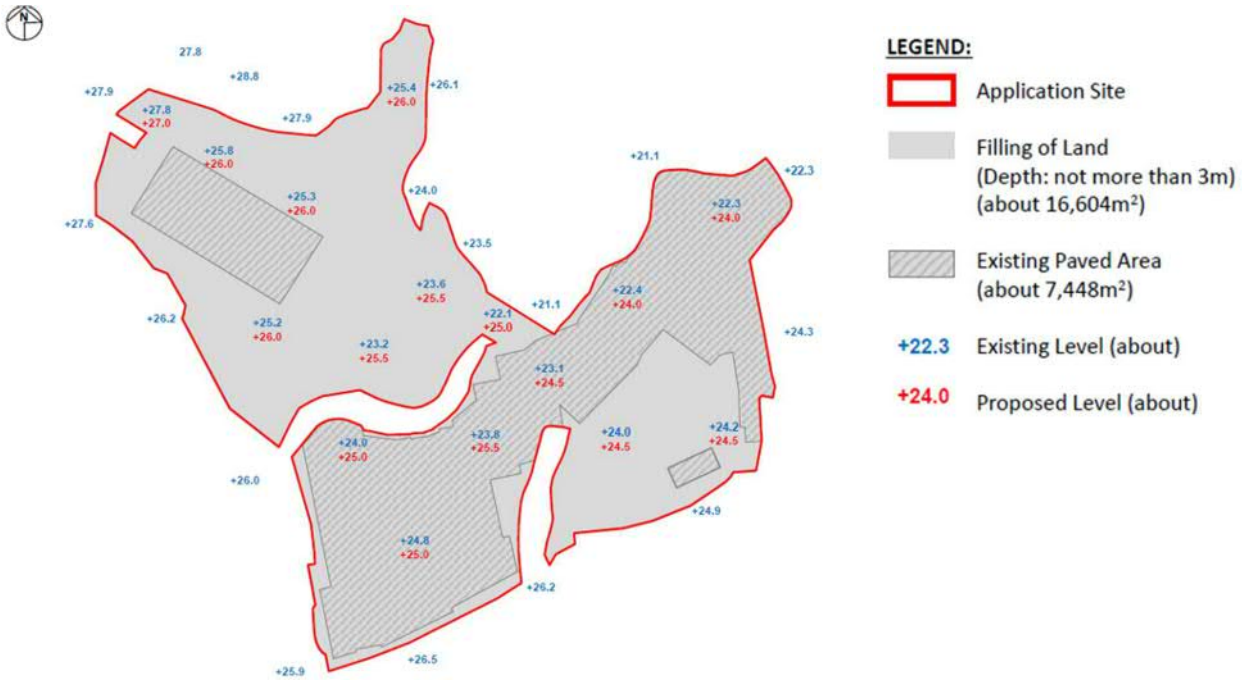


Figure-3.3 Filling plan of the Subject Site

3.5 Proposed Flow Direction and Drainage System

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

3.6 Design of Channels and Catchpits

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

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

3.7 Discharge Point

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

4. HYDRAULIC MODELLING AND DRAINAGE IMPACT ASSESSMENT METHODOLOGY

4.1 Scope of DIA

The surrounding catchments and downstream river is modeled using InfoWorks for the detail analysis of Drainage Impact Assessment (DIA). The details of the model can be found in **Appendic E**. The model simulates stormwater flow under various rainfall scenarios to verify that the proposed drainage system is adequate and that the development does not exacerbate flood risk for the subject site or the surrounding downstream areas.

4.2 Hydraulic Model Established

InfoWorks ICM (version 2025.5) is the modelling software used for the analysis of this 2D model.

The following code are used in the model:

a) Drainage Services Department (DSD) Stormwater Drainage Manual (SDM) fifth edition (2018);
b) DSD SDM Corrigendum Nos. 1/2022, No. 1/2024 and No. 2/2024;
c) Relevant DSD Standard Drawings, Technical Circulars and Practice Notes wherever applicable.

4.3 Design Parameter Adopted

Rainfall Data: 50-year design return period rainfall from HKO region, climate change (Table 28), Rainfall design allowance (Table 31) from Corrigendum 1-2022 of SDM and the storm constants from Corrigendum 1-2024 of SDM are calculated and used for the simulation.

Inflow: Specific inflow has been added at specific nodes to account for the flow coming into the catchment at that location.

Siltation allowance has been considered in the stormwater channel and pipe. According to the SDM (2018) Section 9.3, such flow area reduction factor is estimated in 5% reduction in flow area for gradients greater than 1 in 25 and 10% reduction in flow area for other cases.

4.4 Rainfall Profile used in the Model

Rainfall profiles have been obtained by considering the symmetrically distributed rainfall profile as suggested in SDM (2018) Section 4.3.5:

$$F(t) = \begin{cases} \dfrac{a[b + 2(1-c)t]}{(2t+b)^{c+1}} & 0 \le t \le \frac{td}{2} \\ F(-t) & -\frac{td}{2} \le t \le 0 \end{cases}$$

Where:

F(t) = rate of rainfall or instantaneous intensity in mm/hr at time t (in minutes);

td = rainstorm duration (in minutes) (td ≤ 240)
a, b, c = parameters for the selected return period in HKO Headquarters Rainfall zone as defined in the SDM Corrigendum No. 1/2024

The adopted design rainfall parameters are consistent with the SDM Corrigendum No. 1/2024 table 3d. The adopted parameters are summarised in table 4-1.

Table 4.1 Storm Constants for Different Return Periods of North District Area

Return Period T(years)	**50**
a	474.6
b	2.90
c	0.371

A 4-hour rainstorm is adopted in the hydraulic analysis

4.5 Roughness used in the Model

The established model consists of open channels and river reaches. The equation adopted for open channels and river reaches is Mannings equation.

Sediment depth is considered for pipes, culverts, open channels and river reaches, which is section 9.3 of SDM (10% allowance).

The proposed drainage network roughness coefficients for pipes and culverts have been adopted in consistent with the Table 13 & Table 14 of SDM (2018) and summarized in Table 4-2.

Table 4-1 Adopted Roughness Coefficients

Description	Roughness Value [mm]
Rectangular concrete channels and Concrete surface channel	n = 0.016 (Fair)
Riverbed (Natural-stream channel)	n = 0.050 (Existing)
Riverbed (Natural-stream channel)	n = 0.035 (Improved)
Concrete Pipe	ks = 0.60

4.6 Climate Change

Table 4-3 presents a summary of the design rainfall used for the end-21st century storm events. The simulation events included in Table 4-3 are taken from Corrigendum 1-2022 of SDM.

Table 4-3 Rainfall Increase due to Climate Change

	Rainfall Increase
End of 21st Century	16.0%

4.7 Freeboard

For rivers, a minimum freeboard of 300 mm is adopted and an additional 200mm allowance will be provided at river bends to cover super-elevations at bends and wave run-ups.

5. POTENTIAL DRAINAGE IMPACT AND MITIGATION MEASURES

5.1 Hydraulic Model

Setting of the hydraulic model

- The hydraulic condition of the proposed construction site will be assessed through two scenarios: *existing condition* and *proposed development*.

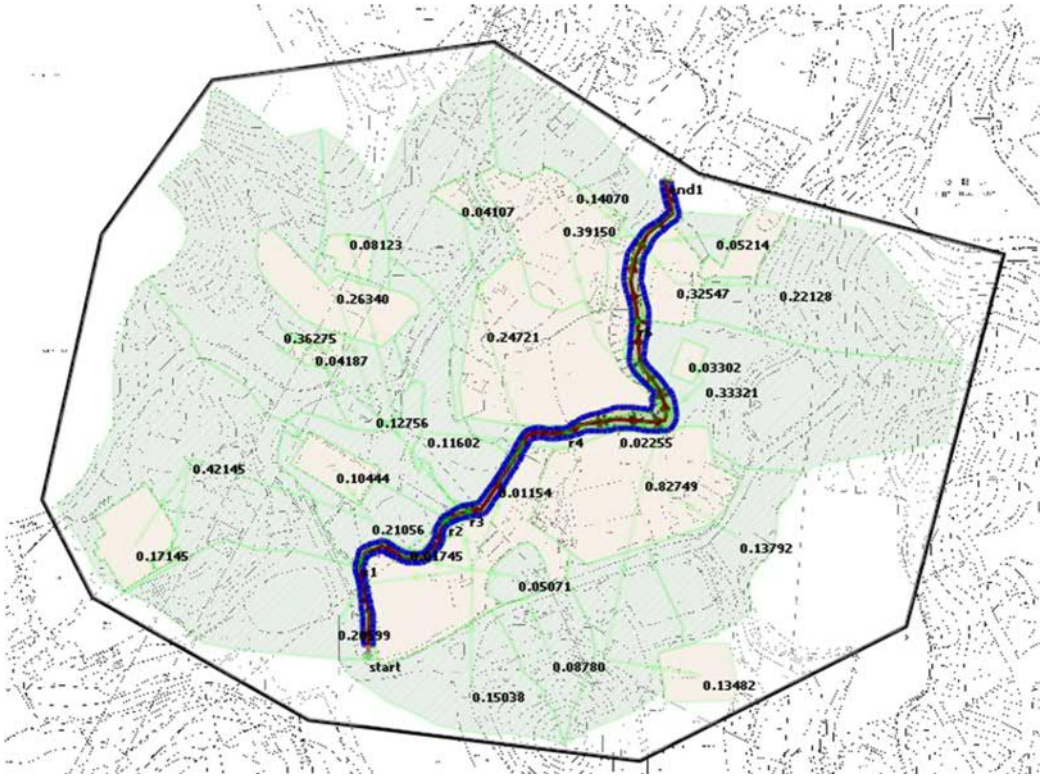


Figure 5.1: Plan view of the existing condition

In the scenario of existing condition, paved areas will be shown in pink, while unpaved areas will be shown in green. The runoff coefficient is set to 0.9 for paved areas and 0.3 for unpaved areas.

Runoff surface ID	Surface type	Initial loss value (m)	Routing model	Fixed runoff coefficient
1	Impervious	0.00007100	Wallingfrd	0.90000
2	Pervious	0.00028000	Wallingfrd	0.30000

Figure 5.2: setting of runoff surface for both scenarios

Land use ID	Runoff surface 1	Default area 1 (%)	Runoff surface 2	Default area 2 (%)
paved	1	100.000		
unpaved	2	100.000	1	100.000

Figure 5.3 setting of land use for both scenarios

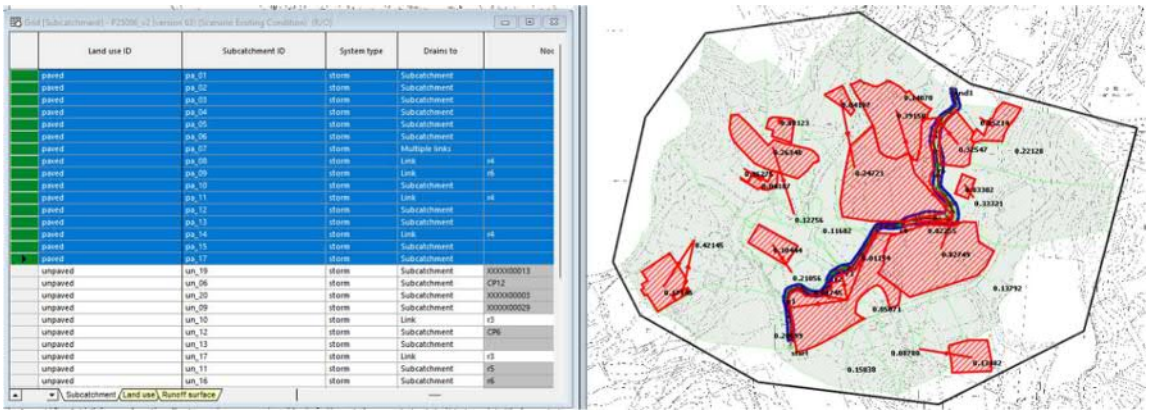
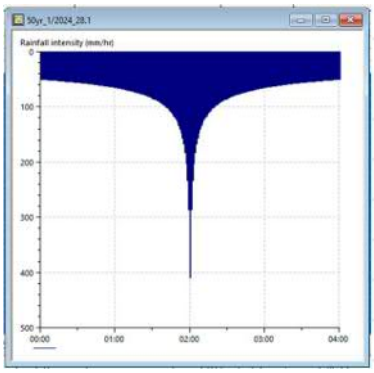


Figure 5.4 selection of paved areas in existing condition scenario



Figure 5.5 selection of unpaved areas in existing condition scenario

Rainfall profile



North District Area (Corrigendum 1/2024) 50

a	474.6
b	2.9
c	0.371

Figure 5.6 adopted rainfall profile in both simulation

The rainfall profile will follow the storm water constant suggested by 1/2024 corrigendum (50yr return period), and then multiplied 1.281 to encounter climate change and design allowance for end of century.

Hydraulic element

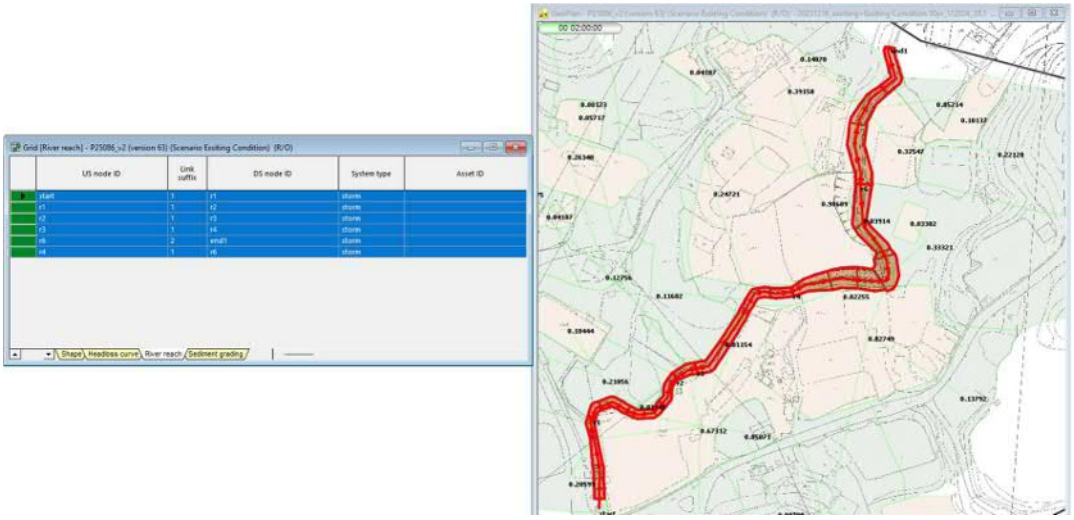


Figure 5.7 selection of river reach in existing scenario

Only river reach is modelled in the existing model. The elevation of cross section of the river reach is mainly adopted from the LiDAR data (2020) of CSDI; while one cross-section line (ID: 12-11) is updated using the data from topo survey. The existing condition of the river can refer to photo record in Appendix A.

Flow path

- Rainfall → sub-catchment→ river reach → outfall

Boundary condition of outfall

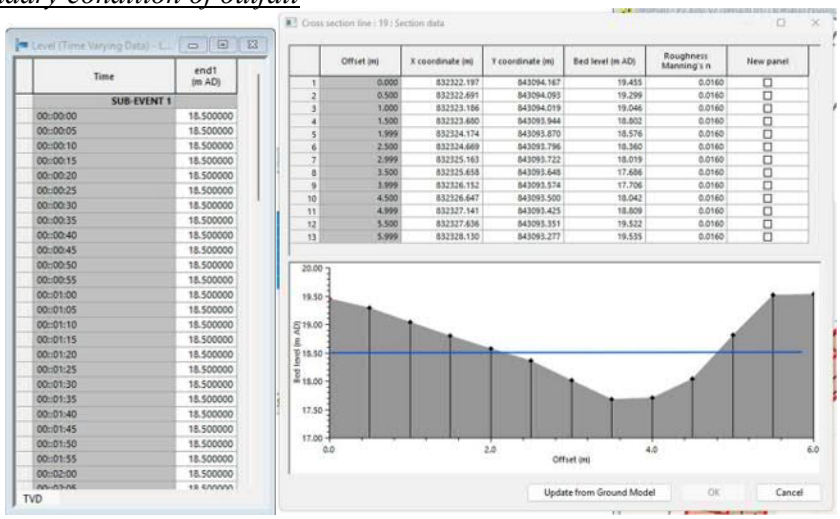


Figure 5.8 boundary setting for both scenarios

The constant water level of 18.5mPD is applied to outfall location to model as boundary condition.

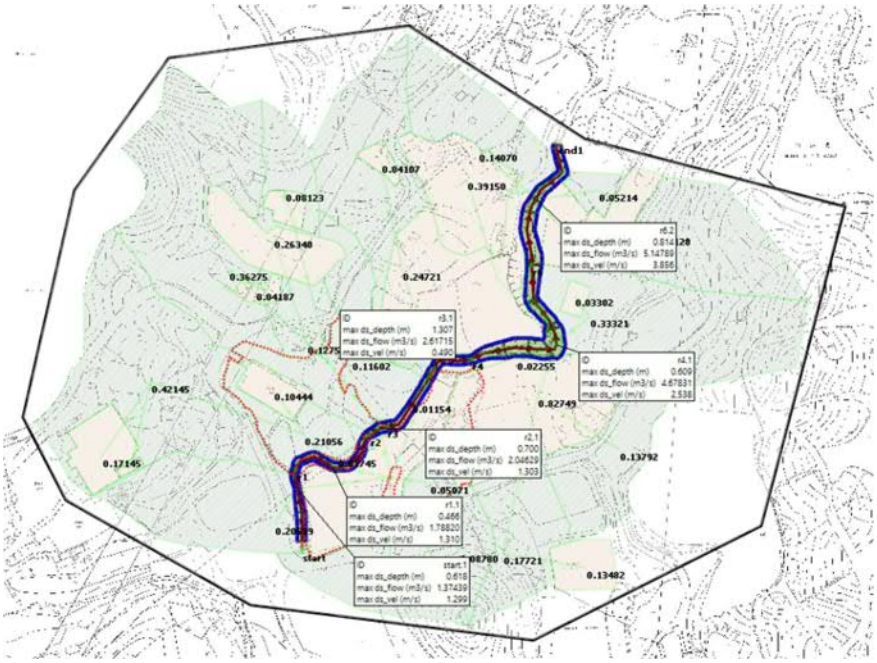


Figure 5.9 stimulation result of existing condition

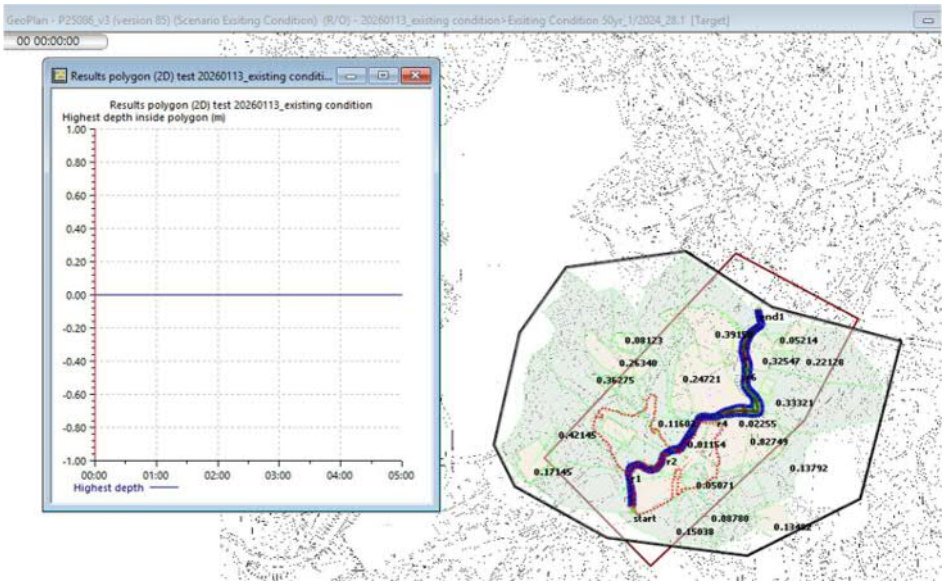


Figure 5.10 stimulation result (2D zone) of existing condition

No flooding observed under existing condition in 50yr return period rainfall scenario.

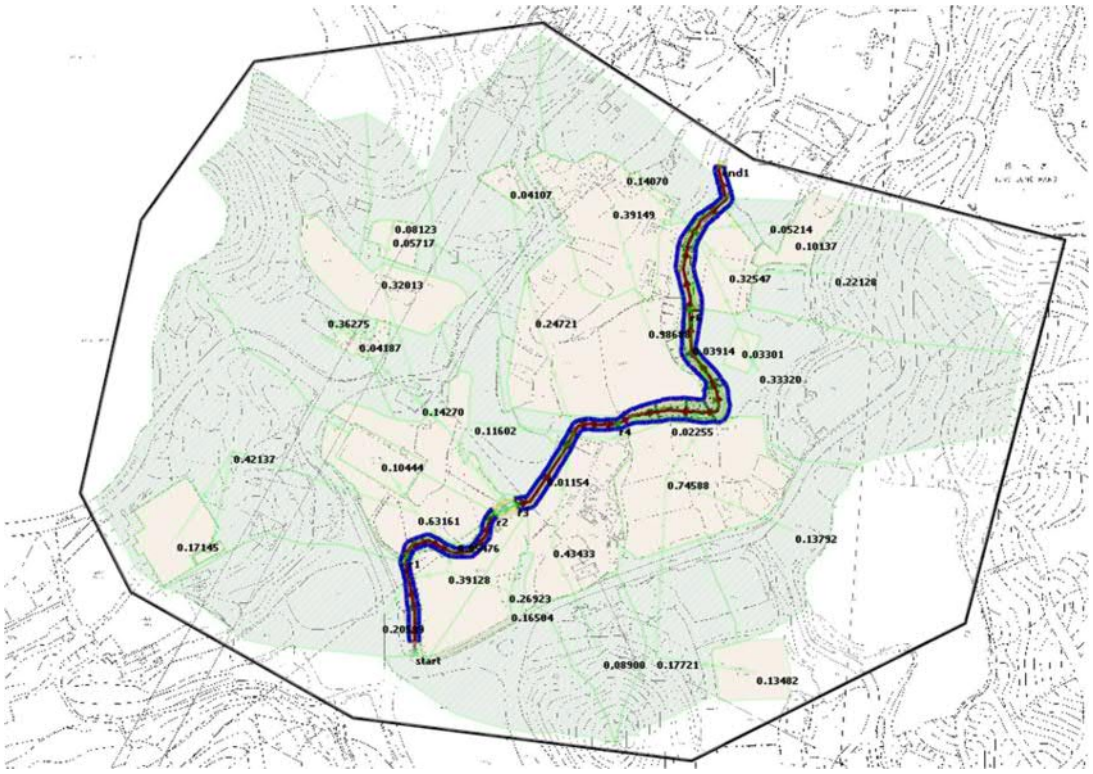


Figure 5.11: Plan view of the proposed development scenario

In the scenario of proposed development, the color setting will be same as scenario of existing condition.

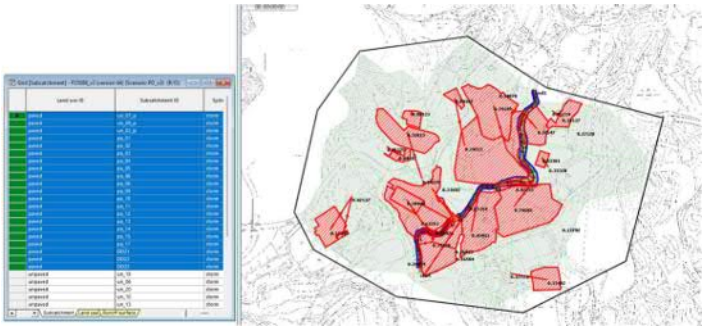


Figure 5.12 selection of paved areas in proposed development scenario

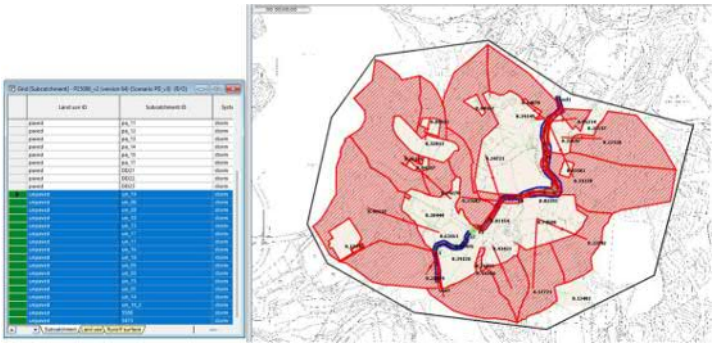


Figure 5.13 selection of unpaved areas in proposed development scenario

Hydraulic element



Figure 5.14 the plan view of the replaced element in the proposed development

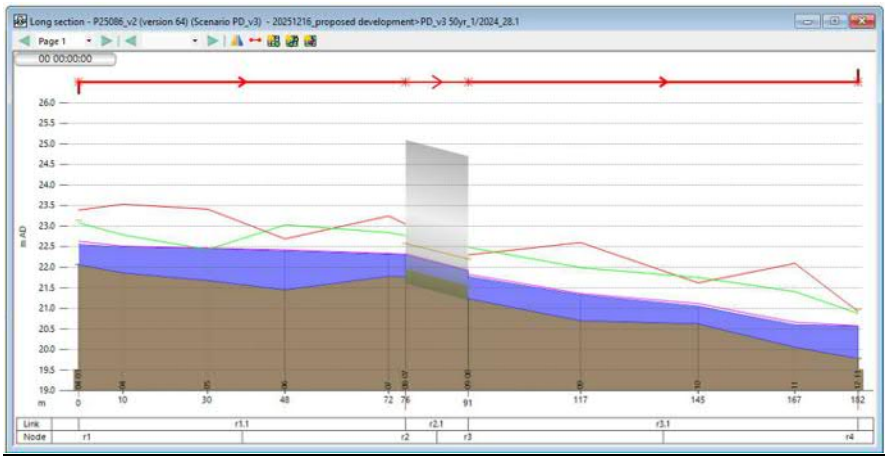


Figure 5.15 the longitudinal profile of replaced element in the proposed development

Part of river reach is replaced to 3600mm(W) x 3500mm(H) concrete box culvert, with 10% sentiment depth, which shown in figure 4.15 and 4.15; while the remaining river reach remained the same setting as the scenario of existing condition.

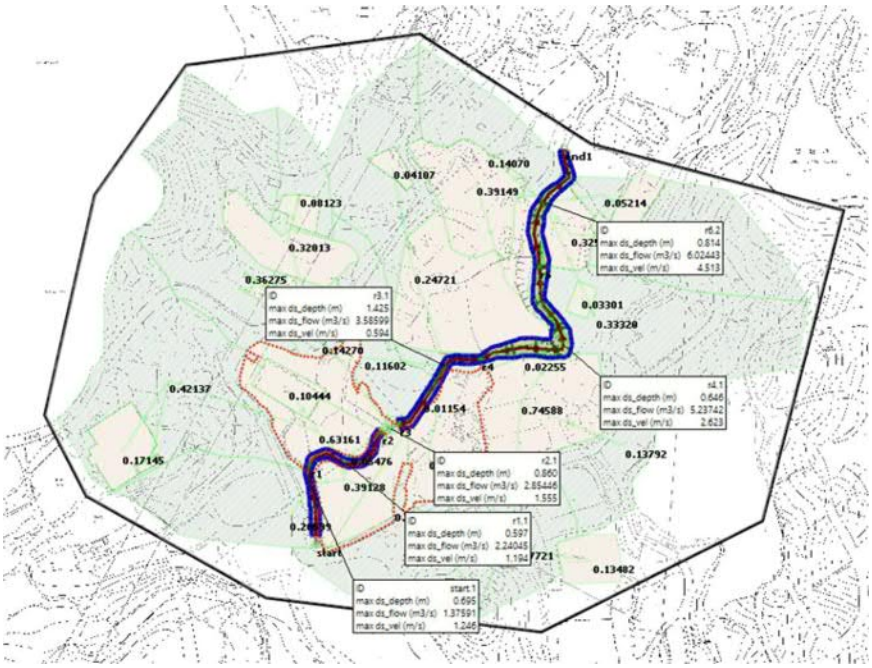


Figure 5.16 stimulation result of proposed development

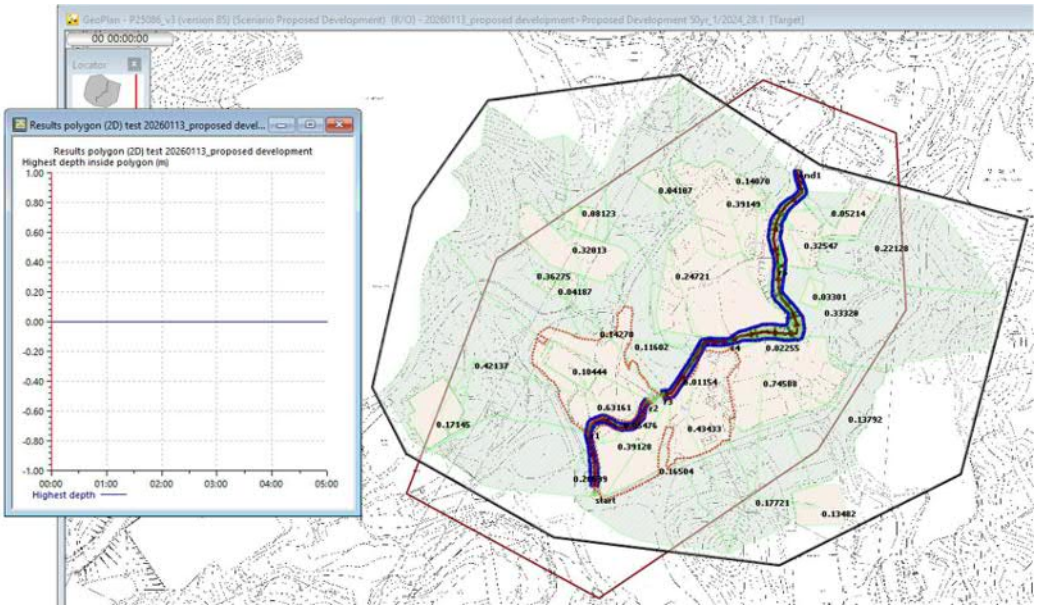


Figure 5.17 stimulation result (2D zone) of proposed development

No flooding observed under proposed in 50yr return period rainfall scenario.

Table 5.1 comparison of water depth before and after development

US node ID	Link suffix	Before Max US depth (m)	Before Max DS depth (m)	After Max US depth (m)	After Max DS depth (m)	difference (%) of Max US depth (m)	difference (%) of Max DS depth (m)
start	1	0.436	0.618	0.436	0.695	0.00	12.46
r1	1	0.618	0.466	0.695	0.597	12.46	28.11
r2#	1	0.466	0.7	0.773	0.86	65.88	22.86
r3	1	0.7	1.307	0.819	1.425	17.00	9.03
r6	2	0.609	0.814	0.646	0.814	6.08	0.00
r4	1	1.307	0.609	1.425	0.646	9.03	6.08

Table 5.2 comparison of velocity before and after development

US node ID	Link suffix	Max US velocity (m/s)	Max DS velocity (m/s)	Max US velocity (m/s)	Max DS velocity (m/s)	difference (%) of Max US velocity (m/s)	difference (%) of Max DS velocity (m/s)
start	1	1.207	1.299	1.207	1.246	0.00	-4.08
r1	1	1.299	1.31	1.246	1.194	-4.08	-8.85
r2#	1	1.31	1.303	1.471	1.555	12.29	19.34
r3	1	1.303	0.49	1.377	0.594	5.68	21.22
r6	2	2.538	3.856	2.622	4.513	3.31	17.04
r4	1	0.49	2.538	0.594	2.623	21.22	3.35

Table 5.3 comparison of flow before and after development

US node ID	Link suffix	Max US flow (m3/s)	Max DS flow (m3/s)	Max US flow (m3/s)	Max DS flow (m3/s)	difference (%) of Max US flow (m3/s)	difference (%) of Max DS flow (m3/s)
start	1	1.00005	1.37439	1.00005	1.37591	0.00	0.11
r1	1	1.37428	1.7882	1.37581	2.24045	0.11	25.29
r2#	1	1.7882	2.04629	2.24056	2.85446	25.30	39.49
r3	1	2.04629	2.61715	2.85447	3.58599	39.49	37.02
r6	2	4.67824	5.14789	5.23742	6.02443	11.95	17.03
r4	1	2.61714	4.67831	3.58595	5.23742	37.02	11.95

#this part of river reach is changed to concrete box culvert.

Table 5.4 comparison of water depth at node before and after development

Node ID	Node type	Flood level (m AD)	Max Level (m AD)	Max Level (m AD)	Freeboard (m)_before	Freeboard (m)_after	difference (m)
start	Break	23.87	23.617	23.617	0.253	0.253	0
r1	Break	23.136	22.684	22.761	0.452	0.375	-0.077
r2	Break	22.576	22.242	22.373	0.334	0.203	-0.131
r3	Break	22.205	21.941	22.06	0.264	0.145	-0.119
r4	Break	21.2	21.094	21.212	0.106	-0.012	-0.118
end1	Outfall	19.076	18.5	18.5	0.576	0.576	0
r6	Break	21.53	19.321	19.358	2.209	2.172	-0.037

The not enough freeboard for node R4 was observed under 50yr return period rainfall scenario for the proposed development, which will be solved through the proposed mitigation measure.

The proposed mitigation includes:

- (1) conduct vegetation removal regularly
- (2) provide storage tanks within site to retain part of stormwater during peak intensity

Additional scenario had been modelled; the roughness Manning's n of downstream river reach is changed from 0.05 to 0.035 under mitigation measure (1).

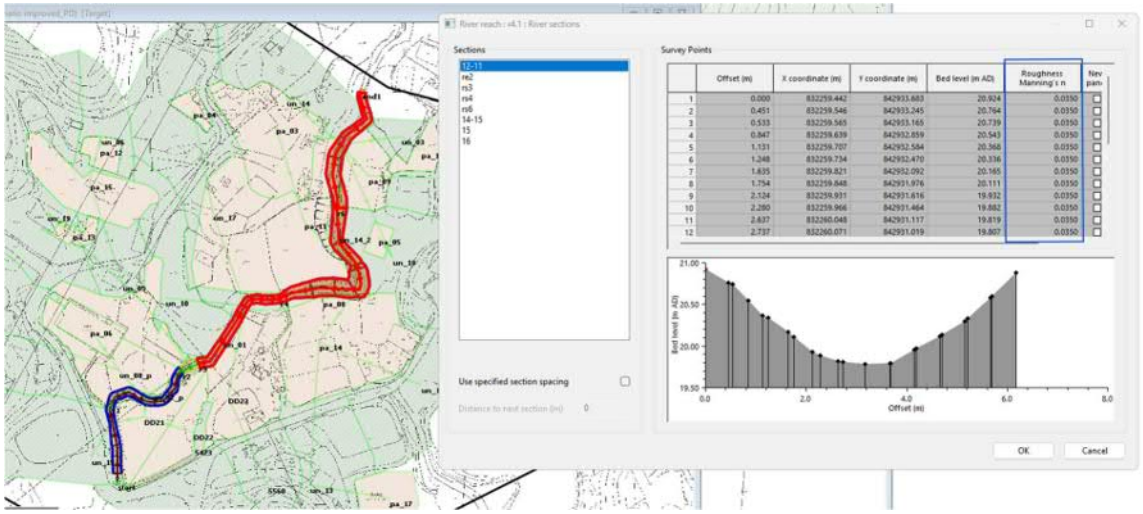


Figure 5.18: mitigated measure (1)

Two storage tanks are modelled within site with the different dimensions under mitigation measure (2).



Figure 5.19 mitigated measure (2.1) 20m² x 2.5m



Figure 5.20 mitigated measure (2.1) 78m² x 2.5m

Setting of the storge tank

When water level reaches the preset water level of the upstream nodes, the sluice will open to retain the part of water. (the preset water level is shown in the below figure)

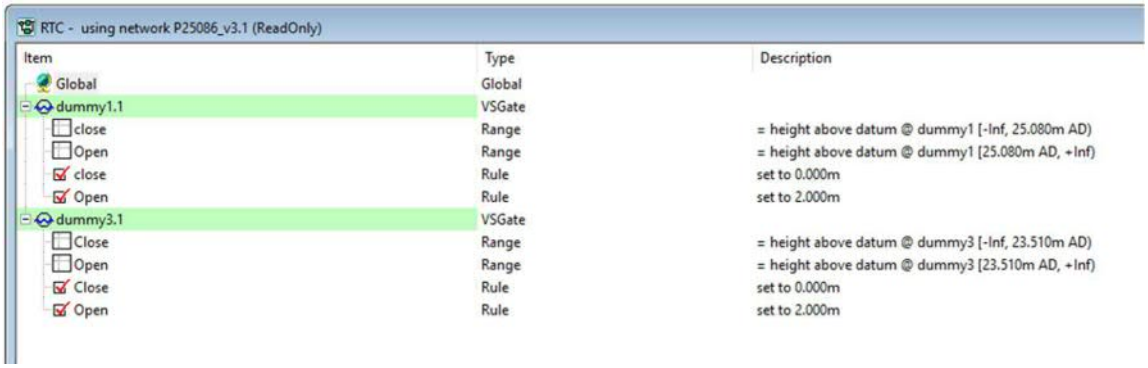


Figure 5.21 RTC Setting of Sluice

Flow path for storage tank

- *Sluice is closed*
- Rainfall → sub-catchment→ U-channel →down pipe →river reach → outfall
- *Sluice is opened*
- Rainfall → sub-catchment→ U channel →down pipe → ***Storage tank*** → after rainfall → pump to downpipe →river reach → outfall

Table 5.5 comparison of water depth at node with and without mitigation

Node ID	Node type	Flood level (m AD)	Max Level (m AD)	Max Level (m AD)	Freeboard (m)	Freeboard (m) with mitigation	difference (m)
start	Break	23.87	23.617	23.617	0.253	0.253	0
r1	Break	23.136	22.761	22.76	0.375	0.376	0.001
r2	Break	22.576	22.373	22.367	0.203	0.209	0.006
r3	Break	22.205	22.06	21.932	0.145	0.273	0.128
r4	Break	21.2	21.212	21.105	-0.012	0.095	0.107
end1	Outfall	19.076	18.5	18.5	0.576	0.576	0
r6	Break	21.53	19.358	19.66	2.172	1.87	-0.302

Table 5.6 comparison of water depth at node between mitigation and baseline

Node ID	Node type	Flood level (m AD)	Max Level (m AD)	Max Level (m AD)	Freeboard (m)_baseline	Freeboard (m) with mitigation	difference (m)
start	Break	23.87	23.617	23.617	0.253	0.253	0
r1	Break	23.136	22.761	22.76	0.452	0.376	-0.076
r2	Break	22.576	22.373	22.367	0.334	0.209	-0.125
r3	Break	22.205	22.06	21.932	0.264	0.273	0.009
r4	Break	21.2	21.212	21.105	0.106	0.095	-0.011
end1	Outfall	19.076	18.5	18.5	0.576	0.576	0
r6	Break	21.53	19.358	19.66	2.209	1.87	-0.339

5.2 Mitigation Measures

The following mitigation measures will be implemented to manage stormwater and minimize the risk of flooding:

5.2.1. Two on-site storage tanks will be installed to retain stormwater during peak rainfall intensity. During a storm, the inlet pipe connected to the downstream end of existing surface channel diverts flows into the tank. The tank functions by temporarily storing incoming peak flows, thereby attenuating the discharge. Infowork modeling result in Table 5.5 and 5.6 confirms that this integrated approach can effectively increase downstream freeboard, thereby helping to prevent flooding events.

5.2.2. When there are existing structures/utilities located in close proximity of/adjacent to the works. Proper design and implementation of temporary works shall be undertaken, and extreme care is taken when carrying out deep excavation for the works adjacent to the existing structures/utilities.

5.2.3. The existing stream and downstream sections will be regularly desilted and cleared of vegetation. Maintenance frequency will be increased to bi-monthly during the rainy season to ensure drainage capability.

6. CONCLUSIONS

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

6.2 The stormwater and surface runoff in the effective catchment area will be discharged to the existing drainage system outside the subject lot area (existing river, culverts, and surface channels). The discharge has been incorporated into the checking of drainage capacity of the existing drainage system (design calculation refers to **Appendix C**)

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

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

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

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

6.7 The development will not have any adverse impact on the drainage in the surrounding area. The construction and development within the subject lot will not alter the flow

direction of surface runoff. There will be no increased risk of flooding, and the capacity of existing drainage utilities will not be exceeded.

6.8 The hydraulic model established for this project has provided an assessment of the susceptibility of the Assessment area to flooding for the end-century extreme storm events with consideration to the effects of climate change.

6.9 The Drainage Impact Assessment showed the drainage system for the proposed development will not increase the risk of flooding in the nearby areas and the existing river has sufficient downstream capacity to receive the runoff and discharge from our proposed development.

6.10 This Drainage Impact Assessment concludes that the proposed development will not result in any flooding or overflow on the site, in adjacent areas, or downstream. The designed drainage system is effective and will safely convey runoff without causing any adverse impacts to the existing river.

6.11 The changes in land use, overland flow paths, surface runoff characteristics, changes on flood extent that will be created by the proposed developments have been represented in the hydraulic model established for the Project.

END OF TEXT

APPENDIX A

Photo Record

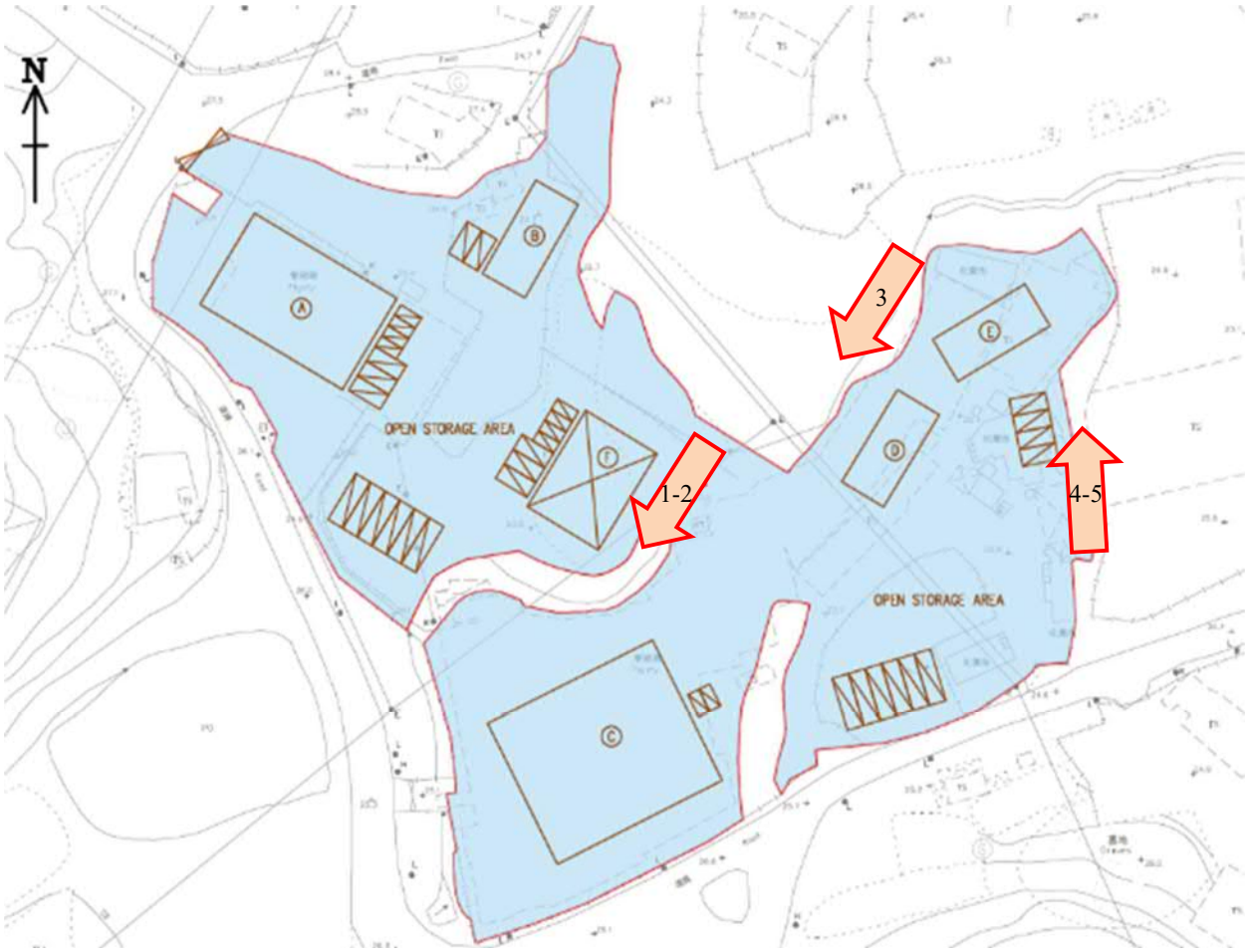


Photo No. 1



Photo No. 2



Photo No. 3



Photo No. 4



Photo No. 5



Additional photos





Photo Ref.: 1



Photo Ref.:2



Photo Ref.: 3



Photo Ref.:4



Photo Ref.: 5



Photo Ref.:6



Photo Ref.: 7



Photo Ref.:8



Photo Ref.: 9



Photo Ref.:10



Photo Ref.: 11



Photo Ref.:12



Photo Ref.: 13



Photo Ref.:14



Photo Ref.: 15



Photo Ref.:16



Photo Ref.: 17



Photo Ref.:18



Photo Ref.: 19



Photo Ref.:20



Photo Ref.: 21



Photo Ref.:22



Photo Ref.: 23



Photo Ref.:24



Photo Ref.: 25



Photo Ref.:26



Photo Ref.: 27



Photo Ref.:28



Photo Ref.: 29



Photo Ref.:30



Photo Ref.: 31



Photo Ref.:32



Photo Ref.: 33



Photo Ref.:34



Photo Ref.: 35



Photo Ref.:36



Photo Ref.: 37



Photo Ref.:38



Photo Ref.: 39



Photo Ref.:40



Photo Ref.: 41



Photo Ref.:42



Photo Ref.: 43



Photo Ref.:44



Photo Ref.: 45



Photo Ref.:46



Photo Ref.: 47



Photo Ref.:48



Photo Ref.: 49



Photo Ref.:50



Photo Ref.: 51



Photo Ref.: 52



Photo Ref.: 53



Photo Ref.: 54



Photo Ref.: 55



Photo Ref.: 56



Photo Ref.: 57



Photo Ref.: 58



Photo Ref.: 59



Photo Ref.: 60



Photo Ref.: 61



Photo Ref.: 62



Photo Ref.: 63



Photo Ref.: 64



Photo Ref.: 65



Photo Ref.: 66



Photo Ref.: 67



Photo Ref.: 68



Photo Ref.: 69



Photo Ref.: 70



Photo Ref.: 71



Photo Ref.: 72



Photo Ref.: 73



Photo Ref.: 74



Photo Ref.: 75



Photo Ref.: 76



Photo Ref.: 77



Photo Ref.: 78



Photo Ref.: 79

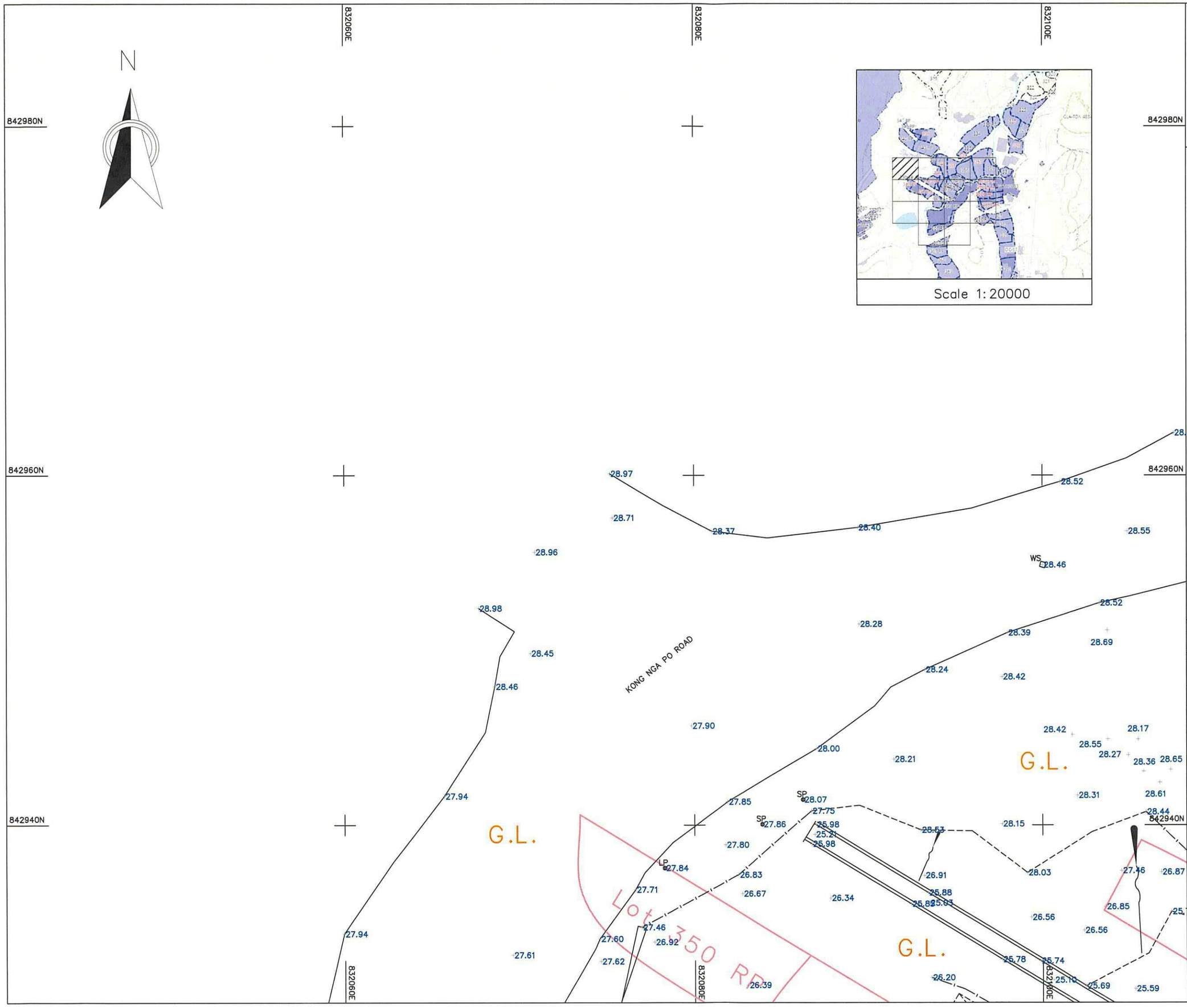
Aerial Photo

taken at late November

CMA CGM

APPENDIX B

Topography Survey Record



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- 1.23 — SPOT LEVEL
- 20 — CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 1 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
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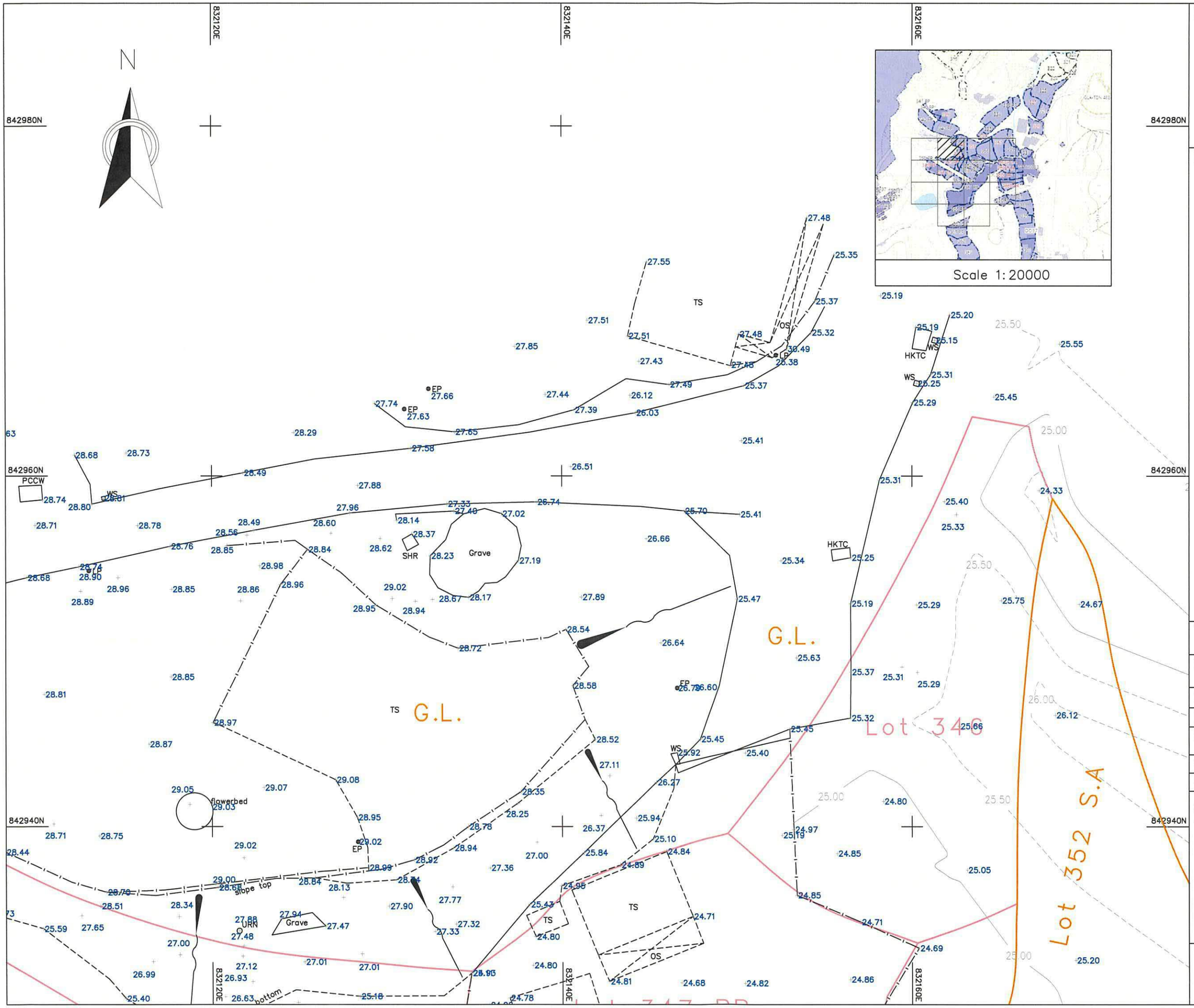
Room 502, 5/F, Keader Centre,
Nos.129-149, On Lok Road,Yuen Long, N.T.
Tel.: 2652 2351 Fax: 2652 2322



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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 2 OF 14)

Scale: 1:200 (A3)

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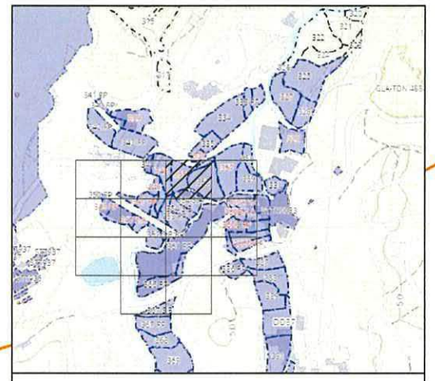

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Lot 356

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26.75 26.07 25.50 25.00 24.50 23.80 26.10 25.90 23.06

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Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

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Plan No: DN/2212/87/351RP-TOPO
(SHEET 3 OF 14)

Scale: 1:200 (A3)

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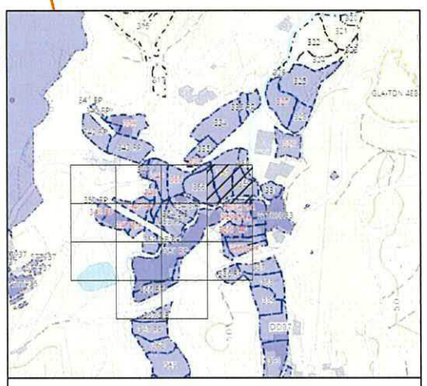

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Lot 357

Lot 358

Lot 359

G.L.

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Plan No: DN/2212/87/351RP-TOPO
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832080E

832100E

842920N

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842880N

G.L.

Lot 349 RP

Lot 348 RP

TS

WT

OS

LP

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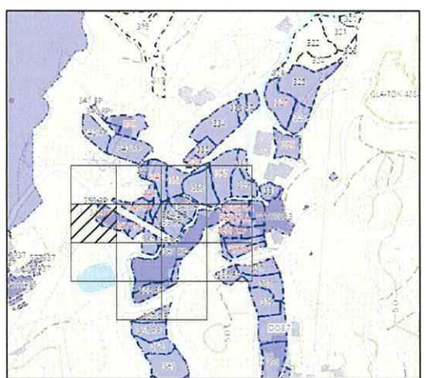

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 5 OF 14)

Scale: 1:200 (A3)

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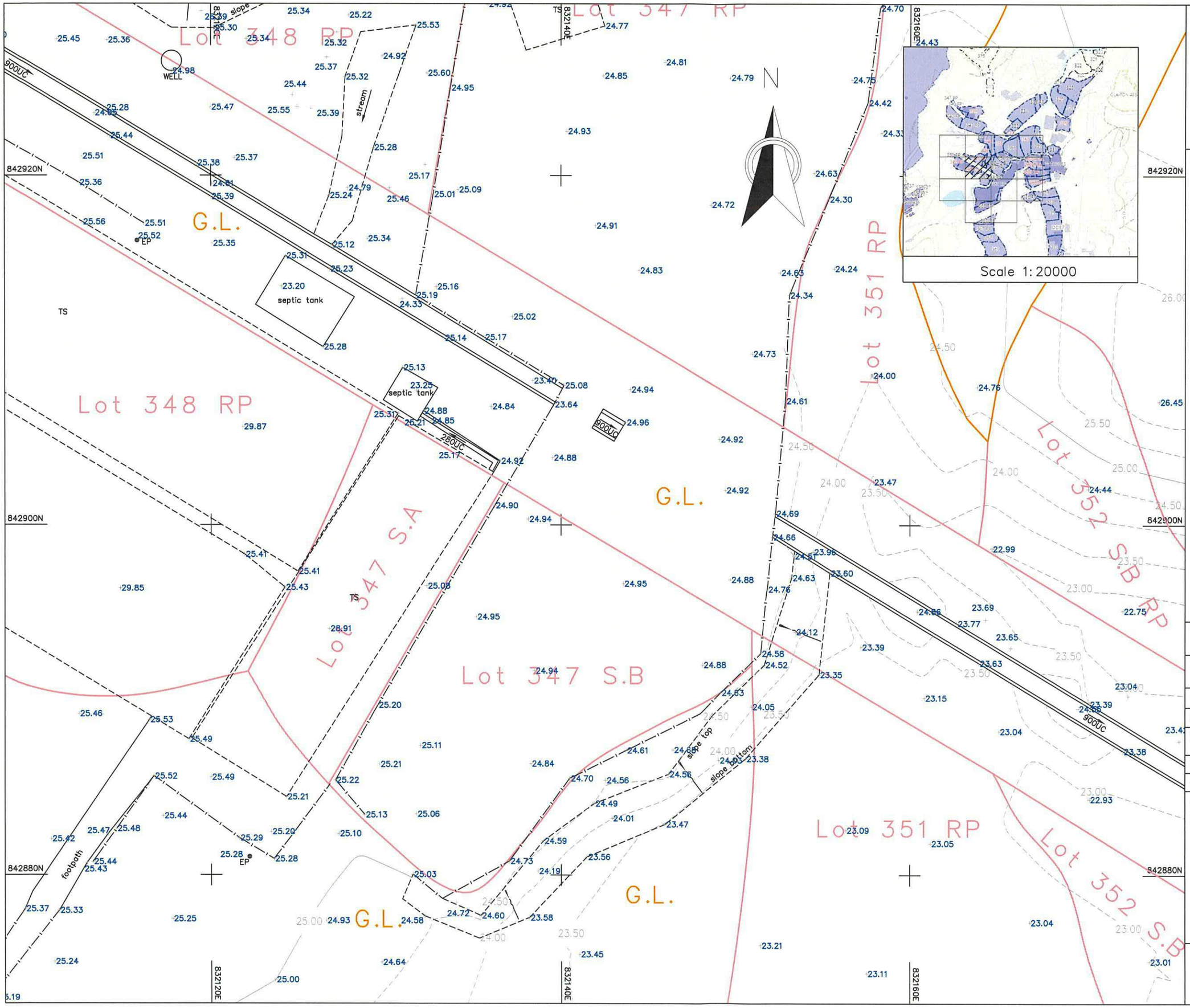

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Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 6 OF 14)

Scale: 1:200 (A3)

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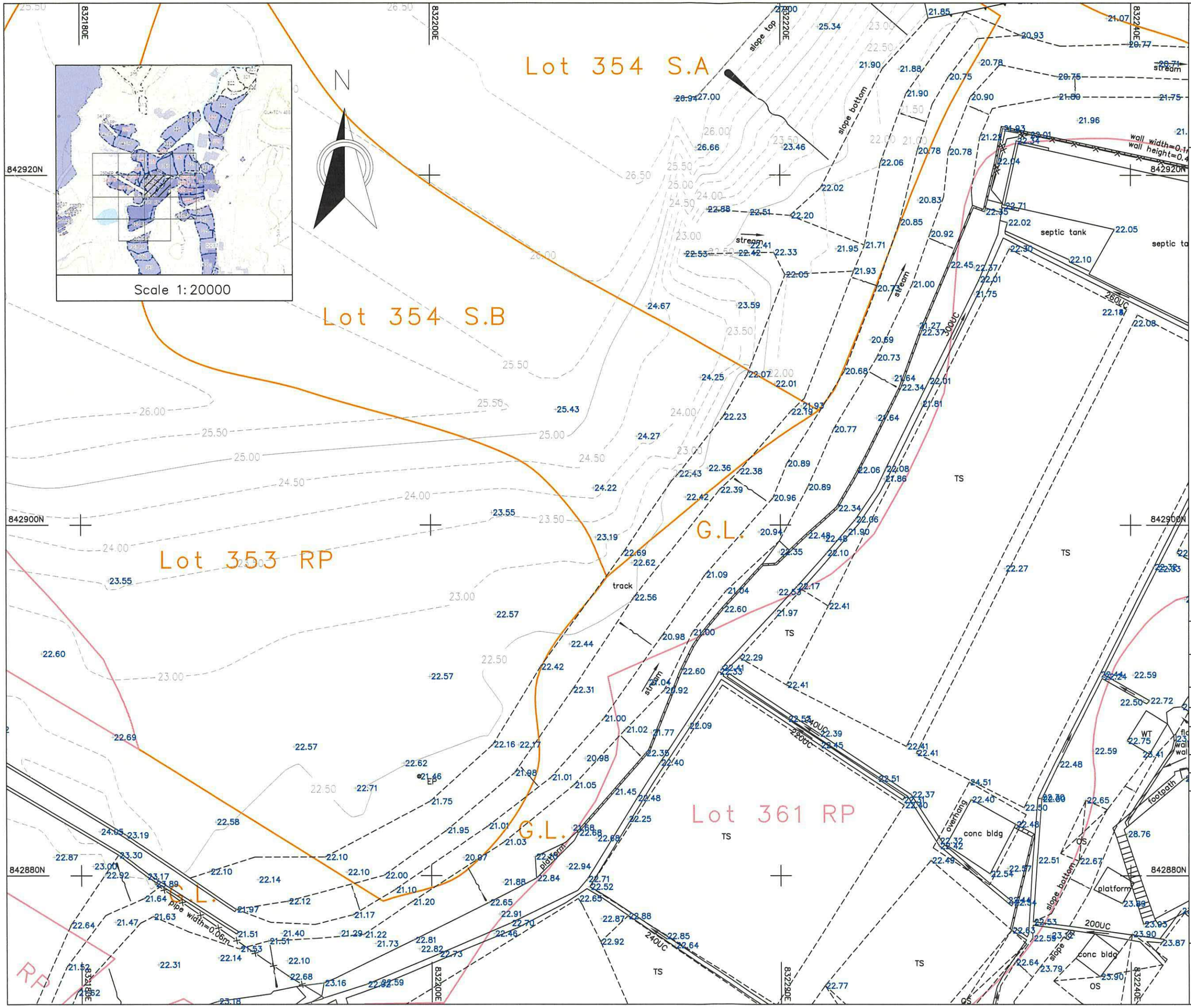

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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 7 OF 14)

Scale: 1:200 (A3)

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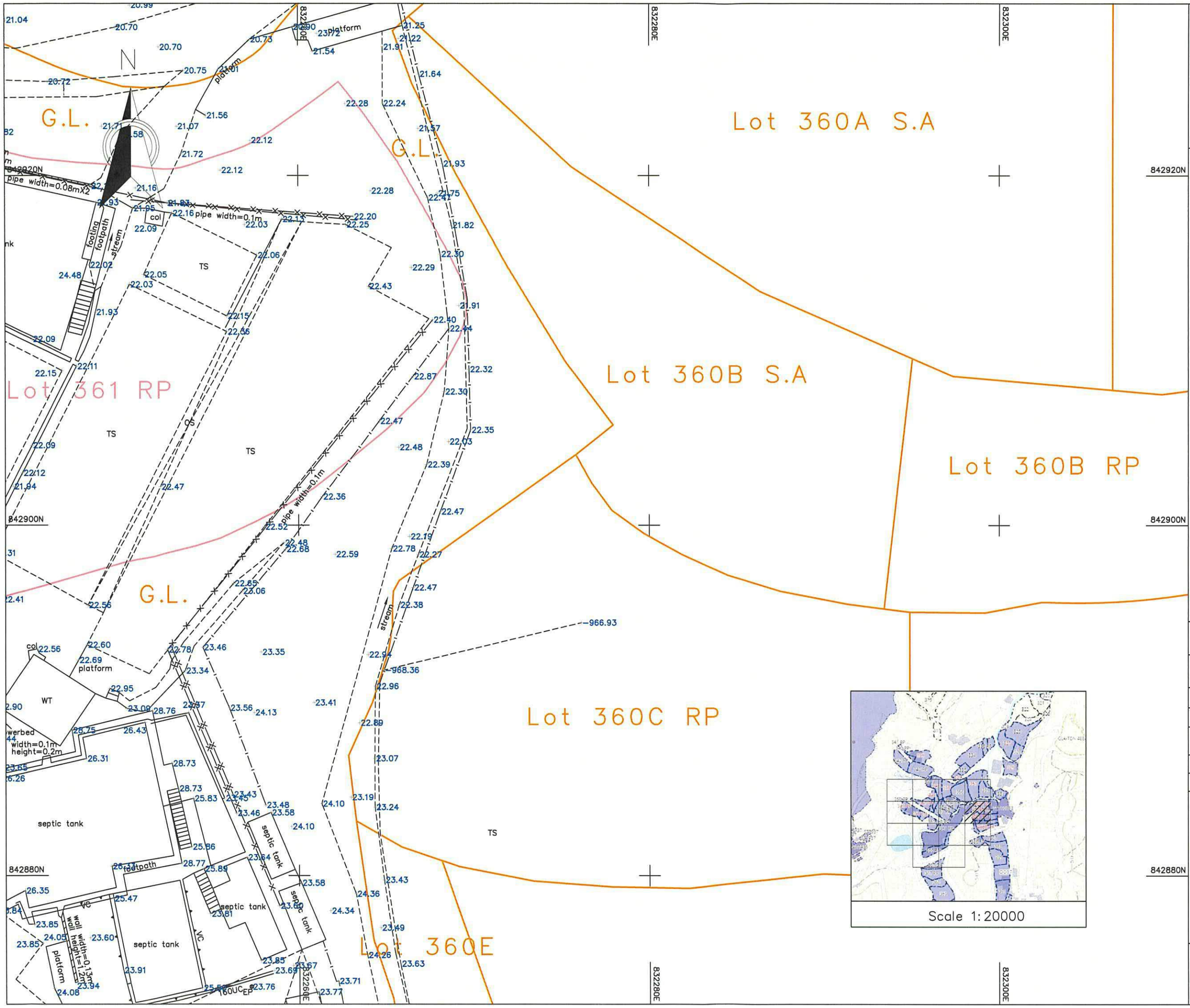
Tel.: 2652 2351 Fax: 2652 2322



Scale 1:20000

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Legend :

- SUBJECT LOT BOUNDARY LINE
- ADJACENT LOT BOUNDARY LINE
- FENCE,RAILING
- PIPE
- ARTIFICIAL SLOPE
- UC CONCRETE DRAIN & CATCHPIT
- COL COLUMN
- CUL CULVERT
- TS TEMPORARY STRUCTURE
- OS OPEN-SIDED STRUCTURE
- VERTICAL MASONRY (RETAINING WALL)
- PARAPET OR WALL
- STEPS
- GULLY
- GATE
- TC HONG KONG TELECOM
- MH MANHOLE FOUL WATER
- WS WATER SERVICE
- IC INSPECTION COVER
- LP LAMP POLE
- SP SIDE POLE
- TP TELEPHONE POLE
- EP ELECTRIC POLE
- 1.23 SPOT LEVEL
- 20 CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 8 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

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Tel.: 2652 2351 Fax: 2652 2322

N

832060E

832080E

832100E

842860N

842840N

842820N

25.19 25.19 25.00

26.03

26.10

25.64 25.08 24.99

25.02

25.73 25.76

26.03

25.99

26.07 25.73

25.49

26.04

26.07

25.79

25.99

26.02

25.98

26.05

25.34

25.40

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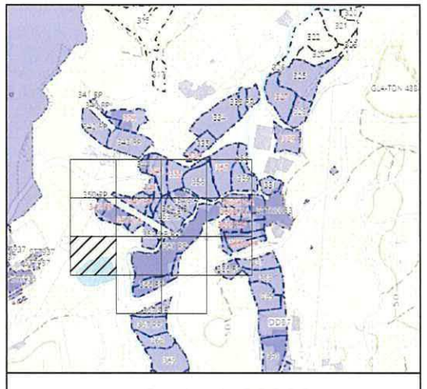

Scale 1: 20000

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 9 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
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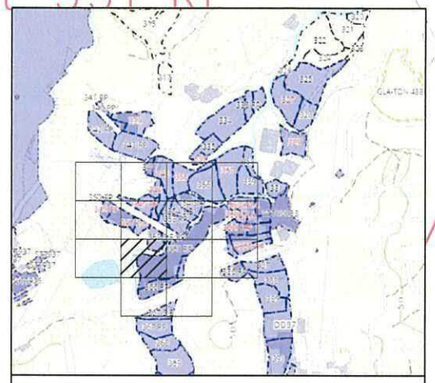
Lot 351 RP

Lot 361 RP

G.L.

G.L.

N



Scale 1: 20000

832120E

832140E

832160E

842860N

842840N

842820N

container

conc bldg

conc bldg

TS

stream

footpath

OS

EP

TP

WT

270UC

210UC

200UC

160UC

140UC

120UC

150

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- 1.23 — SPOT LEVEL
- CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 10 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
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Lot 361 RP

Lot 367 RP

G.L.

conc bldg

container

septic tank

bamboo

stream

footpath

wall width=0.1m
wall height=0.3m

MH

WELL

TS

OS

842860N

842840N

842820N

832180E

832200E

832220E

832240E

N

Scale 1: 20000

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- 20 — CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 11 OF 14)

Scale: 1:200 (A3)

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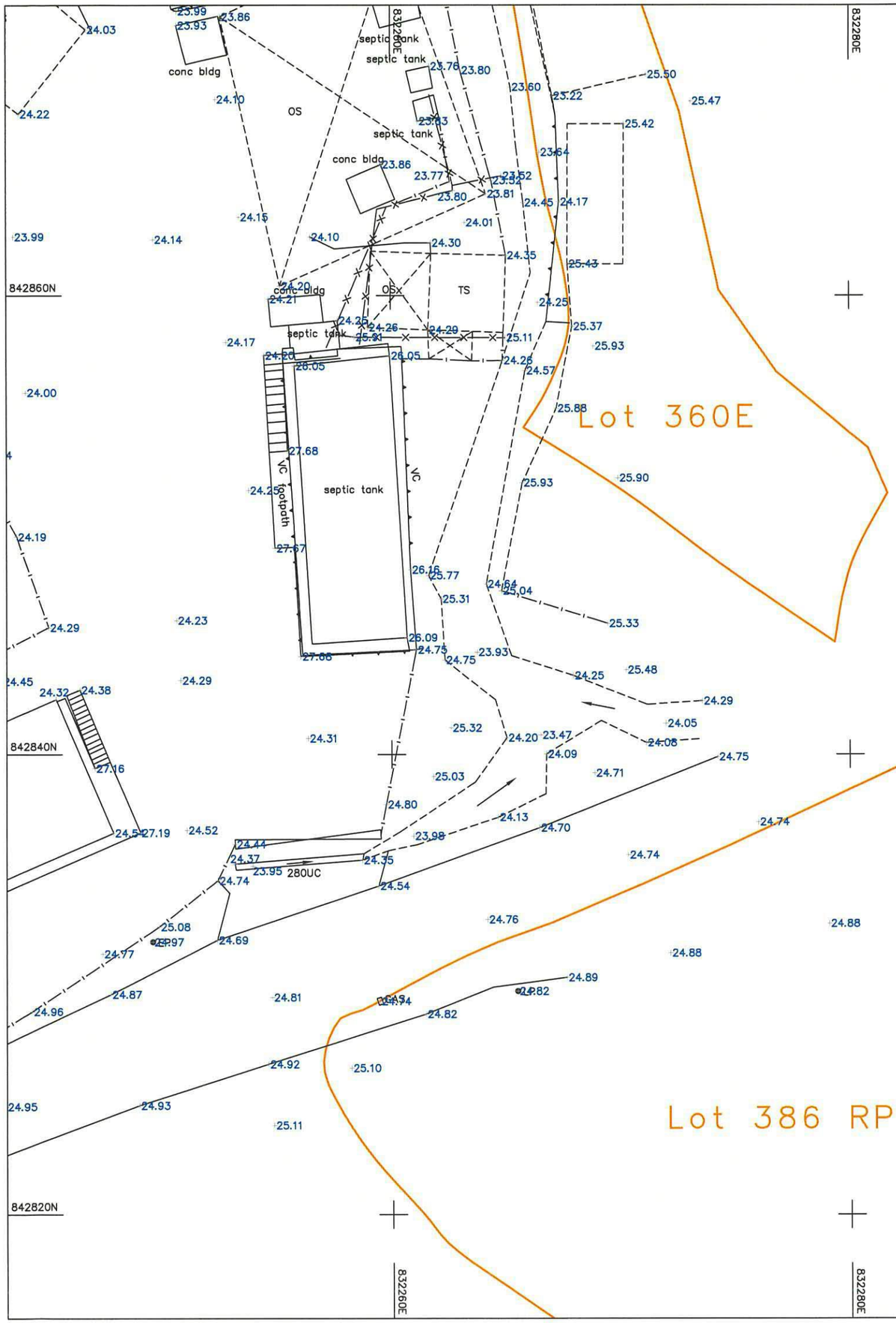

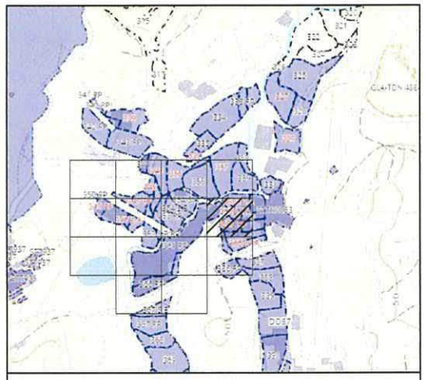

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 12 OF 14)

Scale: 1:200 (A3)

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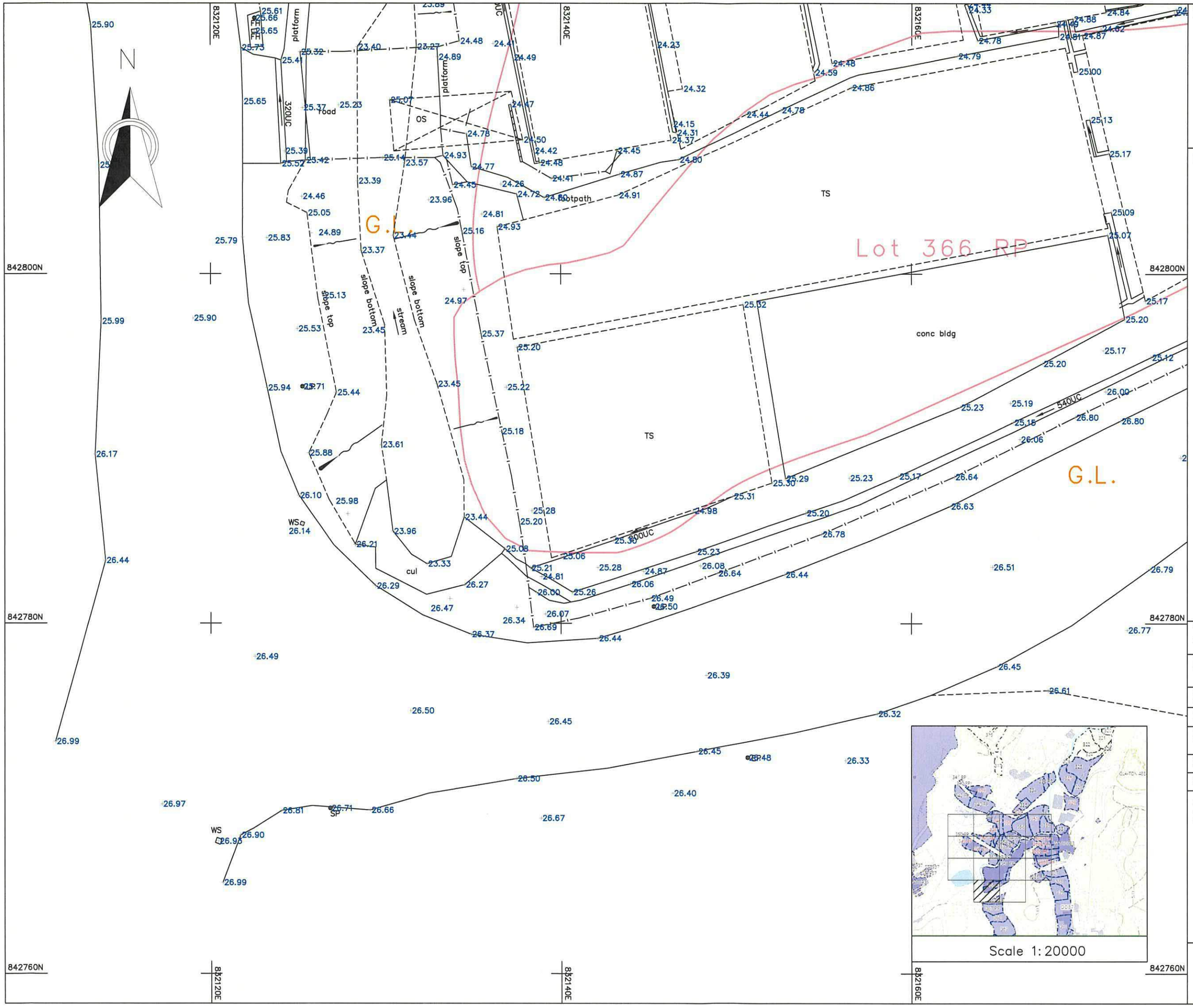

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Topographic Survey of Various Lots in DD87

Locality :
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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 13 OF 14)

Scale: 1:200 (A3)

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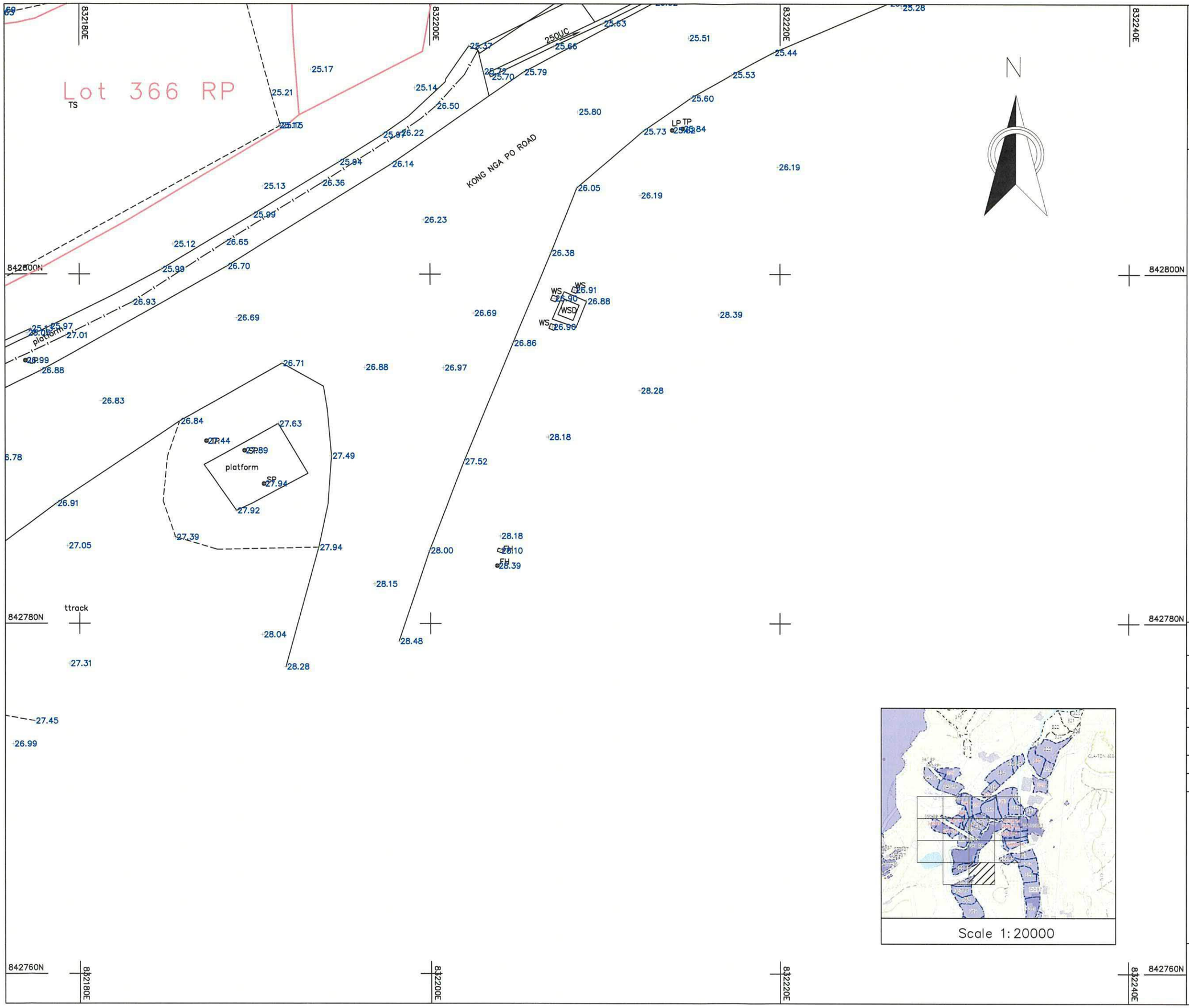

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Locality :
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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 14 OF 14)

Scale: 1:200 (A3)

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APPENDIX C

Drainage Design Calculation

Design Calculation of U-Channel

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

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

Assumption:

Runoff Coefficient for grass	0.2		(Steep and sandy grassland)			
Runoff Coefficient for concrete	1.0					
Catchment A	3250	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	234.8	mm/hr
Catchment B	4040	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	236.1	mm/hr
Catchment C	2480	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	219.7	mm/hr
Catchment D	1879.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	218.0	mm/hr
Catchment E	18173.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	223.6	mm/hr
Catchment F	16404.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	224.8	mm/hr
Catchment G	7705.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	231.0	mm/hr
Catchment H	4570.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	225.8	mm/hr
Catchment I	5413.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	215.4	mm/hr
Catchment J	3507.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	283.2	mm/hr
Catchment K	4257.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	282.3	mm/hr
Catchment L	1497.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	310.4	mm/hr
Allowance	10.0		% reduction in flow area due to permissible degradation between desilting cycles			
Roughness of concrete	0.016					

Abbreviation and Terms:

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

Cathcment		USGL mPD	DSGL mPD	USIL mPD	DSIL mPD	AVG. DEPTH m	INVERT DIFF. m	LENGTH m	GRADIENT 1 in	RAINFALL INTENSITY mm/hr	RUNOFF COEF.	CATCH MENT m^2	Affected Area (catchment)	EFF. AREA m^2	DESIGN FLOW m^3/s	CUM. DESIGN FLOW m^3/s	SIZE mm	TYPE	VEL m/s	ALLOWANCE (REDUCTION %)	FLOW CAP. m^3/s	SPARE CAP. m^3/s	UTILISATION %	RESULT	A (m^2)	P (m)	R (m)
E	Branch 1	27.00	26.00	26.50	24.90	1.10	1.60	110.0	69	223.6	0.2	18173	E	3634.6	0.22590	0.22590	450	UC	2.3	10	0.998	0.772	23	OK	0.426	2.457	0.173
Resultant & Discharge															0.22590	0.22590	450	UC	2.3	10	0.998	0.772	23	OK	0.426	2.457	0.173
A	Branch 2	26.00	25.00	25.30	24.55	0.45	0.75	74.3	99	234.8	1	3250	A	3250	0.21212	0.21212	450	UC	1.7	10	0.276	0.064	77	OK	0.163	1.157	0.141
Resultant & Discharge															0.21212	0.21212	450	UC	1.7	10	0.276	0.064	77	OK	0.163	1.157	0.141
C	Branch 3	25.00	24.50	24.50	23.25	1.25	1.25	124.0	100	219.7	1	2480	C	2480	0.15150	0.15150	400	UC	1.8	10	0.797	0.645	19	OK	0.433	2.720	0.159
L		25.00	25.00	24.50	23.25	1.75	1.25	124.0	100	310.4	0.2	1497	L	299.4	0.02584	0.02584	400	UC	1.9	10	1.154	1.128	2	OK	0.613	3.720	0.165
Resultant & Discharge															0.17734	0.17734	400	UC	1.8	10	0.797	0.619	22	OK	0.433	2.720	0.159
D	Branch 4	25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	218.0	1	1879	D	1879	0.11389	0.11389	400	UC	1.8	10	0.521	0.407	22	OK	0.294	1.948	0.151
K		25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	282.3	0.2	4257	K	851.4	0.06682	0.06682	400	UC	1.8	10	0.521	0.454	13	OK	0.294	1.948	0.151
Resultant & Discharge															0.18071	0.18071	400	UC	1.8	10	0.521	0.341	35	OK	0.294	1.948	0.151
I	Branch 5	24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	215.4	1	5413	I	5413	0.32420	0.32420	400	UC	1.9	10	0.986	0.662	33	OK	0.532	3.268	0.163
J		24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	283.2	0.2	3507	J	701.4	0.05522	0.05522	400	UC	1.9	10	0.986	0.931	6	OK	0.532	3.268	0.163
Resultant & Discharge															0.37941	0.37941	400	UC	1.9	10	0.986	0.607	38	OK	0.532	3.268	0.163
I	Branch 6	24.50	24.00	24.10	23.24	0.76	0.86	85.0	99	215.4	1	5413	I	5413	0.32420	0.32420	400	UC	1.8	10	0.453	0.129	72	OK	0.258	1.748	0.148
Resultant & Discharge															0.32420	0.32420	400	UC	1.8	10	0.453	0.129	72	OK	0.258	1.748	0.148

I	Branch 7	24.50	24.00	24.10	23.27	0.73	0.83	83.1	100	215.4	1	5413	I	5413	0.32420	0.32420	400	UC	1.7	10	0.429	0.105	76	OK	0.247	1.688	0.147
Resultant & Discharge															0.32420	0.32420	400	UC	1.7	10	0.429	0.105	76	OK	0.247	1.688	0.147
B	Branch 8	27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	236.1	1	4040	B	4040	0.26518	0.26518	500	UC	1.9	10	0.684	0.419	39	OK	0.358	1.985	0.180
H		27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	225.8	0.2	4570	H	914	0.05737	0.05737	500	UC	1.9	10	0.684	0.627	8	OK	0.358	1.985	0.180
G		27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	215.4	0.2	7705	G	1541	0.09229	0.09229	500	UC	1.9	10	0.684	0.592	13	OK	0.358	1.985	0.180
Resultant & Discharge															0.41485	0.41485	500	UC	1.9	10	0.684	0.269	61	OK	0.358	1.985	0.180
F	Branch 9	27.00	26.00	26.00	25.50	0.50	0.50	37.0	74	224.8	0.2	16404	F	3280.8	0.20500	0.20500	450	UC	2.0	10	0.368	0.163	56	OK	0.183	1.257	0.146
Resultant & Discharge															0.20500	0.20500	450	UC	2.0	10	0.368	0.163	56	OK	0.183	1.257	0.146
Pipe to Septic tank	pipe	27.00	26.00	24.90	22.90	3.10	2.00	60.2	30						0.20500	0.20500	450	UC	2.7	10	0.422	0.217	49	OK	0.159	1.414	0.113
Resultant & Discharge															0.20500	0.20500	450	UC	2.7	10	0.422	0.217	49	OK	0.159	1.414	0.113

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **A**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3250.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	1.653	m
L =	length which water takes the longest time to reach the design section	=	121.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.05 min say 7.05 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

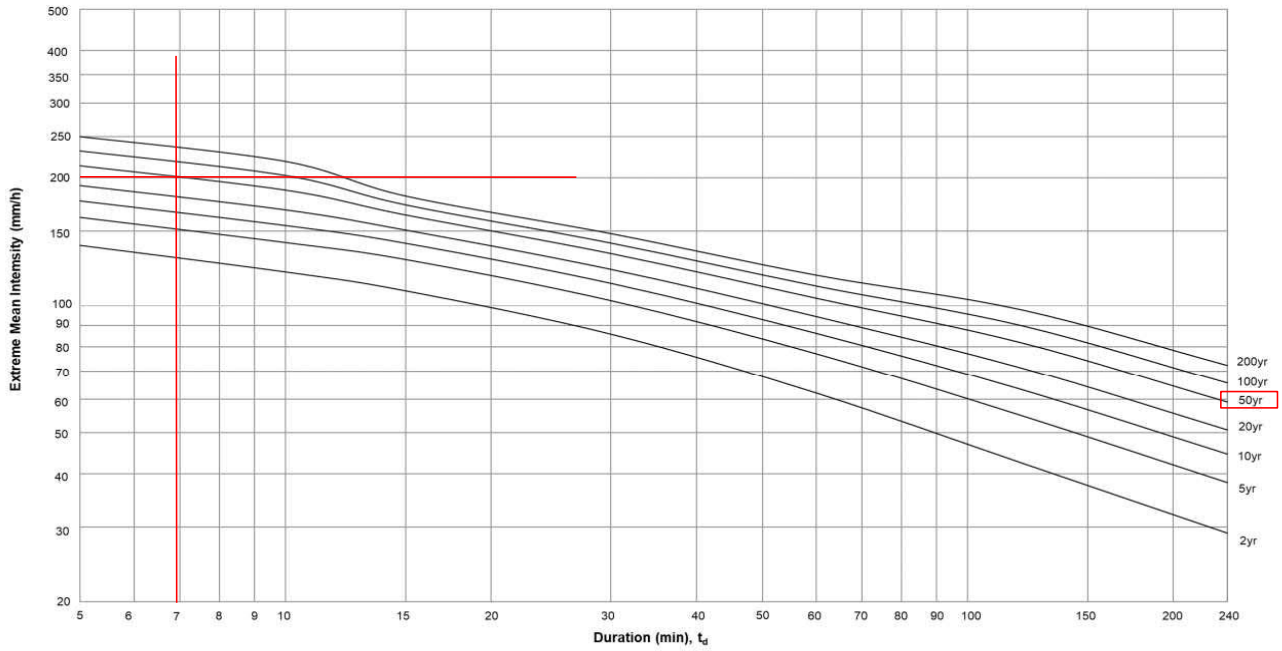


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	202.4	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	234.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **B**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4040.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	1.65	m
L =	length which water takes the longest time to reach the design section	=	121.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.90 min say 6.90 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

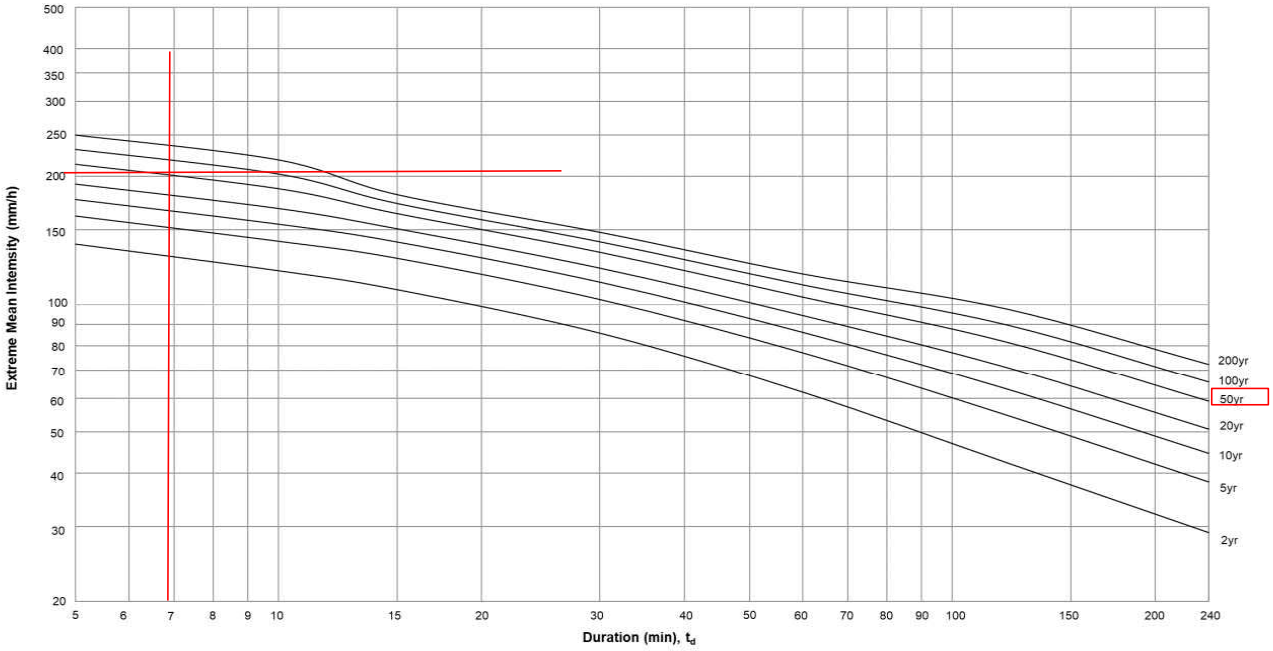


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	203.5	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	236.1	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **C**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	2480.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.43	m
L =	length which water takes the longest time to reach the design section	=	115.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.99 min say 8.99 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

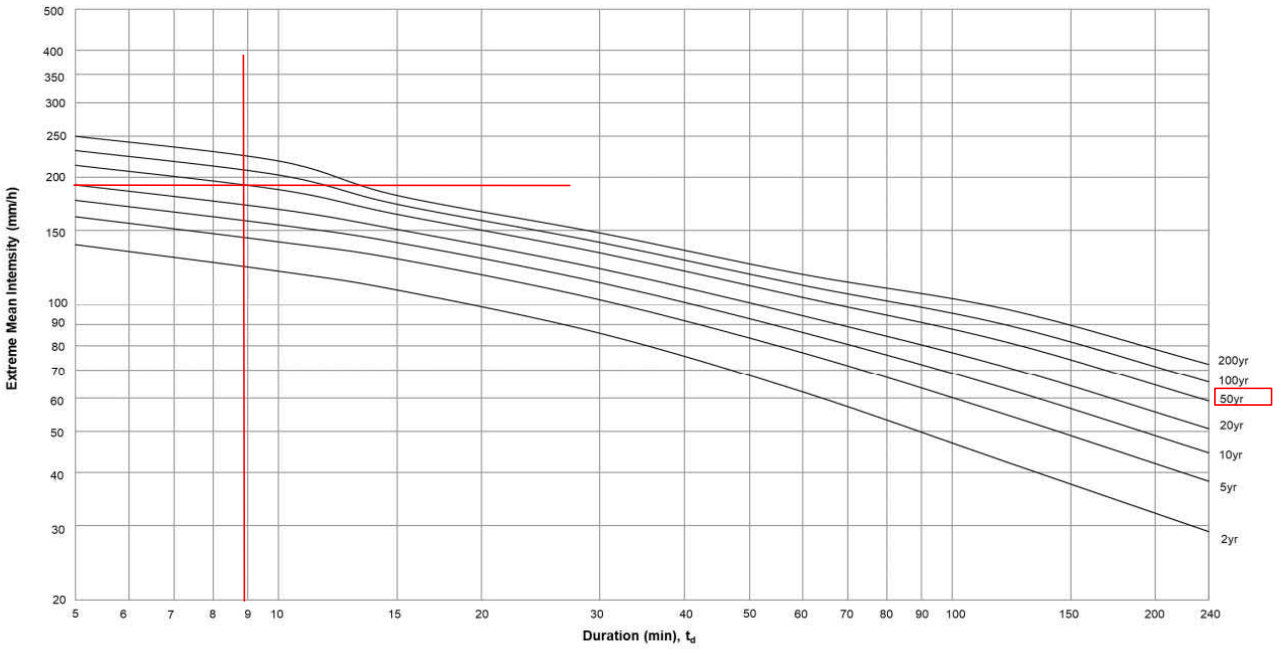


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	189.4	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	219.7	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **D**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1879.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.43	m
L =	length which water takes the longest time to reach the design section	=	115.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.24 min say 9.24 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

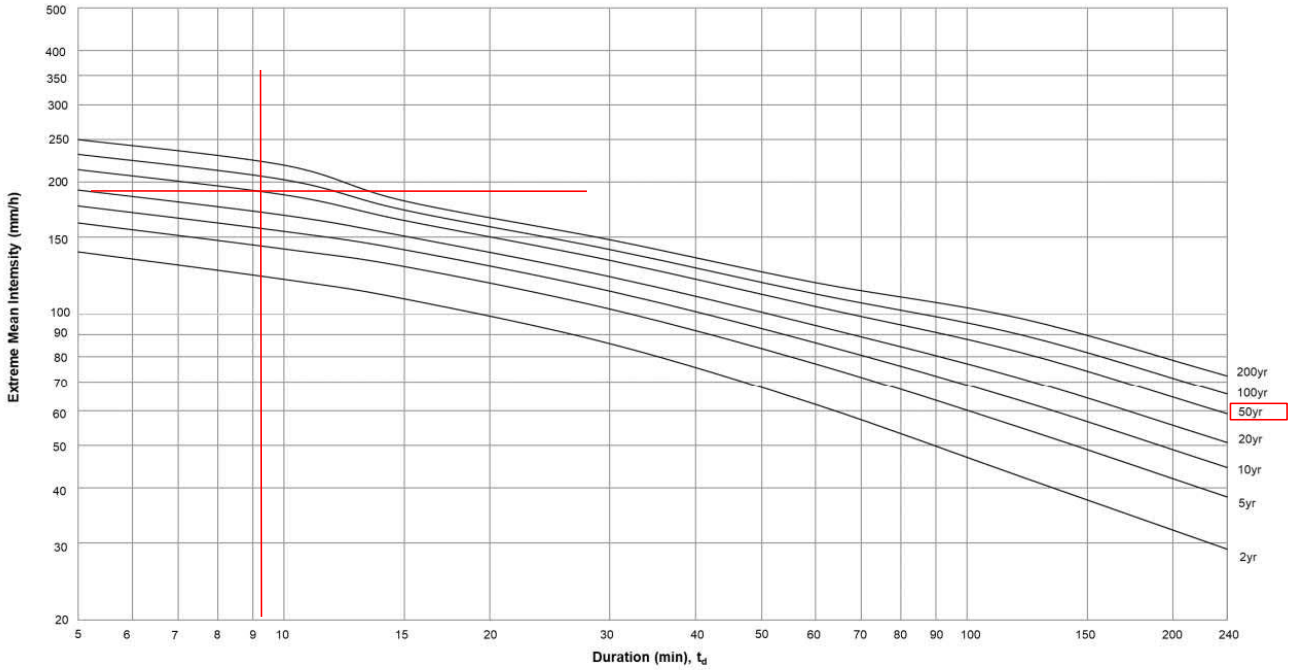


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	188.0	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	218.0	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **E**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	18173.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	7.97	m
L =	length which water takes the longest time to reach the design section	=	236.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.45 min say 8.45 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

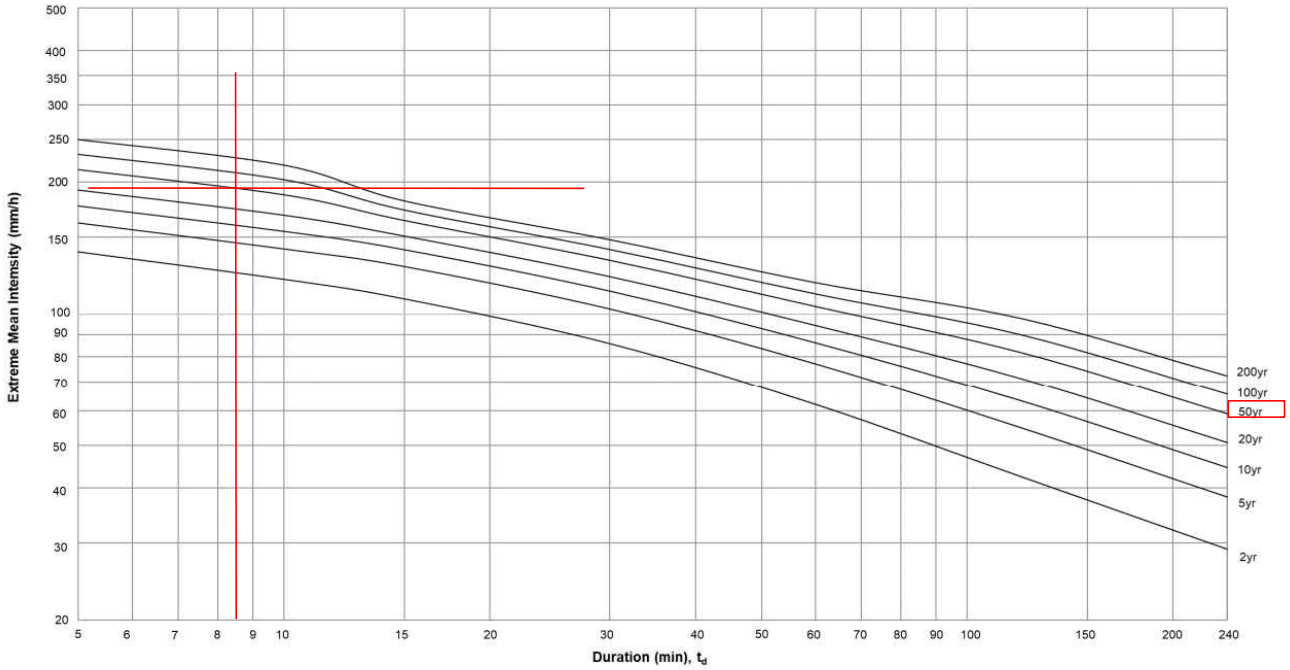


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	192.7	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	223.6	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **F**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	16404.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	9.24	m
L =	length which water takes the longest time to reach the design section	=	236.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.29 min say 8.29 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

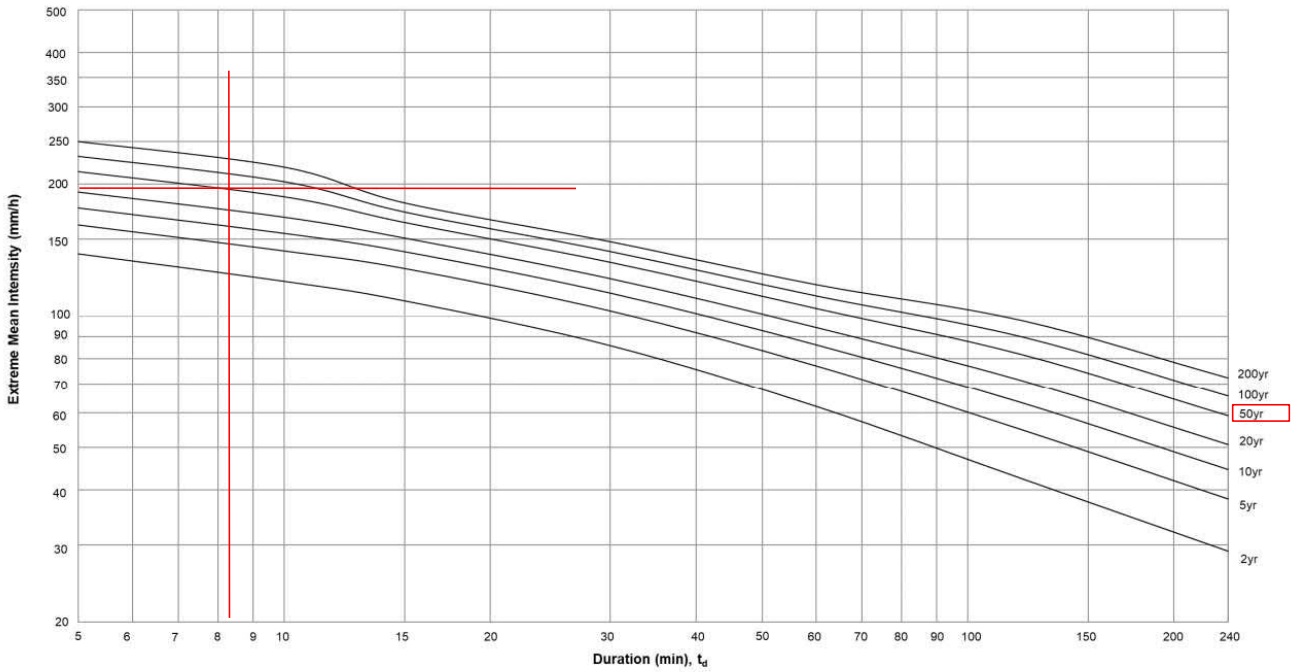


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	193.8	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	224.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **G**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	7705.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	9.29	m
L =	length which water takes the longest time to reach the design section	=	198.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.49 min say 7.49 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

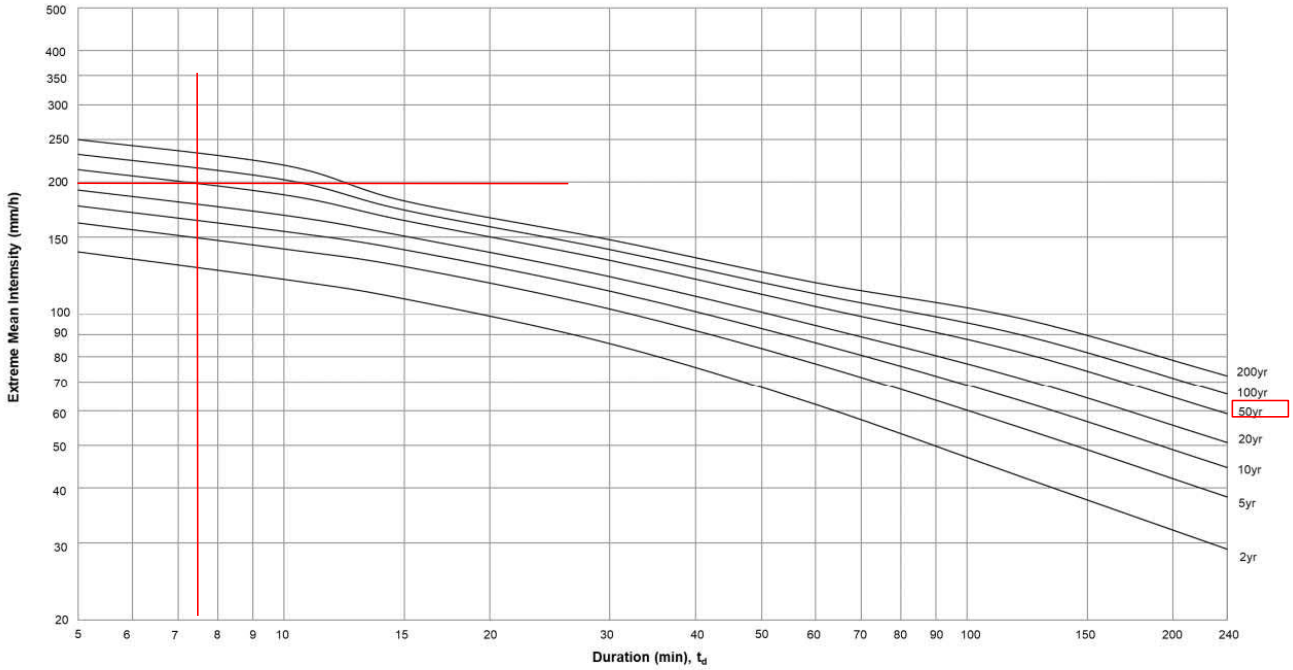


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	199.2	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	231.0	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **H**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4570.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.90	m
L =	length which water takes the longest time to reach the design section	=	162.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.15 min say 8.15 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

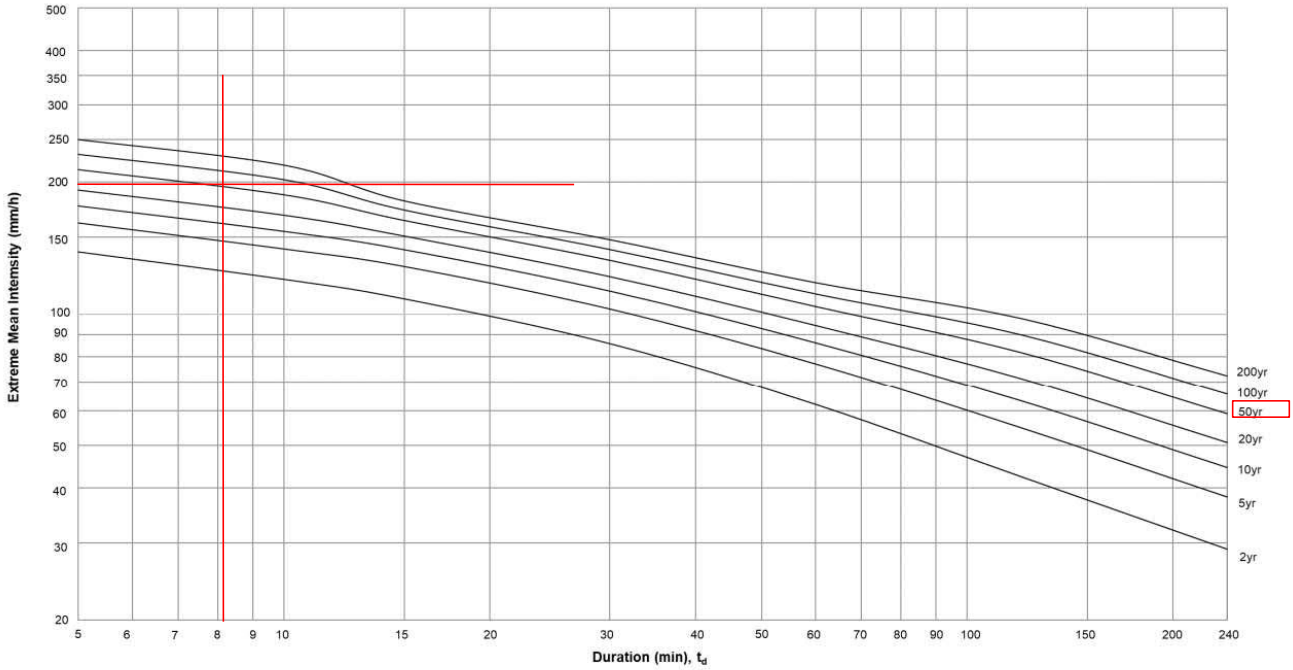


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	194.7	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	225.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **I**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	5413.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.38	m
L =	length which water takes the longest time to reach the design section	=	130.1	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.64 min say 9.64 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

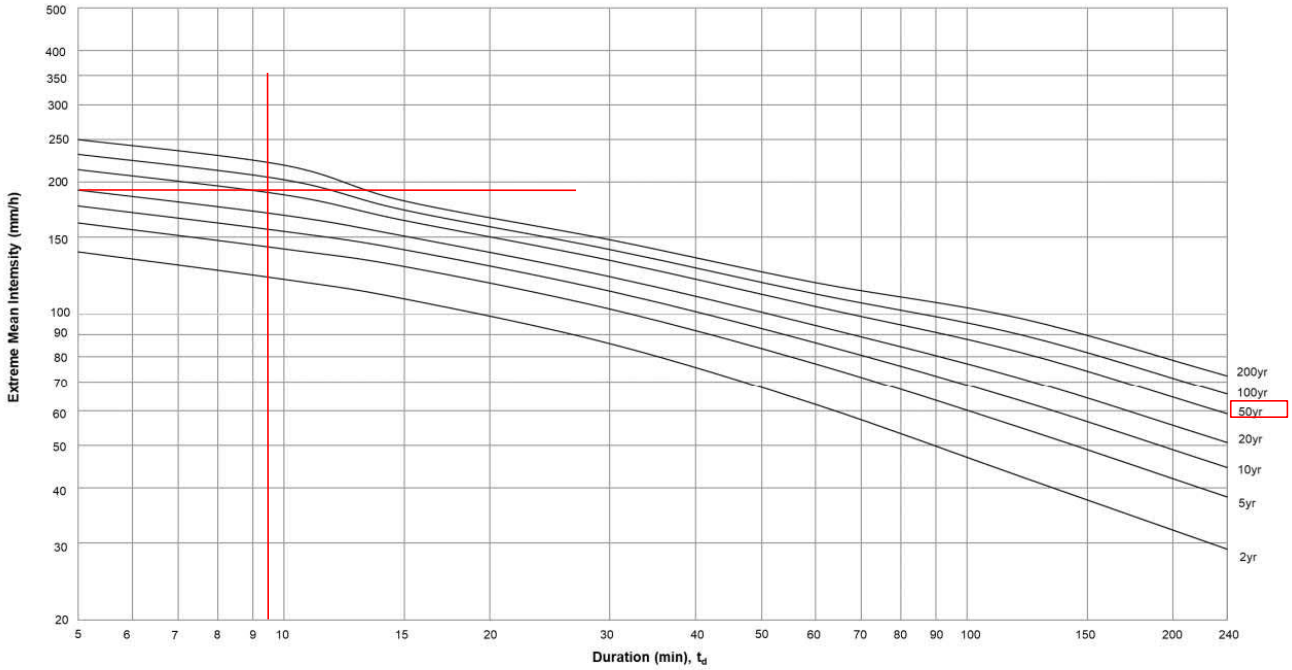


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	185.7	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	215.4	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **J**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3507.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	32.89	m
L =	length which water takes the longest time to reach the design section	=	97.6	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 3.10 min say 3.10 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

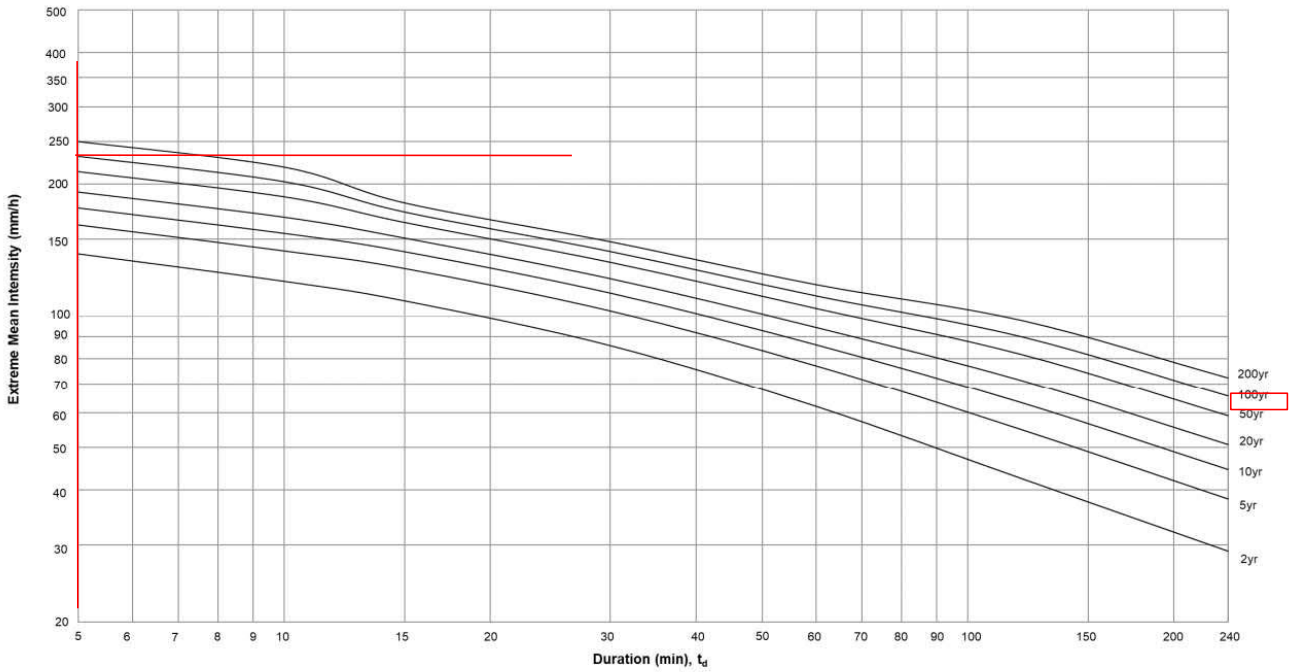


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	244.1	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	283.2	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **K**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4257.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	31.10	m
L =	length which water takes the longest time to reach the design section	=	100.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 3.15 min say 3.15 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

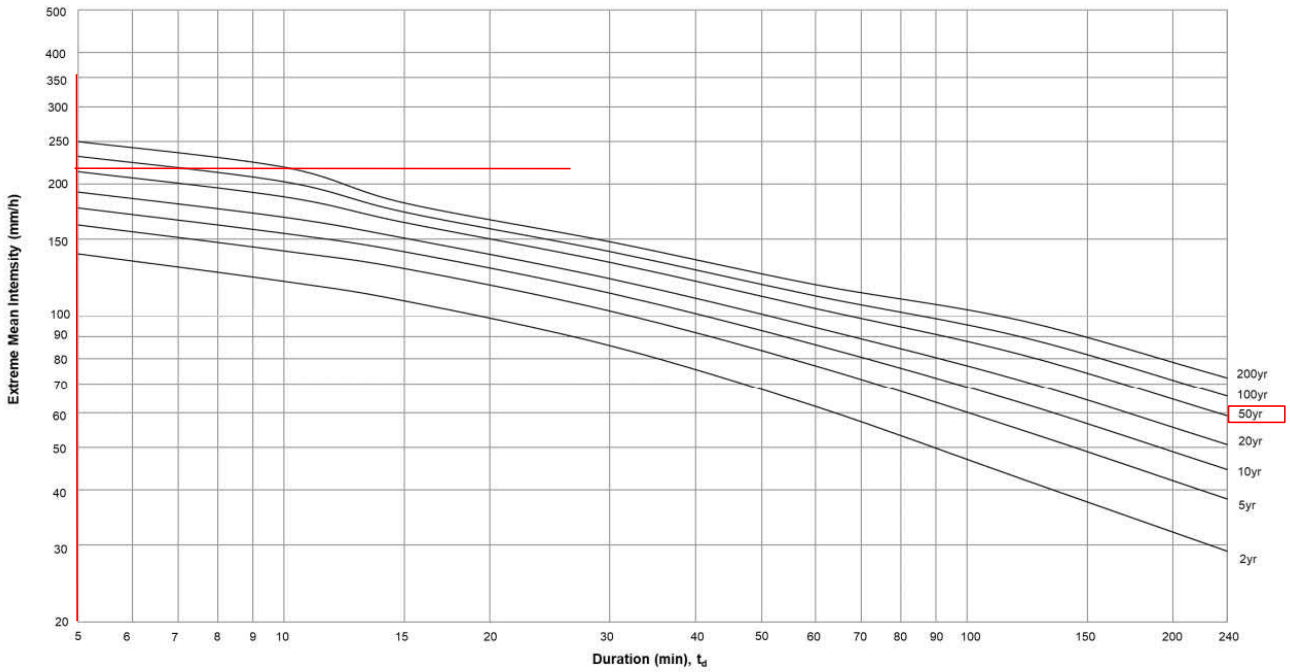


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	243.4	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	282.3	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **L**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1497.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.81	m
L =	length which water takes the longest time to reach the design section	=	24.6	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 1.78 min say 1.78 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

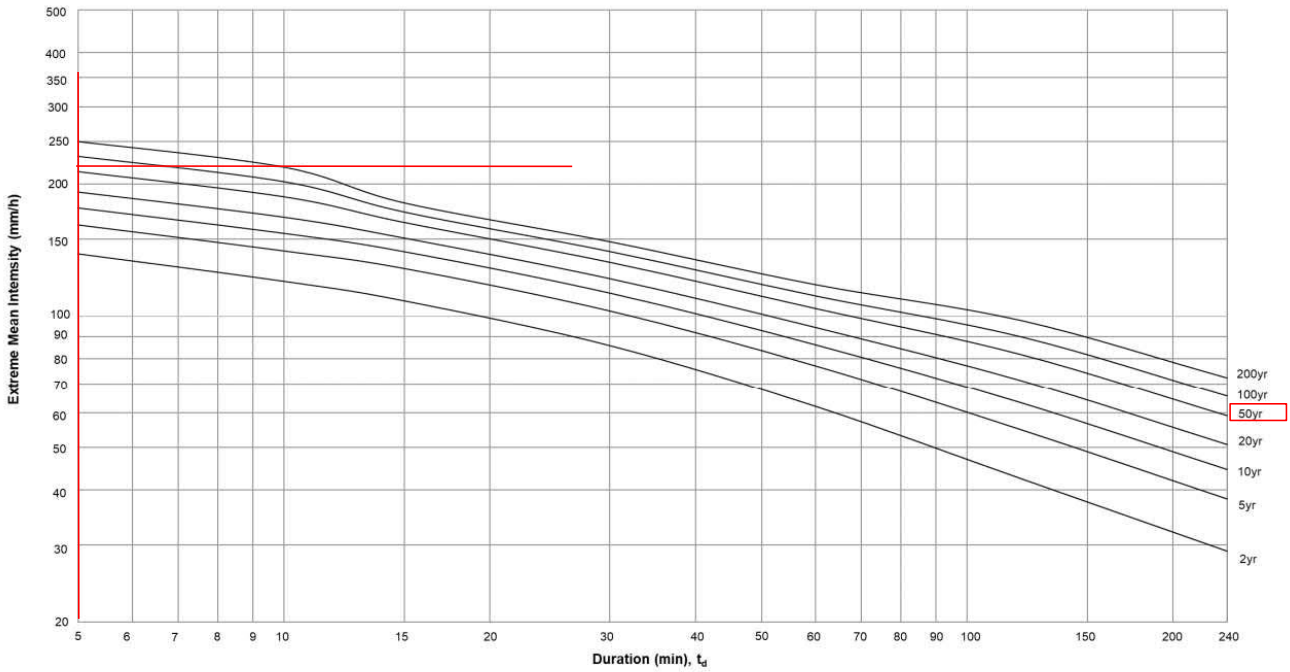


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	267.6	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	310.4	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Structural checking for the box culvert

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Stability)**	Project No.:	P25086

Ref. Output

1.0 Design Codes and Standards

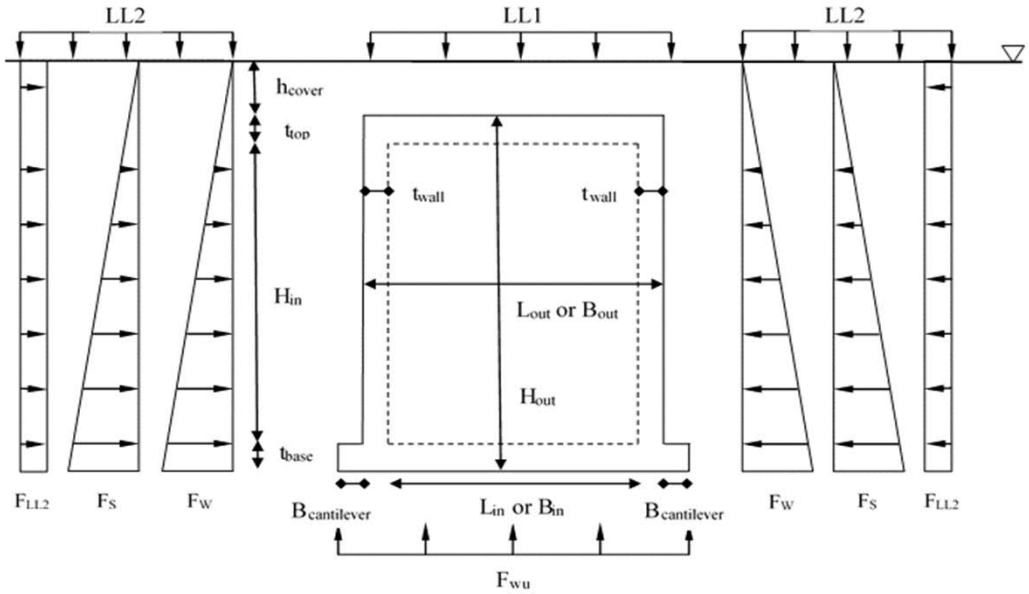
CoP DL & IL	Code of Practice for Dead and Imposed Loads 2011
Geoguide 1	Geoguide 1 "Guide to Retaining Wall Design (2017 Version)"
CoP Fdn. 2017	Code of Practice for Foundations 2017
CoP Conc. 2013	Code of Practice for Structural Use of Concrete 2013

2.0 Geotechnical Parameters and Assumptions

Density of Concrete	γ_{conc}	=	24.5	kN/m^3	(for reinforced concrete)
Density of Soil (Unsaturated)	γ_{soil}	=	19	kN/m^3	
Density of Soil (Saturated)	$\gamma_{soil, sat}$	=	20	kN/m^3	
Friction Angle of Soil	ϕ_{soil}	=	30	°	
Friction Angle of Backfill	$\phi_{backfill}$	=	30	°	
Density of Water	γ_{water}	=	10	kN/m^3	
Active coefficient	K_a	=	0.33		
Inactive coefficient	K_o	=	0.50		
Passive coefficient	K_p	=	3.00		

3.0 Dimension of Chamber

Cover of backfill	h_{cover}	=	0	mm	
Internal length	L_{in}	=	1000	mm	per m run
Internal width	B_{in}	=	3000	mm	
Internal height	H_{in}	=	2900	mm	= C.L. - D.T.I.L. of Manhole
Thickness of top slab	t_{top}	=	300	mm	
Thickness of base slab	t_{base}	=	300	mm	
Thickness of wall	t_{wall}	=	300	mm	
Outer length	L_{out}	=	1000	mm	per m run
Outer width	B_{out}	=	3600	mm	= Bin + 2 × twall + 2 × Bcantilever
Outer height	H_{out}	=	3500	mm	= Hin + 75 + trap + ttop + tbase
Maximum depth of manhole	H_{max}	=	3500	mm	= Hout + hcover
Depth of soil above W.L.	$D_{aboveWT}$	=	2143.33	mm	=C.L. - W.L.
Submerged soil depth	h_{water}	=	1356.67	m	=H_{max} - $D_{aboveWT}$



		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Stability)**	Project No.:	P25086

Ref.								Output
	4.0 Loading on Chamber							
	4.1 **Self weight of chamber, G**	**= 26.5 + 26.5 + 21.3**	=	**74.3**	**kN**			
	Weight of top slab =	= γconc × Bout × Lout × ttop	=	24.5 × 3.6 × 1 × 0.3	=	26.5	kN	
	Weight of base slab =	= γconc × Bout × Lout × tbase	=	24.5 × 3.6 × 1 × 0.3	=	26.5	kN	
	Weight of side wall =	= γconc × Hin × twall × Lout	=	24.5 × 2.9 × 1 × 0.3	=	21.3	kN	
	4.2 Hydrostatic pressure							
	Water pressure (Inner)	**= γwater × Bin × Lin × 0**	=	**0**	**kN**	Assume the inner space of the chamber does not store water		
	Water pressure (Outer)	**= γwater × Bout × Lout × Hout**	=	**126**	**kN**			
	Uplift	**= γwater × Bout × Lout × Hout**	=	**36**	**kN**	Uplifting force for the whole manhole = Fwu		
	4.3 Earth pressure							
	Soil weight on top slab	**= γsat × Bout × Lout × Cover**	=	**0**	**kN**	(Assume the soil is saturated)		
	Soil weight inside the chamber		=	**0**	**kN**	(Assume no soil inside the chamber)		
CoP DL & IL	4.4 Live loading on cover of top slab	q_{LL1}	=	20	kPa	(Consider the manhole located at public road)		
c.l. 3.9	**Q_{LL1}**	**qLL1 × Hout x Bout**	=	**72**	**kN**			
		q_{LL2}	=	20	kPa	(Assume Crtical Case)		
CoP Fdn. 2017	**5.0 Resistance to Sliding, Uplift and Overturning**							
C.l. 2.5.4 (3)	For design based on highest possible groundwater table							
	Self weight of chamber		=	74.3	kN	Weight of structural element		
	Soil weight on top slab		=	0	kN	Weight of backfill above the top slab		
	Soil weight inside the chamber		=	0	kN	No backfill inside the manhole		
	Minimum dead load	**G_{Total}**	=	**74.3**	**kN**			
	5.1 Checking for resistance to sliding and overturning							
	Since the sliding forces and the overturning moments acting on the manholes are balanced on each sides, checking on these 2 criteria are not required.							
C.l. 2.5.4 (3)	5.2 Checking for resistance to uplift force							
	Downward force due to the minimum deadload		=	74.3	kN	= G_Total		
	Downward force due to any permitted anchorage resistance		=	0	kN			
C.l. 2.5.4 (4)	**Resistance to uplift force**		=	**74.3**	**kN**	= Summation of the above 2 elements		
	Uplifting force due to groundwater	**F_{WU}**	=	**36**	kN	= Water pressure (Outer)		
	(3)(b) 1.1 times the uplift force due to groundwater		=	39.6	kN	= 1.1 × F_wu		
	(3)(b) 1.5 times the uplift force due to other loads		=	0	kN			
	(3)(b) Required resistance to uplift force		=	39.6	kN	= Summation of the above 2 elements		
				< Resistance to uplift force = 74.3 kN				**OK !**
Geoguide 1	**6.0 Bearing Capacity Checking**							
	Total gravity load on chamber		=	74.3	kN			
	Check base on Geoguide 1 "Guide to Retaining Wall Design"							
	Saturated Unit Weight of soil		=	20	kN/m^3	= $\gamma_{soil,\,sat}$		
	Effective Unit Weight of soil, γ'		=	10	kN/m^3			
	Factored Shearing Angle, ϕ'_f		=	30	degree	= ϕ_{soil}		
	Effective Cohesion, c'		=	0	kPa			
	Width of Foundation Base, B		=	3.6	m			
	Length of Foundation Base, L		=	1	m			
	Eccentricity of Resultant Load in B Direction, eB		=	0	m			
	Eccentricity of Resultant Load in L Direction, el		=	0	m			
	Effective Width, B'		=	3.6	m	= B – 2eB		
	Effective Length, L'		=	1	m	= L – 2eL		
	Depth of Embedment, d		=	3.5	m	= H_{max} (Assumed)		
	Total overburden pressure at maximum depth	q_t	=	70	kPa	= γsoil,sat × Hmax	= FS	
	Effective surcharge, q'		=	35	kPa	= γ' d cosβ		
	Vertival Load, V		=	74.3	kN			
	Horizontal Load, H		=	0	kN			
	The inclination of the foundation to the horizontal, α (<=45)		=	0	degree			
	Angle of Slope in front of Foundation, β		=	0	degree			
CoP Fdn. 2017	Maximum Bearing Pressure, q_{max}		=	20.6	kPa			
Table 2.1				**< presumed values for allowable bearing pressure = 50 kPa**				**OK !**

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Wall)**	Project No.:	P25086

Ref. Output

1.0 Design Codes and Standards

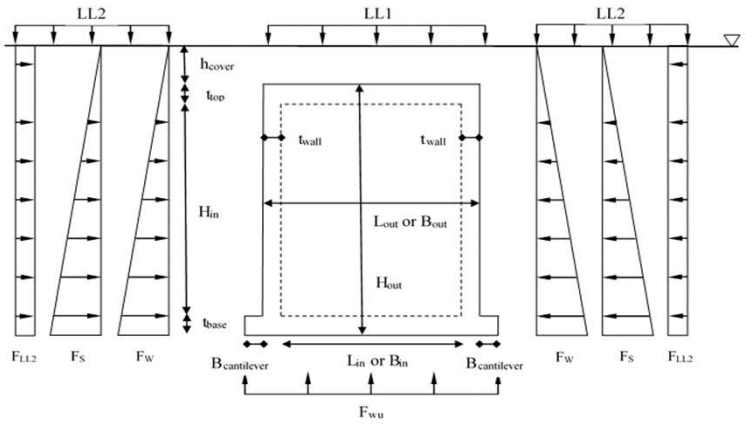
CoP DL & IL	Code of Practice for Dead and Imposed Loads 2011
Geoguide 1	Geoguide 1 "Guide to Retaining Wall Design (2017 Version)"
CoP Fdn. 2017	Code of Practice for Foundations 2017
CoP Conc. 2013	Code of Practice for Structural Use of Concrete 2013

2.0 Geotechnical Parameters and Assumptions

Density of Concrete	γ_{conc}	=	24.5	kN/m^3	
Density of Soil (Unsaturated)	γ_{soil}	=	19	kN/m^3	
Density of Soil (Saturated)	$\gamma_{soil, sat}$	=	20	kN/m^3	
Angle of Soil	ϕ_{soil}	=	30	°	
Angle of Backfill	$\phi_{backfill}$	=	30	°	
Density of Water	γ_{water}	=	10	kN/m^3	
Active lateral earth coefficient	K_a	=	0.33	=	$(1-\sin\phi) / (1+\sin\phi)$
At rest lateral earth coefficient	K_o	=	0.50	=	$(1-\sin\phi)$
Passive lateral earth coefficient	K_p	=	3.00	=	$1 / K_a$

3.0 Dimension of Chamber

Ground level		=	+25.00	mPD	
Box culvert bottom level		=	+21.50	mPD	
Groundwater level		=	+22.86	mPD	(Assume 1/3 water level)
Height of Wall	H	=	3.50	m	(G.L. - Box Top)
Dry soil depth	h_1	=	2.14	m	(G.L. - G.W.T.)
Submerged soil depth	h_2	=	1.36	m	(G.W.T. - Box Top)
Thickness of wall	t_{wall}	=	300	mm	



		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Wall)**	Project No.:	P25086

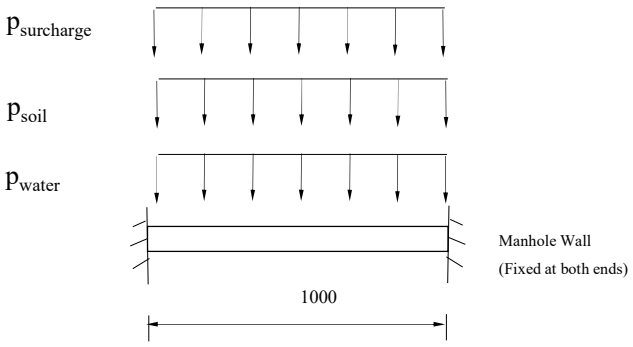
Ref. Output

4.0 Dimension of Wall

For each side wall of the manhole, we consider

Width	=	1000	mm	(per m run)
Height	=	3500	mm	
Thickness	=	300	mm	

5.0 Loading on Side Wall



Consider the side wall as a beam with both ends fixed per m width for analysis, we have

5.1 **Earth pressure:**

Consider at-rest lateral earth pressure,

$p_{s'} = K_0 \times \gamma_{soil} \times h_1 + K_0 \times (\gamma_{soil,sat} - \gamma_{water}) \times h_2$

$= 0.5 \times 19 \times 2.14333333333333 + 0.5 \times (20 - 10) \times 1.3566666666$ = 27.145 kN/m per m run Pressure due to soil

5.2 **Water pressure:**

$p_w = \gamma_{water} \times h_{water} =$ 10×3.5 = 35 kN/m per m run Pressure due to water

5.3 **Surcharge:**

q_{LL2} = 20 kN/m per m run

$p_{surcharge} = K_0 \times q_{LL2} =$ = 10 kN/m per m run CoP DL & IL Table 3.17

6.0 Forces on Side Wall

Load case	Unfactored UDL	Load factor	Factored UDL
Soil	27.145	1.4	38.003
Water	35	1.4	49
Surcharge	10	1.6	16
Total =	72.145		103.003

	SLS	ULS	
Max. Shear Force on side wall = wL/2	36.07	51.50	kN
Max. Bending Moment on side wall = $wL^2/12$	6.01	8.58	kNm

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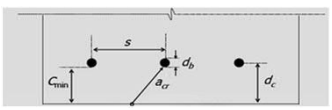
Check by:

Project: Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che — Date: 13/10/2025
Subject: Structural Design for Box Culvert **(Checking of Wall)** — Project No.: P25086

Ref.									Output
CoP Conc. 2013	**7.0 RC Design against Bending Moment and Shear Force**								
	For the dimension of wall with,					V_{ULS} =	51.5	kN per m run	
	Width =	1000	mm	WITH		M_{ULS} =	8.6	kNm per m run	
	Height =	3500	mm			V_{SLS} =	36.1	kN per m run	
	Thickness =	300	mm			M_{SLS} =	6.0	kNm per m run	
	Consider the RC design in a width of 1m, we have								
	7.1 **Reinforcement for moment:**								
	With M_ULS,wall = 8.6 kNm per m run								
	Width			b	=	1000	mm		
	Effective depth			d	=	245	mm		
	Yield strength of steel			f_y	=	500	N/mm^2	(Table 15 of sewerage manual for XA Exposure Condition)	
	Concrete strength			f_{cu}	=	30	N/mm^2	(Table 15 of sewerage manual for XA Exposure Condition)	
	Span			L	=	1000	mm		
	Wall thickness			t_{wall}	=	300	mm		
Table 4.2	Concrete cover				=	50	mm	(Table 15 of sewerage manual for XA Exposure Condition)	
c.l. 6.1	7.1.1 Checking for compression steel								
eq 6.8	K' (for fcu ≦ 45N/mm^2)				=	0.156			
eq 6.7	$K = M / (f_{cu} \times b \times d^2)$				=	0.005	< K' = 0.156	**Compression reinforcement IS NOT required**	
	7.1.2 Checking for tensile steel								
eq 6.10	$z = d [0.5 + \sqrt{(0.25 - K/0.9)}]$				=	0.995d	**> 0.95d, and thus use 0.95d**	= 233	mm
eq 6.11	Required steel reinforcement		$A_{s,req} = M / (0.87 \times f_y \times z)$		=	85	mm^2		
	Provided steel reinforcement =	T	10	@	200	mm spacing			
			$A_{s,prov}$	=	393	mm^2	> Required steel reinforcement		**OK !**
	Percentage of reinforcement		$p_s = A_{s,prov} / bd$	=	0.16	%			
c.l. 9.3.1				>	minimum percentage of steel =	0.13	%		**OK !**
c.l. 9.2.1.3				<	maximum percentage of steel =	4.00	%		**OK !**
	7.1.3 Checking for shear reinforcement								
	Design shear stress		$v = V / (b_v \times d)$	=	0.210	MPa			
c.l. 6.1.2.5	Design concrete shear stress		v_c	=	$0.79/\gamma_m \times p_s^{1/3} \times (400/d)^{1/4} \times (\max(40, f_{cu})/25)^{1/3}$				
				=	0.454	MPa	> v	**Shear reinforcement IS NOT required**	
c.l. 7.3.4	7.1.4 Checking for deflection								
Table 7.4	$M_{SLS} / (b \times d^2)$			=	0.100				
Table 7.4	Design service stress in tension reinforcement		f_s	=	72	N/mm^2	$= 2/3 \times f_y \times A_{st,req} / A_{st,prov} \times 1/\beta_b$		$< 0.8 \times f_y$
Table 7.4	Modification factor = $0.55 + (477 - f_s) / (120 [0.9 + M/bd^2])$			=	4.3	> 2.0	Take	2.0	
Table 7.3	Basic span / effecive depth ratio			=	7	(for cantilever)			
c.l. 7.3.4.4	Modified span / effecive depth ratios (for tensile reinforcement)			=	14	= Basic span / d × Modification factor (Tensile)			
	Actual span / effecive depth ratio			=	4	< 14			**OK !**
	7.1.5 Checking for crack width								
c.l. 7.2.1	Allowable surface crack width		w	=	0.2	mm			
c.l. 7.2.3	Thickness of element		h	=	300	mm	$= t_{wall}$		
	Width of element to be considered		b	=	1000	mm	1m width		
	Effective depth		d	=	245	mm			
	Diameter of steel bars		d_b	=	10	mm			
	Spacing of steel bars		s	=	200	mm			
	Concrete Cover		$c = c_{min}$	=	50	mm			
	Concrete strength		f_{cu}	=	30	N/mm^2			
	Strength of steel		f_s	=	72	N/mm^2			
	Young's Modulus of steel		E_s	=	200	kN/mm^2			
	Applied moment		M_{SLS}	=	6.0	kNm			
	Area of reinforcement		$A_{s,prov}$	=	393	mm^2			
	Depth of the neutral axis		x	=	122.5	mm	≦ 0.5d		
c.l. 7.2.3	Strain in the tension reinforcement		ε_s	=	0.0004	= fs / Es			
appendix	a =	300	= h						
appendix	ε_1 =	0.0005	$= \varepsilon_s (a-x) / (d-x)$						
	For limiting design surface crack width of 0.2mm								
	(BS8007) ε_2 =	$[b_t(h-x)(a'-x)]/[3E_sA_s(d-x)]$	(from CoP Conc. 2013)			=	0.0011		
	ε_m =	$\varepsilon_1 - \varepsilon_2$	=	-0.0006					
	Effective cover =	$d_c = c + d_b / 2$	=	55.0	mm				
	a_{cr} =	$[(s/2)^2 + d_c^2]^{0.5} - d_b / 2$		=	109.1	mm			
	Design surface crack width			ω	=	$3a_{cr}\varepsilon_m / [1+2(a_{cr}-c_{min}) / (h-x)]$			
					=	-0.11	mm		
					<	Allowable surface crack width = 0.2 mm			**OK !**



Prepared by:
Check by:

Project: Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che — Date: 13/10/2025

Subject: Structural Design for Box Culvert **(Checking of Base Slab)** — Project No.: P25086

Ref. — Output

1.0 Dimension of Base Slab

For the base slab of the manhole, we consider

Width = 3600 mm
Length = 1000 mm
Thickness = 300 mm

2.0 Loading on base slab

Consider the loading of base slab more conservatively as the loading on wall, we have

Shear Force on side wall (ULS)	$V_{ULS,wall}$ =	=	51.5	kN per m run
Bending Moment on side wall (ULS)	$M_{ULS,wall}$ =	=	8.6	kNm per m run
Shear Force on side wall (SLS)	$V_{SLS,wall}$ =	=	36.1	kN per m run
Bending Moment on side wall (SLS)	$M_{SLS,wall}$ =	=	6.0	kNm per m run

CoP Conc. 2013

3.0 RC Design against Bending Moment and Shear Force

For the dimension of base slab with,

Width = 3600 mm
Length = 1000 mm
Thickness = 300 mm

WITH

V_{ULS} = 51.5 kN per m run
M_{ULS} = 8.6 kNm per m run
V_{SLS} = 36.1 kN per m run
M_{SLS} = 6.0 kNm per m run

Consider the RC design in a width of 1m, we have

3.1 Reinforcement for moment:

With M_ULS,slab = 8.6 kNm per m run

Width	b	=	1000	mm	
Effective depth	d	=	265	mm	
Yield strength of steel	f_y	=	500	N/mm^2	
Concrete strength	f_{cu}	=	30	N/mm^2	
Span	L	=	3600	mm	
Base slab thickness	t_{base}	=	300	mm	
Table 4.2 Concrete cover		=	30	mm	

c.l. 6.1 3.1.1 Checking for compression steel

eq 6.8 K' (for fcu ≦ 45N/mm^2) = 0.156

eq 6.7 $K = M / (f_{cu} \times b \times d^2)$ = 0.004 < K' = 0.156 **Compression reinforcement IS NOT required**

3.1.2 Checking for tensile steel

eq 6.10 $z = d [0.5 + \sqrt{} (0.25 - K/0.9)]$ = 1d **> 0.95d, and thus use 0.95d** = 252 mm

eq 6.11 Required steel reinforcement $A_{s,req} = M / (0.87 \times f_y \times z)$ = 78 mm^2

Provided steel reinforcement T 10 @ 200 mm spacing $A_{s,prov}$ = 393 mm^2

Percentage of reinforcement $p_s = A_{s,prov} / bd$ = 0.15 %

c.l. 9.3.1 > minimum percentage of steel = 0.13 % **OK !**

c.l. 9.2.1.3 < maximum percentage of steel = 4.00 % **OK !**

3.1.3 Checking for shear reinforcement

Design shear stress $v = V / (b_v \times d)$ = 0.194 MPa

c.l. 6.1.2.5 Design concrete shear stress v_c = $0.79/\gamma_m \times p_s^{1/3} \times (400/d)^{1/4} \times (\max(40, f_{cu})/25)^{1/3}$

= 0.434 MPa > v **Shear reinforcement is NOT required**

c.l. 7.3.4 3.1.4 Checking for deflection

Table 7.4 $M_{SLS} / (b \times d^2)$ = 0.086

Table 7.4 Design service stress in tension reinforcement f_s = 66 N/mm^2 $= 2/3 \times f_y \times A_{st,req} / A_{st,prov} \times$ < $0.8 \times f_y$ $\beta_b = 1$

Table 7.4 Modification factor = $0.55 + (477 - f_s) / (120 [0.9 + M/bd^2])$ = 4.4 > 2.0 Take 2.0

Table 7.3 Basic span / effecive depth ratio = 7 (for cantilever)

c.l. 7.3.4.4 Modified span / effecive depth ratios (for tensile reinforcement) = 14 = Basic span / d × Modification factor (Tensile)

Actual span / effecive depth ratio = 14 < 14 **OK !**

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Base Slab)**	Project No.:	P25086

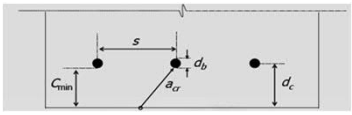
Ref. Output

3.1.5 Checking for crack width

Ref.								
c.l. 7.2.1	Allowable surface crack width		w	=	0.2	mm		
c.l. 7.2.3	Thickness of element		h	=	300	mm	= t_{base}	
	Width of element to be considered		b	=	1000	mm	1m width	
	Effective depth		d	=	265	mm		
	Diameter of steel bars		d_b	=	10	mm		
	Spacing of steel bars		s	=	200	mm		
	Concrete Cover		$c = c_{min}$	=	30	mm		
	Concrete strength		f_{cu}	=	30	N/mm^2		
	Strength of steel		f_s	=	66	N/mm^2		
	Young's Modulus of steel		E_s	=	200	kN/mm^2		
	Applied moment		M_{SLS}	=	6.0	kNm		
	Area of reinforcement		$A_{s,prov}$	=	393	mm^2		
	Depth of the neutral axis		x	=	132.5	mm	≦ 0.5d	
c.l. 7.2.3	Strain in the tension reinforcement		ε_s	=	0.0003	= fs / Es		
appendix	a = 300 = h							
appendix	ε_1 = 0.0004 = ε_s (a-x) / (d-x)							

For limiting design surface crack width of 0.2mm

(BS8007)	ε_2 = $[b_t(h-x)(a'-x)]/[3E_sA_s(d-x)]$	(from CoP Conc. 2013)		=	0.0009		
	ε_m = $\varepsilon_1 - \varepsilon_2$	=	-0.0005				
Effective cover	= $d_c = c + d_b / 2$	=	35.0	mm			
	a_{cr} = $[(s/2)^2 + d_c^2]^{0.5} - d_b / 2$		=	100.9	mm		
Design surface crack width			ω	=	$3a_{cr}\varepsilon_m / [1+2(a_{cr}-c_{min}) / (h-x)]$		
				=	-0.08	mm	
				<	Allowable surface crack width = 0.2 mm		**OK !**



APPENDIX D

Design Drawings

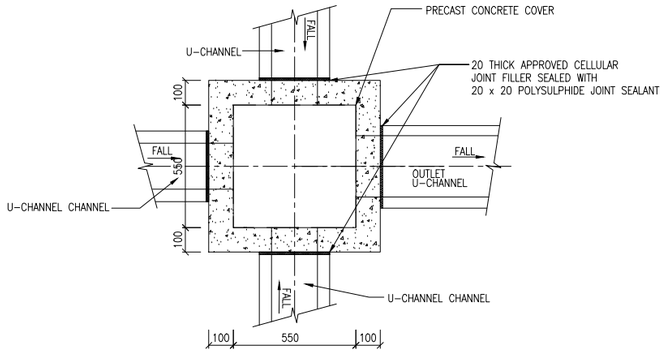
ISO A1 594mm x 841mm

GENERAL NOTES:

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

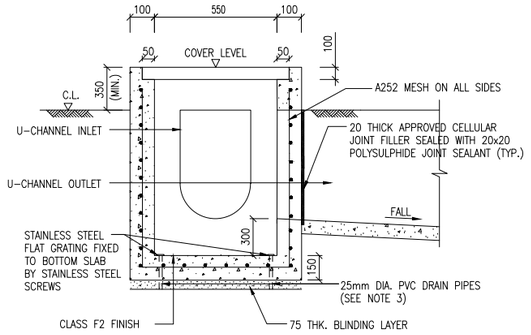
SCHEDULE OF CATCHPIT WITH SAND TRAP

CATCHPIT NO.	CATCHPIT TYPE	COVER LEVEL (mPD)	BTM. LEVEL (mPD)	INLET LEVEL (mPD)	OUTLET LEVEL (mPD)
CP1	2	+26.00	+25.24	+25.40	+25.39
CP2	2	+24.50	+22.82	A: +22.98 B: +23.25	+22.97
CP3	2	+25.00	+23.73	+23.89	A: +23.88 B: +23.88
CP4	2	+25.00	+23.98	+24.14	+24.13
CP5	1	+25.00	+24.51	+24.67	+24.66
CP6	1	+24.50	+23.12	+23.28	+23.27
CP7	1	+24.50	+23.39	A: +23.55 B: +23.56	+23.54
CP8	2	+24.00	+23.08	A: +23.24 B: +23.27	+23.23
CP9	1	+24.00	+23.38	+23.54	+23.53
CP10	2	+25.00	+23.99	+24.15	+24.14
CP11	1	+26.00	+25.21	+25.37	+25.36
CP12	1	+26.00	+25.28	+25.44	+25.43
CP13	1	+26.00	+25.33	A: +25.49 B: +25.50	+24.48
CP14	1	+26.00	+24.64	A: +24.80 B: +25.18 C: +24.90	+24.79
CP15	2	+25.00	+24.00	A: +24.55 B: +24.16	+24.15
CP16	1	+24.50	+24.00	A: +23.51 B: +23.40 C: +23.39	+24.38



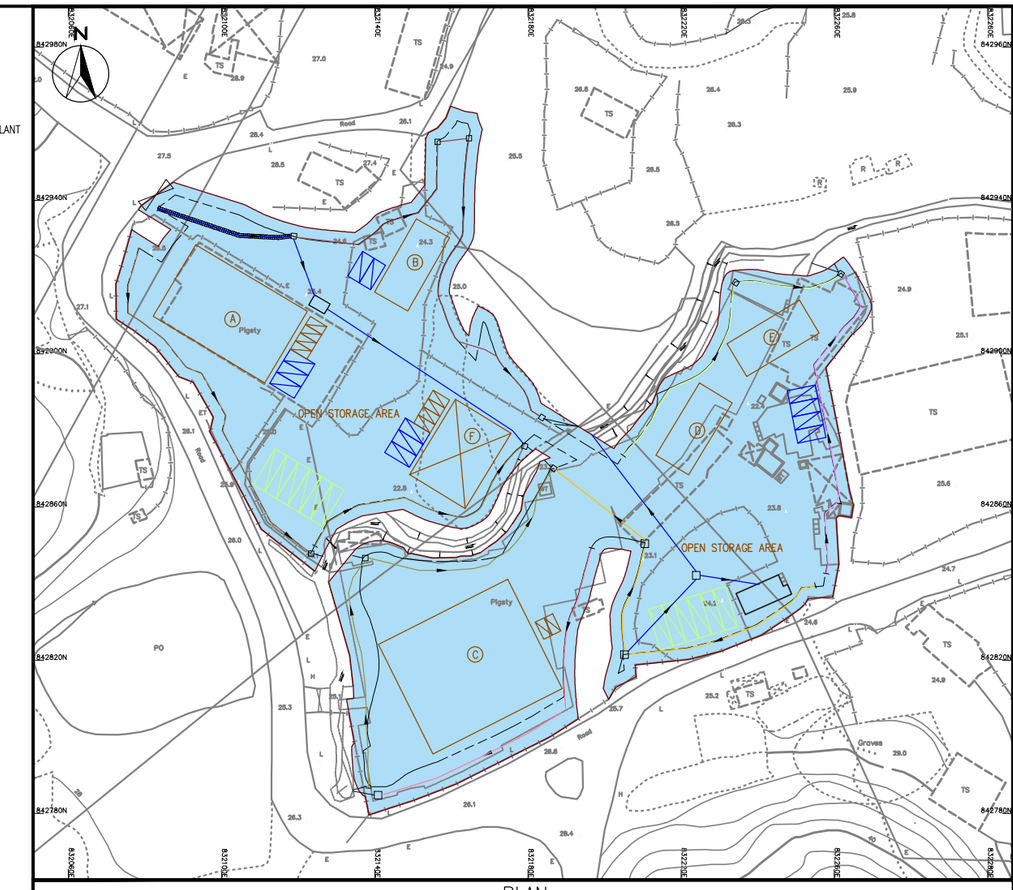
PLAN OF CATCHPIT (TYPE 1&2)

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



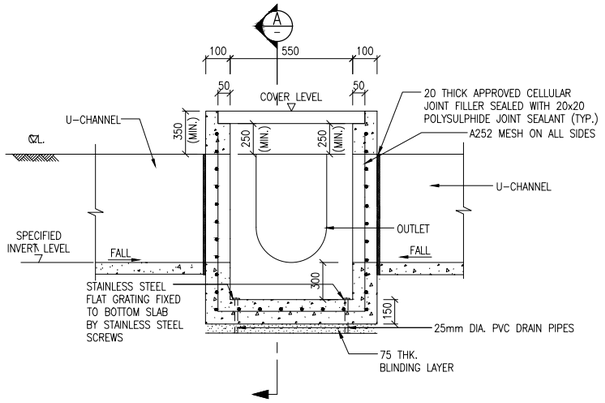
SECTION A

SCALE: 1:100



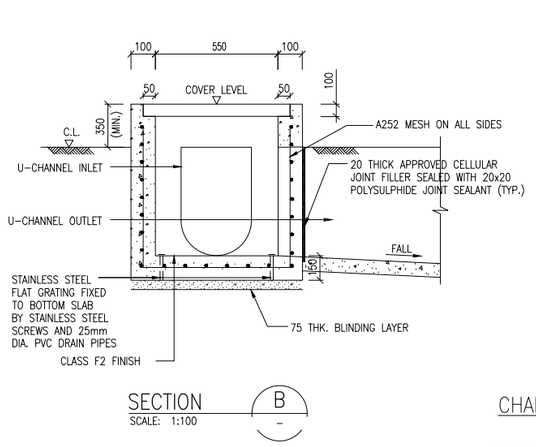
PLAN

SCALE 1:600



SECTION OF TYPE 2 CATCHPIT

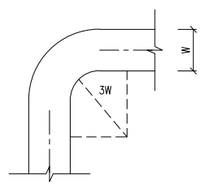
SCALE 1:100



SECTION B

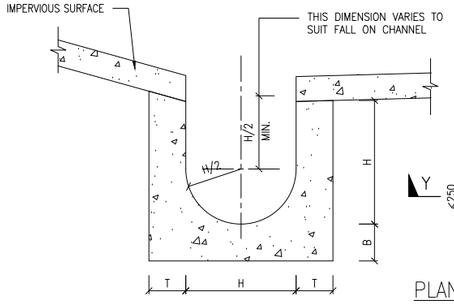
SCALE: 1:100

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



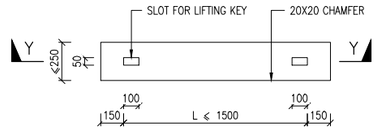
CHANNEL CHANGING DIRECTION THROUGH BENDS

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



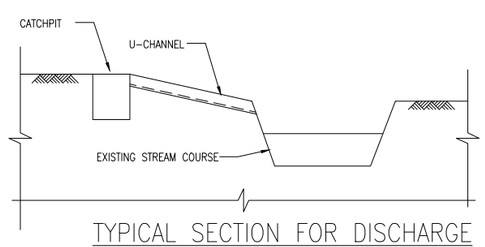
DETAILS OF U-CHANNEL

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



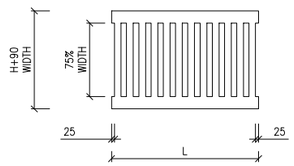
PLAN OF PRECAST CONCRETE COVERS

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



TYPICAL SECTION FOR DISCHARGE CONNECTION

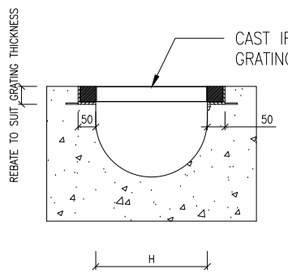
N.T.S.

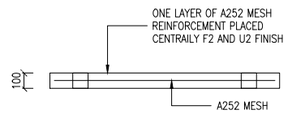


L = 600mm FOR H < 375mm
L = 400mm FOR H > 375mm

CAST IRON GRATING FOR U-CHANNELS

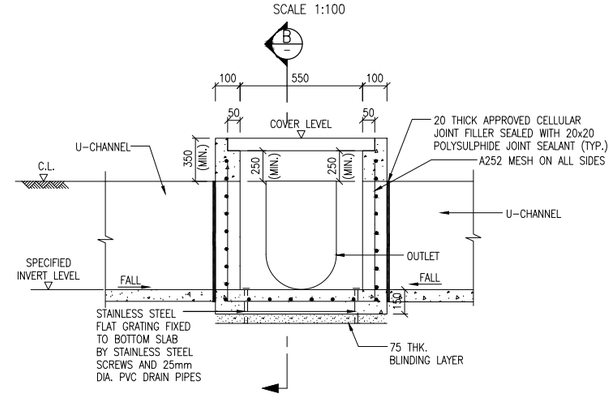
(REFERENCE : CEDD DWG. NO. C2412D)
N.T.S.





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

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



SECTION OF TYPE 1 CATCHPIT

SCALE 1:100

LEGEND:

- PROPOSED APPLICATION SITE
- STRUCTURE
  - A: 737 sq.m (about)
  - B: 220 sq.m (about)
  - C: 1200 sq.m (about)
  - D: 220 sq.m (about)
  - E: 220 sq.m (about)
- OPEN-SIDED STRUCTURE
  - F: 393 sq.m (about)
- PRIVATE CARPARKING SPACE 5m(L) X 2.5m(W) (10 nos.)
- L/UL BAY FOR LGVS 7m(L) X 3.5m(W) (12 nos.)
- L/UL BAY FOR HGVS 11m(L) X 3.5m(W) (12 nos.)
- PROPOSED 11m WIDE VEHICULAR ACCESS

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

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MP		05/25
DESIGNED BY:	MP		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	AS SHOWN (A3)		
CAD FILE:	WNG_25086_C_DRA_001		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

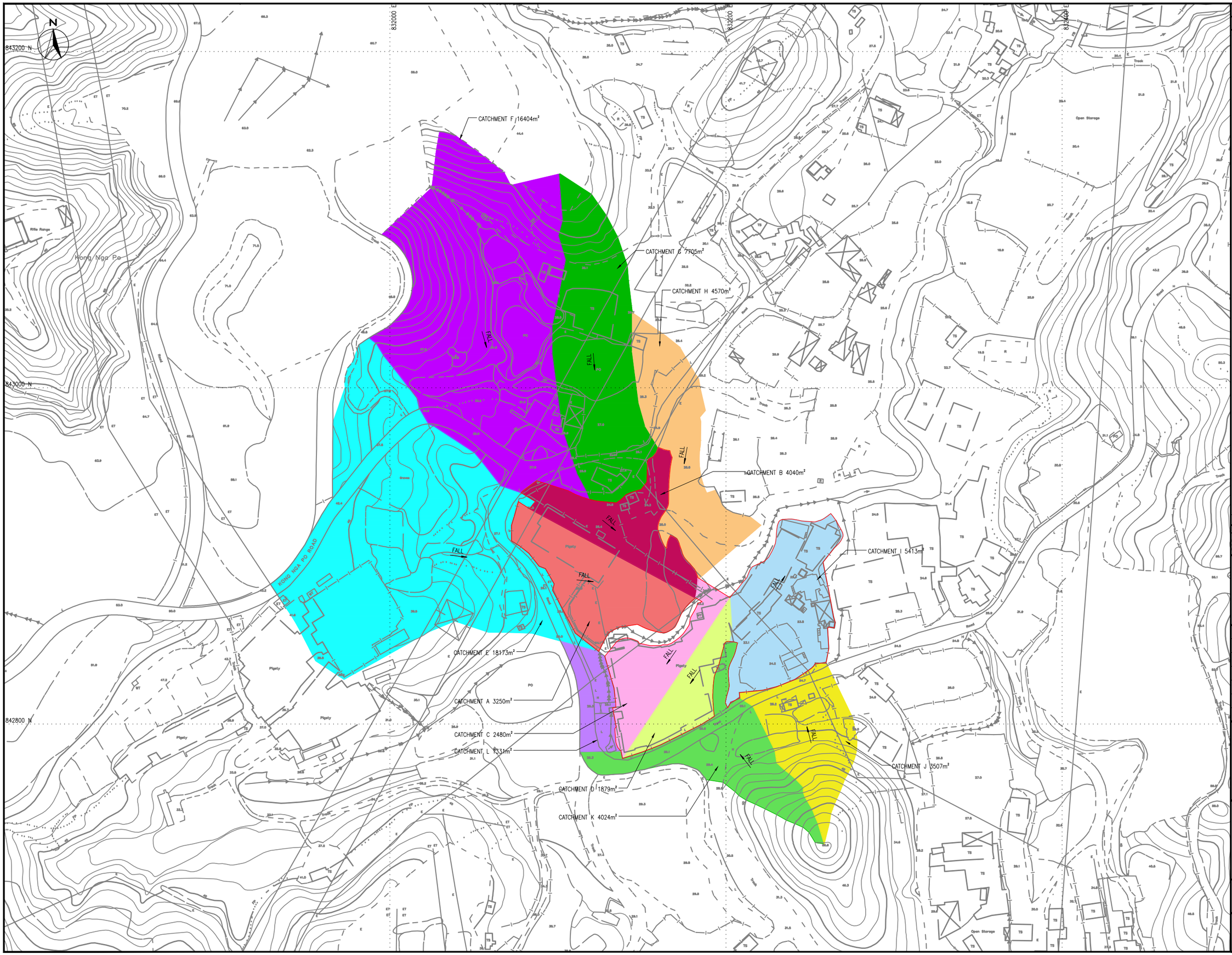
DRAWING TITLE:
GENERAL NOTES AND LAYOUT PLAN

DRAWING NO:	REV:
WNG/25086/C/DRA/001	B

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.

Plot File by: USER42 15/1/2026 5:44:23 pm
PATH \\192.168.1.26\eng4-r\2025\P25086 (Drainage Consultancy Services For S.16 Planning Application For Proposed Temporary Open Storage And Ancillary Office At Lot Nos 346 In DD87 At Ping Che)\05-Drawing\20251010\WNG_25086_C_DRA_001.dwg

ISO A3 297mm x 420mm



B.D. REF.

F.S.D. REF.

LEGEND:

FLOW DIRECTION

BOUNDARY OF LOTS FOR THIS APPLICATION

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:

DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:

PROPOSED EFFECTVE CATCHMENT AREA FOR SURFACE RUNOFF AFFECTING SUBJECT LOTS

DRAWING NO: WNG/25086/C/DRA/002

REV: –

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.
和翔顧問工程師有限公司

ISO A3 297mm x 420mm

832100E 832150E 832200E 832250E

842950N 842900N 842850N 842800N

CP11
C.L. +26.00mPD
I.L.+25.37mPD

CP12
C.L. +26.00mPD
I.L.+25.44mPD

500 UC (FALL 1:100)

PROPOSED VEHICULAR ACCESS

U CHANNEL (BRANCH 9)
I.L.+26.00mPD

COVERED CHANNEL (HEAVY DUTY)

COVERED CHANNEL (LIGHT DUTY)

CP13
C.L. +26.00mPD
I.L.A +25.49mPD
I.L.B +25.50mPD

3000

500 UC (FALL 1:100)

U CHANNEL (BRANCH 1)
I.L.+26.50mPD

U CHANNEL (BRANCH 8)
I.L.+25.50mPD

500DIA. PIPE

CP14
I.L.A. +24.80mPD
I.L.B. +25.06mPD
I.L.C. +24.90mPD

STORMWATER STORAGE TANK A

STORMWATER STORAGE TANK A
5m(W) x 4m(L)x2.5m(H)
WITH 500 DIA. INLET PIPE
I.L.+25.04mPD

450 UC (FALL 1:100)

500 UC (FALL 1:100)

3000

COVERED CHANNEL (LIGHT DUTY)

CP10
C.L. +25.00mPD
I.L.+24.15mPD

UNDERGROUND CONCRETE BOX CULVERT TO BE CONSTRUCTED

400 UC OUTFALL
I.L. 24.05mPD

400 UC

CP15
C.L. +25.00mPD
I.L.A+24.55mPD
I.L.B+24.16mPD

500 UC OUTFALL
I.L. +24.52mPD

U CHANNEL (BRANCH 7)
I.L.+24.10mPD

CP2 C.L. +25.00mPD
I.L.A +22.98mPD
I.L.B +23.25mPD

500DIA. PIPE OUTFALL
I.L. 22.94mPD

400 UC OUTFALL
I.L. +22.95mPD

400 UC (FALL 1:100)

500DIA. PIPE

500 OVERFLOW UC (FALL 1:100)

400 UC OUTFALL
I.L. +23.85mPD

U CHANNEL (BRANCH 4)
I.L.+25.10mPD

U CHANNEL (BRANCH 2)
I.L.+25.30mPD

CP1
C.L. +26.00mPD
I.L.+25.40mPD

450 UC OUTFALL
I.L. +25.48mPD

CP3
C.L. +25.00mPD
I.L.+23.89mPD

400 UC

COVERED CHANNEL (LIGHT DUTY)

CP6
C.L. +24.50mPD
I.L.+23.28mPD

CP16
C.L. +24.50mPD
I.L.A +23.51mPD
I.L.B +23.40mPD
I.L.C. +23.39mPD

COVERED CHANNEL (LIGHT DUTY)

U CHANNEL (BRANCH 6)
I.L.+24.10mPD

STORMWATER STORAGE TANK B

500 PIPE

3012

3007

U CHANNEL (BRANCH 5)
I.L.+24.10mPD

STORMWATER STORAGE TANK 13m(W) x 6m(L)x2.5m(H)
WITH 500 DIA. INLET PIPE
I.L.+23.35mPD

CP7
C.L. +24.50mPD
I.L.A+23.56mPD
I.L.B+23.56mPD
I.L.C+23.55mPD

400 UC OUTFALL
I.L. +24.07mPD

CP4
C.L. +25.00mPD
I.L.+24.14mPD

U CHANNEL (BRANCH 3)
I.L.+24.50mPD

3042

CP5
C.L. +25.00mPD
I.L.+24.67mPD

400 UC OUTFALL
I.L. +24.00mPD

CP9
C.L. +24.00mPD
I.L.+23.54mPD

CP8
C.L. +24.00mPD
I.L.A +23.24mPD
I.L.B +23.27mPD

400 UC OUTFALL

LEGEND:

- FLOW DIRECTION OF STREAM
- BOUNDARY OF LOTS FOR THIS APPLICATION
- PROPOSED 11m WIDE VEHICULAR ACCESS

B.D. REF.

F.S.D. REF.

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

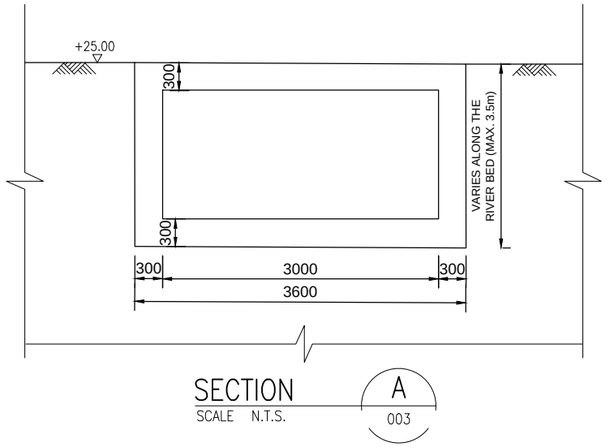
DRAWING TITLE:
PROPOSED DRAINAGE SYSTEM

DRAWING NO: WNG/25086/C/DRA/003

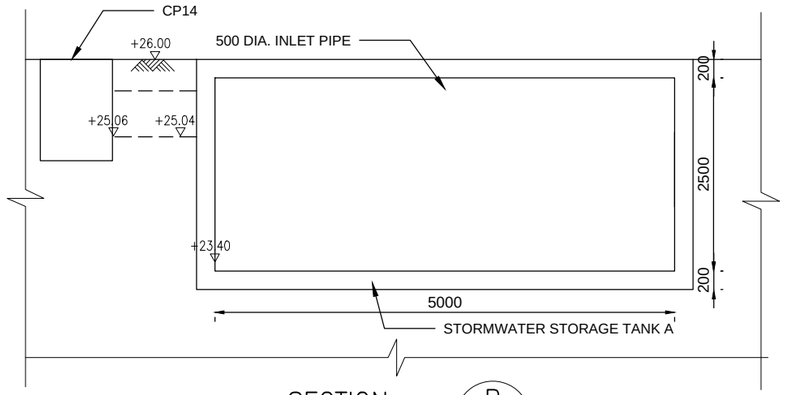
REV: C

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.
榮遠顧問工程師有限公司

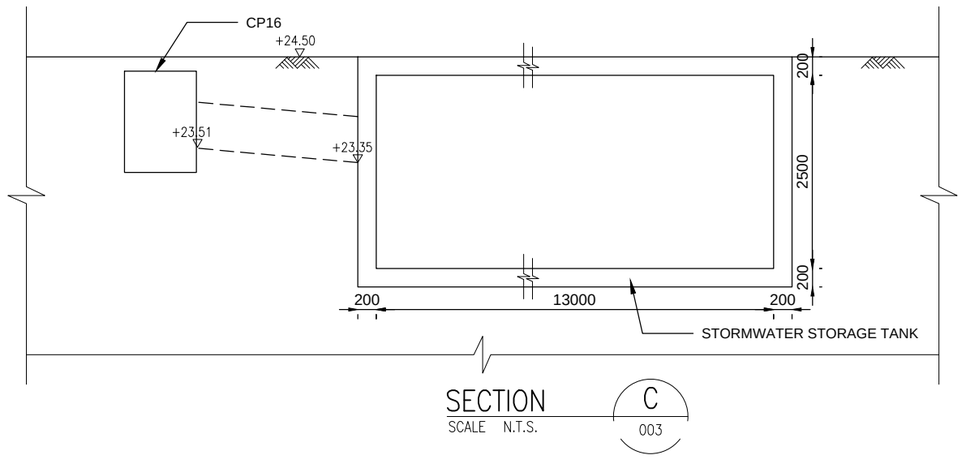
ISO A3 297mm x 420mm



SECTION A
SCALE N.T.S.
003



SECTION B
SCALE N.T.S.
003



SECTION C
SCALE N.T.S.
003

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

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:
SECTION OF STORMWATER STORAGE TANK

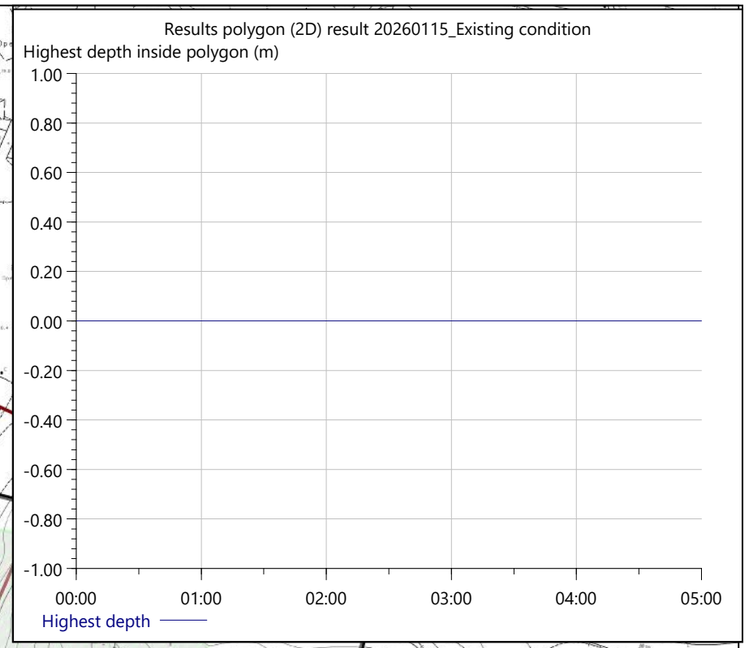
DRAWING NO:	REV:
WNG/25086/C/DRA/004	–

威翔建築工程師有限公司
WINGS & ASSOCIATES
CONSULTING ENGINEERS LTD.

APPENDIX E

InfoWorks result: Drainage Condition – Existing

baseline



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0.08123
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0.05214
0.10137
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0.32547
0.22128
0.36275
0.24721
r6
0.98689
0.04187
0.03914
0.03302
0.33321
0.12756
0.11602
r4
0.02255
0.42145
0.10444
0.01154
0.82749
r3
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r2
0.13792
0.17145
0.01745
0.00999
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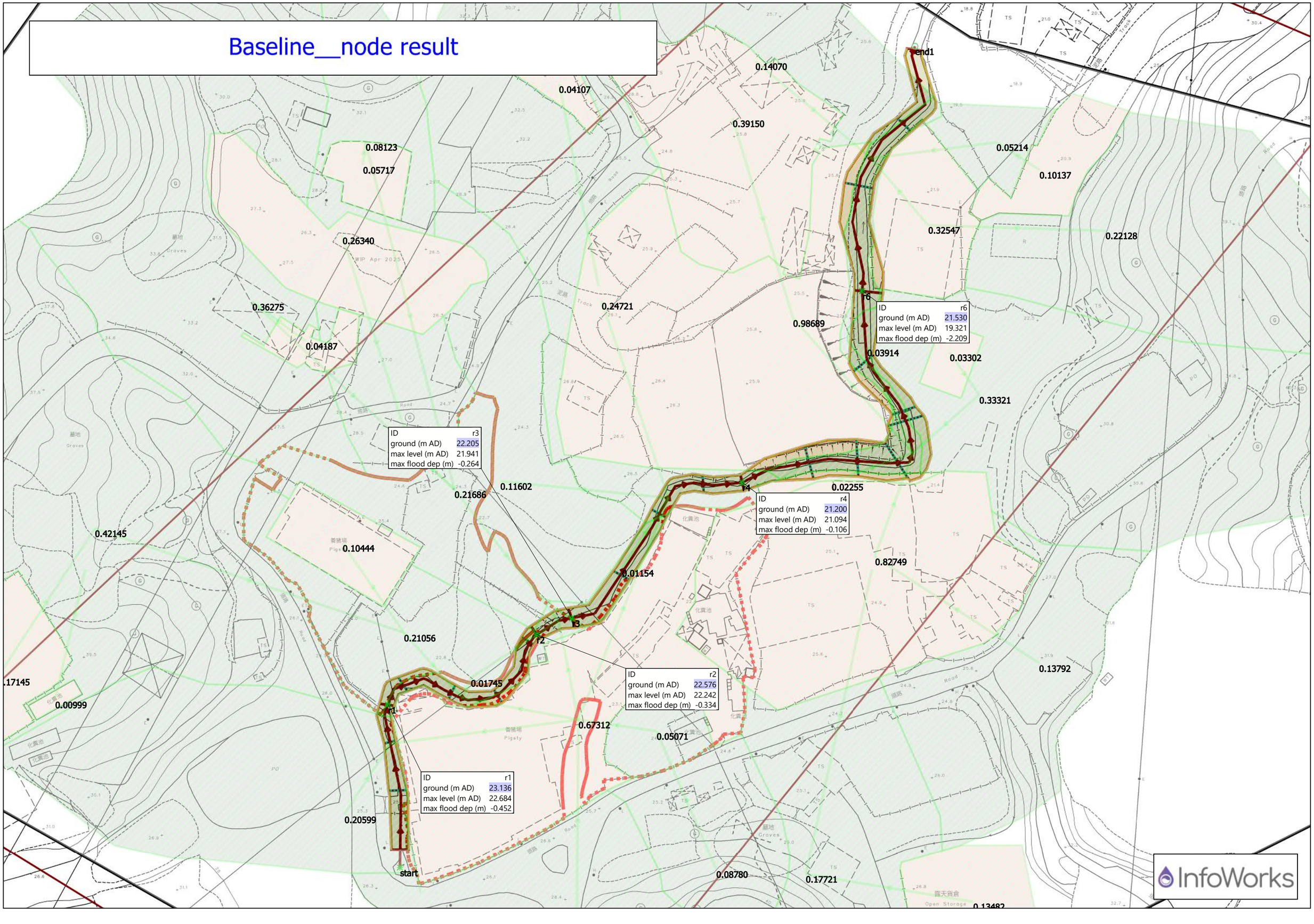
InfoWorks

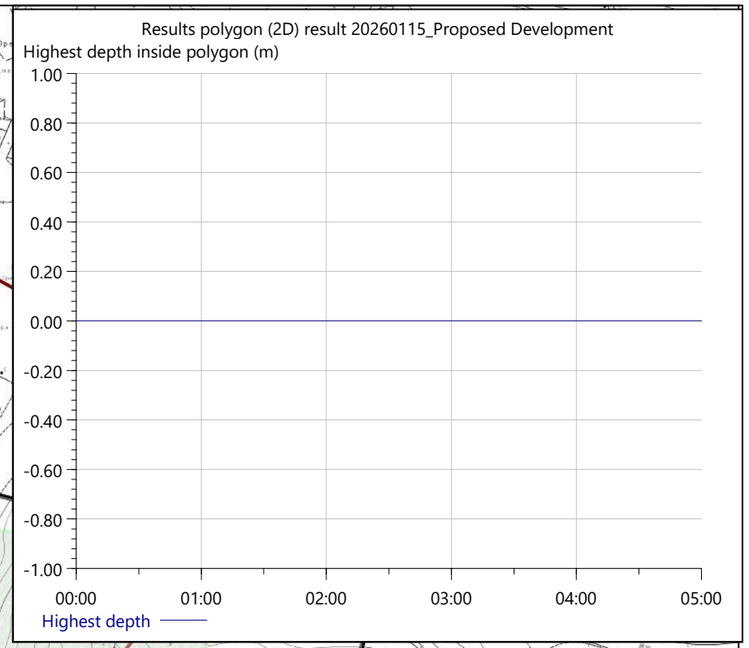
Baseline__node result



APPENDIX F

InfoWorks result: Drainage Condition – Proposed Drainage System

proposed development



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0.05214
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0.24721
r6
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0.03914
0.03301
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r4
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0.01154
0.74588
r3
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r2
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start
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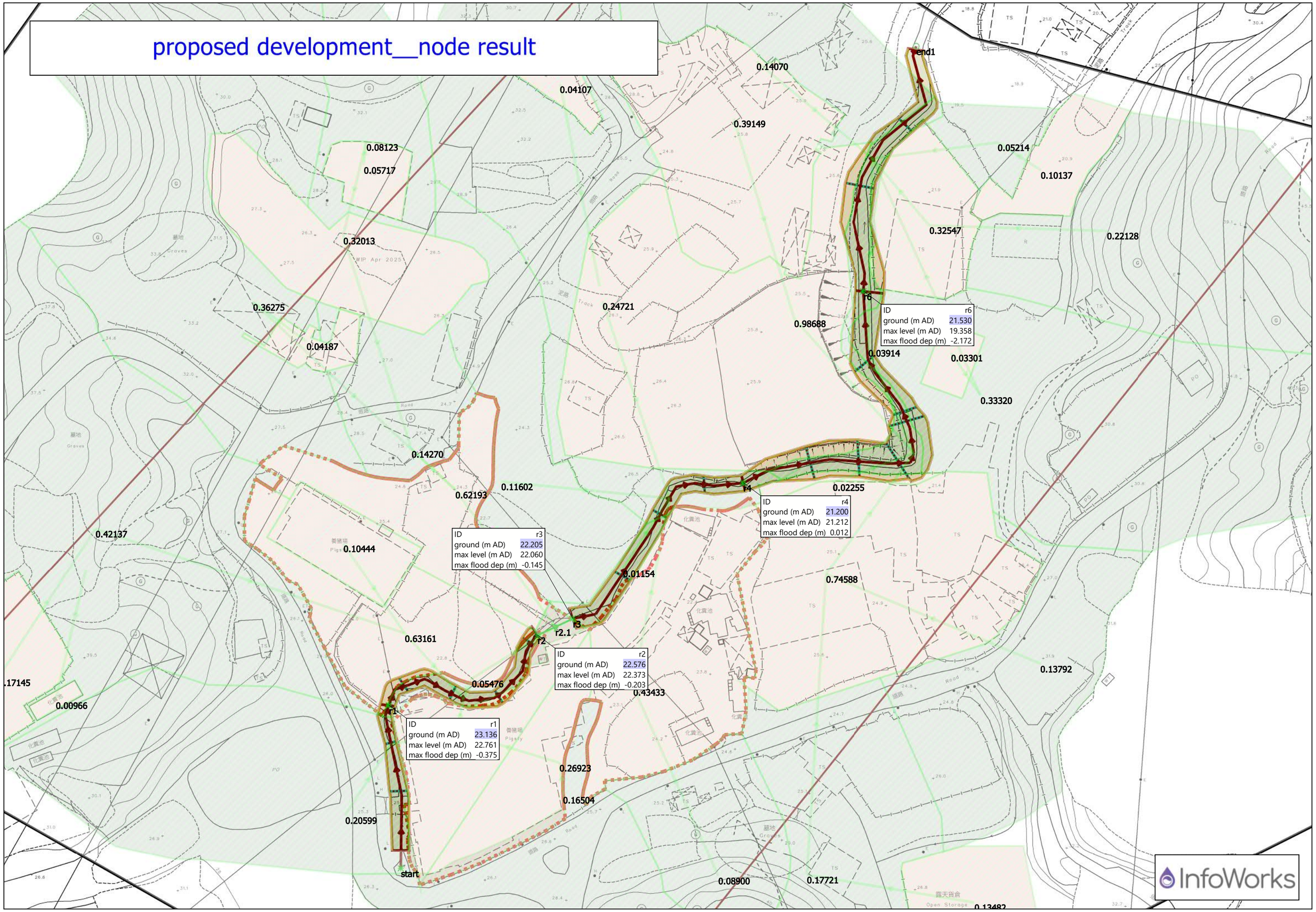
InfoWorks

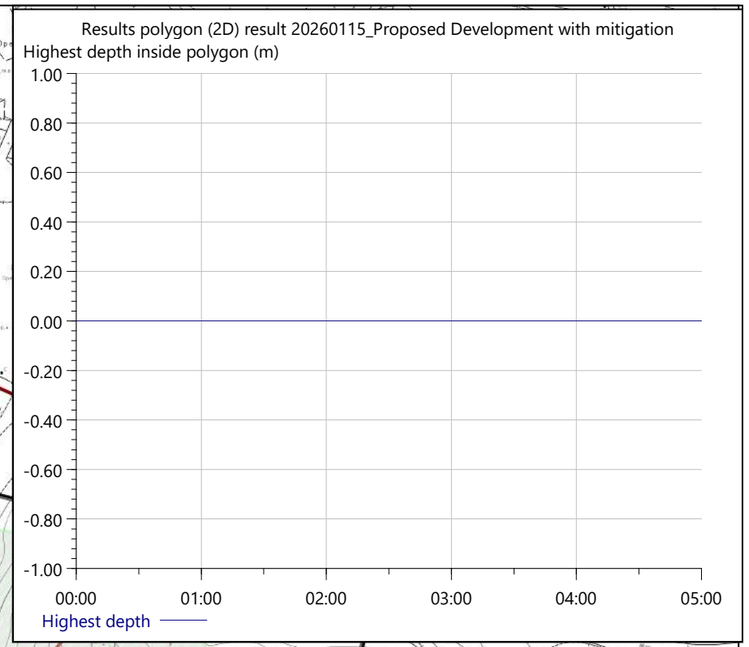
proposed development__node result



APPENDIX G

InfoWorks result: Drainage Condition – Proposed Drainage System (With improvement measure)

proposed development_with mitigation



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0.63161
0.13792
0.17145
0.05476
0.00966
0.39128
0.16504
0.20599
0.08900
0.17721
0.13482
end1
r6
r4
1
2
2.1
Storage tank
r3
r2
dummy4.1
r1
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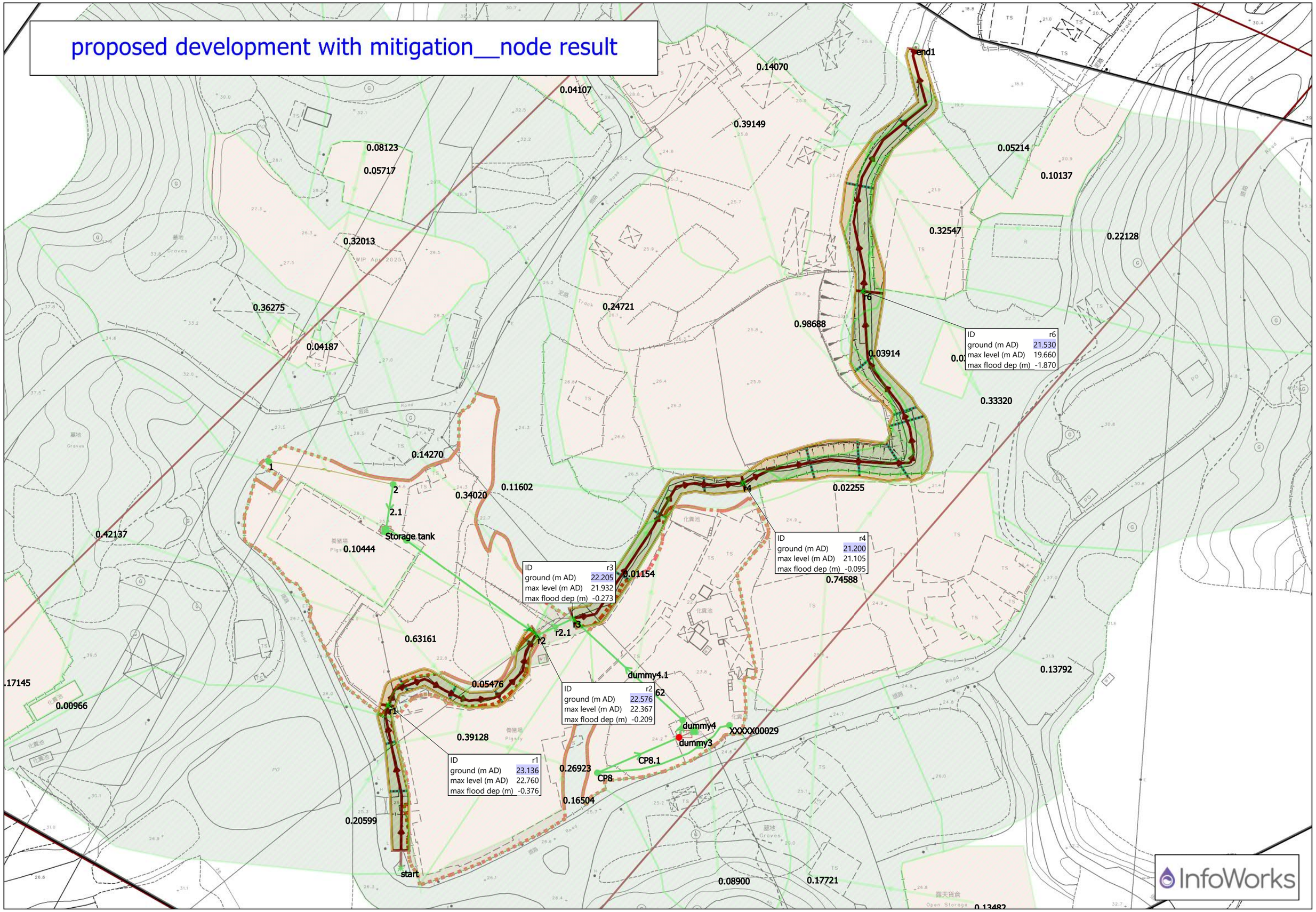
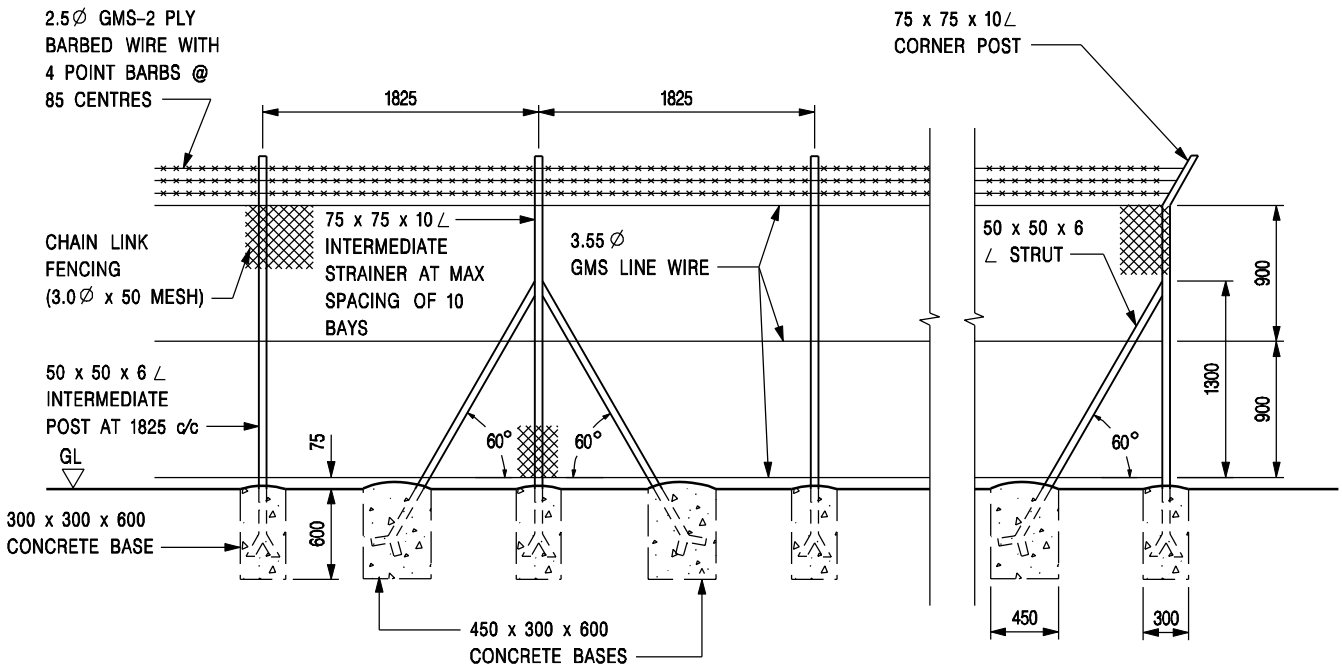
CP8.1
CP8
start
KONG NGA PO ROAD
InfoWorks

proposed development with mitigation__node result



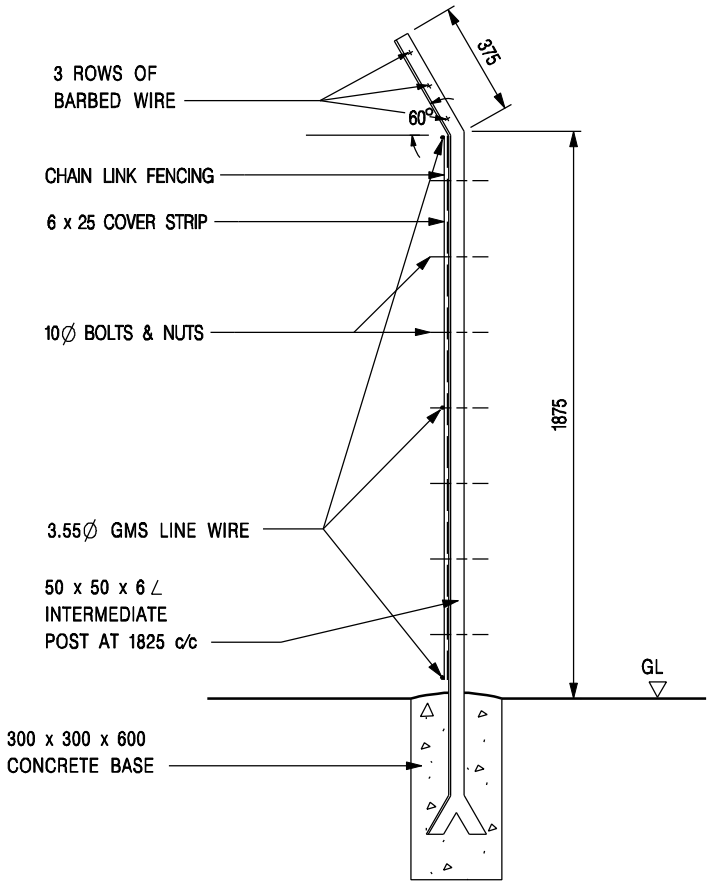
APPENDIX H

CEDD Standard Drawing C1006C – Chain Link Fence



ELEVATION OF INTERMEDIATE POST
INTERMEDIATE STRAINER & CORNER POST

(SCALE 1 : 50)



NOTATION :

GMS – GALVANIZED MILD STEEL

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE SHALL BE GRADE 20 /20. THE USE OF RECYCLED AGGREGATES SHALL BE CONSIDERED.
3. ALL POSTS AND FENCES SHALL BE HOT DIP GALVANIZED TO BS EN ISO 1461.
4. WELDS SHALL BE WIRE BRUSHED AND PAINTED WITH TWO COATS OF ALUMINIUM MASTIC PAINT.
5. ALL STEELWORK SHALL BE OF GRADE S275 TO BS EN 10025.

INTERMEDIATE POST

(SCALE 1 : 25)

REF.	REVISION	SIGNATURE	DATE
C	NOTE 5 AMENDED	Original Signed	09.2018
B	NOTE 3 AMENDED; NOTE 5 ADDED	Original Signed	03.2015
A	NAME OF DEPARTMENT AMENDED	Original Signed	02.2005

CHAIN LINK FENCE

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE AS SHOWN

DATE JAN 1991

DRAWING NO. C1006C

Appendix IV

Response to Comment Tables and Further Information provided (dated 19.9.2025, 14.10.2025, 17.12.2025, 14.1.2026, 2.2.2026, 5.2.2026)

Department	Date	Comments	Responses to Departmental Comments
Lands Department	15.9.2025	1. The application site comprises Government land (GL) and Old Schedule Agricultural Lots held under the Block Government Lease which contains the restriction that no structures are to be erected without the prior consent of the Government. The applicant is required to seek permission to erect structures on GL but no right of access via GL is granted to the application site.	Noted. The current application aims to better utilize available land resources that have previously been developed and used as a pigsty. It is intended to utilize GL directly connecting to private lots as access for the proposed use. The proposed use allows better utilization of the application site, offering favorable relocation options for future relocations of brownfield operations in the New Territories, thus allowing smooth implementation of the New Development Areas whilst ensuring the continuity of local businesses. The applicant is committed to managing to subject GL at their own cost.
		2. Lot No. 347 RP in D.D. 87 is currently covered by Modification of Tenancy (MoT) No. 38957 for erection of temporary structures for dwelling, bathroom, kitchen and shade. This office reserve the rights to take enforcement action for any irregularities and cancel the MoT as appropriate.	Noted. It is intended to utilize the application site for the proposed use, existing structures would be demolished and replaced by new temporary structures.
		3. I must point out the following irregularities covered by the subject planning application have been detected by this office: <u>Unauthorised structures within the said private lots covered by the planning application</u> There are unauthorised structures on the private lots. The applicant should immediately rectify the lease breaches and this office reserves the rights to take necessary lease enforcement action against the breaches without further notice.	A majority of the application site has been operated as a pigsty by the former user which is under a valid Pigsty Farm Licence (No.LK148) issued by Agriculture, Fisheries and Conservation Department (AFCD) for the erection of these structures for agricultural purposes including incorporating the government land (See Attached). Therefore, the existing farm structures are not considered unauthorized as they has been approved by relevant government departments under the process of granting the Farm Licence. Regarding the occupation of government land, a tolerance fee was paid for the occupation of government land, and an application for a Short-Term Tenancy was submitted by the former user in 2023 pending for reply from the Lands Department. As operations of the pigsty gradually ceased in 2024, leaving the application site idle and unutilized, the applicant became the new owner of the lots in 2025 and intends to utilize the application site for the proposed use, submitting the current application to activate the idle

		Unlawful occupation of Government land adjoining the said private lots with unauthorised structures covered by the planning application LandsD objects to the planning application since there is illegal occupation of GL which regularization would not be considered according to the prevailing land policy. The lot owners should immediately cease the illegal occupation of GL and remove the unauthorised structures as demanded by LandsD. Notwithstanding the applicant's submission and the Town Planning Board's approval (if any) of the subject planning application, this office reserves the rights to take necessary land control action against the illegal occupation of GL without further notice.	site. At present, the application site is partly occupied by the applicant, who has not engaged in any operations on government land. The current application aims to utilize the application site by demolishing the existing structures and constructing new temporary ones. The applicant is committed to removing the existing structures at their own expense upon approval of this application. They will apply to the Lands Department for a Short-Term Waiver and Short-Term Tenancy to permit the erection of structures within the private lots and the occupation of government land within the application site boundary, contingent upon approval of the current application. The applicant intends to utilize the application site along with the government land only after receiving the necessary planning approvals. Therefore, there will be no occupation of government land by the applicant prior to the application's approval.
		4. The following irregularities not covered by the subject planning application have been detected by this office: Unauthorised structures extended from Lot No. 361 RP in D.D. 87 to adjoining private lot not covered by the planning application There are unauthorised structures extended from Lot No. 361 RP in D.D. 87 to adjoining private lot not covered by the subject planning application. The lot owner should immediately rectify the lease breaches and this office reserves the rights to take necessary lease enforcement action against the breaches without further notice. Unlawful occupation of Government land not covered by the planning application The GL adjoining Lot No. 361 RP in D.D. 87 has been illegally occupied with unauthorised structures without permission.	The structures extended from Lot No. 361 RP in D.D. 87 to adjoining private lot is not owned/ utilized by the applicant. The applicant is committed to liaise the adjoining lot owner in removing the subject structures, so as to utilise the application site as intended. The applicant is committed to removing the unauthorised structures not covered by the subject planning application within the application site.

		The GL being illegally occupied is not included in the application. Any occupation of GL without Government's prior approval is an offence under Cap. 28. This office reserves the rights to take necessary land control action against the illegal occupation of GL without further notice.	It is intended to utilize the application site with government land after receiving planning approval, hence, there will be no occupation of government land by the applicant before the application is approved.
		5. The lot owners shall <u>either</u> (i) remove the unauthorised structures not covered by the subject planning application and cease the illegal occupation of the GL immediately; or (ii) include the unauthorised structures in the subject planning application for further consideration by the relevant departments <u>and</u>, subject to the approval of the Town Planning Board to the planning application which shall have reflected the rectification or amendments as aforesaid required, apply to this office for Short Term Waiver (STW) and Short Term Tenancy (STT) to permit the structures to be erected and the occupation of GL. The applications for STW and STT will be considered by the Government in its capacity as a land owner and there is no guarantee that they will be approved. In particular, notwithstanding the approval of the Town Planning Board, the GL might be capable of separate alienation, hence, the size of GL (if approved under the STT) is subject to further consideration by the Government and would not necessarily follow the size of the GL in the subject planning application. Besides, the STW would be processed on whole lot basis. And the STW and the STI, if approved, will be subject to such terms and conditions including the payment of backdated waiver fee/rent from the first date when the unauthorised structures were erected and the occupation of GL as well as administrative fees considered appropriate to be imposed by LandsD. In addition, LandsD reserves the right to take enforcement action against the lot owners for any breach of the lease conditions, including the breach(s) already in existence or to be detected at any point in time and land control action for any unlawful occupation of GL. Besides, given the proposed use is temporary in nature, only erection	The lot owners is committed to removing the unauthorised structures not covered by the subject planning application within the application site. It is intended to utilize the application site along with the government land only after receiving the necessary planning approvals. Therefore, there will be no occupation of government land by the applicant prior to the application's approval. Upon approval of the application, the applicant will apply to the Lands Department for a Short-Term Waiver and Short-Term Tenancy to permit the structure(s) erected within the private lots and the occupation of Government land within the application site boundary upon approval of the current application.

		of temporary structure(s) will be considered.	
		6. Unless and until the unauthorized structures and unlawful occupation of GL are duly rectified by the lot owners, please take it as this office's objection to the application which must be brought to the attention of the Town Planning Board when they consider the application.	Ditto.

香港法例第139L章
《公眾衞生 (動物及禽鳥) (禽畜飼養的發牌) 規例》
Public Health (Animals and Birds)
(Licensing of Livestock Keeping) Regulation, Cap. 139L

飼養禽畜牌照
LIVESTOCK KEEPING LICENCE

持牌人相片
Photo of Licensee

(只適用於個人持牌人)
(For individual licensee only)

飼養禽畜牌照編號：[redacted]
Livestock Keeping Licence No.

~~現批准*~~ _____ ~~先生 / 女士~~
~~Permission is hereby granted to Mr. / Ms.*~~

~~香港身份證號碼* (首4個字母連數字)：~~ _____
~~Hong Kong Identity Card No.* (First 4 alphanumeric characters)~~

現批准* CHARM GRAND LIMITED (公司/機構名稱)
Permission is hereby granted to * (Name of Company/Organisation)

商業／機構登記號碼 (首8位數字) [redacted]
Business / Organisation Registration No. (First 8 digits)

獲授權代表姓名 謝志洪 先生／~~女士~~
Name of Authorised Representative (Mr. / ~~Ms.~~)

飼養 4000隻 ~~雞~~／豬／~~其他~~，請註明：_____
to keep ~~chickens~~ / pigs / ~~others, please specify~~

於* [redacted] 。
at*

獲批採用的禽畜廢物處理系統為 濕處理法 。
The approved livestock waste treatment system is

隨附的農場圖則塗上紅色處為獲批給牌照用以飼養禽畜的處所 (獲批處所)**。持牌人照片貼於右上角。
The premises licensed for livestock keeping (the Approved Premises)** are coloured red on the farm plan attached. A photograph of the licensee is attached at the top right hand corner.

本牌照乃根據香港法例第139L章《公眾衞生 (動物及禽鳥) (禽畜飼養的發牌) 規例》發出，持牌人必須遵守隨附的牌照條件。
This licence is issued in accordance with the Public Health (Animals and Birds) (Licensing of Livestock Keeping) Regulation, Cap. 139L and the licensee shall comply with the licence conditions attached.

牌費：$ 3,900
Licence Fee

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Payment Receipt No.

發出日期：1/4/2025
Issue date

(MA Wai-chung, Peter)

漁農自然護理署署長(馬惠忠 代行)
for *Director of Agriculture, Fisheries and Conservation*

* 如持牌人的姓名／名稱或身份證號碼／商業／機構登記號碼或獲授權代表有變，必須在72小時內以郵寄方式 (地址：新界上水粉錦公路蓮塘尾大龍實驗農場) 或傳真方式 (傳真號碼： 2461 4649) 通知禽畜農場牌照組。
* If there is any change in the name or the identity card number / business / organisation registration number or the authorised representative of the licensee, the Livestock Farm Licensing Section should be notified of the change within 72 hours by post to Tai Lung Experimental Station, Lin Tong Mei, Fan Kam Road, Sheung Shui, New Territories or by fax on 2461 4649.

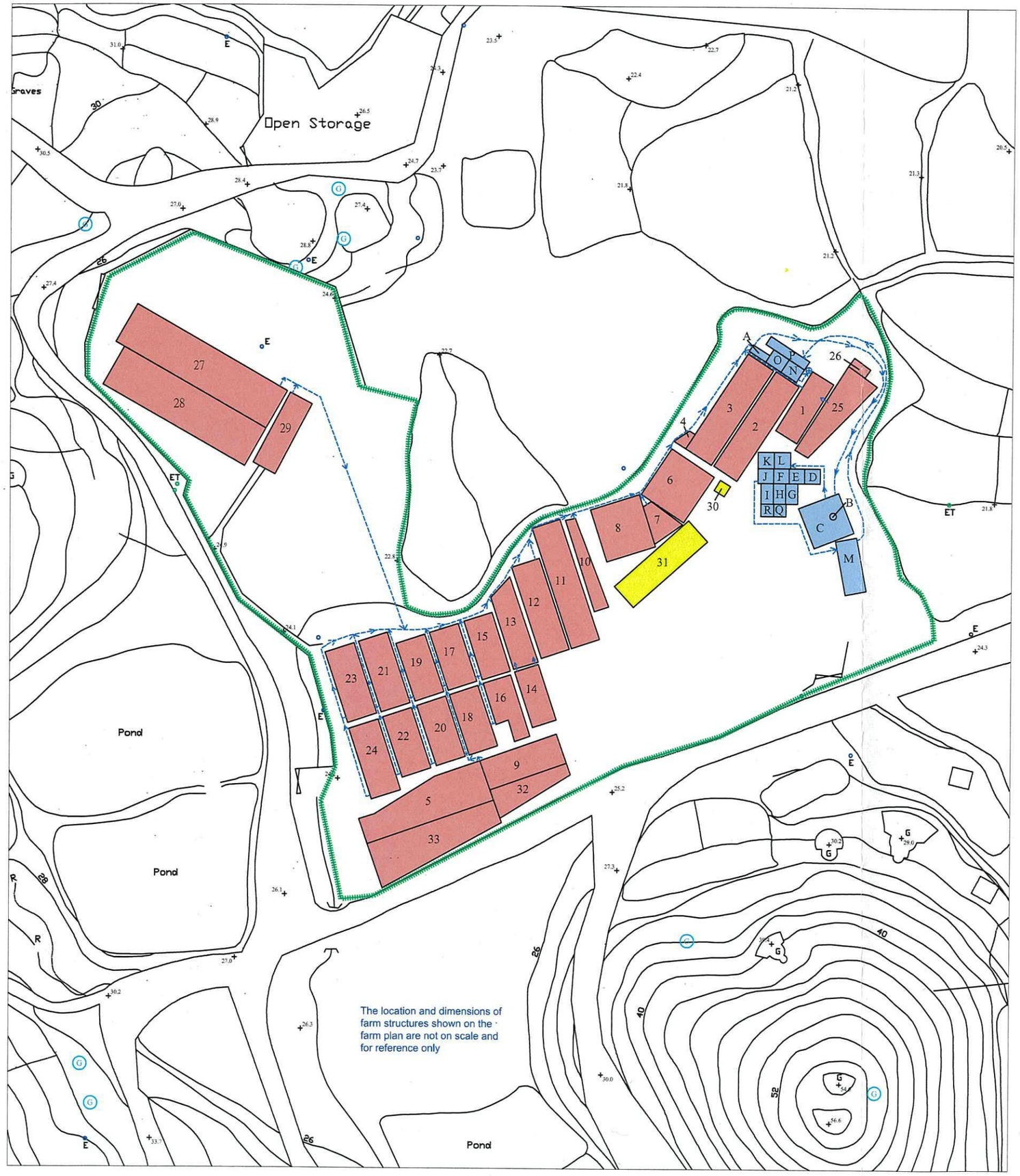
** 本牌照不得視為更改獲批處所或其所在土地的用途的批准或准許。持牌人必須確保為在獲批處所和其所在土地飼養禽畜取得有關方面給予同意、批准或准許。
** This licence shall not be taken as an approval or permission to change the use of the Approved Premises or the land where it stands/they stand. The licensee should ensure that the relevant consent, approval or permission is obtained for the use of the Approved Premises and the land it stands/they stand for the purpose of livestock keeping.

S/No. 0000037

職員專用
For official use only

牌照修訂記錄
Licence Amendment Record

日期 Date	修訂事項 Amended items	辦理人員姓名、職位及簽署 Action Officer's name, post and signature



農場圖則

農場編號 : LK 148

持牌公司 : Charm Grand Limited

農場地址 : 新界打鼓嶺恐龍坑李屋村第87約348RP, 349RP, 361RP, 366RP號地段及政府土地

測量圖編號 : 3-NW-22A / 22B

序號	農用構築物編號	用途	尺寸
1	* Nil	豬屋	6.10 米 x 17.15 米
2	* Nil	豬屋	6.80 米 x 27.90 米
3	* Nil	豬屋	7.50 米 x 27.90 米
4	* Nil	豬屋	10.50 平方米
5	* Nil	豬屋	290.00 平方米
6	* Nil	豬屋	12.60 米 x 13.50 米
7	* Nil	豬屋	49.25 平方米
8	* Nil	豬屋	12.60 米 x 13.40 米
9	* Nil	豬屋	20.00 米 x 7.60 米
10	* Nil	豬屋	73.24 平方米
11	* Nil	豬屋	7.25 米 x 31.15 米
12	* Nil	豬屋	7.25 米 x 23.60 米
13	* Nil	豬屋	126.38 平方米
14	* Nil	豬屋	6.15 米 x 14.40 米
15	* Nil	豬屋	7.25 米 x 15.10 米
16	* Nil	豬屋	95.84 平方米
17	* Nil	豬屋	7.40 米 x 14.95 米
18	* Nil	豬屋	7.40 米 x 15.60 米
19	* Nil	豬屋	7.50 米 x 14.95 米
20	* Nil	豬屋	7.50 米 x 15.60 米
21	* Nil	豬屋	7.45 米 x 18.20 米
22	* Nil	豬屋	7.45 米 x 15.60 米
23	* Nil	豬屋	7.55 米 x 18.20 米
24	* Nil	豬屋	7.55 米 x 18.25 米
25	* Nil	豬屋	151.72 平方米
26	* Nil	豬屋	2.50 米 x 5.00 米
27	* Nil	豬屋	10.67 米 x 42.68 米
28	* Nil	豬屋	10.67 米 x 40.24 米
29	* Nil	豬屋	6.10 米 x 19.52 米
30	* Nil	農用貯物室	2.90 米 x 2.95 米
31	* Nil	農用貯物室	6.95 米 x 24.40 米
32	* Nil	豬屋	104.00 平方米
33	* Nil	豬屋	286.00 平方米

編序	廢物處理設施	尺寸
A	收集池	4.85 米 x 1.90 米 x 1.00 米
B	固液分離機	1台
C	廢物貯藏所	110.67 平方米 x 4.00 米
D	凝聚池	3.83 米 x 3.70 米 x 2.50 米
E	凝聚池	3.83 米 x 3.70 米 x 2.50 米
F	兼氣池	3.83 米 x 3.70 米 x 2.50 米
G	兼氣池	5.00 米 x 3.03 米 x 2.50 米
H	兼氣池	5.00 米 x 3.03 米 x 2.50 米
I	兼氣池	5.00 米 x 3.03 米 x 2.50 米
J	兼氣池	3.83 米 x 3.70 米 x 2.50 米
K	調節池	16.08 平方米 x 2.50 米
L	調節池	16.08 平方米 x 2.50 米
M	曝氣池	13.40 米 x 5.30 米 x 5.00 米
N	曝氣池	4.52 米 x 3.70 米 x 4.94 米
O	曝氣池	4.52 米 x 3.70 米 x 4.94 米
P	曝氣池	11.35 米 x 2.30 米 x 5.44 米
Q	凝聚池	9.69 平方米 x 2.50 米
R	凝聚池	9.69 平方米 x 2.50 米

說明：

- 飼養禽畜農用構築物
- 非飼養禽畜之農用構築物
- 廢物處理設施
- 管道
- 排放點
- 農場邊界

* 未獲政府批准而搭建的農舍，將來仍可能會被政府有關部門清拆

授權批准人：

漁農自然護理署署長
(馬惠忠代行)

No.	Comments	Responses
Comments from Transport Department on 20 Aug 2025		
(i)	The applicant should advise and further substantiate the traffic generation and attraction rates used in the TIA can reflect the particular traffic characteristics of the proposed developments;	For the proposed development, the following considerations have been made: • Warehouses and open storage areas: The trip rates for *industrial buildings* have been adopted. This reflects the nature of activities within warehouses and open storage areas, where vehicle trips are primarily associated with the loading/unloading and movement of goods, which is consistent with the operational characteristics of industrial buildings. • Ancillary site/general storage uses: The trip rates for *office use* have been applied. This reflects the operational function of these facilities, which are mainly administrative in nature and are expected to generate staff-related traffic patterns similar to general office use. To ensure that the adopted trip rates adequately reflect the particular traffic characteristics of the proposed developments, the mean rates in the TPDM have been applied in the assessment. This approach provides a balanced and representative estimate of traffic demand. In addition, reference has also been made to previous planning applications (e.g. A/YL-LFS/555) for developments of a similar nature.
(ii)	The applicant shall update the layout plan to indicate the open storage areas and demonstrate the areas would not cause any obstruction to the maneuvering of vehicles;	The layout plan has been updated with the indication of the open storage areas and maneuvering space, as shown in **Figure 2.1A**. Swept path analyses for 11m HGV, 7m LGV, and 5m private car have been conducted, as shown in **Figures 2.2A, 2.3A, and 2.4A**. The results demonstrate that the ingress/egress points and parking space arrangements are adequate to accommodate the maneuvering of the above vehicle types without obstruction.
(iii)	The applicant should review and revise the floor area used in Table 4.2 of the TIA, which should include the sum of areas for Structure A,	**Table 4.2** has been revised and updated to include the total floor areas of Structure A, Structure C, and the open storage areas. Consequently, **Table 4.5** - Estimated Development Flow has also been updated. The 2028 Design Scenario in **Table 5.4** - Future Year Junction Capacity Assessment has been revised accordingly, together with **Figure 5.3A** and the

	Structure C and the open storage areas;	associated junction capacity calculation sheets.
(iv)	The applicant shall update the layout plan to indicate the width of the ingress / egress point;	**Figure 2.1** has been updated (Revision **A**) to indicate the width of the ingress/egress point, which measures 11.57m.
(v)	The applicant should advise its adequacy on the ingress / egress point for vehicular access arrangement;	**Figures 2.2A, 2.3A and 2.4A** refer. The swept path analyses demonstrate that there will be no difficulties in the maneuvers of 11m HGVs, 7m LGVs, and 5m private cars on the ingress / egress point.
(vi)	The applicant shall demonstrate the satisfactory maneuvering of the goods vehicles entering and exiting the subject site, maneuvering within the subject site and into / out of the parking and loading/unloading spaces, preferably using the swept path analysis;	Swept path analyses for 11m HGVs, 7m LGVs have been conducted and are presented in **Figures 2.2A and 2.3A**. The results demonstrate that goods vehicles can satisfactorily maneuver when entering and exiting the site, circulating within the site, and accessing the parking and loading/unloading spaces.
(vii)	The planned and committed developments listed in Table 5.3 of the TIA should be confirmed with PlanD;	Confirmation has been sought from the PlanD regarding the planned and committed developments listed in Table 5.3 of the TIA. Please refer to bullet point (ii) of reply from PlanD.
(viii)	The applicant shall advise the provision of pedestrian facilities and management measures to ensure pedestrian safety;	A road sign (TS460) will be installed at the site's ingress/egress point to alert both pedestrians and drivers of vehicular movements. Flashing lights will also be provided at the ingress and egress points to further enhance visibility and awareness. Light poles will be provided at the application site to ensure adequate lighting for both vehicles and pedestrians.
(ix)	The applicant shall advise the management/control measures to be	**Figures 2.2A, 2.3A and 2.4A** refer. The swept path analyses demonstrate that there will be no difficulties in internal traffic circulation, as sufficient space for maneuvering vehicles is

	implemented to ensure no queuing of vehicles outside the subject site;	provided throughout the application site. Furthermore, the following management and control measures will be implemented by the Applicant to ensure that there is no queuing of vehicles outside the subject site: 1. Deployment of traffic controllers to regulate vehicle entry and exit from the application site, minimizing conflicts with road traffic; 2. When vehicles are anticipated to enter or leave the site, at least one traffic controller will be stationed at the access point, ensuring vehicles can pass through the site unobstructed.
(x)	The applicant shall advise the measures for preventing illegal parking of visitors' vehicles outside the subject site; and	To prevent illegal parking of visitors' vehicles outside the subject site, the following measures will be implemented: 1. A permit system for visitors will be introduced, allowing only vehicles with prior registration to enter the site. This measure will ensure that sufficient parking space is available on-site and will help prevent illegal parking of visitors' vehicles outside. 2. A trained traffic controller will be deployed to monitor vehicle movements and direct visitors to the designated on-site parking areas.
(xi)	The proposed vehicular access between Kong Nga Po Road and the application site is not managed by TD. The applicant should seek comments from the responsible party.	Noted.

No.	Comments	Responses
Comments from Planning Department on 29 Aug 2025		
(i)	As the Area of Influence (AOI) is not indicated in the TIA, the planned and committed developments could not be ascertained. Please indicate the AOI on plan for our further consideration.	**Section 3.1 – Study Area** has been added to the TIA to describe the extent of the Area of Influence (AOI). In addition, **Figure 3.4** has been included to illustrate the AOI on the plan for reference. The AOI has been defined to cover all relevant junctions along the major access routes of the Proposed Development.
(ii)	Table 5.3 – According to the Explanatory Statement of the approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18, the police facilities to be accommodated at the Kong Nga Po site will have a total floor area of about 35,000m^2. As such, I have no comment on the GFA as shown in Table 5.3.	Noted.
(iii)	It is noted that the proposed use, number of storey of the temporary structures, use of Structure F in Section 2.2, Table 2.1 and Table 2.2 of the TIA do not tally with those in Tables 3 and 4 of the Planning Statement. Please review and amend accordingly.	The proposed use, number of storeys of the temporary structures, and the use of Structure F in **Section 2.2**, **Table 2.1** and **Table 2.2** of the TIA have been revised and updated to align with the Planning Statement.
(iv)	Section 2.2 and Table 2.1 – Apart	Information regarding the uncovered area in **Section 2.2** and **Table 2.1** has been amended

	from circulation/maneuvering space and parking space, the uncovered area should also include area for open storage. Please review and amend accordingly.	to include the area for open storage, in addition to circulation/maneuvering space and parking space.
(v)	According to Section 5.4, the locations of the planned developments are illustrated in Figure **5**.1. However, the drawing no. of "Location of Planned Developments" is Figure **4**.1. Please review and amend accordingly.	The drawing number of "Location of Planned Developments" has been revised to **Figure 5.1** accordingly.

Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Department	Date	Comments	Responses to Departmental Comments
Environmental Protection Department	15.8.2025	1. It is noted from the plans that septic tanks are located within the site. Please clarify whether toilets will be provided within the site and provide information on the associated sewage treatment facility.	It is clarified that stormwater storage tanks are reserved for drainage purposes. During operation of the proposed use, the major source of wastewater will be sewage from toilet generated by staff. Portable toilets would be provided within the application site and licensed collectors will be employed by the applicant to collect and dispose of sewage regularly.

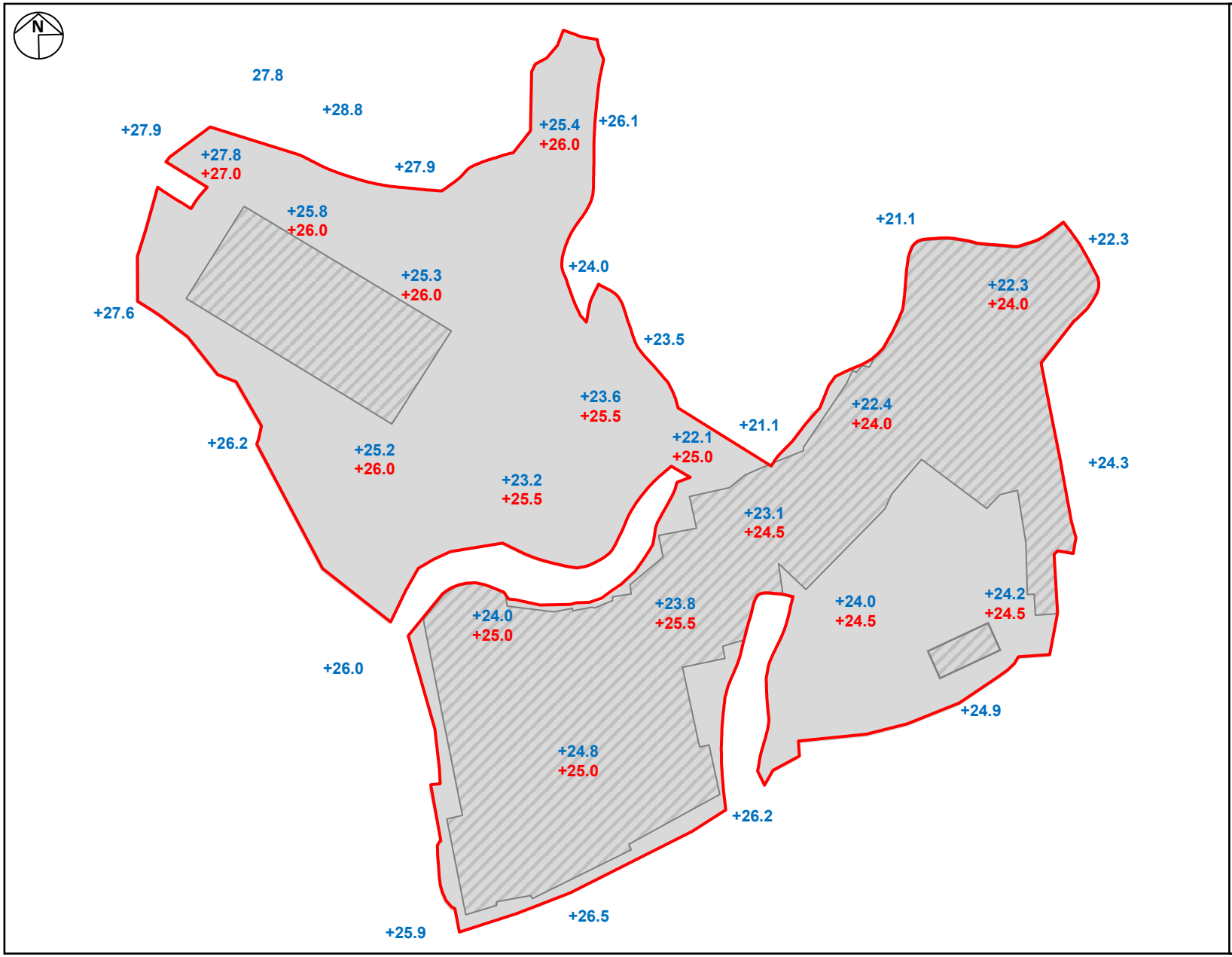
Department	Date	Comments	Responses to Departmental Comments
Drainage Services Department	15.8.2025	a) The application site is large scale in terms of site area, the proposal involves substantial filling works and the existing watercourse within the application site. With consideration of the above-mentioned, the application site is considered as a complicated site and the applicant should submit a Drainage Impact Assessment (DIA) referring to DSD Advice Note No.1 rather than drainage proposal.	Noted. A Drainage Impact Assessment (DIA) has been conducted and attached in the drainage proposal (Appendix E refers).
		b) The DIA shall demonstrate that there would be adequate resources of the applicant to ensure capacity of streamcourse/drainage facilities and flooding susceptibility of the adjoining areas would not be adversely affected by the proposed development and to avoid the site from being eroded and flooded. The applicant is required to assess whether the downstream for drainage connection would have sufficient capacity to receive stormwater runoff. Flood mitigation measures proposed in the DIA and other storm-water drainage facilities should be provided and maintained by the applicant to the satisfaction of this Division.	The downstream capacity is assessed in the DIA. The result showed the downstream has sufficient capacity to receive the natural stormwater runoff and the discharge from the proposed development.
		c) As the existing stream course traversing the application site is crucial to the drainage condition of the region, it should be maintained at all time. The applicant shall be required to place all the proposed works including landfilling works at least 3m away from the top of the banks of existing streamcourse, and all the proposed works in the vicinity of existing streamcourse should not	Noted. Min. 3m away from the top of the banks of existing stream course are reserved for all proposed works. Construction waste will be properly handled to ensure waste materials or sediment enters the watercourse, thereby preventing any adverse drainage impacts during or after construction.

Department	Date	Comments	Responses to Departmental Comments
		create any adverse drainage impacts, both during and after construction.	
		d) Planning Statement Paragraph 4.1.4 and Illustration refer. The existing streamcourse should be aligned by the filling materials, rectification and improvement works should be planned to resume the hydraulic performance of the streamcourse.	The existing streamcourse has a cross-sectional flow area of 0.581m^2. The proposed improvement works provide a box culvert of with 10.5m^2 cross section flow area. This will significantly enhance the hydraulic capacity, improve flow efficiency, and reduce flood risk, thereby resuming and substantially upgrading the hydraulic performance of the drainage system.
		e) Filling plan of the Subject Site under the Drainage Proposal refers. Please advise whether substantial landfilling degrades or analyses the implication to the existing streamcourse and adjoining catchment areas. No land filling on site shall be allowed until the flood mitigation measures have been implemented to the satisfaction of DSD.	It is clarified that no substantial landfilling is involved in the current application. While it is stated that the depth of landfilling will not exceed 3m, it should be noted that the site level of the application site is significantly lower than the adjoining road. The proposed landfilling aims to align the site with road level to prevent flooding (**Illustration 2** refers). In generally, site levels within the application are proposed to be raised by about 1 to 1.5 m to create a flat surface for the proposed use. The proposed levels will maintain a gradual decrease from the southwest to the northeast, and it is anticipated that rainwater will continue to flow from this direction to the river without significant changes. Please refer to **Figure 4** of the Planning Statement. The drainage impact assessment also evaluates the drainage impact at proposed filling level and shows no adverse drainage impact.

Department	Date	Comments	Responses to Departmental Comments
		f) Effective catchment area under the drainage proposal refers. Please advise to delineate the catchment areas. The ground level of area to the west and south of the existing streamcourse is generally higher; therefore, the application site should be studied when assessment to the existing streamcourse traversing the application site is made. Please review the calculations accordingly.	The catchment is delineated according to the geological condition around the site. And further segmented according to different drainage branches. The calculation and the drainage alignment is reviewed and revised.
		g) In view of the scale of development, please evaluate and devise temporary drainage measures to mitigate potential drainage impacts to the adjoining areas during the construction process.	A temporary stormwater drainage system will be installed for the duration of the construction works. Additionally, water pumps will be deployed as needed to enhance drainage capacity and manage surface runoff effectively across the site.
		h) Photos should be submitted clearly showing the current conditions of the area around the site, the existing drainage/flowpaths around the site, the proposed drainage from the site to the downstream drainage watercourses and the existing watercourse at about 20m intervals. The locations of the camera and the direction of each photo should also be indicated on a plan.	Additional photos are supplemented in the proposal. (please refer to Appendix A)
		i) The applicant shall take all precautionary measures to prevent any disturbance, damage, and pollution from the development to any parts of the existing drainage facilities and existing watercourses within the development area. In the event of any damage to the existing drainage facilities and watercourse, the applicant shall be held responsible for the cost of any	Noted.

Department	Date	Comments	Responses to Departmental Comments
		necessary repair works, compensation, and any other consequences arising from this.	
		j) The applicant should be reminded to minimize the possible adverse environmental impacts on the existing watercourse in his design and during construction. DEP and DAFC should be consulted on possible environmental and/or ecological impacts of the development.	Noted.
		k) The proposed drainage works, whether within or outside the site boundary, should be constructed and maintained properly by the applicant and rectify the system if it is found to be inadequate or ineffective during operation at his/her own expense.	Noted.
		l) For works to be undertaken outside the lot boundary, the applicant should obtain prior consent and agreement from DLO/N and/or relevant private lot owners.	Noted.
		m) The applicant shall allow all time free access for the Government and its agent to conduct site inspection on his completed drainage works.	Noted.
		n) The applicant and the successive lot owners shall allow connections from the adjacent lots to the completed drainage works on Government Land when so required.	Noted.
		o) The site is in an area where no public sewerage connection is available. EPD should be consulted	Noted.

Department	Date	Comments	Responses to Departmental Comments
		regarding the sewage treatment/disposal facilities for the proposed development.	



LEGEND:

- Application Site
- Filling of Land (Depth: not more than 3m) (about 16,604m²)
- Existing Paved Area (about 7,448m²)
- +22.3 Existing Level (about)
- +24.0 Proposed Level (about)

(For Identification Only)

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Proposed Land Filling

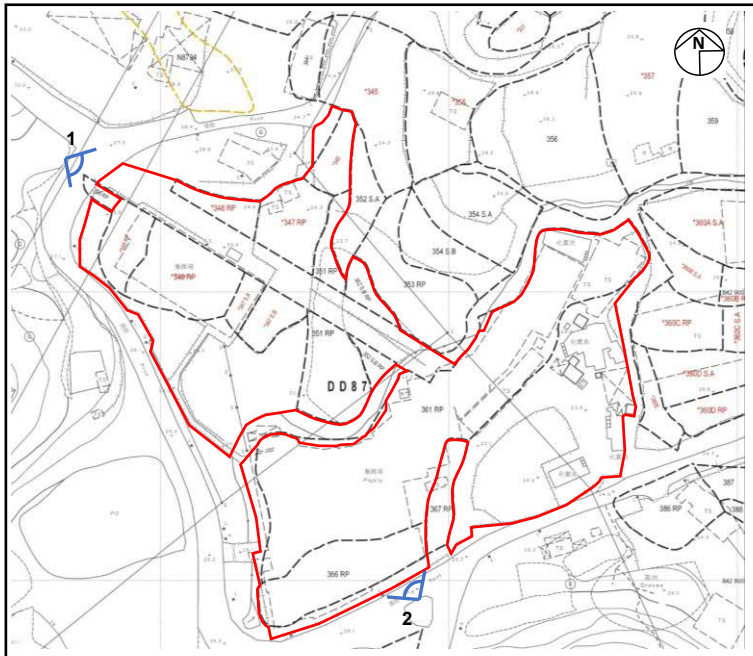
Ref.: ADCL/PLG-10315-R001/F004

Figure:
4

Scale:
Not to Scale

Date:
Jun 2025

AIKON DEVELOPMENT CONSULTANCY LTD.



LEGEND:

The Application Site

Viewpoint

(For Identification Only)

1



Site level of adjoining road: +27.9mPD
Existing Level at the Application Site: +25.8mPD
Proposed Level at the Application Site: +26.0mPD

2



Site level of adjoining road: +26.5mPD
Existing Level at the Application Site: +24.8mPD
Proposed Level at the Application Site: +25.0mPD

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Existing Condition of the Application Site

Ref.: ADCL/PLG-10315-R001/I002

Illustration:
2

Scale:
N.A.

Date:
Oct 2025

AIKON DEVELOPMENT CONSULTANCY LTD.

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Submission of Stormwater Drainage Proposal

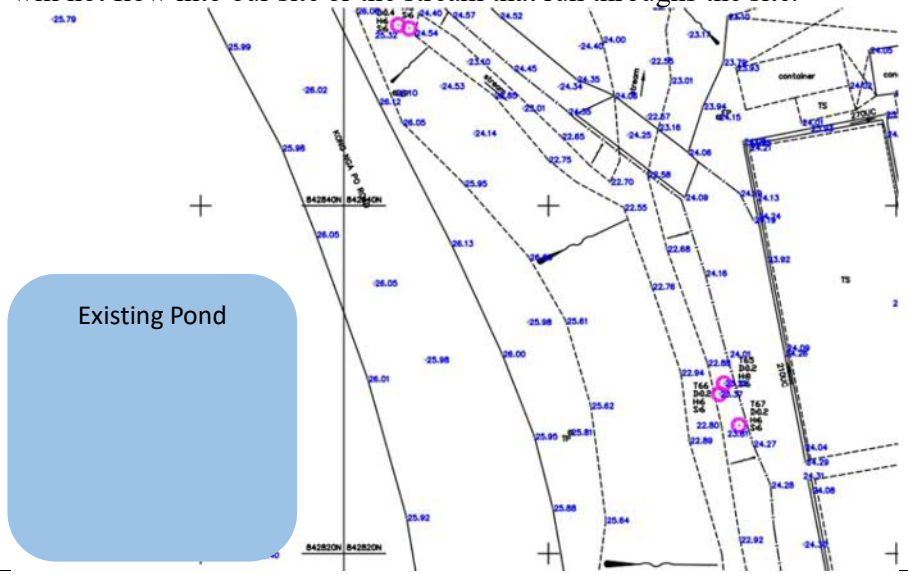
	Comment from DSD	Responses
a)	Figures/Tables in the text should be labeled for ease of reference.	Noted. Tables and figures in the proposal are revised.
b)	For Section 2.5, please advise if the existing ponds form part of the proposed drainage networks.	The pond does not for part of the proposed drainage network. The water flow received from the lot will only be discharged to the existing stream as labelled in the proposal.
c)	Please elaborate on the purpose of discussing Tai Po Kau water level.	The water level is irrelevant to the drainage calculation and the proposal. The text is revised and the table for water level is removed.
d)	Existing streams are not legible in the figure.	The figure is revised.
e)	The concrete pipe linking the existing stream is not found in the drawings.	The drawings are revised to show the concrete chamber.
f)	For drawing WNG/25086/C/DRA/003 1. Please indicate how the CP1, CP2, CP3, CP9 are connected to the downstream system. 2. Please also show the drainage features inside and outside the subject site. 3. Please advise why branches 9 and 10 are discharging to a septic tank.	1. The detailed section of the connection is added in WNG/25086/C/DRA/001 2. All drainage features are showed in the drawing (drainage branches, septic tank and existing stream. 3. Since there are no drainage features nearby, and connecting solely to branch 8 will result to a significant increase of surface channel depth. It is proposed to connect to nearby septic tank as stormwater storage tank, an overflow pipe is installed to discharge the stored water gradually for attenuating the peak flow through the downstream stormwater drainage systems during heavy rainstorms.
g)	Appendix C -Design calculation of u-channel 1. Please advise if the % of utility has included the 10% allowance. 2. Please review the manning's n coefficient by making reference to the latest SDM.	1. The 10% allowance is considered in the calculation, it is shown in the “allowance (reduction %)” column. 2. The coefficient is clarified in the calculation. (n =0.016 assume bad condition)

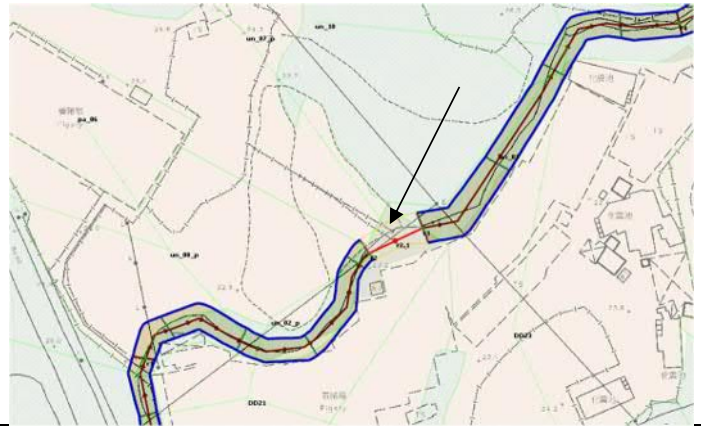
	3. Please clarify how "avg depth" is calculated.	3. Avg. depth is the difference in level of upstream ground level and downstream invert level.
h)	Appendix C - Downstream Capacity Checking - Please indicate outlet (section AA) in drawing DRA/003. - Please indicate concrete pipe in drawing DRA/003. - Please show the upstream catchments of the outlet, and how does that compared to the effective catchments shown in DRA/002. - Please justify the use of water level obtained from Ginfo for a capacity assessment under a design scenario of 50 yrs return period.	Downstream capacity is checked by Infowork. The original hand calculation is removed from the proposal.

A/NE-FTA/264, Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Submission of Drainage Impact Assessmet

	Comment from DSD	Responses
1	Previous comment 1 was not resolved. Please provide single Drainage Impact Assessment document covering study results rather than two separate documents.	Noted, the report will be DIA covering all study results.
2	Section 2.4.1 refers. Storm constants of North District Area instead of HKO headquarter should be adopted. Please revise the text.	The text has been revised. Please refer to the report
3	Section 2 refers. Please advise the source of the cross-section area of existing streamcourse adopted in the hydraulic modelling, and whether it reflects the on-site condition.	The cross-section area adopted in the hydraulic modelling is adopted from the LiDAR data (2020) from CSDI
4.1	Please elaborate in text the modeling results, particularly the hydraulic impacts/potential risks associated with the "proposed development" scenario, and how it is compared to the "existing condition".	The text has been revised. Please refer to the report section 5.
4.2	Figure 3-2 and Figure 3-4: Both figures show the same modeling result. Please clearly label the scenario for each of the figure.	The report has been revised. Please refer to the report section 5.
4.3	Section 3.2.1: "The stormwater will be collected from the newly proposed alignment...". Please elaborate what "newly proposed alignment" refers to.	The "newly proposed alignment" refers to proposed drainage alignment of the lot, which is checked to have sufficient drainage capacity to collect and discharge the stormwater to downstream river. (This section is revised to section 5.2 in the report.)
4.4	Section 3.2.3: "It is proposed that the temp works for the existing drainage diversion are carried out....". Please clarify which section of the drainage system will be diverted and what is the diversion scheme.	There will not be any temporary works to be conduct in the lot so temporary diversion is not required. This section is removed from the report. (This section is revised to section 5.2 in the report.)

4.5	Section 3.2.4: “It is considered that there will be upgrading works required ...”. It is unclear what "upgrading works" are referring to. Please clarify.	The works are mainly desilting and dredging the nearby river and vegetation removal for the lot.
4.6	Please advise if there will be any change of surface runoff due the proposed use. It is observed that water levels in “proposed development” scenario is lower than the “existing condition”. An example is shown below for a selected cross section. Please review and clarify.	The model is revised
5	Section 4.1.1: “flooding for the mid-century and end-century extreme storm events ...” Mid-century scenario was not found. Please clarify.	The report is revised.
6	Please include some site photos of the existing drainage system.	Noted, photo will be updated in the report.
7	There is an existing pond adjacent to the application site (the Site). Please advise if the pond and its upstream channel are discharging to the stream which runs through the Site. If yes, catchment area should be reviewed and revised. 	The pond is assumed to receive stormwater from the surrounding. Also, based on the topographic survey map. The level of the road is higher than the pond. Therefore, even if there are excessive stormwater discharge, it will not flow into our site or the stream that run throughs the site. 

8.1	Please advise the source/reference from which the river cross section data and 2D zone elevation were obtained.	Both river cross-section data and 2D zone elevation are adopted from the LiDAR data (2020) from CSDI
8.2	The model only includes the stream. Please advise if there will be any proposed drainage within the Site.	The model will be used to check the stream condition under case 50A and 50B, while the proposed drainage network will be checked through hand-calculation.
9	Appendix A refers. Please indicate the site boundary for reference.	Noted, will update in the report.
10	Appendix B refers. The figures shown in Appendix B is the model network instead of model result. Please review.	Noted, will be updated
11	Appendix C refers. Please clearly label what scenario each figure refers to.	Noted, will be updated
12.1	The proposed box culvert was not found in the model. Please clarify.	The model is revised. 
12.2	The stormwater storage tank was not found in the model. Please clarify.	the proposed drainage network and the proposed storage tank will be checked through hand-calculation.
13	Please advise if there will be any filling of land or boundary fence/wall. If yes, please assess whether the change of surface elevation or the erection of boundary wall/fence will obstruction the existing overland flow from/to adjacent catchments.	The only filling of land is to level the proposed lot, and the proposed drainage facilitates has sufficient capacity to collect and discharge to downstream. No additional fill or boundary wall will obstruct the overland flow.

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Submission of Drainage Impact Assessment

	Comment from DSD	Responses
1	Table 5.4 refers a) It is observed that the flooding overflow situation at note ID r4 would become worse after the development. Please provide structural mitigation measures, such as provision of storage tank, to control the additional surface runoff discharged to the downstream streamcourse during heavy rain. b) Please consider to run sensitivity analysis to study freeboard at Nodes under 10 year return period scenario.	For the flooding overflow situation at note ID r4, we propose to construct two stormwater storage tanks as a flow control and detention measure to mitigate peak runoff rates from the developed site. Our revised Drainage Impact Assessment (DIA) models the system's performance with the storage tank under the 50-year return period storm event. The results confirm that the proposed tank effectively prevents overflowing situation. Please refer to Appendix F for detailed calculations and supporting figures. Apart from that, the Infoworks ICM model has been updated with the latest topographic survey data (refer to Appendix B) to accurately represent the existing site conditions and downstream ground levels for a reliable assessment.
2	Calculation of the storage tank was not found. Please describe the storage tank's design intent, operational mechanism and hydraulic performance.	The storage tank is modelled in the Infowork. Please refer to Drawing No. WNG/25086/C/DRA/004 for details and dimension of the tank. The layout of branch 9 and branch 5 is modified so when extreme rainfall occurs, the excessive stormwater will flow into the tank instead of the stream. Temporarily storing incoming peak flows, thereby attenuating the discharge.

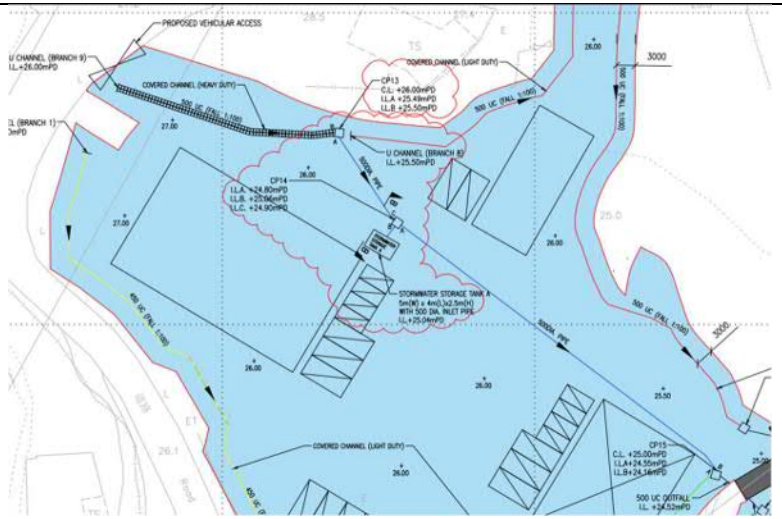


Figure 1: Modification to Branch 9 and storage tank A

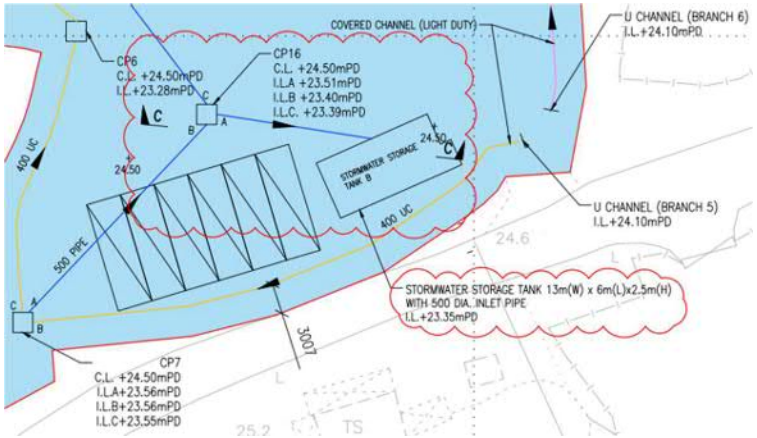


Figure 2: Modification to Branch 5 and storage tank B

Operational Mechanism and Hydraulic Performance: In extreme rainfall events, the inlet pipe connected to the downstream end of existing surface channel diverts into the tank. The stored water in the tank will be emptied by pump after the rainfall

Storage tank A: The inlet level of the tank is set at the highest water level (for branch 9) during the peak flow (see the figure below). This ensures that only

excessive stormwater is diverted into the tank for temporary detention. Once rainfall subsides, the stored water will be pumped out to restore the tank's capacity for the next event.

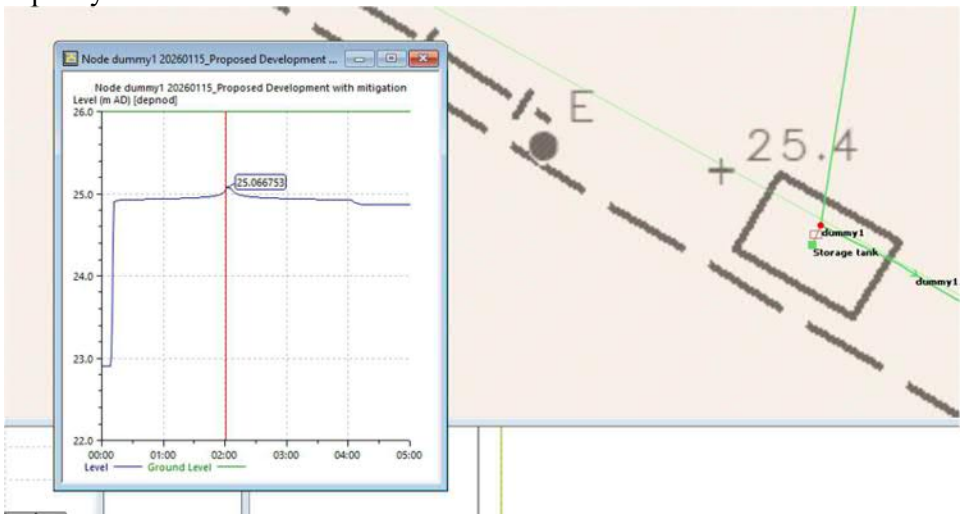


Figure 3: Water level (+25.066 mPD) from the model result for storage tank A

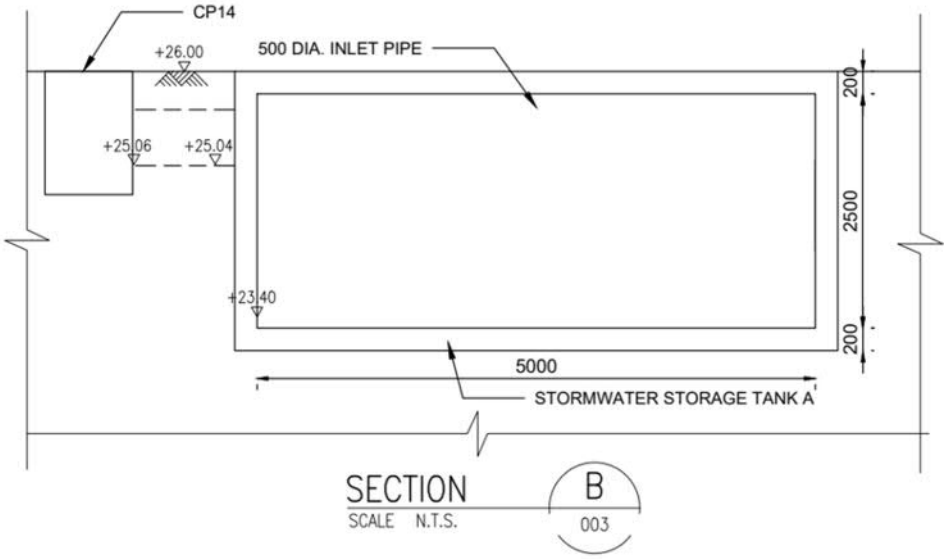
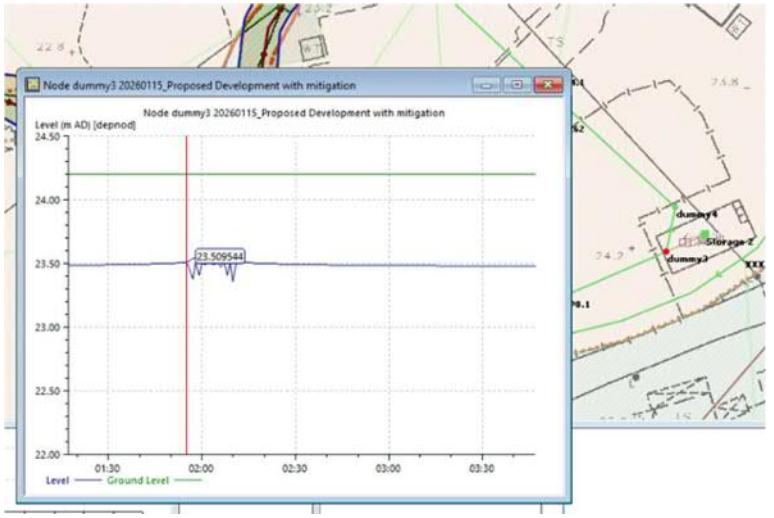
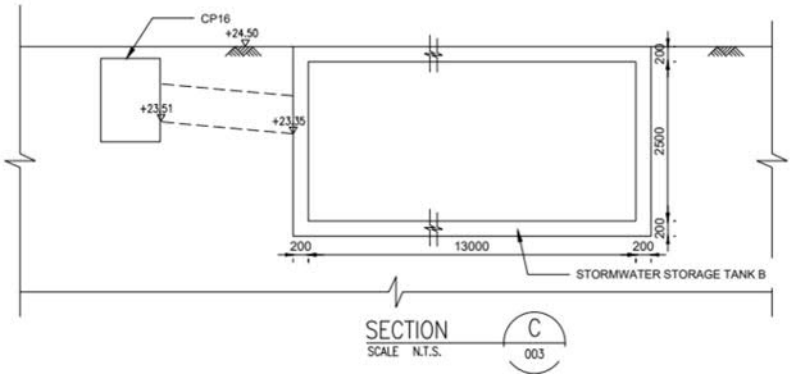
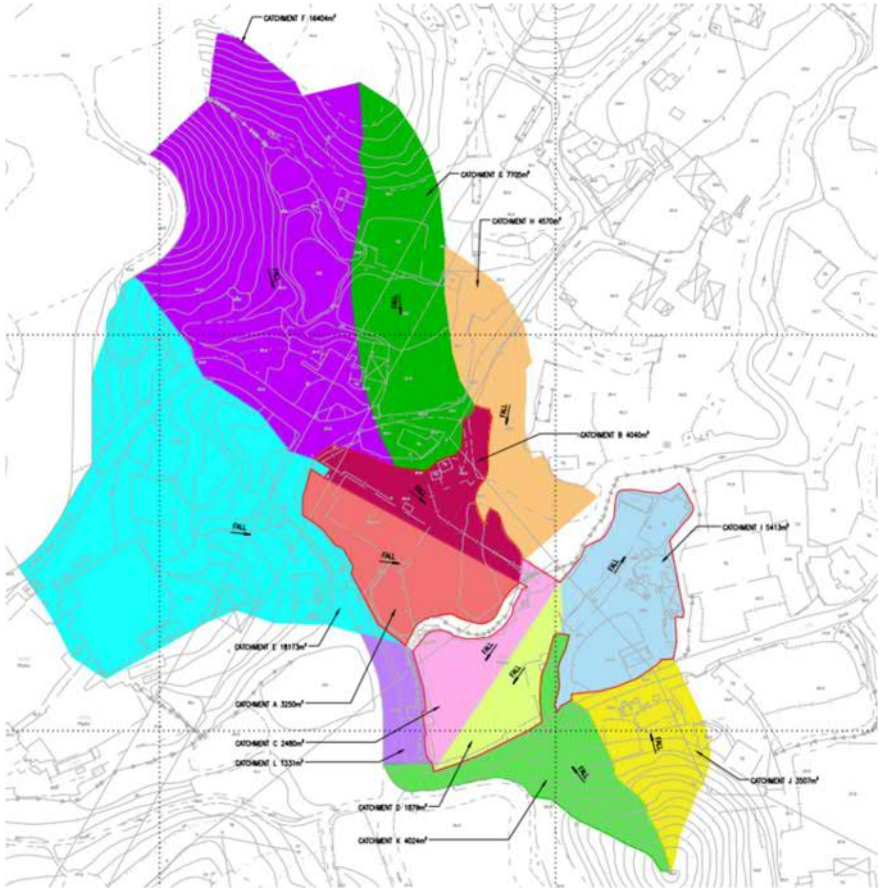


Figure 4: Section of storage tank A (inlet level +25.06mPD)

		Storage tank B: The operation mechanism is the same with tank B, except is diverts excessive stormwater from branch 5  Figure 5: Water level from the model result for storage tank B (+23.509mPD)  Figure 6: Section of storage tank B (inlet level +23.51mPD)
3	Section 4.4 "The adopted parameters are summarised in table 2-1". Table was not found, please revise.	It is a typo and the parameters are referring to table 4-1. The report is revised.

4	Table 4-1 refers a) Manning's n = 0.016 was adopted according to Table 2-2. However, the model adopted different values. Please clarify. b) Based on the site photos, the existing stream does not appear to be a concrete channel. Please review whether the value for "rectangular concrete channels" should be adopted.	Table 4-1 are revised to table 4-2. a) The adopted roughness values are clarified in Table 4-2, stating the values adopted for different conditions (RC channel, surface channel, riverbed, RC pipe). We also would like to clarify the model only assesses the downstream capacity, the internal drainage networks are check through hand calculation (refer to Appendix C). b) For the existing conditions model, the roughness value for RC channel was **not used**, since there are no paved area. The concrete channel roughness was applied only in the improvement case (where a rectangular concrete channel is proposed), to allow a direct comparison between the existing and improved scenario.
5	Section 5.2.1 refers. The statement "Associated stormwater drainage network is proposed along the alignment" lacks specificity on the mitigation measures. Please elaborate.	Noted, Section 5.2.1 is revised. Please refer to the revised report.
6	Section 6.6 refers. It was mentioned that openings on fencing and walls would be provided to prevent obstructing surface flow. However, this seems to conflict with the responses in RtoC item 13. Please clarify.	We wish to clarify that a boundary chainlink fence is proposed as part of the development. A minimum 75mm gap has been provided for the proposed chain-link fence wall, in addition, the hollow nature of the fence prevents any obstruction to the **existing overland flow paths**. Details of the proposed chain-link fence can be found referred to the attached CEDD Standard Drawing attached in Appendix H. Any surface runoff entering the site through these gaps will be collected by the proposed internal drainage network, which has sufficient capacity to convey these flows for proper discharge downstream. Therefore, there will be no adverse impact on overland flow from adjacent catchments.
7	The depth of landfilling works could be up to 3m as inferred from Figure 3-3, which contradicts with response in RtoC item 13. Please clarify.	To clarify, there will be filling to create a flat surface with slight gradient to provide falls to drainage features and match the existing road surface outside the lot boundary. The design of the site's grading and drainage system specifically ensures that the **finished filling levels and gradients will direct overland flow into the proposed internal drainage network**. This system has sufficient capacity to collect and convey all surface runoff (refer to calculation in Appendix C), including flows from adjacent catchments to the approved downstream discharge point without causing obstruction or flooding.



Catchment (outside lot)	Existing ground level (mPD)	Adjacent catchment (color)	Ground level (mPD)
E (Cyan)	+27.0	A (Orange)	+26-27.0
F (Purple)	+27.5	B (Red)	+25.0-26.0
G (Green)	+26.1-27.4	B (Red)	+25.0-26.0
H (Skin)	+25.0-25.5	B (Red)	+25.0-26.0

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>J (Yellow)</td><td>+24.7-25.2</td><td>I (Light blue)</td><td>+24.0-24.5</td></tr>
<tr><td>K (Lime green)</td><td>26.6-28.4</td><td>D (mint)</td><td>+25.0-25.5</td></tr>
<tr><td>L (Light purple)</td><td>26.1-26.3</td><td>C (pink)</td><td>+25.0-25.5</td></tr>
</table>

Furthermore, as shown in the table, although the lot is filled to a higher platform level, the finished level will remain lower than the adjacent catchment. Thus, the filling works will not obstruct the overland flow path.
</td></tr>
<tr><td>8</td><td>Section 6.8 and RtoC item 5 refer. Please clarify whether "mid-century" events were assessed as it was not mentioned in the previous sections.</td><td>Since the “End of 21st Century” event produces the worst drainage impact to the site, "mid-century" events are not assessed or adopted for the drainage assessment.</td></tr>
<tr><td>9</td><td>Appendix C and Drawing No. WNG/25086/C/DRA/003 refer. Branch 1 was shown as 400mm in Appendix C but 450mm in the drawing. Please clarify.</td><td>The dimension should be 450mm. All discrepancies are revised. You may refer to the revised drawings and report.</td></tr>
<tr><td>10</td><td>Section 3.1 notes that the existing channel within the boundary will be backfilled and removed. However, no further discussion on this channel was found in the report.

Please review the text.</td><td>The existing channel within the lot boundary will be removed to facilitate the development. This change was not discussed in further detail as the hydrological design of the site is based entirely on the new, fully engineered condition.

The proposed internal drainage network is designed to replace the function of the existing channel. The new system has sufficient capacity to manage all site runoff and maintain downstream flows, so no adverse impact is anticipated from the channel's removal.</td></tr>
<tr><td>11</td><td>Please clarify if the existing channel was modified to a 450mm UC as shown in the layout below. If so, please provide justification for such modification including the design intent of this 450mm UC and its selected size.</td><td>The existing channel will be removed before the landfilling works and will not be modified or reuse in the proposed development. The 450UC (which revised to 500 pipe in this submission) is now revised as part of the drainage branch 1 to discharge stormwater to the downstream river.</td></tr>
</table>

Department	Date	Comments	Responses to Departmental Comments
Agriculture, Fisheries and Conservation Department	29.1.2026	From nature conservation perspective: the applicant should implement measures to protect nearby watercourses from adverse impacts during the construction and operational phases.	The applicant would implement mitigation measures to protect nearby watercourses from adverse impacts during the construction and operational phases. The applicant and contractor will follow good site practice and be responsible for the design construction, operation and maintenance of all the mitigation measures a specified in ProPECC PN 1/94 for construction and site drainage. During construction phase, temporary sand bag barriers would be provided on site to properly direct storm water. The contractor would observe and comply with the WPCO and its subsidiary regulation and carry out the Works in such as manner as to minimise adverse impacts on the water quality during execution of the works. During operation phase, all operation activities would be confined within the application site, sufficient buffer distance from the watercourse would be provided during operation. No non point/diffuse source pollution, such as dust, tyre scraps, etc. would be washed into the watercourses during rainstorms. In addition, runoff would be controlled by best management practice. The applicant is committed to protect nearby watercourses from adverse impacts with the provision and implementation of the mitigation measures.

Aikon Development Consultancy Ltd.
毅勤發展顧問有限公司
Tel 電話：[redacted]
Fax 傳真：
Email 電郵：
Web 網址：

Date : 5th February, 2026
Our Ref. : ADCL/PLG-10315/L012

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

By Email

Dear Sir/Madam,

Re: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(Planning Application No. A/NE-FTA/264)

We would like to supersede our submission dated 19.1.2026 (*Ref. ADCL/PLG-10315/L009*) and provide further information to facilitate considerations by relevant authorities and the Town Planning Board.

The Applicant intends to make use of the application site to facilitate the relocation of brownfield operations affected by land resumption for New Development Areas. A Memorandum of Understanding has been established with three existing brownfield operators, who have collaboratively conducted extensive site search and identified the application site as suitable for the relocation (please refer to the attached site search and information of the existing brownfield operators). The Applicant and the existing brownfield operators have agreed that upon approval of the current application by the Board, the application site will be utilised by the existing brownfield operators for the proposed use during the planning approval period.

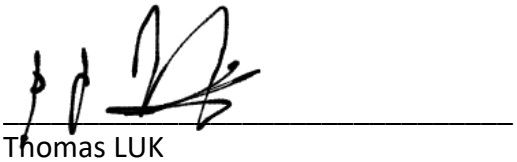
Since the existing operations have been in place for many years and the current facilities no longer meet modern operational standards, this relocation would provide operators with an upgraded, safer, and more spacious facility that can accommodate growing infrastructural demands. The proposed upgrade will enhance the working environment, making it safer and more spacious, thereby improving the capacity to deliver essential services to the expanding construction and industrial sectors. Additionally, the Applicant is concurrently liaising with other affected operators to ensure the utilisation of the site.

Given the challenges in identifying a relocation site of adequate scale, the application site offers a timely solution that ensures operational continuity with minimal disruption. The Applicant sincerely hopes the Board will consider this application favorably, allowing for the proposed use for a temporary period of 3 years.

Thank you for your kind attention and should you have any queries, please do not hesitate to contact our Mr. Thomas LUK at [redacted].

Address 地址：[redacted]

Yours faithfully,
For and on behalf of
Aikon Development Consultancy Limited



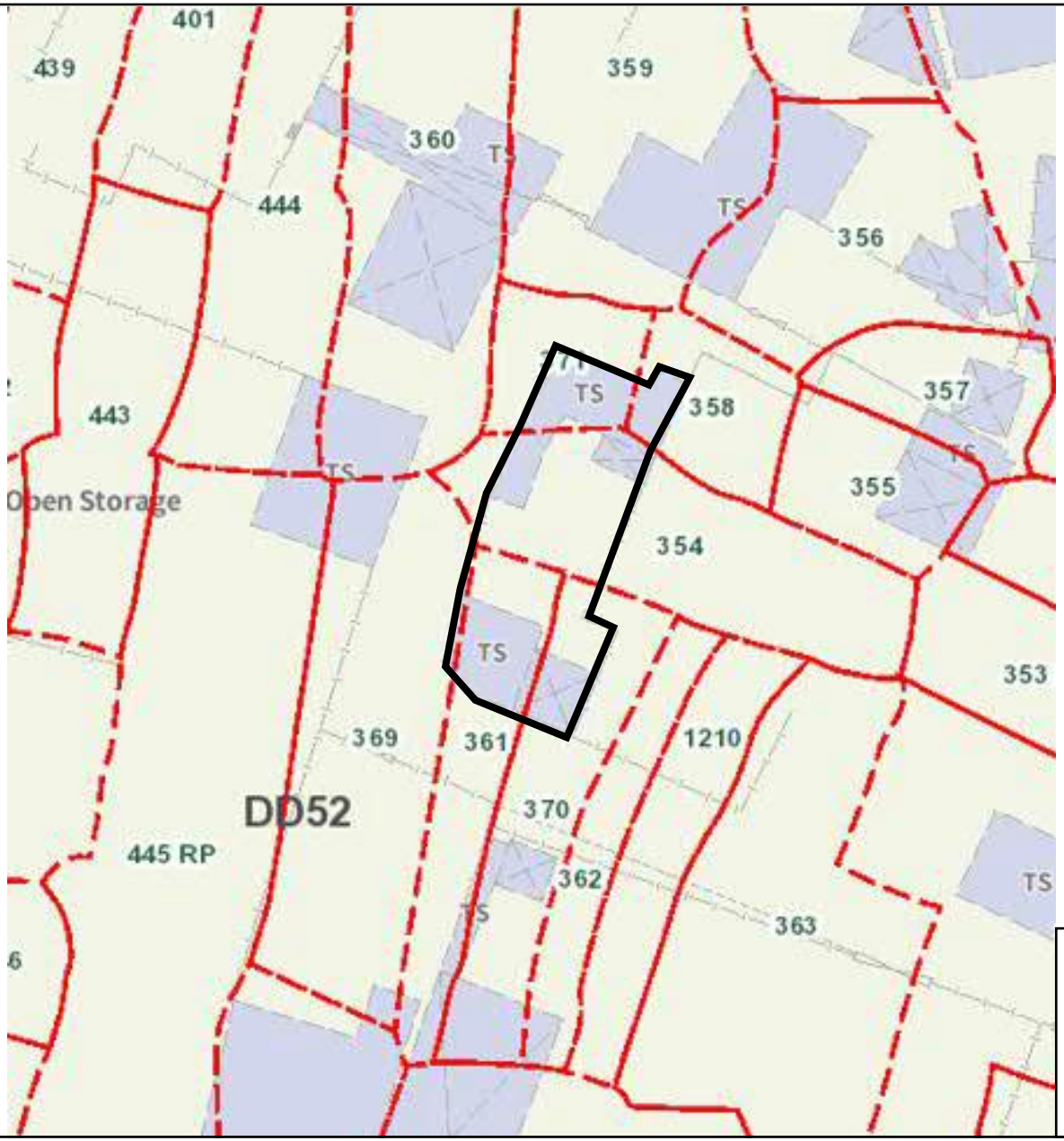
Thomas LUK

Encl.
c.c. Client

Table 1. Alternative Sites for the Relocation of the Affected Brownfield Operations

Sites	Alternative Site 1	Alternative Site 2	Alternative Site 3	Application Site
Location	Various Lots in D.D. 78, Ta Kwu Ling, New Territories	Various Lots in D.D. 129, Lau Fau Shan, Yuen Long	Various Lots in D.D. 104, Yau Mei San Tsuen, Mai Po, Yuen Long	Various Lots in D.D. 87, Kong Nga Po, Sheung Shui
Site Area	8,950m^2 (about)	9,570m^2 (about)	17,910m^2 (about)	16,604m^2 (about)
Accessibility	Accessible from Heung Yuen Wai Highway via a local access	Accessible from Deep Bay Road via a local access	Accessible from Geranium Path	Accessible from Kong Nga Po Road
Distance from Existing Operations	4.2 km (about)	15 km (about)	10 km (about)	1.2 km (about)
Zonings	“AGR” on the Approved Wo Keng Shan Outline Zoning Plan (OZP) No. S/NE-WKS/10 and the Ta Kwu Ling North OZP No. S/NE-TKLN/2	"GB" on the Approved Lau Fau Shan And Tsim Bei Tsui Outline Zoning Plan No. S/YL-LFS/11	"Other Specified Uses (Wetland Conservation Park)" and "Recreation" on the Approved Mai Po And Fairview Park Outline Zoning Plan No. S/YL-MP/8	“AGR” on the Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18
Existing Condition	Mainly covered by vegetation	Vegetated	With fishponds and temporary structures	Vacant
Surrounding Area	Surrounded by Greenbelt and temporary structures	Surrounded by Greenbelt and Coastal Protection Area	Surrounded by fishponds and houses	Surrounded by government facilities, warehouse, open storages/storage yards

Suitability for Relocation	Not suitable for relocation – Distant location of original operation; Not compatible with the surrounding area	Not suitable for relocation – Remote location; Not compatible with the surrounding area	Not suitable for relocation – Remote location; Not compatible with the surrounding area	Comparatively suitable for relocation: - In close proximity to the original operation, established road network - Vacant without active agricultural activities

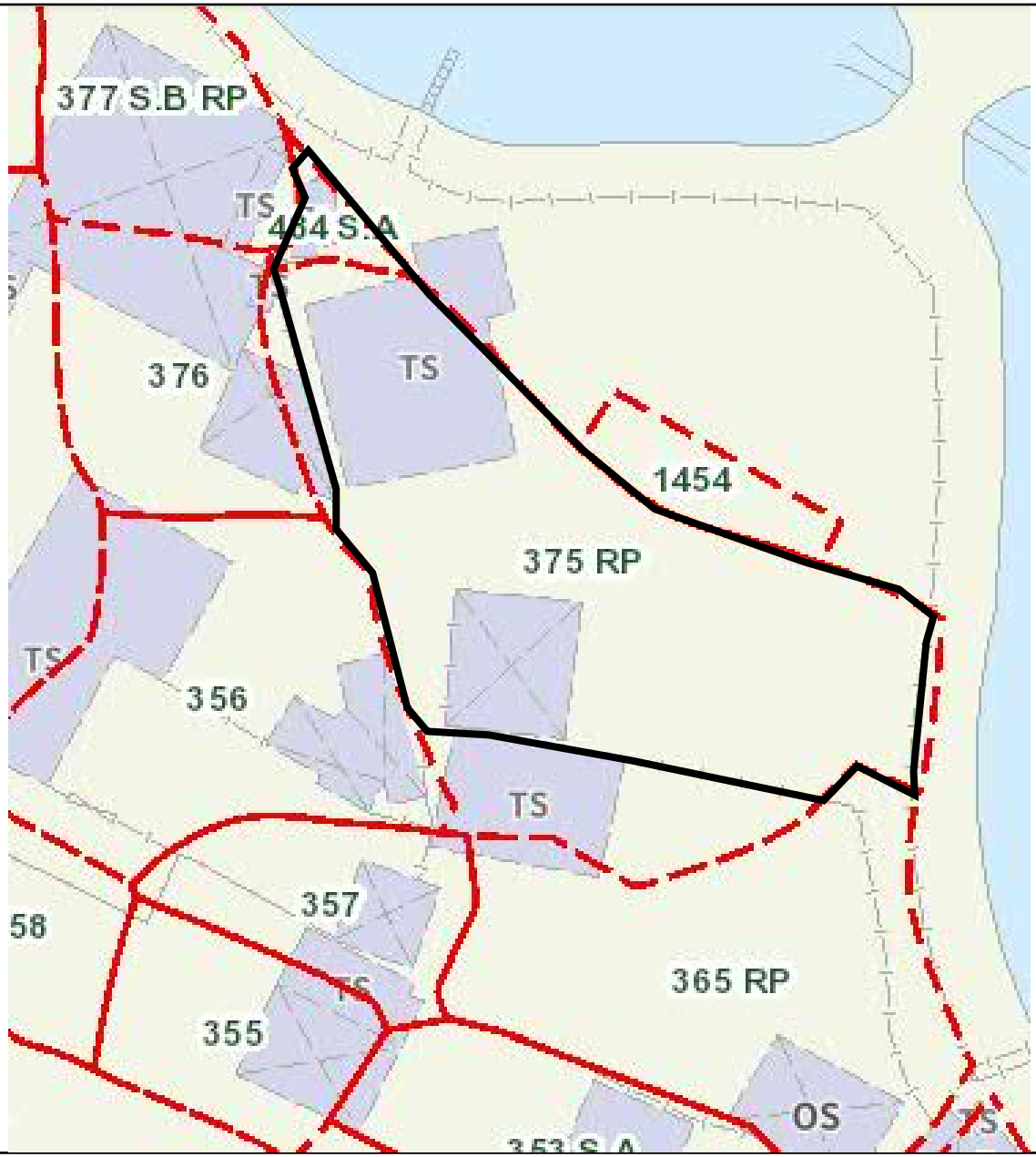


LEGEND:

Site of the Existing Operations
(Site A) About 1,085m²
金先峰貿易有限公司

(For Indicative Purposes Only)

Affected Operator: 金先峰貿易有限公司
Lots 354 (Part), 358 (Part), 361 (Part), 369 (Part), 370 (Part) and 371 (Part) in D.D. 52

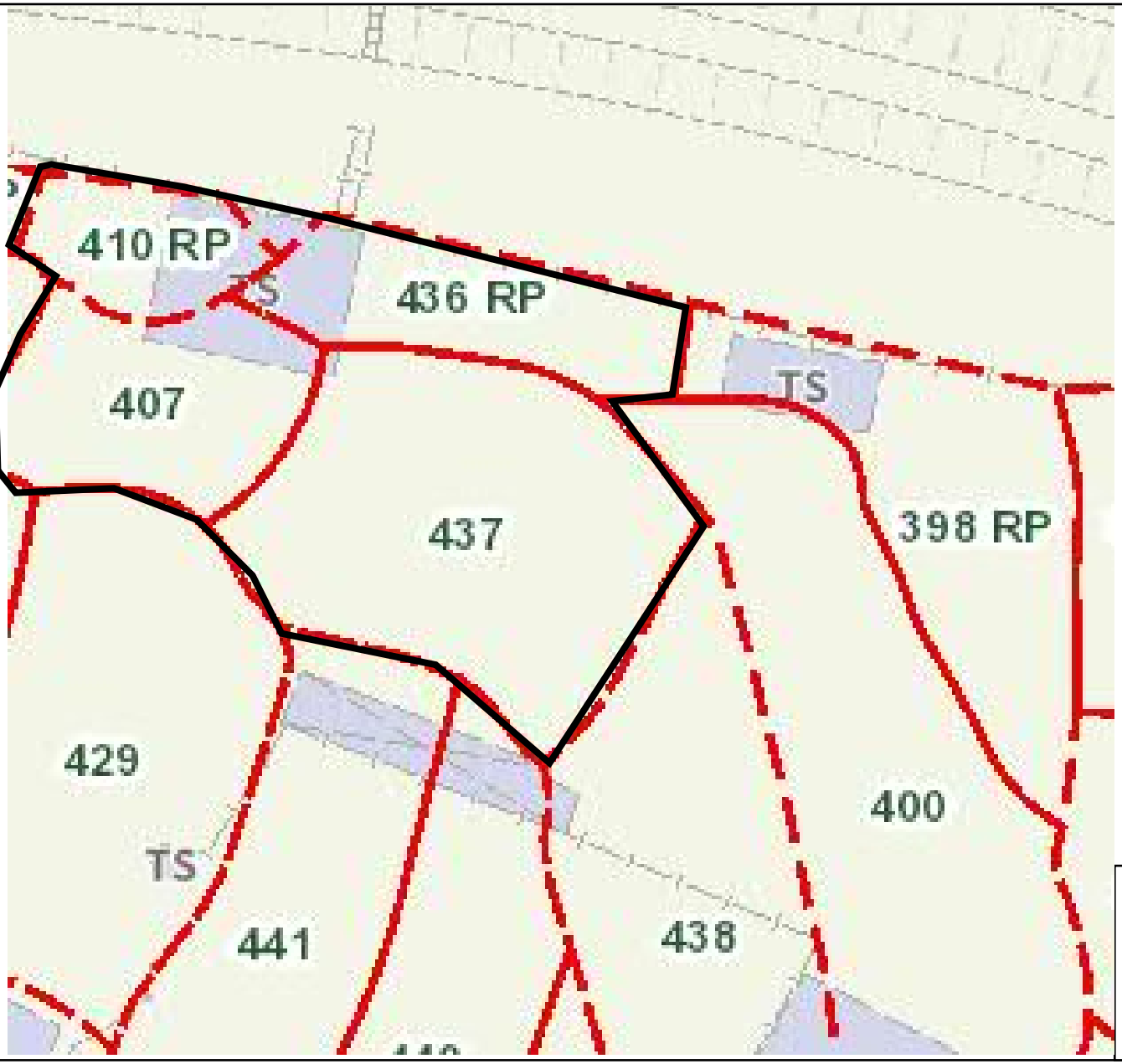


LEGEND:

Site of the Existing Operations (Site B) About 2,650m²
仁記

(For Indicative Purposes Only)

Affected Operator: 仁記
Lots 375 RP (Part) and 484 S.A (Part) in D.D. 52



LEGEND:

Site of the Existing Operations
(Site C) About 3,300m²
深圳市榮利達貨運代理有限公司

(For Indicative Purposes Only)

Affected Operator:深圳市榮利達貨運代理有限公司
Lots 410 RP (Part), 407 (Part), 436 RP (Part) and 437 (Part) in D.D. 52

金先鋒貿易有限公司 與 Brilliant Profit Limited
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 Brilliant Profit Limited（下稱「**甲方**」）與金先鋒貿易有限公司（下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2026 年 1 月 9 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段之現行租用者；

(二) **乙方**為新界上水丈量約份第 52 約地段**第 354 號（部分）、第 358 號（部分）、第 361 號（部分）、第 369 號（部分）、第 370 號（部分）及第 371 號（部分）**（下稱「**舊地盤**」）作貨倉（危險品倉庫除外）及露天存放用途之現行作業者。受古洞北新發展區及粉嶺北新發展計劃餘下階段相關之收地安排影響，**乙方**未來將難以繼續在舊地盤進行現行作業。**乙方**有意重置其現時位於舊地盤內作貨倉（危險品倉庫除外）及露天存放作業至其他地盤以確保有穩定且充足的土地繼續其日常業務；以及

(三) **甲方**已根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請，(規劃申請編號: A/NE-FTA/264)（下稱「**規劃申請**」），擬議在新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地（下稱「**申請地點**」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）。**雙方**合意在規劃申請獲批准後，並於規劃許可生效期間，**甲方**將申請地點租予**乙方**作臨時貨倉（危險品倉庫除外）及露天存放用途。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程，並依從租賃協議內的條款及條件容許**乙方**租用申請地點內臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，依從租賃協議內的條款及條件租用申請地點作臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

.....
Authorized Signature(s)

_____
(_____)
代表　甲方（Brilliant Profit Limited）
商業登記證號碼：[redacted]

_____
(_____)
代表　乙方（**金先鋒貿易有限公司**）
商業登記證號碼：[redacted]

致： 香港北角渣華道 333 號
北角政府合署 15 樓
城市規劃委員會

敬啟者：

新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地
根據城市規劃條例第 16 條申請作擬議臨時貨倉（危險品倉庫除外）及
露天存放建築物料、機械連附屬設施及相 關填土工程（為期 3 年）
（規劃申請編號：A/NE-FTA/264）

本公司，金先鋒貿易有限公司（商業登記證號碼：[redacted]）多年於新界上水丈量約份第 52 約地段**第 354 號（部分）、第 358 號（部分）、第 361 號（部分）、第 369 號（部分）、第 370 號（部分）及第 371 號（部分）**（下稱「舊地盤」）經營作貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施。然而，最近受政府於古洞北新發展區及粉嶺北新發展計劃 餘下階段之收地影響，本公司未來將難以繼續在舊地盤進行現行作業。

經過廣泛搜尋合適的地段，並考慮到資金許可及儘量減少運作模式的變更，本公司已與 Brilliant Profit Limited（商業登記證號碼：[redacted]）達成共識，期望儘早租用以上申請地段以繼續目前的運作。

本公司得悉 Brilliant Profit Limited 已在多個月前向城市規劃委員會遞交了上述申請，現正受委員會及各政府部門審核中，並將於 2026 年 2 月 6 日作出決議。

若有關申請再進一步延誤或未能獲得批准，本公司將需要重新尋找合適的搬遷地段，此過程將耗時且非常困難。因此，我們懇請委員會可以批准有關申請，以讓我司等受影響戶可以儘快安排搬遷和重新安置，繼續進行受影響的棕地作業，以解燃眉之急。

金先鋒貿易有限公司 KIN FUNG TRADING CO., LIMITED

商業登記證號碼 [redacted]

日期：2026 年 1 月 9 日

仁記 與 Brilliant Profit Limited
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 Brilliant Profit Limited（下稱「**甲方**」）與仁記（下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2026 年 1 月 9 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段之現行租用者；

(二) **乙方**為新界上水丈量約份第 52 約地段**第 375 號餘段(部分)、及第 484 號 A 分段(部分)**（下稱「**舊地盤**」）作貨倉（危險品倉庫除外）及露天存放用途之現行作業者。受古洞北新發展區及粉嶺北新發展計劃餘下階段相關之收地安排影響，**乙方**未來將難以繼續在舊地盤進行現行作業。**乙方**有意重置其現時位於舊地盤內作貨倉（危險品倉庫除外）及露天存放作業至其他地盤以確保有穩定且充足的土地繼續其日常業務；以及

(三) **甲方**已根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請，(規劃申請編號: A/NE-FTA/264)（下稱「**規劃申請**」），擬議在新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地（下稱「**申請地點**」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）。**雙方**合意在規劃申請獲批准後，並於規劃許可生效期間，**甲方**將申請地點租予**乙方**作臨時貨倉（危險品倉庫除外）及露天存放用途。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程，並依從租賃協議內的條款及條件容許**乙方**租用申請地點內臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，依從租賃協議內的條款及條件租用申請地點作臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

.....
Authorized Signature(s)

(_____)

代表　甲方　（Brilliant Profit Limited）
商業登記證號碼：[redacted]

(_____)

代表　乙方（仁記）
商業登記證號碼：[redacted]

致： 香港北角渣華道 333 號
北角政府合署 15 樓
城市規劃委員會

敬啟者：

新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地
根據城市規劃條例第 16 條申請作擬議臨時貨倉（危險品倉庫除外）及
露天存放建築物料、機械連附屬設施及相 關填土工程（為期 3 年）
（規劃申請編號：A/NE-FTA/264）

本公司，仁記（商業登記證號碼：[redacted]）多年於新界上水丈量約份第 52 約地段**第 375 號餘段（部分）、及第 484 號 A 分段(部分)**（下稱「舊地盤」）經營作貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施。然而，最近受政府於古洞北新發展區及粉嶺北新發展計劃 餘下階段之收地影響，本公司未來將難以繼續在舊地盤進行現行作業。

經過廣泛搜尋合適的地段，並考慮到資金許可及儘量減少運作模式的變更，本公司已與 Brilliant Profit Limited（商業登記證號碼：[redacted]）達成共識，期望儘早租用以上申請地段以繼續目前的運作。

本公司得悉 Brilliant Profit Limited 已在多個月前向城市規劃委員會遞交了上述申請，現正受委員會及各政府部門審核中，並將於 2026 年 2 月 6 日作出決議。

若有關申請再進一步延誤或未能獲得批准，本公司將需要重新尋找合適的搬遷地段，此過程將耗時且非常困難。因此，我們懇請委員會可以批准有關申請，以讓我司等受影響戶可以儘快安排搬遷和重新安置，繼續進行受影響的棕地作業，以解燃眉之急。

KEE YAN

商業登記證號碼 [redacted]

日期：2026 年 1 月 9 日

深圳市榮利達貨運代理有限公司 與 Brilliant Profit Limited
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 Brilliant Profit Limited（下稱「**甲方**」）與深圳市榮利達貨運代理有限公司 （下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2026 年 1 月 9 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段之現行租用者；

(二) **乙方**為新界上水丈量約份第 52 約地段**第 410 號餘段(部分)、第 407 號(部分)、第 436 號餘段(部分)及第 437 號(部分)**（下稱「**舊地盤**」）作貨倉（危險品倉庫除外）及露天存放用途之現行作業者。受古洞北新發展區及粉嶺北新發展計劃餘下階段相關之收地安排影響，**乙方**未來將難以繼續在舊地盤進行現行作業。**乙方**有意重置其現時位於舊地盤內作貨倉（危險品倉庫除外）及露天存放作業至其他地盤以確保有穩定且充足的土地繼續其日常業務；以及

(三) **甲方**已根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請，(規劃申請編號: A/NE-FTA/264)（下稱「**規劃申請**」），擬議在新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地（下稱「**申請地點**」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）。**雙方**合意在規劃申請獲批准後，並於規劃許可生效期間，**甲方**將申請地點租予**乙方**作臨時貨倉（危險品倉庫除外）及露天存放用途。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程，並依從租賃協議內的條款及條件容許**乙方**租用申請地點內臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，依從租賃協議內的條款及條件租用申請地點作臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

Authorized Signature(s)

_____
(_____)
代表 甲方 （Brilliant Profit Limited）
商業登記證號碼：[redacted]

鄭華蓮
_____
(_____)
代表 乙方（深圳市榮利達貨運代理有限公司）
商業登記證號碼：_____

致： 香港北角渣華道 333 號
北角政府合署 15 樓
城市規劃委員會

敬啟者：

新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地
根據城市規劃條例第 16 條申請作擬議臨時貨倉（危險品倉庫除外）及
露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）
(規劃申請編號: A/NE-FTA/264)

本公司，深圳市榮利達貨運代理有限公司（商業登記證號碼：_____）多年於新界上水丈量約份第 52 約地段**第 410 號餘段(部分)、第 407 號(部分)、第 436 號餘段(部分)及第 437 號(部分)**（下稱「舊地盤」）經營作貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施。然而，最近受政府於古洞北新發展區及粉嶺北新發展計劃 餘下階段之收地影響，本公司未來將難以繼續在舊地盤進行現行作業。

經過廣泛搜尋合適的地段，並考慮到資金許可及儘量減少運作模式的變更，本公司已與 Brilliant Profit Limited（商業登記證號碼：[redacted]）達成共識，期望儘早租用以上申請地段以繼續目前的運作。

本公司得悉 Brilliant Profit Limited 已在多個月前向城市規劃委員會遞交了上述申請，現正受委員會及各政府部門審核中，並將於 2026 年 2 月 6 日作出決議。

若有關申請再進一步延誤或未能獲得批准，本公司將需要重新尋找合適的搬遷地段，此過程將耗時且非常困難。因此，我們懇請委員會可以批准有關申請，以讓我司等受影響戶可以儘快安排搬遷和重新安置，繼續進行受影響的棕地作業，以解燃眉之急。

鄭翠蓮
商業登記證號碼

日期：2026 年 1 月 9 日

電　話　Tel:　3529 2415
圖文傳真　Fax:　3793 4547
電郵地址　Email:　grc3@landsd.gov.hk
本署檔號　Our Ref.:　LD/C(NDA)/DN/1
來函檔號　Your Ref.:
來函請註明本署檔號
Please quote our reference in your reply

地政總署
新發展區組清拆小組
CLEARANCE TEAM
NEW DEVELOPMENT AREA SECTION
LANDS DEPARTMENT

我們矢志努力不懈，提供盡善盡美的土地行政服務。
We strive to achieve excellence in land administration.
新界上水彩園邨彩屏樓地下 129 至 136 號
Unit 129-136, G/F, Choi Ping House, Choi Yuen Estate, Sheung Shui, N.T.
網址 Website: www.landsd.gov.hk

Serial No.: 25/C(NDA)/090

LAND (MISCELLANEOUS PROVISIONS) ORDINANCE
(Chapter 28 of The Laws of Hong Kong Special Administrative Region)
NOTICE UNDER SECTION 6(1)

LOCATION: Unleased land as shown coloured pink on Plan 1 in the Remaining Phase Development of Fanling North New Development Area, New Territories

TAKE NOTICE that the Authority designated pursuant to section 3 of the captioned Ordinance hereby requires unlawful occupation of the unleased land at the above location to cease **before the 30th day of November of 2025**.

.....

(FU Yue-ping)
for Director of Lands

Date 28 August 2025

NOTE:
Pursuant to section 6(2) of the Land (Miscellaneous Provisions) Ordinance (the Ordinance), if the occupation of unleased land does not cease as required by this Notice, any public officer, or other person, acting on the direction of the Authority may, with the assistance of such other public officers or other persons as may be necessary (a) remove from the unleased land the persons (if any) thereon; and (b) take possession of any property or structure on the unleased land in question. By virtue of section 6(3) of the Ordinance, any property or structure of which possession is taken under section 6(2)(b) of the Ordinance shall become the property of the Government free from the rights of any person and may be demolished or otherwise dealt with as the Authority thinks fit. Any person who, without reasonable excuse, does not cease the occupation as required by this Notice, may be convicted under section 6(4) of the Ordinance. According to section 6(5) of the Ordinance, the Authority may recover from the person convicted of an offence under section 6(4) of the Ordinance any cost incurred in or arising out of the demolition of any property or structure in the unleased land under section 6(3) of the Ordinance and the exercise of the powers conferred by section 6 of the Ordinance.

編號: 25/C(NDA)/090

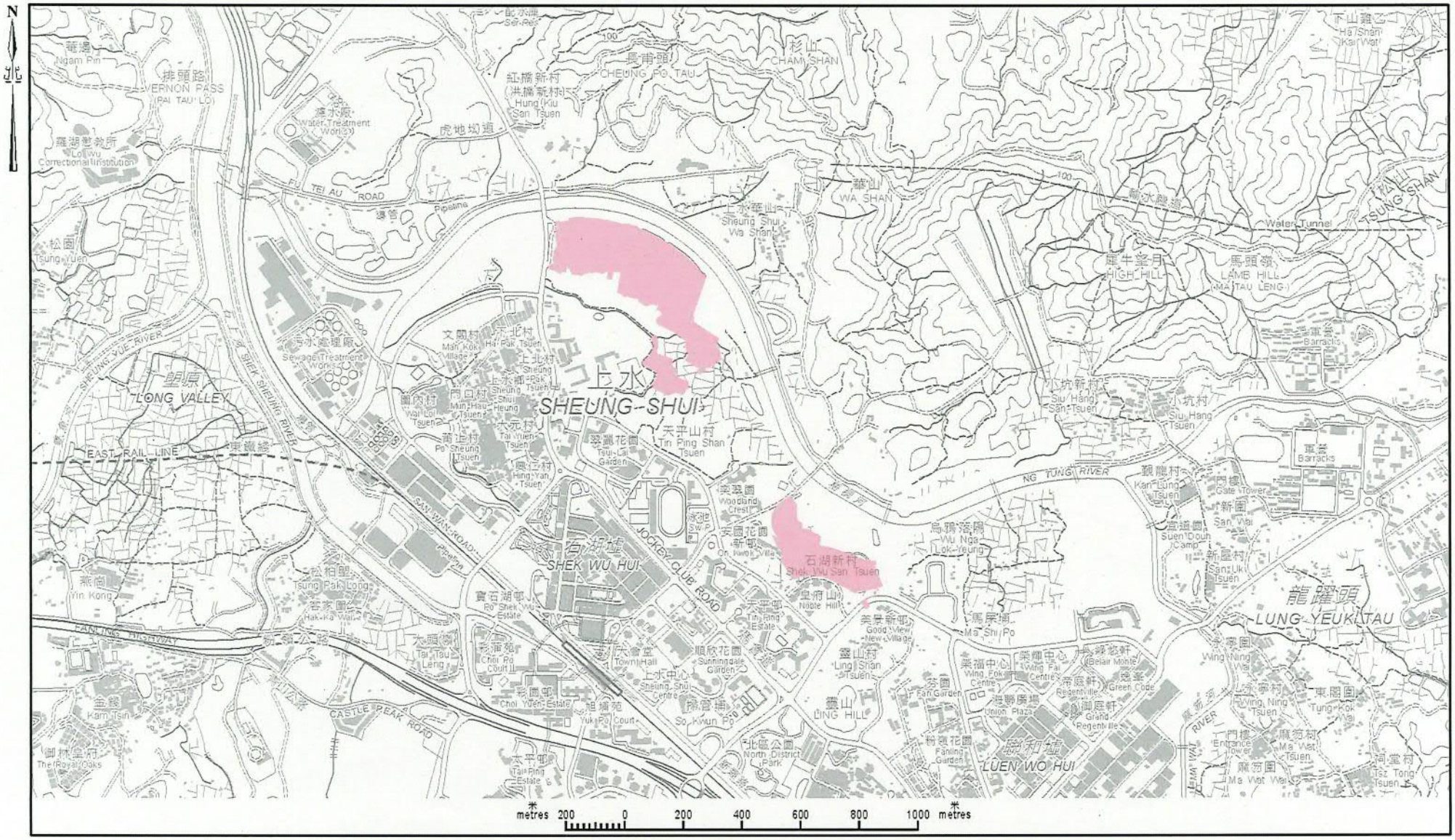
土地(雜項條文)條例
(香港特別行政區法例第 28 章)
根據第 6(1)條所發的通知

現公布，依據上述條例第 3 條指定的當局現飭令不合法佔用位於新界粉嶺北新發展區餘下階段發展在圖則一中粉紅色所示範圍內的未批租土地的情況於**二零二五年十一月三十日之前**停止。

地政總署署長
(傅裕平 代行)

二零二五年八月廿八日

附註：
依據《土地(雜項條文)條例》(該條例)第 6(2)條，如佔用未批租土地的情況未有遵照本通知所飭令者而停止，則按當局指示行事的任何公職人員或其他人(有需要時由其他公職人員或其他人協助)，可(a)將該未批租土地上的任何人(如有的話)驅逐；及(b)接管該未批租土地上的任何財產或構築物。憑藉該條例第 6(3)條，根據該條例第 6(2)(b)條接管的任何財產或構築物即成為政府的財產而不再受任何人在該財產或構築物中的任何權益所規限，並可按當局認為適合的任何方式，將該財產或構築物拆掉或作其他處理。任何人在無合理辯解下未有遵照本通知所飭令者而停止佔用情況，可因觸犯該條例第 6(4)條而被定罪。此外，根據該條例第 6(5)條，當局可向根據該條例第 6(4)條被定罪的人收回因根據該條例第 6(3)條拆掉該未批租土地上的財產或構築物以及行使該條例第 6 條所賦權力而招致或引起的任何費用。


N
上水
SHEUNG SHUI
SHEUNG SHUI
LONG VALLEY
EAST RAIL LINE
SHEUNG YUE RIVER
SHEK SHEUNG RIVER
NG TUNG RIVER
LUEN WO HUI
SHEK WU HUI
LUNG YEUK TAU
CASTLE PEAK ROAD
FANLING HIGHWAY
SAN WAN ROAD
JOCKEY CLUB ROAD
TAI TAU ROAD
Water Tunnel
HIGH HILL
LAMB HILL
WA SHAN
CHAU SHAN
LING HILL
metres 200 0 200 400 600 800 1000 metres

任何財產或構築物（包括但不限於構築物編號）不合法佔用粉紅色所示範圍的未批租土地的情況應在二零二五年十一月三十日之前停止。

Unlawful occupation by any property or structure (including but not limited to structure numbers) on the unleased land as shown coloured pink should cease before the 30th day of November 2025.

X4/13, X4/14, X4/15, X4/16, X4/17/1-12, X4/18, X4/19, X4/20, X4/21, X4/22, X4/23, X4/24, X4/25, X4/26, X4/27/1-5, X4/28, X4/29, X4/30/1-3, X4/31, X4/32, X4/33, X4/34, X4/35, X4/36, X4/37, X4/38, X4/39, X4/40, X4/41, X4/42, X4/43, X4/44, X4/45, X4/46, X4/47, X4/48, X4/49, X4/50, X4/51, X4/52/1-5, X4/53, X4/54, X4/55, X4/56, X4/57, X4/58/1-4, X4/59, X4/60, X4/61, X4/62, X4/63, X4/64, X4/65, X4/66, X4/67-1-3, X4/68, X4/69, X4/70, X4/71, X4/72, X4/73, X4/74, X4/75, X4/76, X4/77/1-6, X4/78, X4/79, X4/80, X4/81, X4/82, X4/83, X4/84-93, X4/94, X4/95, X4/96, X4/97, X4/98, X4/99, X4/100/1-6, X4/101, X4/102, X4/103, X4/104, X4/105, X4/106/1-4, X4/107, X4/108, X4/109, X4/110 & 112, X4/111/1-13, X4/113, X4/114, X4/115, 115A, 116/1-3, X4/117, X4/118, X4/119, X4/120/1-13, X4/121-122, X4/123, X4/124, X4/125, X4/126, X4/127, X4/128, X4/129-137, X4/138, X4/139, X4/140, X4/141, X4/142/1-8, X4/143, X4/144, X4/145, X4/146-148, X4/149-150, X4/151, X4/152, X4/153, X4/154/1-3, X4/155, X4/156, X4/157, X4/158, X4/159/1-5, X4/160, X4/161, X4/162, X4/163, X4/163A, X4/164, X4/165/1-2, X4/166, X4/167, X4/168, X4/169, X4/170/1-4, X4/171, X4/172, X4/173/1-7, X4/174, X4/175, X4/176, X4/177, X4/178, X4/179, X4/180, X4/181, X4/182, X4/183, X4/184-193, X4/194, X4/195-200, X4/211D, X4/211E, X4/211F, X4/244, X4/245/1-2, X4/246, X4/247, X4/248, X4/249, X4/250, X4/251, X4/252, X4/253, X4/254, X4/255, X4/256, X4/257, X4/258, X4/259/1-13, X4/260, X4/S/3, X4/S/4, X4/S/5, X5/66, X5/67, X5/68-72, X5/70A, X5/154, X5/156, X5/157, X5/158, X5/159, X5/160, X5/161, X5/162, X5/163, X5/164, X5/165, X5/166, X5/167, X5/168, X5/169, X5/170, X5/171, X6/46, X6/119, X6/201, X6/202-204, X6/205, X6/206, X6/207, X6/208, X6/209, X6/210, X6/211, X6/212, X6/213, X6/214, X6/215, X6/216, X6/217, X6/218, X6/219, X6/220, X6/221, X6/222, X6/223, X6/224, X6/225, X6/226, X6/227, X6/228-233, X6/234, X6/235, X6/236, X6/237, X6/238, X6/239, X6/240, X6/241, X6/242, X6/243, X6/244, X6/245, X6/246, X6/247, X6/248, X6/249, X6/250, X6/251, X6/252, X6/253, X6/254, X6/255, X6/256-259, X6/260, X6/261, X6/262, X6/263, X6/264, X6/265, X6/266, X6/267, X6/268, X6/269, X6/270, X6/271, X6/272, X6/273, X6/274, X6/275, X6/276, X6/277, X6/278, X6/279, X6/280, X6/281, X6/282, X6/283, X6/284, X6/285, X6/286, X6/287, X6/288-290, X6/291, X6/292, X6/293, X6/294, X6/295, X6/296, X6/297, X6/298, X6/299, X6/300, X6/301, X6/302, X6/303, X6/304, X6/305, X6/306, X6/307, X6/308, X6/309, X6/310, X6/311, X6/312, X6/313-315, X6/316, X6/317-322, X6/323, X6/324-327, X6/328, X6/329-331, X6/332, X6/333, X6/334-337, X6/343, X6/344, X6/345A-G, X6/352, X6/353-357, X6/358, X6/372, X6/384, X6/391, X6/392, X6/393, X6/394, X6/395, X6/399, X6/400-410, X7/S/1

第 205 號公告 地政總署

收回土地條例 (第 124 章)

(根據第 4 條發出的公告)

收回土地
以便進行古洞北新發展區及
粉嶺北新發展區發展計劃——
餘下階段

致下文詳述並在第 DNM5339a 號收地圖則上以橙色標示，位於新界的各塊或各幅土地的業主，以及就該等土地擁有權益、權利或地役權的每名人士。該等土地稱為：

丈量約份第 51 約地段第 172 號餘段 (部分)、第 174 號、第 175 號、第 176 號、第 178 號、第 179 號餘段、第 180 號、第 182 號、第 209 號 (部分)、第 227 號 (部分)、第 228 號 (部分)、第 229 號、第 230 號、第 231 號 (部分)、第 232 號 A 分段、第 232 號 B 分段、第 233 號、第 234 號、第 235 號、第 236 號、第 237 號 (部分)、第 238 號餘段 (部分)、第 239 號 (部分)、第 240 號 (部分)、第 241 號 (部分)、第 242 號、第 245 號 B 分段餘段 (部分)[又稱第 245B 號餘段 (部分)]、第 246 號餘段 (部分)、第 248 號、第 249 號 (部分)、第 252 號 (部分)、第 256 號 (部分)、第 257 號 (部分)、第 258 號 (部分)、第 259 號、第 260 號 A 分段、第 260 號餘段 (部分)、第 261 號 (部分)、第 262 號、第 263 號、第 264 號、第 265 號、第 270 號 (部分)、第 306 號餘段 (部分)、第 332 號 (部分)、第 333 號 (部分)、第 334 號 (部分)、第 335 號 (部分)、第 358 號 (部分)、第 359 號 (部分)、第 396 號 (部分)、第 397 號、第 398 號、第 399 號 (部分)、第 400 號 (部分)、第 401 號、第 402 號、第 403 號、第 404 號 (部分)、第 406 號 (部分)、第 407 號 (部分)、第 414 號 (部分)、第 416 號 (部分)、第 418 號 (部分)、第 419 號、第 420 號 (部分)、第 421 號 (部分)、第 422 號、第 424 號 (部分)、第 425 號 (部分)、第 428 號 (部分)、第 429 號 (部分)、第 430 號、第 431 號 (部分)、第 432 號 (部分)、第 433 號 (部分)、第 434 號 (部分)、第 435 號 (部分)、第 437 號餘段、第 442 號、第 443 號、第 444 號、第 445 號、第 446 號、第 447 號、第 448 號 (部分)、第 450 號 (部分)、第 451 號、第 452 號、第 453 號、第 455 號、第 456 號餘段、第 457 號、第 458 號 B 分段餘段、第 482 號 (部分)、第 483 號 (部分)、第 484 號 A 分段 (部分)、第 484 號餘段 (部分)、第 485 號 D 分段 (部分)、第 485 號餘段、第 486 號、第 532 號餘段 (部分)、第 533 號餘段 (部分)、第 534 號餘段 (部分)、第 538 號、第 539 號 (部分)、第 540 號 (部分)、第 541 號 (部分)、第 542 號 (部分)、第 543 號 (部分)、第 544 號、第 545 號 (部分)、第 546 號 (部分)、第 547 號 (部分)、第 548 號 (部分)、第 549 號、第 550 號、第 551 號 (部分)、第 552 號 (部分)、第 553 號 (部分)、第 554 號、第 555 號、第 556 號、第 557 號 A 分段、第 557 號餘段、第 558 號 A 分段、第 558 號餘段、第 559 號、第 560 號、第 561 號、第 562 號 (部分)、第 566 號餘段 (部分)、第 608 號 (部分)、第 609 號 (部分)、第 610 號餘段 (部分)、第 611 號餘段 (部分)、第 612 號、第 613 號餘段、第 614 號餘段、第 619 號餘段、第 620 號餘段、第 621 號餘段、第 622 號 A 分段第 1 小分段 (部分)、第 622 號 A 分段餘段、第 622 號 B 分段第 1 小分段 (部分)、第 622 號 B 分段餘段、第 624 號 A 分段 (部分)、第 624 號餘段、第 625 號 A 分段 (部分)、第 625 號餘段、第 626 號 (部分)、第 627 號餘段、第 628 號餘段 (部分)、第 629 號餘段 (部分)、第 636 號餘段、第 646 號餘段 (部分)、第 647 號餘段 (部分)、第 648 號餘段 (部分)、第 650 號餘段、第 651 號餘段、第 652 號、第 653 號、第 654 號、第 655 號餘段 (部分)、第 656 號、第 657 號 (部分)、第 741 號、第 791 號餘段、第 792 號餘段、第 793 號、第 806 號、第 807 號 A 分段 (部分)、第 2013 號 A 分段餘段 (部分)、第 2013 號 B 分段餘段 (部分)、第 2013 號 C 分段餘段 (部

分)、第 2014 號、第 2015 號 (部分)、第 2016 號 A 分段餘段 (部分)、第 2016 號 B 分段餘段 (部分)、第 2018 號 A 分段、第 2018 號 B 分段 (部分)、第 2018 號餘段、第 2019 號 A 分段 (部分)、第 2019 號餘段 (部分)、第 2020 號餘段 (部分)、第 2021 號 A 分段、第 2022 號 A 分段 (部分)、第 2022 號 B 分段、第 2022 號餘段、第 2023 號、第 2024 號、第 2025 號、第 2026 號、第 2027 號 A 分段、第 2027 號 B 分段、第 2028 號、第 2029 號餘段、第 2030 號餘段、第 2031 號餘段、第 2032 號餘段、第 2034 號 (部分)、第 2035 號 A 分段、第 2035 號 B 分段 (部分)、第 2036 號 (部分)、第 2037 號 (部分)、第 2038 號 (部分)、第 2039 號餘段、第 2041 號、第 2042 號 A 分段 (部分)、第 2042 號 B 分段、第 2043 號 (部分)、第 2044 號 A 分段 (部分)、第 2044 號餘段、第 2045 號 (部分)、第 2046 號 A 分段 (部分)、第 2046 號 B 分段、第 2046 號餘段、第 2047 號 B 分段、第 2047 號 C 分段 (部分)、第 2047 號餘段、第 2048 號、第 2049 號 A 分段、第 2049 號餘段、第 2050 號餘段、第 2052 號餘段、第 2053 號 B 分段、第 2053 號餘段、第 2054 號、第 2055 號餘段、第 2056 號、第 2057 號、第 2058 號、第 2059 號餘段、第 2060 號餘段、第 2061 號 B 分段、第 2061 號 C 分段、第 2061 號餘段、第 2062 號 A 分段、第 2062 號 B 分段、第 2062 號餘段、第 2063 號 A 分段、第 2063 號餘段、第 2064 號、第 2066 號、第 2067 號、第 2069 號餘段、第 2070 號餘段、第 2071 號、第 2072 號、第 2073 號、第 2074 號 (部分)、第 2075 號、第 2076 號、第 2077 號 (部分)、第 2078 號、第 2080 號 A 分段 (部分)、第 2080 號餘段、第 2081 號 A 分段、第 2081 號餘段、第 2082 號 A 分段、第 2082 號餘段、第 2083 號 A 分段、第 2083 號 B 分段、第 2083 號 C 分段、第 2083 號餘段、第 2084 號、第 2085 號 A 分段、第 2085 號餘段、第 2086 號 A 分段、第 2086 號餘段、第 2087 號 A 分段、第 2087 號 B 分段、第 2087 號餘段、第 2088 號 A 分段、第 2088 號 B 分段、第 2088 號餘段、第 2089 號 A 分段、第 2089 號餘段、第 2090 號、第 2091 號 A 分段、第 2091 號餘段、第 2092 號、第 2093 號、第 2094 號 A 分段、第 2094 號餘段、第 2095 號 A 分段、第 2095 號餘段、第 2096 號 A 分段第 1 小分段、第 2096 號 A 分段餘段、第 2096 號 B 分段、第 2096 號餘段、第 2097 號餘段、第 2124 號餘段 (部分)、第 2125 號餘段 (部分)、第 2127 號 A 分段餘段、第 2127 號 B 分段餘段、第 2128 號、第 2129 號、第 2130 號 A 分段 (部分)、第 2130 號 B 分段、第 2130 號餘段、第 2131 號餘段 (部分)、第 2133 號餘段、第 2134 號餘段、第 2135 號、第 2136 號餘段、第 2137 號 A 分段、第 2137 號餘段、第 2138 號 A 分段、第 2138 號餘段、第 2139 號 A 分段、第 2139 號餘段、第 2140 號、第 2141 號 A 分段、第 2141 號餘段、第 2144 號餘段、第 4541 號餘段、第 4644 號 (部分)、第 4666 號 (部分)、第 4849 號 A 分段 (部分)、第 4849 號 B 分段、第 4849 號 C 分段、第 4849 號 D 分段第 1 小分段、第 4849 號 D 分段餘段、第 4849 號 E 分段第 1 小分段 (部分)、第 4849 號 E 分段餘段、第 4849 號 F 分段第 1 小分段 (部分)、第 4849 號 F 分段餘段 (部分)、第 4849 號 G 分段 (部分)、第 4849 號 H 分段和第 4849 號餘段；

丈量約份第 52 約地段第 55 號 (部分)、第 56 號、第 74 號餘段、第 75 號餘段 (部分)、第 76 號、第 77 號餘段、第 78 號 A 分段餘段、第 78 號 B 分段餘段、第 79 號餘段、第 80 號餘段、第 81 號、第 82 號 A 分段餘段 [又稱第 82A 號餘段]、第 86 號 A 分段餘段 (部分)、第 87 號餘段 (部分)、第 89 號、第 90 號 A 分段、第 90 號 B 分段、第 92 號、第 93 號、第 94 號餘段、第 95 號 B 分段、第 96 號 B 分段、第 97 號、第 98 號 A 分段 (部分)、第 99 號、第 100 號 (部分)、第 101 號 (部分)、第 104 號 A 分段、第 104 號 B 分段 (部分)、第 104 號餘段 (部分)、第 117 號 A 分段餘段 (部分)、第 118 號 A 分段餘段、第 130 號 A 分段餘段、第 131 號 A 分段餘段、第 132 號、第 133 號、第 134 號餘段、第 135 號、第 147 號 (部分)、第 149 號 (部分)、第 150 號、第 151 號、第 152 號、第 153 號餘段、第 154 號 B 分段餘段 (部分)、第 159 號 C 分段餘段、第 160 號 B 分段、第 161 號、第 162 號、第 163 號、第 164 號 (部分)、第 166 號餘段、第 167 號 A 分段 (部分)、第 167 號餘段 (部分)、第 168 號 A 分段 (部分)、第 168 號餘段 (部分)、第 170 號餘段 (部分)、第 171 號餘段 (部分)、第 172 號餘段 (部分)、第 173 號餘段、第 174 號餘段、第 176 號餘段、第 177 號餘段、第 179 號

餘段、第 181 號餘段 (部分)、第 187 號餘段 (部分)、第 194 號 A 分段餘段 (部分)、第 195 號餘段 (部分)、第 210 號 (部分)、第 212 號 (部分)、第 231 號餘段 (部分)、第 318 號、第 319 號餘段、第 320 號餘段 (部分)、第 321 號 (部分)、第 329 號 B 分段餘段 (部分)、第 330 號餘段 (部分)、第 331 號 A 分段餘段、第 331 號餘段、第 332 號餘段、第 333 號餘段、第 334 號 (部分)、第 335 號 (部分)、第 336 號 (部分)、第 337 號 (部分)、第 338 號 (部分)、第 339 號 (部分)、第 340 號 (部分)、第 341 號 (部分)、第 342 號 (部分)、第 343 號 (部分)、第 344 號 (部分)、第 345 號 (部分)、第 346 號、第 347 號 (部分)、第 348 號 (部分)、第 350 號、第 351 號 (部分)、第 352 號、第 353 號 A 分段、第 353 號餘段、第 354 號、第 355 號、第 356 號、第 357 號、第 358 號、第 359 號、第 360 號、第 361 號、第 362 號、第 363 號、第 364 號、第 365 號餘段、第 366 號餘段、第 367 號 (部分)、第 369 號、第 370 號、第 371 號、第 372 號餘段、第 373 號、第 374 號、第 375 號餘段、第 376 號、第 377 號 A 分段餘段、第 377 號 B 分段餘段、第 378 號、第 379 號、第 380 號、第 381 號餘段、第 397 號餘段、第 398 號餘段、第 399 號、第 400 號、第 401 號、第 402 號、第 403 號、第 404 號、第 405 號 A 分段、第 405 號餘段、第 406 號、第 407 號、第 408 號、第 409 號餘段、第 410 號餘段、第 414 號 AB 分段餘段 [又稱第 414AB 號餘段]、第 414 號 C 分段餘段 [又稱第 414C 號餘段]、第 415 號餘段、第 416 號餘段、第 420 號餘段、第 421 號、第 422 號、第 423 號餘段、第 424 號、第 425 號、第 426 號、第 427 號、第 428 號、第 429 號、第 430 號、第 431 號、第 432 號、第 433 號、第 436 號餘段、第 437 號、第 438 號、第 439 號、第 440 號、第 441 號、第 442 號、第 443 號、第 444 號、第 445 號餘段 (部分)、第 446 號 (部分)、第 449 號 (部分)、第 451 號餘段 (部分)、第 452 號 (部分)、第 454 號 A 分段 (部分)、第 457 號 (部分)、第 459 號、第 462 號 (部分)、第 463 號 (部分)、第 464 號 A 分段餘段 (部分)、第 466 號 (部分)、第 467 號、第 468 號、第 474 號、第 475 號 (部分)、第 477 號、第 478 號、第 479 號、第 480 號、第 481 號、第 482 號 A 分段、第 482 號餘段、第 483 號、第 484 號 A 分段、第 486 號 A 分段餘段、第 528 號 A 分段餘段 (部分)、第 529 號 A 分段餘段、第 804 號 (部分)、第 805 號餘段 (部分)、第 806 號 (部分)、第 809 號 (部分)、第 810 號、第 811 號、第 812 號餘段、第 813 號餘段、第 814 號、第 815 號、第 816 號餘段、第 817 號餘段、第 1193A 號 (部分)、第 1207 號 (部分)、第 1208 號、第 1210 號、第 1319 號、第 1322 號 A 分段、第 1322 號餘段、第 1380 號、第 1381 號餘段和第 1454 號；

丈量約份第 83 約地段第 1130 號餘段 (部分)、第 1131 號餘段 (部分)、第 1132 號、第 1133 號、第 1134 號 (部分)、第 1135 號 A 分段 (部分)、第 1135 號 B 分段 (部分)、第 1135 號餘段、第 1136 號 A 分段第 1 小分段 (部分)、第 1136 號 A 分段餘段、第 1136 號餘段、第 1149 號 A 分段 (部分)、第 1149 號餘段、第 1150 號餘段 (部分)、第 1152 號 A 分段 (部分)、第 1152 號餘段、第 1153 號 A 分段 (部分)、第 1153 號餘段、第 1154 號 A 分段、第 1154 號 B 分段 (部分)、第 1154 號餘段、第 1156 號 B 分段、第 1156 號餘段、第 1157 號 A 分段第 1 小分段 (部分)、第 1157 號 A 分段第 2 小分段、第 1157 號 A 分段餘段、第 1157 號 B 分段第 1 小分段 (部分)、第 1157 號 B 分段餘段、第 1157 號 C 分段 (部分)、第 1157 號 D 分段第 1 小分段、第 1157 號 D 分段餘段、第 1157 號 E 分段、第 1157 號餘段、第 1158 號 A 分段第 1 小分段、第 1158 號 A 分段餘段、第 1158 號 B 分段第 1 小分段、第 1158 號 B 分段餘段、第 1158 號 C 分段、第 1158 號餘段、第 1159 號 A 分段、第 1159 號餘段、第 1160 號 A 分段第 1 小分段、第 1160 號 A 分段餘段、第 1160 號 B 分段、第 1160 號餘段、第 1161 號 A 分段、第 1161 號餘段、第 1162 號 A 分段餘段、第 1162 號 B 分段、第 1162 號 C 分段第 1 小分段、第 1162 號 C 分段第 2 小分段 A 分段、第 1162 號 C 分段第 2 小分段餘段、第 1162 號 D 分段第 1 小分段、第 1162 號 D 分段餘段、第 1175 號 A 分段、第 1175 號餘段、第 1176 號、第 1177 號 A 分段和第 1177 號餘段；

丈量約份第 88 約地段第 41 號、第 43 號 B 分段 (部分)、第 45 號、第 46 號 B 分段、第 49 號和第 53 號 (部分)；

丈量約份第 92 約地段第 739 號 A 分段、第 739 號 B 分段第 1 小分段、第 739 號 B 分段餘段、第 739 號 C 分段 (部分)、第 739 號餘段 (部分)、第 741 號 A 分段 (部分)、第 741 號 B 分段、第 741 號 C 分段 (部分)、第 741 號 D 分段、第 741 號 E 分段 (部分)、第 741 號 F 分段 (部分)、第 741 號 G 分段、第 741 號 H 分段、第 741 號餘段 (部分)、第 742 號 A 分段、第 742 號 B 分段、第 742 號餘段、第 743 號 A 分段、第 743 號餘段、第 744 號餘段、第 745 號 A 分段、第 745 號餘段、第 746 號餘段、第 749 號餘段、第 857 號 (部分)、第 858 號、第 859 號 (部分)、第 860 號 (部分)、第 861 號 (部分)、第 862 號、第 863 號、第 864 號、第 865 號、第 868 號、第 871 號餘段 (部分)、第 872 號餘段 (部分)、第 879 號 A 分段餘段 (部分)、第 880 號 C 分段餘段 (部分)、第 903 號 B 分段 (部分)、第 904 號 A 分段、第 904 號 B 分段、第 904 號 C 分段、第 904 號 D 分段 (部分)、第 904 號 E 分段 (部分)、第 904 號 F 分段 (部分)、第 904 號 G 分段 (部分)、第 905 號、第 906 號、第 908 號 A 分段、第 908 號 B 分段、第 908 號餘段、第 909 號 A 分段、第 910 號 (部分)、第 911 號 C 分段餘段 (部分)、第 912 號 A 分段第 1 小分段 (部分)、第 912 號餘段 (部分)、第 913 號、第 914 號 A 分段第 1 小分段 (部分)、第 914 號餘段、第 915 號 A 分段第 1 小分段 (部分)、第 915 號餘段 (部分)、第 916 號 (部分)、第 917 號 (部分)、第 918 號 (部分)、第 919 號 (部分)、第 920 號、第 923 號 (部分) 和第 2222 號 (部分)；

丈量約份第 95 約地段第 4 號 (部分)、第 5 號、第 6 號 A 分段、第 6 號餘段 (部分)、第 7 號、第 8 號 A 分段、第 9 號、第 10 號 A 分段、第 10 號餘段、第 12 號 A 分段、第 13 號、第 14 號 A 分段、第 14 號餘段、第 16 號 A 分段第 2 小分段 (部分)、第 16 號 A 分段第 3 小分段 (部分)、第 16 號 A 分段第 4 小分段、第 16 號 A 分段第 5 小分段 (部分)、第 16 號 A 分段第 6 小分段 (部分)、第 16 號 A 分段第 7 小分段 (部分)、第 16 號 A 分段第 8 小分段、第 16 號 A 分段第 9 小分段、第 16 號 A 分段第 10 小分段、第 16 號 A 分段第 11 小分段、第 16 號 A 分段第 12 小分段、第 16 號 A 分段第 13 小分段、第 16 號 A 分段第 14 小分段 (部分)、第 17 號 A 分段餘段、第 19 號、第 20 號、第 21 號、第 22 號、第 23 號、第 24 號、第 25 號、第 26 號、第 27 號、第 28 號 (部分)、第 29 號 (部分)、第 38 號 A 分段 (部分)、第 38 號 B 分段 (部分)、第 38 號餘段 (部分)、第 39 號 A 分段 (部分)、第 39 號餘段 (部分)、第 40 號 (部分)、第 42 號餘段、第 43 號 (部分)、第 44 號 (部分)、第 45 號 (部分)、第 53 號 (部分)、第 59 號 (部分)、第 61 號 (部分)、第 62 號 (部分)、第 63 號、第 64 號、第 65 號 (部分)、第 66 號 (部分)、第 67 號、第 69 號、第 70 號、第 71 號、第 72 號、第 73 號、第 74 號、第 75 號、第 76 號、第 77 號、第 78 號 A 分段、第 78 號餘段、第 79 號、第 80 號、第 81 號 (部分)、第 82 號 (部分)、第 83 號 (部分)、第 84 號 (部分)、第 85 號 (部分)、第 86 號 (部分)、第 87 號 (部分)、第 88 號 (部分)、第 89 號 (部分)、第 90 號 (部分)、第 91 號 (部分)、第 94 號 A 分段餘段 (部分)、第 95 號 A 分段第 2 小分段、第 95 號 A 分段餘段 (部分)、第 96 號 A 分段 (部分)、第 97 號 A 分段第 1 小分段、第 97 號 A 分段餘段、第 98 號 A 分段、第 98 號餘段 (部分)、第 99 號 (部分)、第 100 號 A 分段 (部分)、第 100 號餘段、第 102 號 (部分)、第 104 號 (部分)、第 106 號 (部分)、第 111 號 A 分段 (部分)、第 111 號 B 分段 (部分)、第 111 號餘段 (部分)、第 112 號 (部分)、第 118 號 (部分)、第 119 號 (部分)、第 122 號 (部分)、第 123 號 (部分)、第 124 號 (部分)、第 126 號、第 127 號、第 128 號、第 129 號、第 131 號、第 132 號 (部分)、第 133 號 (部分)、第 139 號 (部分)、第 140 號、第 143 號 (部分)、第 145 號 (部分)、第 148 號、第 149 號、第 150 號 (部分)、第 151 號 (部分)、第 152 號 (部分)、第 153 號 (部分)、第 154 號 (部分)、第 157 號、第 158 號、第 161 號 (部分)、第 162 號、第 163 號 (部分)、第 164 號 A 分段 (部分)、第 166 號 B 分段、第 167 號 A 分段餘段、第 168 號 A 分段餘段、第 169 號餘段、第 170 號、第 171 號、第 172 號 (部分)、第 173 號、第 174 號、第 175 號、第 176 號、第 177 號、第

178 號、第 180 號、第 181 號、第 182 號、第 183 號、第 184 號、第 186 號、第 187 號、第 188 號、第 189 號、第 190 號 A 分段、第 191 號、第 193 號、第 194 號 A 分段、第 195 號 A 分段餘段 (部分)、第 196 號餘段、第 197 號 A 分段 (部分)、第 198 號餘段 (部分)、第 199 號 A 分段、第 200 號 A 分段、第 201 號 A 分段 (部分)、第 203 號 (部分)、第 204 號 (部分)、第 205 號 (部分)、第 206 號、第 207 號 (部分)、第 208 號 A 分段 (部分)、第 208 號 B 分段 (部分)、第 208 號餘段 (部分)、第 210 號 A 分段、第 211 號 A 分段餘段、第 212 號 A 分段、第 212 號餘段、第 213 號、第 214 號 A 分段、第 214 號餘段、第 215 號、第 216 號、第 217 號、第 218 號、第 219 號、第 220 號、第 221 號 A 分段餘段、第 222 號 A 分段餘段 (部分)、第 223 號、第 224 號、第 225 號、第 229 號、第 231 號 B 分段餘段 (部分)、第 233 號 A 分段 (部分)、第 234 號 A 分段第 1 小分段 (部分)、第 234 號 A 分段餘段、第 235 號 A 分段第 1 小分段 (部分)、第 235 號 A 分段餘段、第 236 號 A 分段餘段 (部分)、第 237 號 B 分段 (部分)[又稱 237B(部分)；亦稱 237(部分)]、第 238 號 (部分)、第 240 號 (部分)、第 241 號 (部分)、第 242 號、第 244 號、第 245 號 (部分)、第 246 號、第 247 號 (部分)、第 249 號 (部分)、第 252 號 (部分)、第 253 號 (部分)、第 255 號 (部分)、第 256 號 (部分)、第 257 號、第 258 號、第 259 號 (部分)、第 261 號、第 262 號、第 263 號、第 264 號、第 265 號 A 分段、第 265 號餘段、第 266 號、第 268 號 (部分)、第 270 號 (部分)、第 271 號 A 分段餘段 (部分)、第 272 號 (部分)、第 273 號、第 276 號 (部分)、第 280 號 (部分)、第 283 號 (部分)、第 285 號、第 286 號、第 287 號、第 288 號、第 289 號 (部分)、第 292 號 A 分段 (部分)、第 292 號餘段 (部分)、第 306 號 (部分)、第 308 號 (部分)、第 314 號餘段 (部分)、第 321 號 B 分段、第 321 號 C 分段、第 321 號 D 分段、第 321 號 E 分段、第 321 號餘段、第 322 號餘段、第 323 號、第 325 號 A 分段、第 325 號 B 分段、第 325 號餘段、第 328 號 A 分段、第 328 號餘段 (部分)、第 329 號 (部分)、第 331 號、第 334 號 A 分段、第 334 號 B 分段、第 334 號 C 分段、第 334 號 D 分段、第 334 號 E 分段、第 334 號 F 分段、第 334 號餘段、第 335 號 A 分段 (部分)、第 335 號 B 分段、第 335 號 C 分段、第 335 號 D 分段、第 335 號 E 分段、第 335 號 F 分段、第 335 號 G 分段、第 335 號 H 分段、第 335 號 I 分段、第 335 號 J 分段、第 335 號餘段 (部分)、第 337 號 (部分)、第 338 號、第 341 號餘段、第 346 號 A 分段 (部分)、第 346 號 B 分段 (部分)、第 349 號 (部分)、第 351 號、第 352 號、第 353 號 A 分段、第 353 號 B 分段、第 353 號 C 分段、第 353 號 D 分段、第 355 號 (部分)、第 356 號 (部分)、第 357 號、第 359 號、第 360 號、第 372 號餘段 (部分)、第 373 號餘段 (部分)、第 691 號 C 分段第 2 小分段 (部分)、第 691 號 C 分段第 3 小分段、第 691 號 C 分段第 4 小分段、第 691 號 C 分段第 5 小分段、第 691 號 C 分段第 6 小分段、第 691 號 C 分段第 7 小分段、第 691 號 C 分段第 8 小分段、第 691 號 C 分段第 9 小分段、第 691 號 C 分段餘段 (部分)、第 694 號 (部分)、第 695 號 (部分)、第 696 號 (部分)、第 697 號、第 698 號、第 699 號、第 700 號、第 701 號、第 702 號 (部分)、第 703 號 (部分)、第 711 號餘段 (部分)、第 713 號餘段、第 714 號餘段、第 715 號餘段、第 716 號餘段、第 717 號餘段、第 719 號餘段 (部分)、第 720 號餘段 (部分)、第 722 號餘段 (部分)、第 723 號餘段、第 724 號、第 725 號 A 分段、第 725 號 B 分段、第 725 號餘段 (部分)、第 726 號餘段 (部分)、第 727 號餘段 (部分)、第 728 號 A 分段、第 728 號 B 分段、第 728 號 C 分段、第 728 號 D 分段、第 728 號 E 分段、第 728 號 F 分段、第 728 號 G 分段餘段 (部分)、第 728 號 H 分段、第 728 號 J 分段、第 728 號 K 分段、第 728 號 L 分段、第 728 號 M 分段、第 728 號 N 分段、第 728 號餘段、第 729 號 A 分段第 1 小分段、第 729 號 A 分段第 2 小分段 A 分段、第 729 號 A 分段第 2 小分段 B 分段、第 729 號 A 分段第 2 小分段 C 分段、第 729 號 A 分段第 2 小分段餘段、第 729 號 A 分段第 3 小分段、第 729 號 A 分段第 4 小分段、第 729 號 A 分段第 5 小分段餘段、第 729 號 A 分段第 6 小分段餘段、第 729 號 A 分段第 7 小分段、第 729 號 A 分段第 8 小分段、第 729 號 A 分段第 9 小分段、第 729 號 A 分段第 10 小分段 A 分段、第 729 號 A 分段第 10 小分段餘段、第 729 號 A 分段第 11 小分段、第 729 號 A 分段第 12 小分段、第 729 號 A 分段第 13 小分段、

第 729 號 A 分段餘段、第 730 號 A 分段第 1 小分段、第 730 號 A 分段第 2 小分段、第 730 號 A 分段第 3 小分段、第 730 號 A 分段第 4 小分段、第 730 號 A 分段第 5 小分段、第 730 號 A 分段第 6 小分段、第 730 號 A 分段第 7 小分段、第 730 號 A 分段第 8 小分段、第 730 號 A 分段餘段、第 730 號餘段 (部分)、第 731 號 A 分段第 2 小分段、第 731 號 A 分段第 3 小分段、第 731 號 A 分段第 4 小分段、第 731 號 A 分段第 5 小分段 (部分)、第 731 號 A 分段第 6 小分段 (部分)、第 731 號 A 分段第 7 小分段 A 分段、第 731 號 A 分段第 7 小分段餘段、第 731 號 A 分段第 8 小分段 (部分)、第 731 號 A 分段第 10 小分段、第 731 號 A 分段第 11 小分段 (部分)、第 731 號 A 分段第 12 小分段 (部分)、第 731 號 A 分段第 13 小分段 (部分)、第 731 號 A 分段第 14 小分段、第 731 號 A 分段第 15 小分段、第 731 號 A 分段第 16 小分段、第 731 號 A 分段餘段 (部分)、第 731 號餘段 (部分)、第 732 號 B 分段、第 732 號 C 分段 (部分)、第 732 號餘段 (部分)、第 733 號 C 分段餘段 (部分)、第 736 號餘段 (部分)、第 737 號餘段 (部分)、第 738 號餘段、第 739 號餘段、第 740 號餘段 (部分)、第 741 號 (部分)、第 742 號 A 分段 (部分)、第 742 號餘段 (部分)、第 743 號 A 分段、第 743 號餘段、第 744 號 A 分段、第 744 號餘段、第 745 號 A 分段、第 745 號餘段 (部分)、第 747 號、第 748 號餘段、第 749 號、第 750 號、第 751 號 (部分)、第 752 號 (部分)、第 754 號 A 分段、第 754 號 B 分段、第 754 號 C 分段、第 754 號 D 分段、第 754 號餘段、第 755 號 A 分段、第 755 號 B 分段、第 755 號 C 分段、第 755 號 D 分段 (部分)、第 755 號餘段 (部分)、第 757 號 A 分段、第 757 號 B 分段、第 757 號餘段 (部分)、第 758 號、第 759 號 A 分段 (部分)、第 759 號 B 分段、第 759 號 C 分段 (部分)、第 759 號餘段 (部分)、第 761 號 A 分段 (部分)、第 761 號 B 分段、第 761 號 C 分段 (部分)、第 761 號 D 分段、第 761 號餘段、第 762 號 A 分段、第 762 號 B 分段、第 762 號 C 分段 (部分)、第 762 號 D 分段、第 762 號餘段、第 763 號、第 764 號、第 765 號、第 766 號 A 分段、第 766 號餘段、第 767 號 A 分段餘段 (部分)、第 767 號餘段 (部分)、第 768 號 A 分段餘段 (部分)、第 768 號 B 分段餘段 (部分)、第 768 號 C 分段、第 768 號餘段、第 769 號餘段 (部分)、第 770 號 A 分段餘段、第 774 號 A 分段 (部分)、第 776 號 A 分段餘段 (部分)、第 778 號餘段 (部分)、第 783 號餘段 (部分)、第 784 號餘段 (部分)、第 790 號餘段、第 794 號餘段、第 795 號、第 796 號餘段、第 798 號 A 分段、第 798 號 B 分段、第 798 號餘段、第 799 號餘段、第 803 號 A 分段第 1 小分段餘段、第 803 號 A 分段第 2 小分段、第 803 號 A 分段第 3 小分段 (部分)、第 803 號 A 分段餘段、第 805 號 A 分段餘段、第 805 號 B 分段餘段 (部分)、第 806 號 (部分)、第 807 號餘段、第 809 號餘段、第 811 號 A 分段、第 811 號餘段、第 812 號、第 814 號、第 815 號餘段 (部分)、第 816 號 A 分段第 1 小分段 (部分)、第 816 號 A 分段第 2 小分段、第 816 號 A 分段餘段 (部分)、第 816 號餘段、第 817 號餘段、第 818 號餘段、第 819 號餘段、第 820 號餘段 (部分)、第 821 號 A 分段餘段、第 821 號 B 分段、第 821 號 C 分段、第 821 號餘段 (部分)、第 822 號 A 分段餘段、第 822 號 B 分段第 1 小分段、第 822 號 B 分段第 2 小分段、第 822 號 B 分段第 3 小分段 (部分)、第 822 號 B 分段餘段 (部分)、第 823 號、第 824 號 (部分)、第 825 號 (部分)、第 826 號、第 827 號 (部分)、第 829 號 (部分)、第 830 號 (部分)、第 831 號 A 分段 (部分)、第 831 號 B 分段 (部分)、第 832 號、第 833 號、第 834 號、第 835 號、第 837 號、第 839 號、第 840 號、第 841 號 (部分)、第 842 號、第 844 號 A 分段、第 844 號餘段、第 845 號、第 846 號 A 分段、第 846 號 B 分段、第 846 號餘段、第 847 號、第 849 號 A 分段、第 849 號 B 分段、第 850 號、第 851 號 (部分)、第 852 號 A 分段、第 852 號餘段 (部分)、第 853 號 (部分)、第 856 號 A 分段、第 856 號餘段、第 857 號、第 858 號 A 分段、第 858 號餘段、第 859 號、第 860 號 A 分段、第 860 號 B 分段、第 860 號 C 分段、第 860 號餘段、第 861 號 A 分段、第 861 號餘段、第 863 號、第 864 號、第 865 號、第 866 號 A 分段、第 867 號、第 868 號 A 分段、第 869 號 A 分段、第 870 號 A 分段、第 871 號 A 分段、第 871 號餘段、第 872 號 A 分段、第 872 號 B 分段 (部分)、第 872 號餘段、第 873 號 A 分段、第 873 號餘段 (部分)、第 874 號 A 分段、第 874 號餘段 (部分)、第 875 號 (部分)、第 876 號 (部分)、第 877 號 (部

分)、第 878 號 (部分)、第 879 號 (部分)、第 880 號、第 881 號、第 882 號、第 884 號、第 885 號、第 886 號、第 887 號 (部分)、第 888 號餘段 (部分)、第 889 號 (部分)、第 890 號 (部分)、第 891 號 (部分)、第 892 號 (部分)、第 893 號 (部分)、第 900 號、第 910 號餘段 (部分)、第 913 號餘段、第 914 號 (部分)、第 915 號、第 916 號 (部分)、第 917 號 (部分)、第 918 號、第 919 號、第 920 號、第 921 號、第 922 號、第 923 號、第 924 號、第 925 號、第 927 號 (部分)、第 928 號、第 929 號、第 930 號 (部分)、第 931 號 (部分)、第 932 號、第 933 號 (部分)、第 934 號 (部分)、第 935 號、第 936 號、第 937 號、第 938 號、第 939 號餘段 (部分)、第 940 號、第 941 號、第 942 號餘段、第 943 號餘段、第 944 號餘段、第 945 號餘段、第 966 號餘段 (部分)、第 986 號餘段、第 989 號餘段、第 991 號餘段、第 998 號餘段、第 999 號餘段、第 1001 號餘段、第 1002 號、第 1003 號餘段、第 1004 號 A 分段、第 1004 號餘段 (部分)、第 1005 號 (部分)、第 1007 號 A 分段、第 1007 號餘段 (部分)、第 1008 號 (部分)、第 1009 號 A 分段、第 1009 號餘段 (部分)、第 1010 號 A 分段、第 1011 號 A 分段、第 1011 號餘段、第 1012 號 A 分段、第 1012 號餘段、第 1013 號 A 分段、第 1014 號 A 分段、第 1014 號餘段、第 1015 號 A 分段、第 1015 號餘段、第 1016 號 (部分)、第 1017 號 (部分)、第 1018 號餘段 (部分)、第 1019 號 (部分)、第 1126 號 A 分段餘段 (部分)、第 1126 號 B 分段餘段、第 1127 號、第 1128 號餘段、第 1130 號餘段、第 1140 號餘段、第 1141 號、第 1142 號、第 1143 號 (部分)、第 1144 號 A 分段、第 1144 號 B 分段 (部分)、第 1144 號餘段、第 1145 號 (部分)、第 1146 號餘段 (部分)、第 1157 號餘段 (部分)、第 1158 號、第 1159 號、第 1160 號、第 1161 號、第 1162 號、第 1914 號、第 1917 號、第 1921 號 B 分段、第 1921 號餘段、第 1924 號、第 1952 號 (部分)、第 1971 號 (部分)、第 1975 號、第 1994 號 (部分)、第 1995 號、第 2067 號、第 2072 號 (部分)、第 2074 號和第 2079 號；

丈量約份第 96 約第 626 號 A 分段餘段、第 627 號、第 629 號、第 630 號 A 分段、第 630 號 B 分段餘段、第 631 號餘段、第 632 號餘段 (部分)、第 633 號餘段 (部分)、第 634 號 C 分段餘段、第 637 號餘段、第 638 號餘段、第 643 號餘段、第 644 號餘段、第 645 號 A 分段餘段、第 645 號 C 分段餘段、第 647 號餘段、第 657 號 A 分段餘段 (部分)、第 659 號 A 分段餘段 (部分)、第 659 號 B 分段 (部分)、第 659 號 C 分段餘段 (部分)、第 662 號 (部分)、第 663 號 (部分)、第 664 號餘段 (部分)、第 665 號餘段、第 666 號餘段 (部分)、第 667 號 (部分)、第 668 號 (部分)、第 671 號 (部分)、第 747 號 B 分段餘段 (部分)、第 747 號 C 分段餘段 (部分)、第 747 號 D 分段第 1 小分段 (部分)、第 834 號餘段 (部分)、第 839 號 B 分段 (部分)、第 839 號 C 分段第 1 小分段 (部分)、第 839 號 C 分段餘段 (部分)、第 839 號餘段 (部分)、第 855 號餘段、第 858 號、第 859 號 B 分段餘段 (部分)、第 860 號 (部分)、第 861 號 (部分)、第 862 號餘段、第 863 號、第 864 號、第 866 號、第 868 號、第 869 號餘段 (部分)、第 870 號 (部分)、第 871 號 (部分)、第 872 號 (部分)、第 875 號、第 876 號、第 877 號、第 878 號、第 882 號餘段、第 884 號餘段、第 886 號餘段、第 888 號餘段 (部分)、第 897 號、第 898 號 (部分)、第 899 號 (部分)、第 900 號 (部分)、第 901 號 (部分)、第 904 號 (部分)、第 905 號 (部分)、第 920 號 (部分)、第 922 號 (部分)、第 923 號 (部分)、第 924 號 (部分)、第 925 號 (部分)、第 954 號 (部分)、第 965 號、第 976A 號、第 979 號、第 980 號、第 982 號 (部分)、第 983 號 (部分)、第 989 號 (部分)、第 990 號 A 分段 (部分)、第 990 號 B 分段 (部分)、第 991 號 (部分)、第 992 號 (部分)、第 993 號、第 994 號 (部分)、第 998 號 (部分)、第 999 號 (部分)、第 1000 號 (部分)、第 1004 號 (部分)、第 1005 號、第 1006 號、第 1007 號、第 1008 號 (部分)、第 1015 號 (部分)、第 1017 號 (部分)、第 1020 號、第 1021 號 (部分)、第 1033 號、第 1035 號、第 1037 號、第 1040 號、第 1042 號、第 1056 號 (部分)、第 1057 號和第 2252 號餘段 (部分)；以及

粉嶺上水市地段第 182 號餘段 (部分)。

現公布行政長官會同行政會議已決定，須收回上述土地作公共用途。本人並已根據香港特別行政區行政長官所授予的權力，發出命令，在本公告張貼於上述土地的日期起計三個月屆滿時，上述土地須予收回，並歸還香港特別行政區政府所有。

本公告已於 2024 年 1 月 11 日張貼於上述土地。在通知期屆滿時，即 2024 年 4 月 11 日午夜，上述土地須予收回，並歸還香港特別行政區政府所有。土地歸還日期為 2024 年 4 月 12 日。

公眾人士可在本公告刊登《憲報》之後，於地政總署網頁 (https://www.landsd.gov.hk/tc/resources/gov-notices/acq.html) 政府公告一欄內，瀏覽本公告及上述收地圖則的電子版本。下列辦事處亦備有本公告的副本及上述收地圖則，公眾人士可於辦事處下述一般開放時間內免費查閱：

辦事處地址	*開放時間* *(公眾假期除外)*
香港中環統一碼頭道 38 號 海港政府大樓地下 中西區民政諮詢中心	星期一至星期五 上午 9 時至晚上 7 時
新界粉嶺璧峰路 3 號 北區政府合署地下 北區民政諮詢中心	
新界元朗青山公路 269 號 元朗民政事務處大廈地下 元朗民政諮詢中心	
新界粉嶺璧峰路 3 號 北區政府合署 6 樓 北區地政處	星期一至星期五 上午 8 時 45 分至下午 12 時 30 分 以及 下午 1 時 30 分至下午 5 時 30 分
新界元朗橋樂坊 2 號 元朗政府合署 9 樓 元朗地政處	

2024 年 1 月 11 日

地政總署副署長 (專業事務) 趙莉莉

Ref.: ADCL/PLG-10315/R001

Section 16 Planning Application

Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years

Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Planning Statement

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Prepared by
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June 2025

EXECUTIVE SUMMARY

(In case of discrepancy between English and Chinese versions, English shall prevail)

This Planning Statement is submitted to the Town Planning Board (hereinafter referred to as "the Board") in support of a planning application (hereinafter referred to as "the current application") for **Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years** (hereinafter referred to as "the proposed use") at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories (hereinafter referred to "the application site"). The Planning Statement serves to provide background information and planning justifications in support of the proposed use in order to facilitate consideration by the Board.

The application site falls with an area zoned "Agriculture" ("AGR") on the Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18 gazetted on 19.04.2024. As detailed throughout this Planning Statement, the proposed use is well justified on the grounds that:-

(a) the proposed use would facilitate the relocation of brownfield operations affected by the New Development Areas by offering timely relocation solutions, ensuring a smooth transition of brownfield operations at a strategic location;
(b) it would capitalize on development opportunities by phasing out pigsty operations, optimizing land use resources in the area, and contributing to the overall upgrade of the locality;
(c) the proposed use falls under Category 2 areas as per the Town Planning Board Guidelines (TPB PG-No. 13G);
(d) the proposed use is considered compatible with the surrounding land uses;
(e) the proposed use is temporary in nature. Approval of the current application would not jeopardise the long-term planning intention of the "AGR" zone or any planned infrastructural developments at the application site and its neighbourhood;
(f) no adverse traffic, drainage, infrastructural or environmental impacts arising from the proposed use is anticipated; and
(g) the proposed use will not set an undesirable precedent as similar applications are identified in the close vicinity of the application site.

In view of the above and the list of detailed planning justifications in the Planning Statement, it is sincerely hoped that the Board will give sympathetic consideration to approve the current application for the proposed use for a temporary period of 3 years.

行政摘要

(如內文與其英文版本有差異，則以英文版本為準)

此規劃報告書旨在支持一宗遞交予城市規劃委員會（以下簡稱「城規會」）的規劃申請（以下簡稱「該申請」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築材料、機械連附屬設施及進行相關填土工程（為期 3 年）（以下簡稱「擬議用途」）。該申請涉及的地點位於新界上水缸瓦甫丈量約份第 87 約地段第 346 號、 347 號 A 分段、347 號 B 分段、347 號餘段、348 號餘段、349 號餘段、351 號餘段、352 號 B 分段餘段、361 號餘段（部分）、366 號餘段及毗鄰政府土地（以下簡稱「申請地點」）。此規劃報告書提供該申請的背景及規劃理據以支持擬議用途予城規會考慮。

根據 2024 年 4 月 29 日刊憲之虎地坳及沙嶺分區計劃大綱核准圖（編號：S/NE-FTA/18）（以下簡稱為「大綱核准圖」），申請地點坐落於「農業」地帶。根據大綱核准圖的註釋說明，有關用途或發展即使圖則沒有作出規定，城規會仍可批給作不超過三年屬臨時性質的用途。此規劃報告書詳細闡述該申請的規劃理據，當中包括：-

(一) 擬議用途可為受新發展區影響的棕地作業提供及時的搬遷方案，確保在策略性地點順利過渡；
(二) 透過淘汰現時養豬場運作，善用區內的土地資源，有助提升區內的整體質素，從而把握發展機遇；
(三) 根據城市規劃委員會指引(TPB PG-No. 13G)，擬議用途屬於第二類地區；
(四) 擬議用途與周圍土地用途相容；
(五) 擬議用途為臨時用途。擬議用途不會妨礙落實大綱核准圖中「農業」地帶的長遠規劃意向，亦不會妨礙申請地點及其附近的任何已規劃的基礎設施發展；
(六) 擬議用途不會對交通、排水、基建或環境造成不良影響；及
(七) 考慮到附近已有類似該申請的規劃申請獲批准，擬議用途並不會立下不良先例。

鑑於以上及此規劃報告書所提供的詳細規劃理據，敬希城規會各委員酌情考慮批准該申請作臨時三年擬擬用途。

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1. INTRODUCTION

1.1 Purpose

1.1.1 Pursuant to section 16 of the Town Planning Ordinance (Cap. 131), this *Planning Statement* is submitted to the Town Planning Board (hereinafter referred to as "the Board") in support of a planning application (hereinafter referred to as "the current application") for **Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years** (hereinafter referred to as "the proposed use") at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories (hereinafter referred to "the application site"). The application site has an area of about 16,604m^2 (including about 6,886m^2 of Government land). This Planning Statement serves to provide background information and planning justifications in support of the proposed use in order to facilitate consideration by the Board. The location of the application site is shown in **Figure 1** whilst **Figure 2** indicates the relevant private lots and Government land in which the application site involves.

1.1.2 The application site currently falls within an area zoned "Agriculture" ("AGR") on the Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18 gazetted on 19.04.2024 (hereinafter referred to as "the Current OZP") (**Figure 3** refers). As stipulated in the Notes of the Current OZP, "*…temporary use or development of any land or building not exceeding a period of three years requires permission from the Town Planning Board. Notwithstanding that the use or development is not provided for in terms of the Plan, the Town Planning Board may grant permission, with or without conditions, for a maximum period of three years…*". The Remarks of "AGR" zone of the Current OZP also stated *"...any filling of land shall not be undertaken...without the permission from the Town Planning Board..."*. In this connection, a planning permission is wished to be sought from the Board for the proposed use on a temporary basis for a period of three years.

1.1.3 Prepared on behalf of *Brilliant Profit Limited* (hereinafter referred to as "the Applicant"), *Aikon Development Consultancy Limited* has been commissioned to prepare and submit the current application.

1.2 Background

1.2.1 The development of the Northern Metropolis is underway, featuring numerous projects in New Development Areas. With land resumption progressing, existing brownfield operations are being impacted. The application site is strategically located in Kong Nga Po, benefiting from the adjoining Kong Nga Po Police Training Facilities and its developed infrastructure. In light of this development opportunity, the applicant has liaised with the existing operator of the pigsty at the application site and entered into a Memorandum of Understanding to cease pigsty operations and

utilize the site for the proposed use (**Appendix I** refers). The current application aims to phase out the existing pigsty operation and transform the application site into an organized, safe venue to support local logistics and construction industry, leveraging its strategic location and infrastructure. Additionally, the current application seeks to optimize land use resources in the area and contribute to the overall upgrade of the locality.

1.2.2 By allowing the current application, the applicant could provide timely solutions for relocation options for the affected brownfield operations, facilitating the smooth transition of existing operations. The applicant has been in contact with potential operators and tenants. Upon approval of the current application, suitable tenants will be arranged to utilize the proposed use at the application site for the intended purpose. It is believed that the proposed use, with its substantial site area and strategic location as well as infrastructural support, will be a favorable option for facilitating future relocations of brownfield operations in the New Territories, thus allowing smooth implementation of the New Development Areas whilst ensuring the continuity of local businesses.

1.3 Objectives

1.3.1 The current application strives to achieve the following objectives:-

(a) To offer timely relocation solutions for brownfield operations affected by the NDAs, ensuring a smooth transition of brownfield operations at a strategic location;

(b) To phase out current incompatible use and optimize land use resources in the area, contributing to the overall upgrade of the locality;

(c) To fully utilise the land resources falling within "AGR" zone for temporary uses that are beneficial to the community, viable in operation, and compatible with the character of the surrounding environment without hindering the long-term planning intention of "AGR" zone; and

(d) To induce no additional adverse traffic, environmental or infrastructural impacts on the surrounding areas.

1.4 Structure of the Planning Statement

1.4.1 This Planning Statement is divided into 6 chapters. **Chapter 1** is the above introduction outlining the purpose and background of the current application. **Chapter 2** gives background details of the application site in terms of the current land-use characteristics and neighbouring developments. Planning context of the application site is reviewed in **Chapter 3** whilst **Chapter 4** provides details of the proposed use. A full list of planning justifications is given in **Chapter 5** whilst **Chapter 6** summarises the concluding remarks for the proposed use.

2. SITE PROFILE

2.1 Location and Current Conditions of the Application Site

2.1.1 The application site is located at Kong Nga Po and is directly accessible via a local track connecting to Kong Nga Po Road (**Figure 1** refers). **Figure 2** indicates the private lots and government land involved. The application site is mostly hard paved and fenced off. The northern and southern portion of the application site are occupied by pigsties which has ceased operation.

2.2 Surrounding Land-use and Characteristics

2.2.1 To the west of the application site is the Kong Nga Po police training facilities. The new facilities, which cover 19 hectares will provide modern and efficacious training facilities for the Hong Kong Police Force. With the commencement of the project, the surrounding infrastructures have been significantly upgraded. The surrounding areas of the application site are intermixed with warehouse, open storages/storage yards, pigsties, temporary domestic structure, fallow agricultural land, vacant land and tree clusters. **Illustration 1-I and 1-II** indicates the current conditions of the application site and its surrounding areas.

3. PLANNING CONTEXT

3.1 Statutory Planning Context

3.1.1 The application site falls within an area zoned "AGR" on the Current OZP (**Figure 3** refers). According to the Notes of the Current OZP, "AGR" zone is intended primarily to '*retain and safeguard good quality agricultural land/farm/fish ponds for agricultural purpose*'. It is also intended to "*retain fallow arable land with good potential for rehabilitation for cultivation and other agricultural purposes*".

3.1.2 As stipulated in the Notes of the Current OZP, "…*temporary use or development of any land or building not exceeding a period of three years requires permission from the Town Planning Board. Notwithstanding that the use or development is not provided for in terms of the Plan, the Town Planning Board may grant permission, with or without conditions, for a maximum period of three years*…". The Remarks of "AGR" zone of the Current OZP also stated *"...any filling of land shall not be undertaken...without the permission from the Town Planning Board..."*. In this connection, the applicant wishes to seek planning permission from the Board for the proposed use on a temporary basis of three years.

3.2 Previous Application

3.2.1 There is no previous application for the application site.

3.3 Similar Applications

3.3.1 In the past five years, there are similar applications for similar uses within the "AGR" zone(s) on the Fu Tei Au and Sha Ling Outline Zoning Plan. Details of the similar applications are tabulated in **Table 2** below. Approval of the current application will not set an undesirable precedent as similar applications are identified in the close vicinity of the application site.

Table 2: Similar Planning Applications in the Past Five Years

Application No.	Proposed Use(s)	Zoning(s)	Decisions (Date)
A/NE-FTA/199	Temporary Cargo Handling and Forwarding Facility (Logistics Centre) for a Period of 3 Years	"AGR"	Approved with condition(s) on a temporary basis (05/02/2021)
A/NE-FTA/220	Proposed Temporary Cold Storage for Poultry and Distribution Centre for a Period of 3 Years and Filling of Land for Site Formation Works	"AGR"	Approved with condition(s) on a temporary basis (10/11/2023)
A/NE-FTA/236	Temporary Logistics Warehouse for a Period of 3 Years	"AGR"	Approved with condition(s) on a temporary basis (26/01/2024)
A/NE-FTA/244	Proposed Temporary Open Storage of Construction Materials for a Period of 3 Years and Associated Filling of Land	"AGR"	Approved with condition(s) on a temporary basis (06/12/2024)
A/NE-FTA/246	Proposed Temporary Open Storage of Construction Material and Machinery for a Period of 3 Years and Associated Filling of Land	"AGR"	Approved with condition(s) on a temporary basis (25/10/2024)
A/NE-FTA/249	Temporary Cargo Handling and Forwarding Facility for a Period of 3 Years	"AGR"	Approved with condition(s) on a temporary basis (06/12/2024)
A/NE-FTA/251	Proposed Temporary Open Storage of Construction Materials and Machineries for a Period of 3 Years and Associated Filling of Land	"AGR"	Approved with condition(s) on a temporary basis (04/10/2024)

3.4 Town Planning Board Guidelines (TPB PG-No. 13G)

3.4.1 The application site entirely falls under Category 2 areas in the Town Planning Board Guidelines for Application for Open Storage and Port Back-up Uses under Section 16 of the Town Planning Ordinance (TPB PG-No. 13G) promulgated by the Board in April 2023.

3.4.2 According to the TPB PG-No.13G, "Category 2 are areas mostly without clear planning intention or fixed development programme; areas to be affected by major upcoming infrastructural projects; areas within or close to clusters of open storage, port back-up or other types of brownfield sites/ temporary uses. In addition, the areas should not be subject to high flooding risk. Technical assessments, where appropriate or if required, should be submitted to demonstrate that the proposed uses would not have adverse drainage, traffic, visual, landscaping and environmental impacts on the surrounding areas. Subject to no adverse departmental comments and local objections, or the concerns of the departments and local residents can be addressed through the implementation of approval conditions, planning permission could be granted on a temporary basis up to a maximum period of 3 years".

4. THE DEVELOPMENT PROPOSAL

4.1 Site Configuration and Layout

4.1.1 The application site has a total area of about 16,604m^2 (including about 6,886m^2 of Government land). The application site consists of six single-storey temporary structures (including 5 nos. of enclosed structures and one open-sided structure), with a maximum height of 15m, providing a gross floor area (GFA) of about 4,927m^2 for the proposed use. The uncovered land area would be served as open storage purposes and circulation/manoeuvring space as well as provision of 10 parking spaces for private cars, 12 loading and unloading (L/UL) bay for light goods vehicles (LGVs) and 12 L/UL bays for medium/heavy goods vehicles (M/HGVs). The Indicative Layout Plan is shown in **Figure 5** whilst the key development parameters for the proposed use are detailed in **Table 3**.

4.1.2 Access to the application site will be provided through an ingress/egress point (in about 11m) located at the northwestern boundary (**Figure 5** refers), which is connected to a local access leading to Kong Nga Po Road (**Figure 1** refers). Should the current application be approved, the existing fencing will be adjusted, and new fencing of about 3m will be erected along the periphery of the application site. The proposed use would make use of the internal circulation road to supports distribution and efficient vehicle maneuvering.

4.1.3 A majority part of the application site has been paved to serve the pigsty, and it is proposed to raise the ground level feasible traffic flow and heavy vehicle access. Considering the existing topographic profile of the application site, the current level of the site ranges from about +22.1mPD to about +27.8mPD, with the majority portion being approximately 1 to 4m lower than Kong Nga Po Road the access road to the south. The ground level is proposed to be raised to a level between +24.0mPD to 27.0mPD. The application site will be filled with soil and concrete, covering the entire application site (16,604m^2) and with a depth of not more than 3m. (**Figure 4** refers).

4.1.4 The western and eastern portions of the application site is currently connected by a platform structure with pipe underneath to maintain streamflow (**Illustration 1-III** refers). According to the applicant, this structure has been in place since the pigsty operation. To facilitate future operation and ensure safety, the structured platform area is proposed to be filled. An 800mm diameter concrete pipe is proposed to replace the existing concrete pile and install underneath a structured platform to ensure no disturbance to the existing drainage performance of the drainage system. (**Appendix III** refers).

4.2 Operation

4.2.1 The proposed use (i.e. temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities)

will provide a well-managed venue for storage of goods and construction materials and machinery.

4.2.2 Structure A and Structure C are designated as warehouses of not more than 2-storey for storage of goods. All goods stored within the application site will be non-polluted and non-dangerous in nature and will remain stagnant all the time. The operation hours of the proposed use are from 8:00a.m. to 6:00p.m. from Mondays to Saturdays and there will be no operations on Sundays and public holidays. Structures B, D and E are designated as ancillary office and storeroom to support the proposed use. Open area with sufficient manoeuvring space will be served as open storage purposes.

4.2.3 Regarding the implementation of the development proposal, the Applicant stands ready to apply to the Lands Department for the Short-Term Tenancy (STT) and the Short-Term Waiver (STW) for occupying the Government land, and permitting the structures to be erected or to regularise any irregularities on site, once the current application is approved.

Table 3: Key Development Parameters

Proposed Use	Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years
Operation Hours	From 9:00a.m. to 6:00 p.m. from Mondays to Saturdays (Excluding Sundays and Public Holidays)
Site Area	16,604m^2 (including about 6,886m^2 of Government land)
Covered Area	About 2,990m^2 (About 18%)
Uncovered Area	About 13,614m^2 (About 82%)
Temporary Structure No(s). No. of Storey Maximum Height Total Floor Area	 6 Not More than 2 Storey Not More than 15m About 4,927m^2
No. of Parking Spaces Private Car (5m(L) x 2.5m(W))	10 10
No. of Loading/Unloading (L/UL) Bays HGVs (11m(L) x 3.5m(W)) LGVs (7m(L) x 3.5m(W))	24 12 12
Filling of Land Area of Filling Depth of Filling Type of Filling Materials Existing Ground Level (about) Proposed Ground Level (about)	 16,604 m^2 Not more than 3 m Soil and Concrete +26.5mPD (Northeast portion) +24.0mPD (Southwest portion) +27.0 mPD (Northeast portion) +24.5 mPD (Southwest portion)

Table 4: Key Development Parameters for the Proposed Structures

Structure	Uses	Roof Area (About)	Floor Area (About)	Building Height
Structure A	Warehouse	737 m^2	1,474 m^2	15m (2 storey)
Structure B	Ancillary Site Office/General Storage Uses	220 m^2	220 m^2	7m (1 storey)
Structure C	Warehouse	1,200 m^2	2,400 m^2	15m (2 storey)
Structure D	Ancillary Site Office/General Storage Uses	220 m^2	220 m^2	7m (1 storey)
Structure E	Ancillary Site Office/General Storage Uses	220 m^2	220 m^2	7m (1 storey)
Structure F	General Storage Uses	393 m^2	393 m^2	7m (1 storey)
	Total	2,990 m^2	4,927 m^2	NA

4.3 Proposed Traffic Arrangement

4.3.1 The application site can be accessed via an unnamed access road leading to Kong Nga Po Road. The proposed use features an 11m-wide access point, which is well-suited for the proposed types of vehicles. This entry width supports safe and efficient vehicle maneuvering, minimizing the risk of congestion or accidents. Within the application site, 10 parking spaces for private cars, 12 L/UL bay for LGVs, and 12 L/UL bays for M/HGVs are provided.

4.3.2 The proposed use is designed to meet regulatory standards and optimise operational efficiency without substantially impacting local traffic. A traffic impact assessment was conducted (**Appendix II** refers), and it is concluded that, the proposed use, strategically situated near key roadways, its development traffic will not cause adverse traffic impact onto the local road network.

4.3.3 To further minimise any potential traffic impact, several operational arrangements have been proposed, including a low-intensity operation model, restricted operating hours, vehicle management measures to schedule operations outside peak times, and safety design features. With the proposed traffic arrangements, the proposed use is designed to meet regulatory standards and optimise operational efficiency without substantially impacting the surrounding road network.

4.4 Landscape and Visual Consideration

4.4.1 A majority of the application sites have been paved for previous uses (about 45%) and there is no existing tree within the application site. Most of the area was used as a pigsty and is covered by extensive structures from that previous use. The applicant has very low agricultural value at present and the proposed development would induce no significant landscape impact.

4.4.2 It is proposed that the application site will be fenced off to prevent direct visual contact from outside. Compared to the adjoining Police Training Facilities, the scale of the proposed use is considered to be minimal, and not visual intrusive. The proposed use is expected to have no or minimal adverse visual impacts on the surrounding land uses and the overall neighborhood.

4.5 Environmental Consideration

4.5.1 The goods to be stored within the application site will be non-polluted and non-dangerous in nature and will remain stagnant all the time. The Applicant will strictly follow Environmental Protection Department (EPD)'s latest "Code of Practice on Handling Environmental Aspects of Temporary Uses and Open Storage Sites (CoP)" and comply with all environmental protection/ pollution control ordinances, during construction and operation stages of the proposal, should the application be approved. As such, no adverse environmental impact and misuse of the proposed use is anticipated.

4.6 Drainage Consideration

4.6.1 According to the Drainage Proposal (**Appendix III**), a new drainage system within the subject lots is proposed after the site formation works to raise the ground level to be uniform. The proposed drainage system has been checked to be sufficient to handle stormwater surface runoff within the subject site area and not affecting the adjacent footpath and carriageway to minimize the potential risks of overland flows and flooding by rainfall event. As such, no significant adverse drainage impact is anticipated.

5. PLANNING JUSTIFICATIONS

5.1 Facilitating Relocation of Brownfield Operations

5.1.1 The Northern Metropolis is currently under active implementation, with various projects with resumption and clearance underway in New Development Areas. As land resumption continues, many existing brownfield operations are being affected. Notably, significant amount of private land was reverted to the government in April 2024 for Kwu Tung North and Fanling North New Development Area. To continue existing operation, a considerable amount of time is required for the extensive site search process. In addition to identifying and reviewing suitable sites, time and resources may be needed to seek planning approvals and implement suitable land use from virgin sites.

5.1.2 The application site is strategically positioned in Kong Nga Po, benefiting from nearby Police Training Facilities and established infrastructure. To capitalize on these development opportunities, the applicant intends to develop the application site to offer timely relocation solutions, ensuring a smooth transition for brownfield operations. The applicant has liaised with potential operators and tenants. Upon approval of the current application, the applicant will arrange suitable tenants to utilize the proposed use at the application site as intended. It is believed that the proposed use, with its substantial site area and strategic location as well as infrastructural support, will be a favorable option for facilitating future relocations of brownfield operations in the New Territories, thus allowing smooth implementation of the New Development Areas whilst ensuring the continuity of local businesses.

5.2 Capitalizing Development Opportunities and Upgrade of the Locality

5.2.1 The application previously served as a pigsty. As the area gradually upgrades with more infrastructure and facilities, the pigsty is deemed incompatible due to hygiene concerns. The applicant has liaised with the existing operator of the pigsty at the application site and entered into a Memorandum of Understanding to cease pigsty operations and utilize the site for the proposed use.

5.2.2 The proposed use will phase out the existing pigsty operation while transforming the application site into an organized and safe venue to support local logistics and the construction industry with a strategic location and infrastructure support. The current application would also optimize land use resource in the area and contribute to the overall upgrade of the locality.

5.3 Not Contrary to the Town Planning Board Guidelines (TPB PG-No. 13G)

5.3.1 The application site falls under Category 2 areas in the TPB PG-No. 13G promulgated by the Board in April 2023. According to the TPB PG-No.13G, Category 2 areas are areas mostly without clear planning intention or fixed development programme; areas to be affected by major upcoming infrastructural projects; areas within or close

to clusters of open storage, port back-up or other types of brownfield sites/ temporary uses. In addition, the areas should not be subject to high flooding risk. Technical assessments, where appropriate or if required, should be submitted to demonstrate that the proposed uses would not have adverse drainage, traffic, visual, landscaping and environmental impacts on the surrounding areas. Subject to no adverse departmental comments and local objections, or the concerns of the departments and local residents can be addressed through the implementation of approval conditions, planning permission could be granted on a temporary basis up to a maximum period of 3 years.

5.3.2 Considering that the proposed use is well-justified with no adverse impacts on traffic, landscape, visual, drainage, sewerage and environmental aspects in the surrounding areas, the current application is considered not contrary to the TPB PG-No. 13G.

5.4 Compatible with Land Uses of the Surrounding Areas

5.4.1 The surrounding areas of the application site are in rural inland plain landscape character and predominately occupied by open storages, warehouses, temporary structures, tree clusters, active/fallow farmlands and vegetated areas. The proposed use is therefore considered to be compatible with the land uses of the surrounding areas. The proposed use is considered to fully commensurate with its local geographical settings and is ideal to attain the utmost land use maximisation without giving rise to detrimental impacts on the surrounding areas.

5.5 Not Jeopardizing the Planning Intention of "AGR" Zone

5.5.1 Considering the close proximity of various adjacent open storage and warehouse uses to the application site, the planning intention of "AGR" zone may hardly be materialized in short term until the surrounding characteristics are entirely and compulsorily required to be utilized for agricultural activities again. In contrast, approving the proposed temporary use under the current application would facilitate ongoing and flexible adaptation to meet the changing demands of land use.

5.5.2 The temporary nature of the proposed use under the current application will by no means jeopardize the long-term planning intention of the "AGR" zone, considering that the proposed use under the current application is only being applied for a period of 3 years.

5.6 No Adverse Traffic Impact

5.6.1 The proposed use is designed to meet regulatory standards and optimise operational efficiency without substantially impacting local traffic. According to the Traffic Impact Assessment (**Appendix II** refers), the proposed use, strategically situated near key roadways, its development traffic will not cause adverse traffic impact onto the local road network.

5.6.2 To further minimise any potential traffic impact, several operational arrangements have been proposed, including a low-intensity operation model, restricted operating hours, vehicle management measures to schedule operations outside peak times, and safety design features. With the proposed traffic arrangements, the proposed use is designed to meet regulatory standards and optimise operational efficiency without substantially impacting the surrounding road network.

5.7 No Adverse Visual nor Landscape Impacts

5.7.1 The application site has been paved and there is no existing tree within the application site. The application site has very low agricultural value at present and the proposed development would induce no significant landscape impact.

5.7.2 It is proposed that the application site will be fenced off to prevent direct visual contact from outside. This design ensures compatibility with the surrounding land uses, which predominantly consists of open storages and warehouses. Compared to the adjoining Police Training Facilities, the scale of the proposed use is considered to be minimal, and not visual intrusive. The proposed use is expected to have no or minimal adverse visual impacts on the surrounding land uses and the overall neighborhood.

5.8 No Adverse Infrastructural nor Environmental Impacts

5.8.1 The goods to be stored within the application site will be non-polluted and non-dangerous in nature and will remain stagnant all the time. The Applicant is committed to implementing good site practices and adhering to the latest "CoP" and comply with all environmental protection/ pollution control ordinances, throughout the construction and operation stages of the proposed development, should the application be approved. It is ensured that the proposed development will not generate any unacceptable environmental impacts (including air quality, noise, water quality and waste management), during both the construction and operation phases. Therefore, no adverse environmental impact or misuse of the proposed use is anticipated.

5.9 No Adverse Drainage Impact

5.9.1 According to the Drainage Proposal (**Appendix III**), a new drainage system within the subject lots is proposed after the site formation works to raise the ground level to be uniform. The proposed drainage system has been checked to be sufficient to handle stormwater surface runoff within the subject site area and not affecting the adjacent footpath and carriageway to minimize the potential risks of overland flows and flooding by rainfall event. As such, no significant adverse drainage impact is anticipated.

5.10 Not Setting an Undesirable Precedent

5.10.1 Considering the similar applications being approved by the Board on the same OZP

as discussed in **Section 3.3**, no undesirable precedent is expected should the current application be approved.

6. CONCLUSION

6.1 This Planning Statement is submitted to the Board in support of the current application for the proposed use at the application site. This Planning Statement serves to provide background information and planning justifications in support of the proposed use to facilitate consideration by the Board.

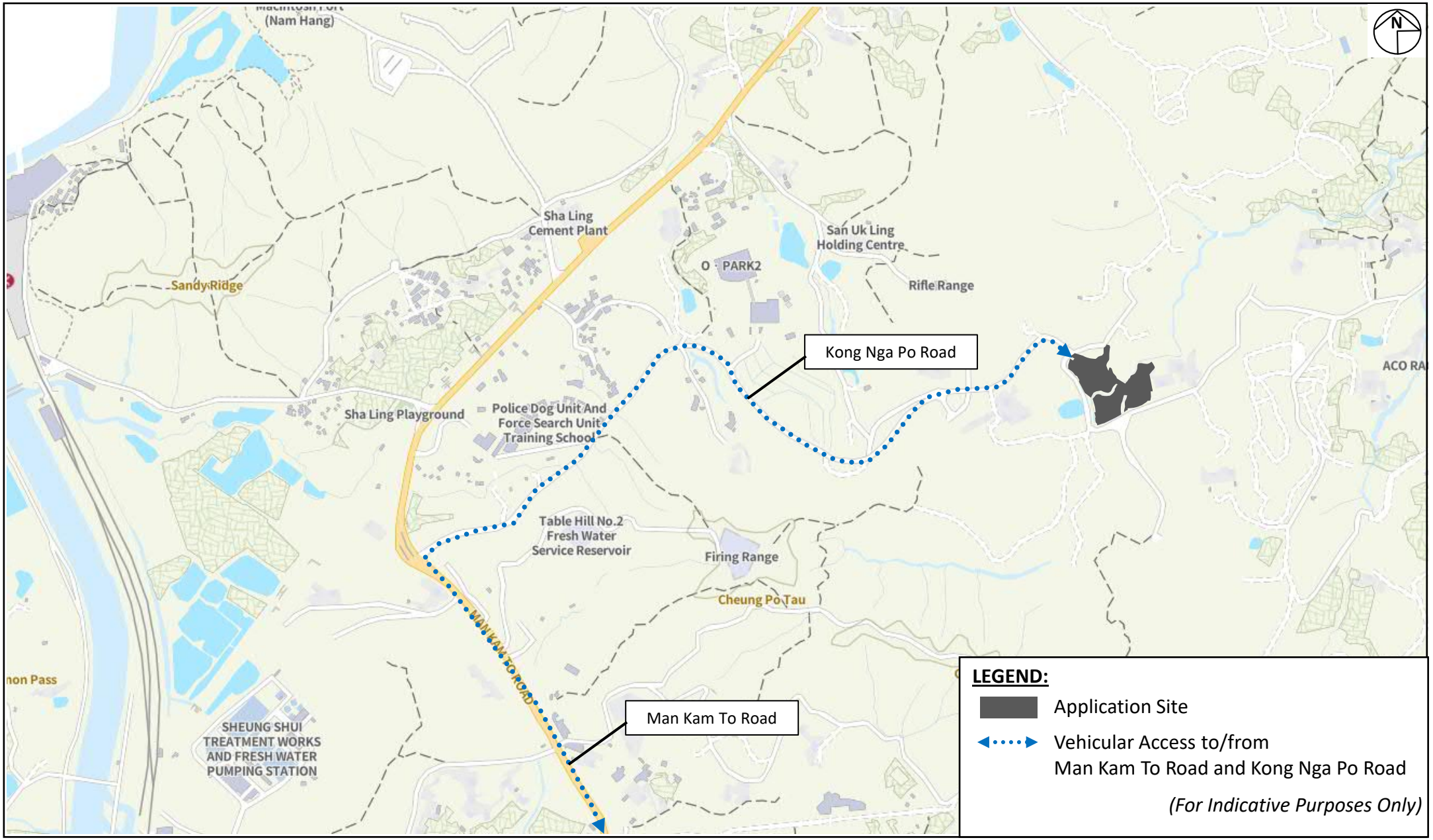
6.2 The application site falls with an area zoned "AGR" on Current OZP. As detailed throughout this Planning Statement, the proposed use is well justified on the grounds that:-

(a) the proposed use would facilitate the relocation of brownfield operations affected by the New Development Areas by offering timely relocation solutions, ensuring a smooth transition of brownfield operations at a strategic location;
(b) it would capitalize on development opportunities by phasing out pigsty operations, optimizing land use resources in the area, and contributing to the overall upgrade of the locality;
(c) the proposed use falls under Category 2 areas as per the Town Planning Board Guidelines (TPB PG-No. 13G);
(d) the proposed use is considered compatible with the surrounding land uses;
(e) the proposed use is temporary in nature. Approval of the current application would not jeopardise the long-term planning intention of the "AGR" zone or any planned infrastructural developments at the application site and its neighbourhood;
(f) no adverse traffic, drainage, infrastructural or environmental impacts arising from the proposed use is anticipated; and
(g) the proposed use will not set an undesirable precedent as similar applications are identified in the close vicinity of the application site.

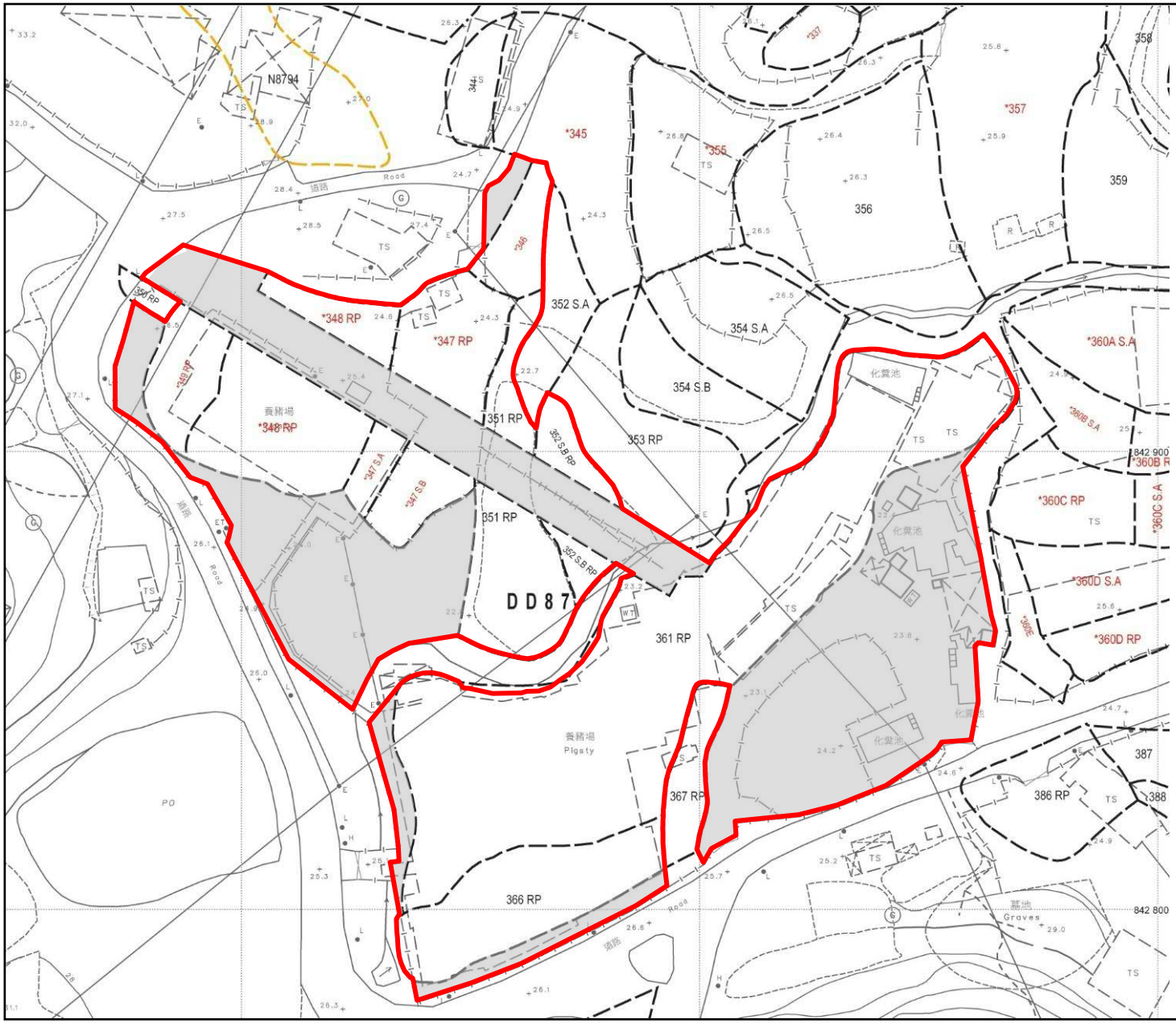
6.3 In view of the above and the list of detailed planning justifications in the Planning Statement, it is sincerely hoped that the Board will give sympathetic consideration to approve the current application for the proposed use for a temporary period of 3 years.

List of Figures

Figure 1	Location Plan
Figure 2	Extract of Lot Index Plan (No. ags_ S00000141570_0001)
Figure 3	Extract of Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18
Figure 4	Proposed Land Filling
Figure 5	Indicative Layout Plan



Project: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories	**Title:** Location Plan *Ref.: ADCL/PLG-10315-R001/F001*	**Figure:** 1 **Scale:** Not to Scale **Date:** Jun 2025	AIKON DEVELOPMENT CONSULTANCY LTD.



LEGEND:

Application Site (About 16,604m^2)

Government Land (About 6,886m^2)

(For Indicative Purposes Only)

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Extract of Lot Index Plan
(No. ags_S00000141570_0001)

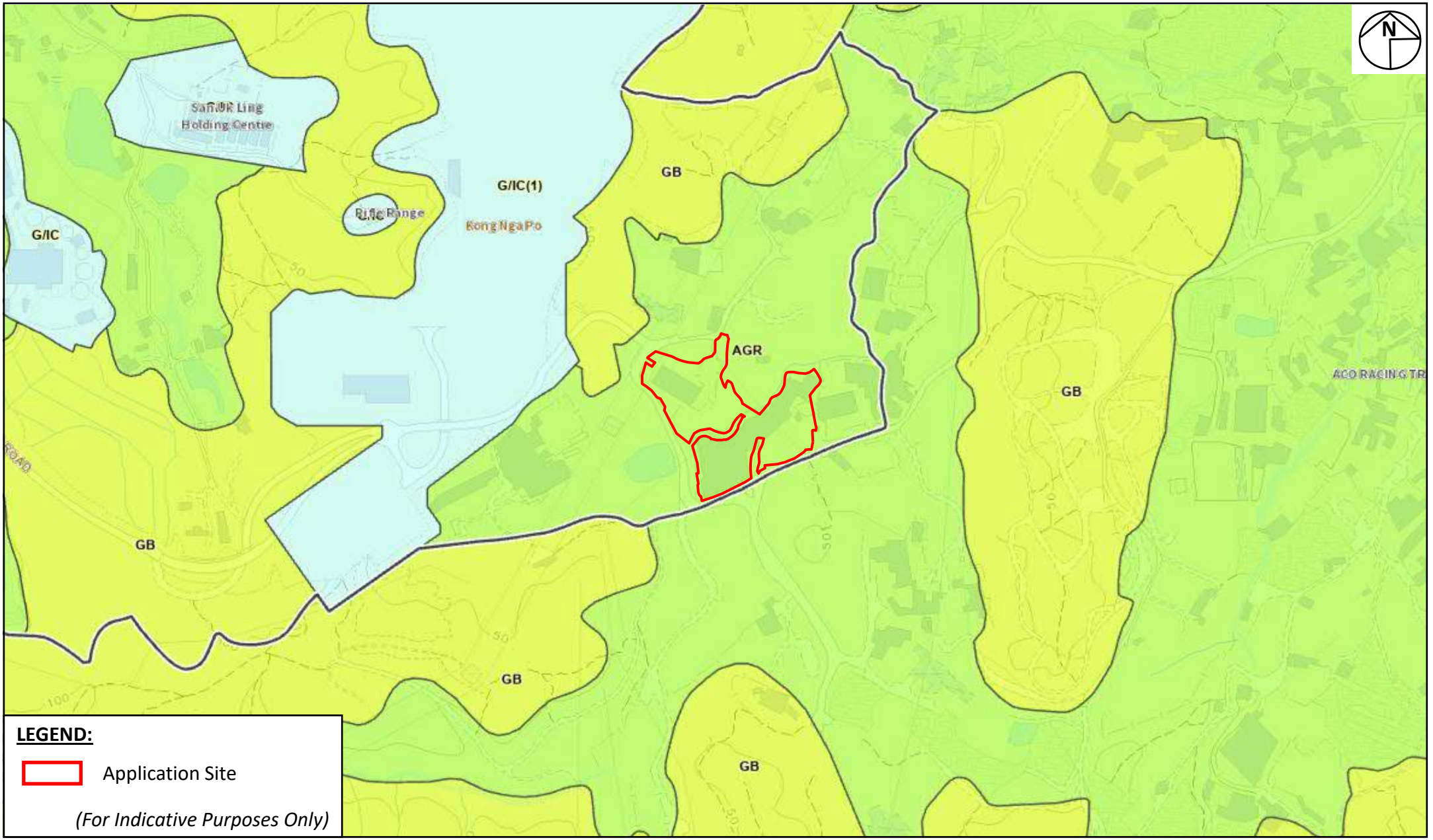
Ref.: ADCL/PLG-10315-R001/F002

Figure:
2

Scale:
Not to Scale

Date:
Jun 2025

AIKON DEVELOPMENT CONSULTANCY LTD.



Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Extract of Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18

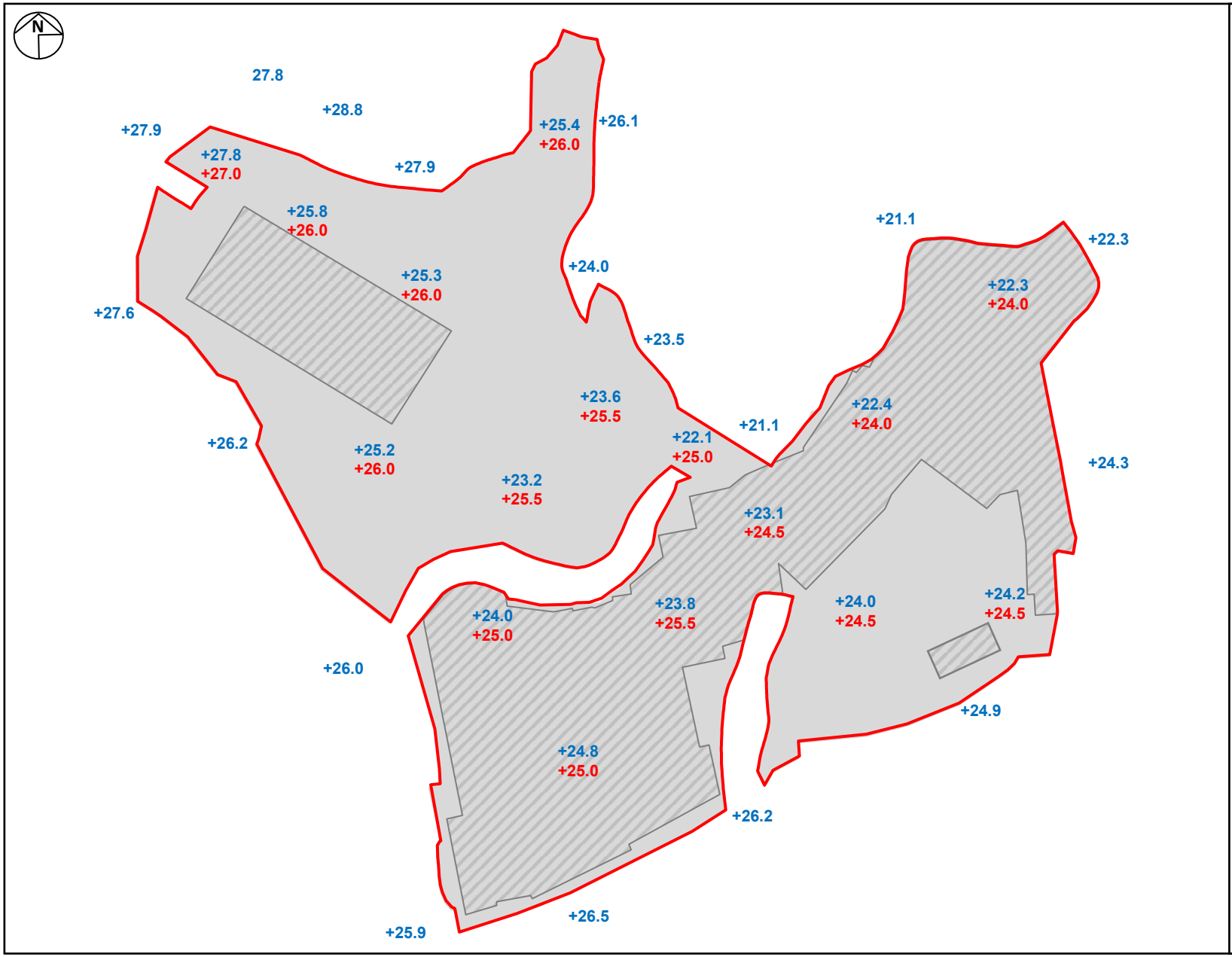
Ref.: ADCL/PLG-10286-R001/F003

Figure:
3

Scale:
Not to Scale

Date:
Jun 2025

AIKON DEVELOPMENT CONSULTANCY LTD.



LEGEND:

- Application Site
- Filling of Land (Depth: not more than 3m) (about 16,604m²)
- Existing Paved Area (about 7,448m²)
- +22.3 Existing Level (about)
- +24.0 Proposed Level (about)

(For Identification Only)

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Proposed Land Filling

Ref.: ADCL/PLG-10315-R001/F004

Figure:
4

Scale:
Not to Scale

Date:
Jun 2025

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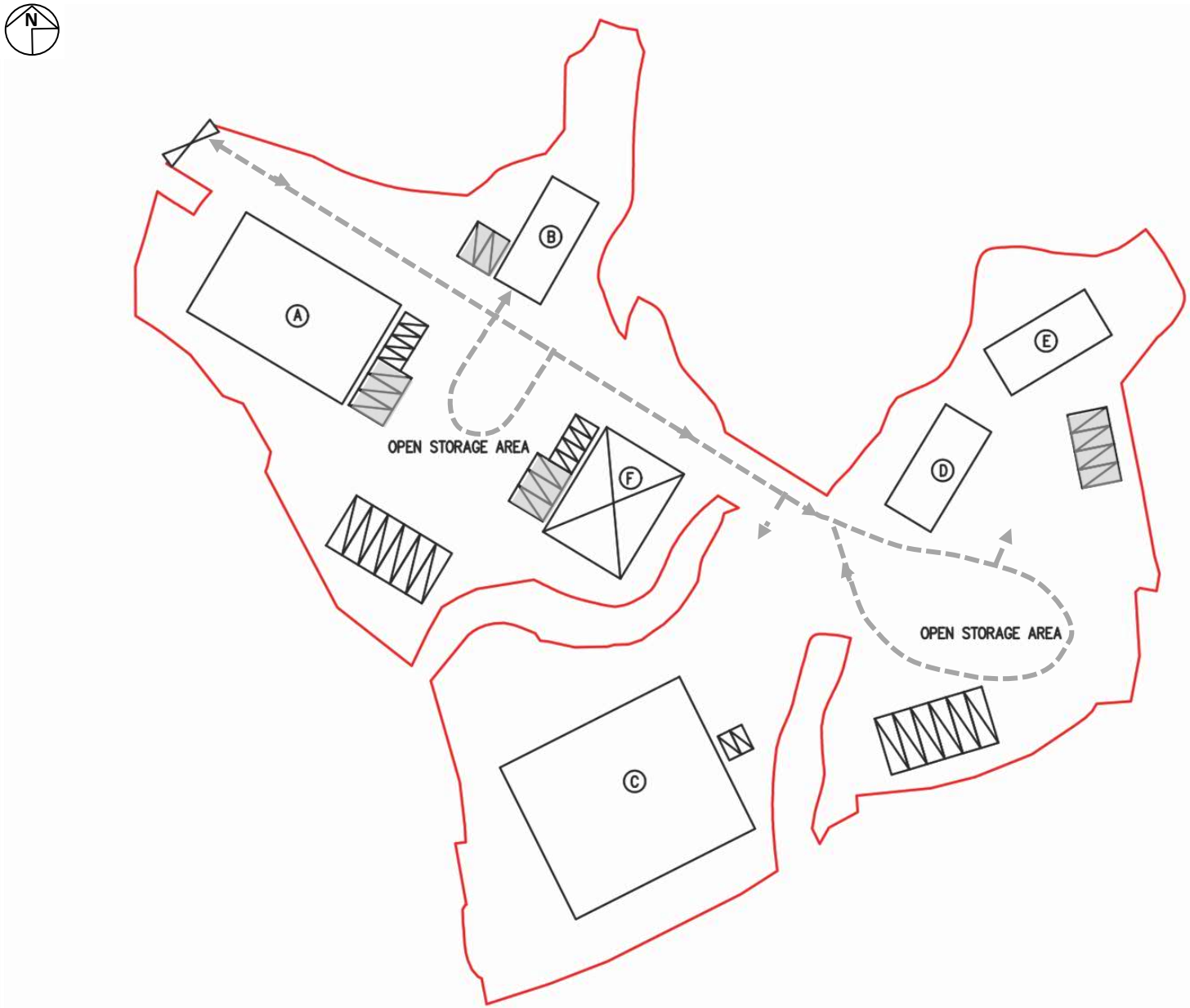

LEGEND:

- Application Site (About 16,604m²)
- Structure
  A: 1,474 m² (about) (2-storey)
  B: 220m² (about) (1-storey)
  C: 2,400 m² (about) (2-storey)
  D: 220 m² (about) (1-storey)
  E: 220 m² (about) (1-storey)
- Open-Sided Structure
  F: 393 m² (about) (1-storey)
- Loading and Unloading Bay for Heavy Goods Vehicle (11m(L) x 3.5m(W)) (12 nos.)
- Loading and Unloading Bay for Light Goods Vehicle (7m(L) x 3.5m(W)) (12 nos.)
- Private Car Parking Space (5m(L) x 2.5m(W)) (10nos.)
- Ingress/Egress (About 11m wide)
- Internal Vehicular Flow

(For Identification Only)

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Indicative Layout Plan

Ref.: ADCL/PLG-10315-R001/F005

Figure:
5

Scale:
Not to Scale

Date:
Jun 2025

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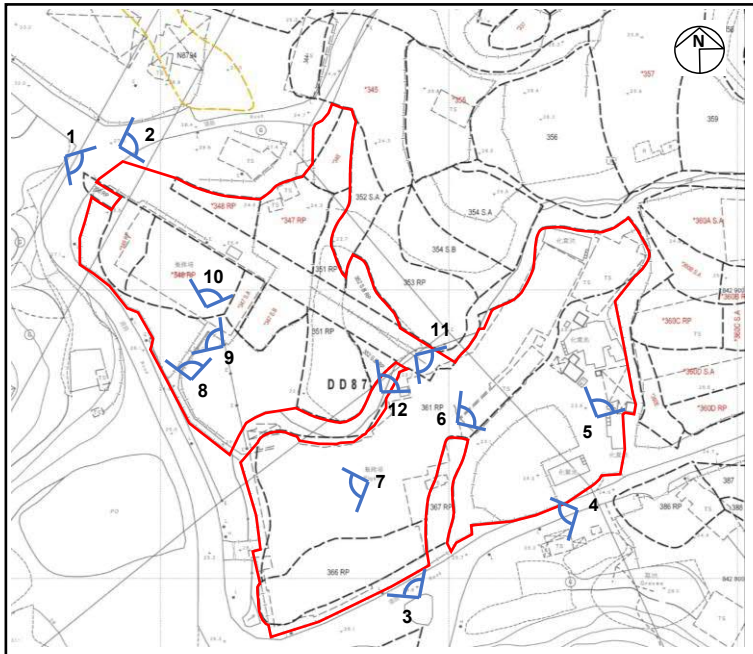
List of Illustration

Illustration 1-I	Existing Condition of the Application Site and the Surrounding Areas
Illustration 1-II	Existing Condition of the Application Site and the Surrounding (Cont'd)
Illustration 1-III	Existing Condition of the Application Site and the Surrounding (Cont'd)



LEGEND:

The Application Site

Viewpoint

(For Identification Only)









Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Existing Condition of the Application Site and the Surrounding Areas

Ref.: ADCL/PLG-10315-R001/I001-I

Illustration:
1-I

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Date:
Jun 2025

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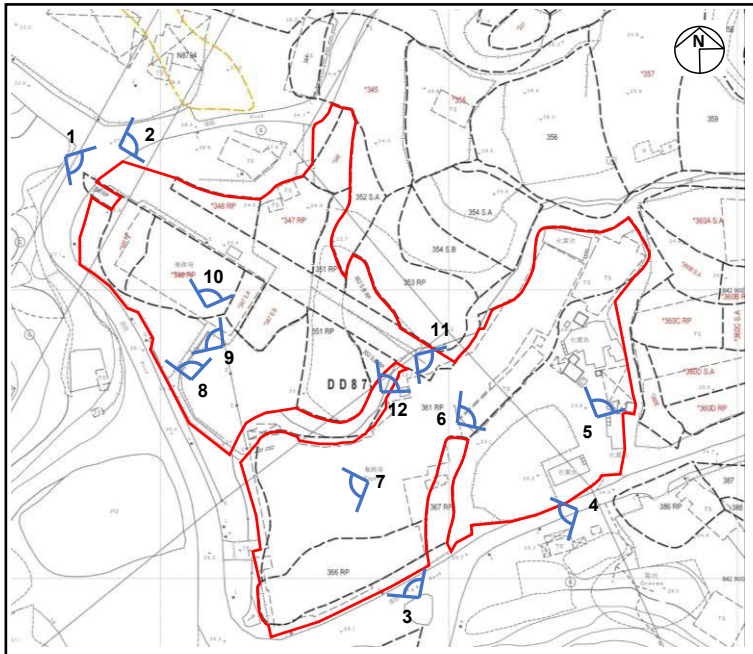

LEGEND:

The Application Site

Viewpoint

(For Identification Only)









Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Existing Condition of the Application Site and the Surrounding Areas (Cont'd)

Ref.: ADCL/PLG-10315-R001/I001-II

Illustration:
1-II

Scale:
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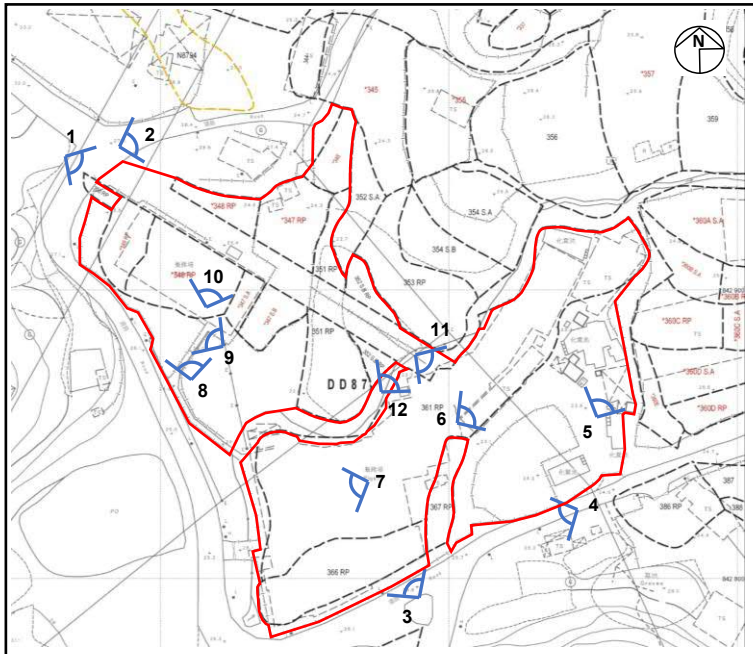
Date:
Jun 2025

AIKON DEVELOPMENT CONSULTANCY LTD.



LEGEND:

The Application Site

Viewpoint

(For Identification Only)









Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Existing Condition of the Application Site and the Surrounding Areas (Cont'd)

Ref.: ADCL/PLG-10315-R001/I001-III

Illustration:
1-III

Scale:
N.A.

Date:
Jun 2025

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List of Appendices

Appendix I	Memorandum of Understanding with the Existing Operator of the Pigsty
Appendix II	Traffic Impact Assessment
Appendix III	Drainage Proposal

Appendix I

Memorandum of Understanding with the Existing Operator of the Pigsty

BRILLIANT PROFIT LIMITED 與 CHARM GRAND LIMITED

共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 BRILLIANT PROFIT LIMITED（下稱「**甲方**」）與 CHARM GRAND LIMITED（下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2025 年 5 月 10 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、 347 號 A 分段、347 號 B 分段、347 號餘段、348 號餘段、349 號餘段、351 號餘段、352 號 B 分段餘段、361 號餘段、366 號餘段（下稱「**申請地點**」）之現行土地擁有人；

(二) **乙方**為按《公眾衞生(動物及禽鳥)(禽畜飼養的發牌)規例》下的飼養禽畜牌照持牌人，獲批准在新界打鼓嶺恐龍坑李屋村第 87 約地段 348 號、349 號餘段、361 號餘段、366 號餘段及政府土地上飼養禽畜。考慮到**乙方**未來將難以繼續在有關地段飼養禽畜，並有意搬遷至多層的現代化環保養豬場以改善營運模式；以及

(三) **甲方**擬根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請（下稱「**規劃申請**」），擬議在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築材料、機械連附屬設施（為期 3 年）及進行相關填土工程。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作臨時貨倉（危險品倉庫除外）及露天存放建築材料、機械連附屬設施（為期 3 年）及進行相關填土工程；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，停止現時飼養禽畜處所的營運及搬遷，以協助**甲方**能盡快進行相關工程。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

Authorized Signature(s)

代表 甲方（BRILLIANT PROFIT LIMITED）
商業登記證號碼：[redacted]

For and on behalf of
CHARM GRAND LIMITED

Authorized Signature(s)

代表 乙方（CHARM GRAND LIMITED）
商業登記證號碼：[redacted]

香港法例第139L章
《公眾衞生 (動物及禽鳥) (禽畜飼養的發牌) 規例》
Public Health (Animals and Birds)
(Licensing of Livestock Keeping) Regulation, Cap. 139L

飼養禽畜牌照
LIVESTOCK KEEPING LICENCE

持牌人相片
Photo of Licensee

(只適用於個人持牌人)
(For individual licensee only)

飼養禽畜牌照編號：[redacted]
Livestock Keeping Licence No.

~~現批准*~~ _____ ~~先生 / 女士~~
~~Permission is hereby granted to Mr. / Ms.*~~

~~香港身份證號碼* (首4個字母連數字)：~~ _____
~~Hong Kong Identity Card No.* (First 4 alphanumeric characters)~~

現批准* CHARM GRAND LIMITED (公司/機構名稱)
Permission is hereby granted to * (Name of Company/Organisation)

商業／機構登記號碼 (首8位數字) [redacted] 獲授權代表姓名 [redacted] 先生／~~女士~~
Business / Organisation Registration No. (First 8 digits) Name of Authorised Representative (Mr. / ~~Ms.~~)

飼養 4000隻 ~~雞~~／豬／~~其他~~，請註明：_____
to keep ~~chickens~~ / pigs / ~~others, please specify~~

於* 新界打鼓嶺恐龍坑李屋村第87約348, 349RP, 361RP, 366RP號地段及政府土地 。
at*

獲批採用的禽畜廢物處理系統為 濕處理法 。
The approved livestock waste treatment system is

隨附的農場圖則塗上紅色處為獲批給牌照用以飼養禽畜的處所 (獲批處所)**。持牌人照片貼於右上角。
The premises licensed for livestock keeping (the Approved Premises)** are coloured red on the farm plan attached. A photograph of the licensee is attached at the top right hand corner.

本牌照乃根據香港法例第139L章《公眾衞生 (動物及禽鳥) (禽畜飼養的發牌) 規例》發出，持牌人必須遵守隨附的牌照條件。
This licence is issued in accordance with the Public Health (Animals and Birds) (Licensing of Livestock Keeping) Regulation, Cap. 139L and the licensee shall comply with the licence conditions attached.

牌費：$ [redacted]
Licence Fee

除遭署長撤銷外，本牌照有效期至：31/3/2028
Unless revoked by the Director, this licence will remain valid until

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Payment Receipt No.

發出日期：1/4/2025
Issue date

(MA Wai-chung, Peter)

漁農自然護理署署長(馬惠忠 代行)
for *Director of Agriculture, Fisheries and Conservation*

* 如持牌人的姓名／名稱或身份證號碼／商業／機構登記號碼或獲授權代表有變，必須在72小時內以郵寄方式 (地址：新界上水粉錦公路蓮塘尾大龍實驗農場) 或傳真方式 (傳真號碼： 2461 4649) 通知禽畜農場牌照組。
* If there is any change in the name or the identity card number / business / organisation registration number or the authorised representative of the licensee, the Livestock Farm Licensing Section should be notified of the change within 72 hours by post to Tai Lung Experimental Station, Lin Tong Mei, Fan Kam Road, Sheung Shui, New Territories or by fax on 2461 4649.

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** This licence shall not be taken as an approval or permission to change the use of the Approved Premises or the land where it stands/they stand. The licensee should ensure that the relevant consent, approval or permission is obtained for the use of the Approved Premises and the land it stands/they stand for the purpose of livestock keeping.

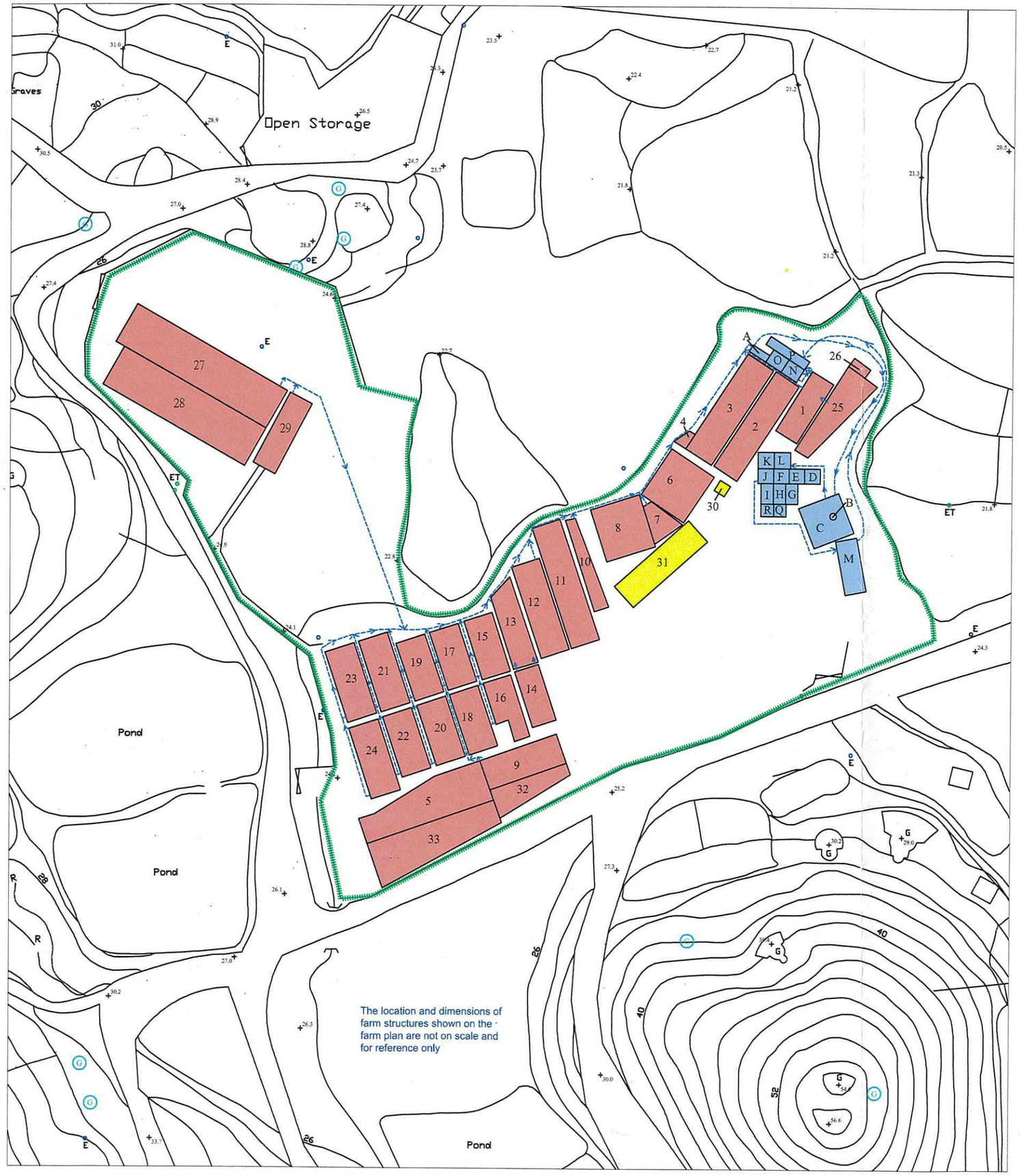
AF282 (Rev. 2024)

S/No. 0000037

職員專用
For official use only

牌照修訂記錄
Licence Amendment Record

日期 Date	修訂事項 Amended items	辦理人員姓名、職位及簽署 Action Officer's name, post and signature



農場圖則

農場編號 : LK 148

持牌公司 : Charm Grand Limited

農場地址 : 新界打鼓嶺恐龍坑李屋村第87約348RP, 349RP, 361RP, 366RP號地段及政府土地

測量圖編號 : 3-NW-22A / 22B

序號	農用構築物編號	用途	尺寸
1	* Nil	豬屋	6.10 米 x 17.15 米
2	* Nil	豬屋	6.80 米 x 27.90 米
3	* Nil	豬屋	7.50 米 x 27.90 米
4	* Nil	豬屋	10.50 平方米
5	* Nil	豬屋	290.00 平方米
6	* Nil	豬屋	12.60 米 x 13.50 米
7	* Nil	豬屋	49.25 平方米
8	* Nil	豬屋	12.60 米 x 13.40 米
9	* Nil	豬屋	20.00 米 x 7.60 米
10	* Nil	豬屋	73.24 平方米
11	* Nil	豬屋	7.25 米 x 31.15 米
12	* Nil	豬屋	7.25 米 x 23.60 米
13	* Nil	豬屋	126.38 平方米
14	* Nil	豬屋	6.15 米 x 14.40 米
15	* Nil	豬屋	7.25 米 x 15.10 米
16	* Nil	豬屋	95.84 平方米
17	* Nil	豬屋	7.40 米 x 14.95 米
18	* Nil	豬屋	7.40 米 x 15.60 米
19	* Nil	豬屋	7.50 米 x 14.95 米
20	* Nil	豬屋	7.50 米 x 15.60 米
21	* Nil	豬屋	7.45 米 x 18.20 米
22	* Nil	豬屋	7.45 米 x 15.60 米
23	* Nil	豬屋	7.55 米 x 18.20 米
24	* Nil	豬屋	7.55 米 x 18.25 米
25	* Nil	豬屋	151.72 平方米
26	* Nil	豬屋	2.50 米 x 5.00 米
27	* Nil	豬屋	10.67 米 x 42.68 米
28	* Nil	豬屋	10.67 米 x 40.24 米
29	* Nil	豬屋	6.10 米 x 19.52 米
30	* Nil	農用貯物室	2.90 米 x 2.95 米
31	* Nil	農用貯物室	6.95 米 x 24.40 米
32	* Nil	豬屋	104.00 平方米
33	* Nil	豬屋	286.00 平方米

編序	廢物處理設施	尺寸
A	收集池	4.85 米 x 1.90 米 x 1.00 米
B	固液分離機	1台
C	廢物貯藏所	110.67 平方米 x 4.00 米
D	凝聚池	3.83 米 x 3.70 米 x 2.50 米
E	凝聚池	3.83 米 x 3.70 米 x 2.50 米
F	兼氣池	3.83 米 x 3.70 米 x 2.50 米
G	兼氣池	5.00 米 x 3.03 米 x 2.50 米
H	兼氣池	5.00 米 x 3.03 米 x 2.50 米
I	兼氣池	5.00 米 x 3.03 米 x 2.50 米
J	兼氣池	3.83 米 x 3.70 米 x 2.50 米
K	調節池	16.08 平方米 x 2.50 米
L	調節池	16.08 平方米 x 2.50 米
M	曝氣池	13.40 米 x 5.30 米 x 5.00 米
N	曝氣池	4.52 米 x 3.70 米 x 4.94 米
O	曝氣池	4.52 米 x 3.70 米 x 4.94 米
P	曝氣池	11.35 米 x 2.30 米 x 5.44 米
Q	凝聚池	9.69 平方米 x 2.50 米
R	凝聚池	9.69 平方米 x 2.50 米

說明：

- 飼養禽畜農用構築物
- 非飼養禽畜之農用構築物
- 廢物處理設施
- 管道
- 排放點
- 農場邊界

* 未獲政府批准而搭建的農舍，將來仍可能會被政府有關部門清拆

授權批准人：

漁農自然護理署署長
(馬惠忠代行)

Appendix II

Traffic Impact Assessment

S.16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

TRAFFIC IMPACT ASSESSMENT

Reference: 80115-R01-01
Date: May 2025
Prepared by: 8FM Consultancy Limited

8FM Consultancy Limited

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1 INTRODUCTION

1.1 Background

The Applicant intends to seek planning permission for the Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos. 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP (Part), 361 RP, 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories ("Project Site").

The location of the Project Site is shown in **Figure 1**.

8FM Consultancy Limited was commissioned as the traffic consultant to carry out a Traffic Impact Assessment (TIA) Study in support of this planning application.

1.2 Study Objectives

The objectives of this TIA are listed as follows:

- To review the existing traffic conditions in the vicinity of the Project Site;
- To present and evaluate the internal transport facilities;
- To estimate the traffic forecasts of the adopted design year and assess the future traffic situation in the surrounding network;
- To evaluate the potential traffic impact of the proposed development; and
- To suggest traffic improvement proposals, if necessary.

1.3 Report Structure

The report is structured as follows:

- Chapter 2 - Proposed Development

  Describing the project site, vehicular access arrangement, development schedule and the proposed internal transport facilities;
- Chapter 3 - Existing Traffic Situation

  Presenting the existing traffic context, the traffic survey, and the traffic assessment of the existing traffic conditions;
- Chapter 4 – Development Traffic Generation

  Estimating the traffic flows arising from the proposed development;
- Chapter 5 – Future Traffic Situation

Describing the traffic forecast methodology and presenting the traffic assessment results under reference and design scenarios;

- Chapter 6 - Summary and Conclusion

  Summarizing the findings and conclusion of this traffic impact assessment study.

2 PROPOSED DEVELOPMENT

2.1 The Site Location

The Project Site is located in Kong Nga Po, Sheung Shui, and it can be accessible from Kong Nga Po Road via a local track. The location of the Project Site is shown in **Figure 1**.

2.2 The Development Schedule

The project site is proposed to be utilised as warehouse, open storage for construction materials and equipment and ancillary office on a temporary basis of 3 years. Based on the planning statement, the operation hours of the proposed use are from 9:00 a.m. to 6:00 p.m. from Mondays to Saturdays, and there will be no operation on Sundays and public holidays.

In accordance with the planning statement, the project site has a total area of about 16,604m2, including (i). uncovered area for circulation/maneuvering space and provision of 10 parking spaces; and (ii). covered area with six single-storey temporary structures. The layout of the project site is shown in **Figure 2.1**. Key development parameters of the proposed use are tabulated in **Table 2.1**. The details of the temporary structures in the site are tabulated in **Table 2.2**.

Table 2.1 Key Development Parameters

Proposed Use	Temporary Open Storage of Construction Materials and Equipment and Ancillary Office
Operation Hours	9:00am - 6:00pm (Mondays – Saturdays, Except Sundays and Public Holidays)
Total Site Area	16,604m^2 (including about 6,886m^2 of Government land)
Covered Area	About 2,990m^2 (Warehouse and Ancillary Use)
Uncovered Area	About 13,614m^2 (Maneuvering space & Parking Space)

Table 2.2 Details of the Temporary Structures

Structure	Uses	Floor Area (about)	Building Height
Structure A	Warehouse	1,474 m^2	2 storey
Structure B	Ancillary Site Office/General Storage Uses	220m^2	1 storey
Structure C	Warehouse	2,400 m^2	2 storey
Structure D	Ancillary Site Office/General Storage Uses	220m^2	1 storey
Structure E	Ancillary Site Office/General Storage Uses	220m^2	1 storey
Structure F	Ancillary Site Office/General Storage Uses	393m^2	1 storey

2.3 Vehicle Access Arrangement

Access to the project site will be provided through an about 11m-wide ingress/egress point located at the northwestern boundary, which is connected to a local track leading to Kong Nga Po Road. The vehicle access arrangement is presented in **Figure 2.1** for reference.

Swept path analysis is also conducted for the access point and the access road. **Figure 2.2** demonstrates that the existing site access and parking space arrangement are adequate for maneuvering a 12m Large Fire Appliance.

2.4 Internal Transport Facilities

The internal transport facilities to be provided in the project site are summarized in **Table 2.3**. As there are no specific parking and loading/unloading requirements for temporary open storage development in accordance with HKPSG, ancillary transport facilities are provided based on the Applicant's requirements to meet operational needs.

Table 2.3 Internal Transport Facilities

Type of Ancillary Transport Facilities	Size	Provision based on Applicant's Operational Needs
Private Car Parking Spaces	5m(L) x 2.5m(W)	10
L/UL Bays for LGVs	7m(L) x 3.5m(W)	12
L/UL Bays for HGVs	11m(L) x 3.5m(W)	12

3 EXISTING TRAFFIC SITUATION

3.1 Existing Road Network

As indicated in **Figure 1**, the project site is located at the east of Kong Nga Po Road, and it can be accessible from Kong Nga Po Road via a local unnamed road. The existing condition of the connecting carriageways is summarized as follows:

- Unnamed Road 1 is a single-track access road connecting Kong Nga Po Road in the west to Ping Che Road in the east. It acts as a single carriageway with 1-lane 2-way operation.
- Kong Nga Po Road is a rural road acting as a single carriageway with 2-lane 2-way operation. It connects Man Kam To Road in the west and Kong Nga Po in the east.
- Man Kam To Road is a rural road with 3 to 4 lanes and 2-way operation. It connects Man Kam To Control Point in the north and Jockey Club Road in the south.

3.2 Public Transport Facilities

The project site cannot be immediately accessible by taking public transportation. The nearest franchised bus and GMB services are around 2.3km away from the site, operating along Man Kam To Road. Details of these public transport services are presented in **Table 3.1** and **Figure 3.1**.

Table 3.1 Franchised Bus and GMB Services Close to Project Site

Route	Routing	Peak Frequency (minutes)
KMB 73K	Sheung Shui ↔Man Kam To (San Uk Ling)	10-15
GMB 59K	Sheung Shui Station ↔Lin Ma Hang	15

3.3 Traffic Survey

In order to evaluate the existing traffic conditions in the vicinity, the classified traffic surveys were conducted on 7 May 2025 (Wednesday) from 7:00 to 10:00 in the morning and from 16:00 to 19:00 in the evening. The key junctions of the study area are indicated in **Figure 3.2.**

The traffic flows collected during the traffic surveys have been converted to passenger car units (PCU) based on the PCU factors as indicated in Volume 2 of the Transport Planning and Design Manual (TPDM).

The results of the traffic survey identified that the AM and PM peak hours occur during 7:30 to 8:30 and 16:45 to 17:45, respectively. The 2025 observed peak hours traffic flows in the study area are presented in **Figure 3.3**.

3.4 Existing Traffic Condition

Based on the observed traffic flows, the performance of the key junctions in the vicinity of the project site during the AM and PM peak hours was assessed.

3.4.1 Existing Junction Capacity Assessment

The results of junction performance are indicated in **Table 3.2** and detailed junction calculation sheets are given in **Appendix A**.

Table 3.2 Existing Junction Capacity Assessment

Jn No.	Junction Location	Type/ Capacity Index	AM Peak	PM Peak
A	Unnamed Rd 1 / Kong Nga Po Rd	Priority / DFC(i)	0.17	0.14
B	Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	Roundabout / DFC	0.20	0.14
C	Man Kam To Rd / Kong Nga Po Rd	Priority / DFC	0.62	0.60

**Notes:*

(i) DFC - Design Flow / Capacity Rati. The performance of a priority junction or roundabout is normally measured by its Design Flow / Capacity (DFC) ratio. A DFC ratio less than 1.0 indicates that the junction is operating within design capacity. A DFC ratio greater than 1.0 indicates that the junction is overloaded, resulting in traffic queues and longer delay time to the minor arm traffic.

As shown in Table 3.2, all of the surveyed junctions perform satisfactorily during peak hours with adequate reserve capacities.

4 DEVELOPMENT TRAFFIC GENERATION

4.1 Estimated Development Flows

With reference to the Planning Statement, the proposed development will make use of heavy goods vehicles (HGV), light goods vehicles (LGV), and private cars to travel to/from the application site.

As the proposed development will be operated as warehouses and ancillary site office/general storage uses, the trip generation & attraction arising from the operational needs will be estimated respectively based on the different land use.

4.1.1 Warehouse

With reference to **Table 2.2**, Structures A & C will be proposed as warehouse. The trip generation & attraction of warehouses in the proposed development is estimated with reference to the trip rates of industrial use under TPDM Vol 1, which are tabulated in **Table 4.1**. Mean level is adopted for a conservative estimation of trip assessment.

Table 4.1 Traffic Rates for Industrial Building

Land Use	Unit	Upper Limit/ Mean/ Lower Limit	AM Peak		PM Peak	
			Generation Rate	Attraction Rate	Generation Rate	Attraction Rate
Industrial Building	(pcu/hr/100 sqm GFA)	Upper Limit	0.1153	0.1727	0.1648	0.1260
		Mean	**0.0926**	**0.1386**	**0.1350**	**0.1049**
		Lower Limit	0.0698	0.1044	0.1053	0.0808

The calculated traffic generation & attraction arising from the operation of warehouses during the identified peak hours are estimated in **Table 4.2**.

Table 4.2 Estimated Traffic Generation & Attraction Arising from Warehouse

Land Use	Area	Unit	AM Peak		PM Peak	
			Generation	Attraction	Generation	Attraction
Warehouse	1,937m^2	pcu/hr	2	3	3	3

4.1.2 Ancillary Site Office/General Storage Uses

With reference to **Table 2.2**, Structures B, D, E & F will be proposed as ancillary site/general storage. The trip generation & attraction of the ancillary site office/general storage uses is estimated with reference to the trip rate for office in the TPDM Vol 1, which is tabulated in **Table 4.3**. The trip rates of both industrial/office uses under TPDM Vol 1 would be applicable as the structures serve

two purposes. For a conservative approach, the mean level of trip rates for office use is adopted.

Table 4.3 Traffic Rates for Office Development

Land Use	Unit	Upper Limit/ Mean/ Lower Limit	AM Peak		PM Peak	
			Generation Rate	Attraction Rate	Generation Rate	Attraction Rate
Office	(pcu/hr/100 sqm GFA)	Upper Limit	0.2361	0.3257	0.1928	0.1510
		Mean	**0.1703**	**0.2452**	**0.1573**	**0.1175**
		Lower Limit	0.1045	0.1646	0.1217	0.084

The calculated traffic generation & attraction arsing from the operation of site office during the identified peak hours are esitmated in **Table 4.4**.

Table 4.4 Estimated Traffic Generation & Attraction Arising from Ancillary Site Office/General Storage Uses

Land Use	Area	Unit	AM Peak		PM Peak	
			Generation	Attraction	Generation	Attraction
Ancillary Site Office/General Storage Uses	1,053m^2	pcu/hr	2	3	2	2

4.1.3 Estimated Development Flow

With the trip generation & attraction estimated for different land use, the development flow is summarized in **Table 4.5.**

Table 4.5 Estimated Development Flow

Unit	AM Peak (pcu/hr)		PM Peak (pcu/hr)	
	Generation	Attraction	Generation	Attraction
pcu/hr	4	6	5	5
Total	10 pcu/hr		10 pcu/hr	

4.2 Traffic Routing for the Project Site

The anticipated routes for project-related vehicles travelling to and from the project site are indicated in **Figure 4.1** and described as follows:

4.2.1 Ingress route

The project vehicles are expected to travel to the project site from Man Kam To Control Point and various locations across the 18 districts. Considering operational needs and accessibility, the vehicle distribution from these origins is estimated to be 50/50.

4.2.2 Egress route

The project vehicles are expected to disperse from the project site and arrive at Man Kam To Control Point and various locations across the 18 districts. Considering operational needs and accessibility, the vehicle distribution to these destinations is estimated to be 50/50.

5 FUTURE TRAFFIC SITUATION

5.1 Design Year

The planning application for the Proposed Temporary Warehouse and Open Storage with Ancillary Facilities and Associated Filling of Land development involves a period of 3 years, it is assumed that the end year for the Project Site would be year 2028. Therefore, the year 2028 is adopted as the design year of this study.

5.2 Traffic Forecast Methodology

To conduct the traffic forecast on the road networks in the vicinity of the project site, the existing traffic flows will be adjusted with the following factors considered:

- Historical traffic data from Annual Traffic Census (ATC) by Transport Department;
- The forecast population and employment from the 2021-based Territorial Population and Employment Data Matrices (TPEDM) planning data by the Planning Department;
- Committed and planned developments adjacent to the project site.

5.3 Regional Traffic Growth

5.3.1 Annual Traffic Census (ATC)

Reference has been made to the ATC reports from year 2019 to 2023. The historical traffic data of the surrounding road links are based on the Annual Average Daily Traffic (AADT) extracted from ATC issued by the Transport Department. The relevant AADT data from year 2019 to 2023 are summarized in **Table 5.1**.

Table 5.1 AADT Extracted from Annual Traffic Census

Station	Road	From	To	2019	2020	2021	2022	2023	Growth Rate p.a.
5465	Man Kam To Rd	Jockey Club Rd	Boundary	16,900	17,270	17,960	17,410	17,820	1.33%
					2.19	4.00	-3.06	2.35	
5218	Jockey Club Rd	Po Shek Wu Rd	Man Kam To Rd	26,450	25,180	26,400	25,230	22,510	-3.95%
					-4.80	4.85	-4.43	-10.78	
6018	Po Shek Wu Rd	Choi Yuen Rd	Jockey Club Rd	37,910	36,090	37,850	33,260	34,190	-2.55%
					-4.80	4.88	-12.13	2.80	
			Total	81,260	78,540	82,210	75,900	74,520	**-2.14%**

Table 5.1 indicates that the overall average annual growth rate of the adjacent road network is -2.14%.

5.3.2 Projected Population Data

Reference has been made to the 2021-based Territorial Population and Employment Data Matrices (TPEDM) planning data provided by the Planning Department. The population data in the North District for the years 2021, 2026, and 2031 are presented in **Table 5.2**.

Table 5.2 2021-Based TPDEM Data for North District

Item	TPDEM Estimation/Projection			Annual Growth Rate		
	2021	2026	2031	2021 to 2026	2026 to 2031	2021 to 2031
Population	309,650	352,000	435,550	2.60%	**4.35%**	3.47%

Source: 2021-based TPEDM by Planning Department

Table 5.2 indicates that the highest annual growth rate for population is 4.35%.

Based on the findings of the above two tables, a conservative growth rate of **4.35%** per annum was adopted to estimate the background traffic growth from 2025 to 2028.

5.4 Planned and Committed Development

Planned and committed developments in the vicinity of the Project Site, which are expected to be completed and in operation within the assessment period (up to 2028), have been identified and considered in the traffic forecast. A summary of the identified developments is presented in **Table 5.3**, and the locations of the planned developments are illustrated in **Figure 5.1**.

Table 5.3 Traffic Generation of Planned Developments

Land Use	GFA	AM Peak (pcu/hr)		PM Peak (pcu/hr)	
		Generation	Attraction	Generation	Attraction
Kong Nga Po Police Training Facilities	35,000m^2	60	86	55	41

Traffic generated by the above major planned and committed developments has been included in the traffic forecast for the design year 2028.

5.5 2028 Traffic Flows

The growth factor will be applied to the 2025 observed peak hours traffic flows to estimate the 2028 reference flows.

The reference and design flows of the design year 2028 are calculated from the following formula:

2028 Reference Flows (Fig. 5.1)	=	2025 Observed Flows (Fig 3.3) x $(1+4.35\%)^3$
2028 Design Flows (Fig. 5.2)	=	2025 Reference Flows (Fig. 5.1) + Net Change in Development Traffic Flows

Figure 5.2 shows the 2028 Reference Peak Hours Flows in the area. By adding the net development traffic, **Figure 5.3** shows the 2028 Design Peak Hours Traffic Flows.

5.6 Future Traffic Impact Assessment

The traffic impact assessments for design year 2028 were conducted for the key junctions and road links in the vicinity of the project site for both the Reference and Design scenarios.

5.6.1 Future Year Junction Capacity Assessment

Based on the Reference Flows and Design Flows, junction capacity assessments for design year 2028 are carried out and the results are presented in **Table 5.4**, with detailed calculation sheets given in **Appendix A**.

Table 5.4 Future Year Junction Capacity Assessment

Jun No.	Junction Location	Type/ Capacity Index	2028 Reference Scenario		2028 Design Scenario	
			AM	PM	AM	PM
A	Unnamed Rd 1 / Kong Nga Po Rd	Priority / DFC(i)	0.22	0.18	0.23	0.19
B	Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	Roundabout / DFC	0.27	0.17	0.28	0.17
C	Man Kam To Rd / Kong Nga Po Rd	Priority / DFC	0.82	0.80	0.83	0.81

**Notes: DFC - Design Flow / Capacity Ratio*

(i) The performance of a priority junction or roundabout is normally measured by its Design Flow / Capacity (DFC) ratio. A DFC ratio less than 1.0 indicates that the junction is operating within design capacity. A DFC ratio greater than 1.0 indicates that the junction is overloaded, resulting in traffic queues and longer delay time to the minor arm traffic.

Table 5.4 reveals that all the junctions will operate satisfactorily with ample junction capacity in both the 2028 reference and 2028 design scenarios during peak hours.

6 Summary and Conclusion

6.1 Summary

The Applicant intends to seek the Town Planning Board permission to utilise the Project Site as temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities for a period of 3 years and associated filling of land.

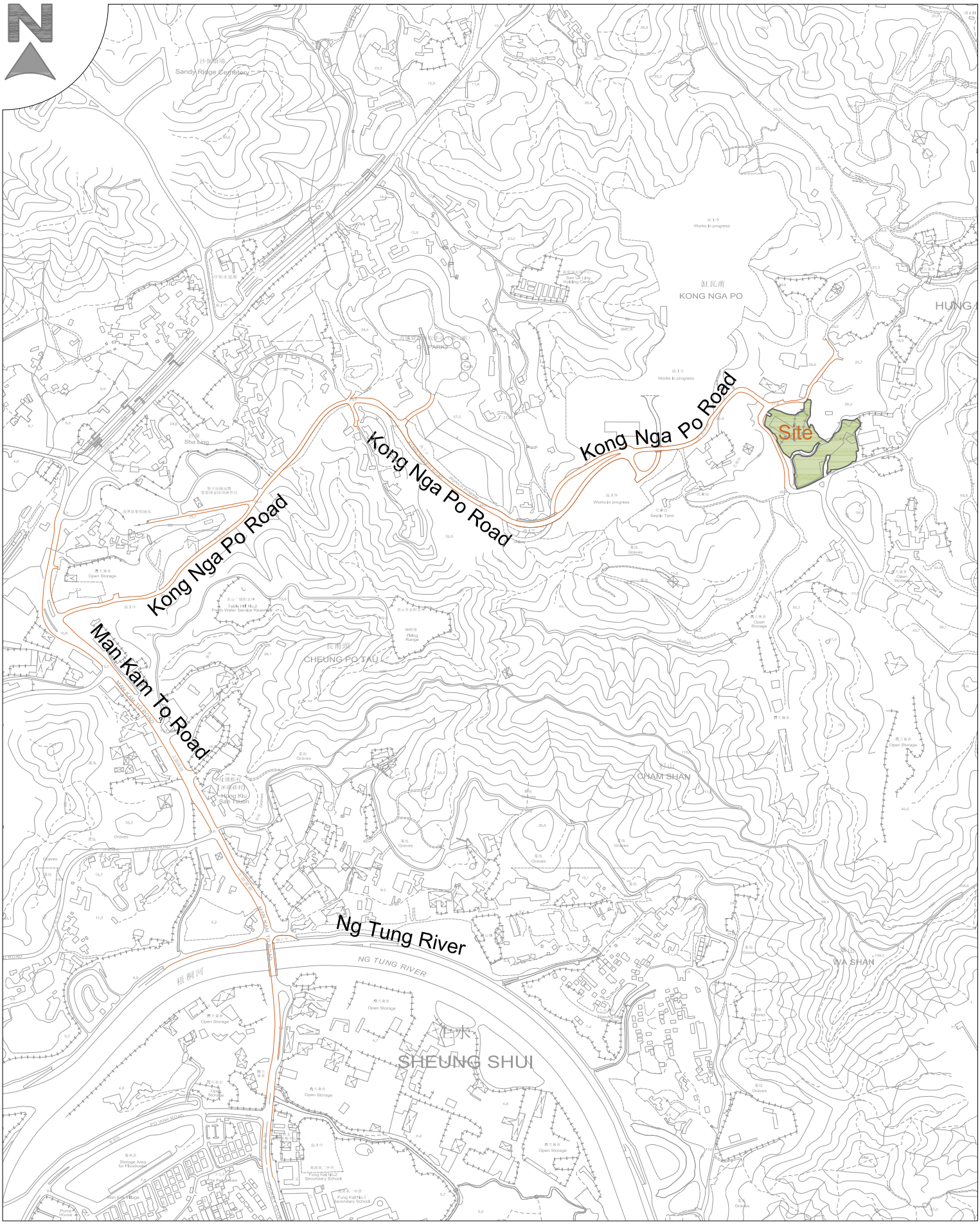
In order to appraise the existing traffic conditions, classified turning movement count surveys have been carried out at the key junctions and road links in the vicinity of project site on 7 May 2025 from 7:00 to 10:00 in the morning and 16:00 to 19:00 in the evening. The morning and evening peak hours of the road network have been identified as 7:30am to 8:30am and 16:45pm to 17:45pm, respectively.

Year 2028 is used as the design year for the traffic impact assessment. Based on the historical data and the future planning data, an annual growth rate of 4.35% was adopted for this study. This growth factor has been applied to the observed traffic flows in 2025 to determine the anticipated traffic flows in design year 2028.
The assessment results reveal that the key junctions identified are expected to operate satisfactorily with sufficient capacity in both 2028 reference and 2028 design scenarios during peak hours.

6.2 Conclusion

The findings of this study show that the development traffic will not cause adverse traffic impact onto the local road network. The proposed development is therefore supported from the traffic engineering point of view at this stage.

Figures



Proposal -	Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories		
Drawing Title -	Dwg No. - Figure 1	Rev. - --	8FM CONSULTANCY LIMITED
Location of the Project Site	Scale - 1:10000@A4	Date - May 2025	

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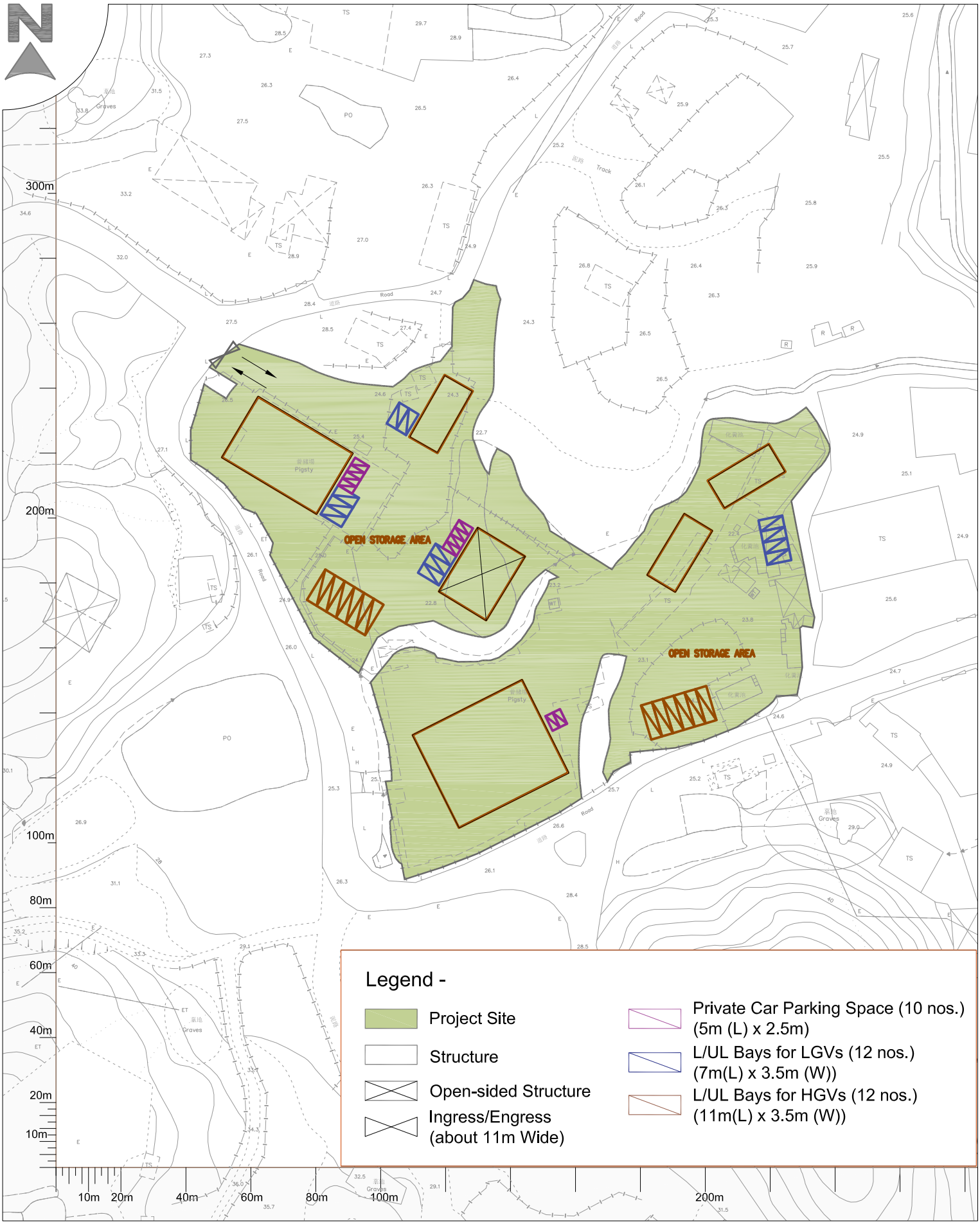


Proposal - Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Drawing Title -	Dwg No. - Figure 2.1	Rev. - --
Layout of Project Site	Scale - 1:1500@A4	Date - May 2025

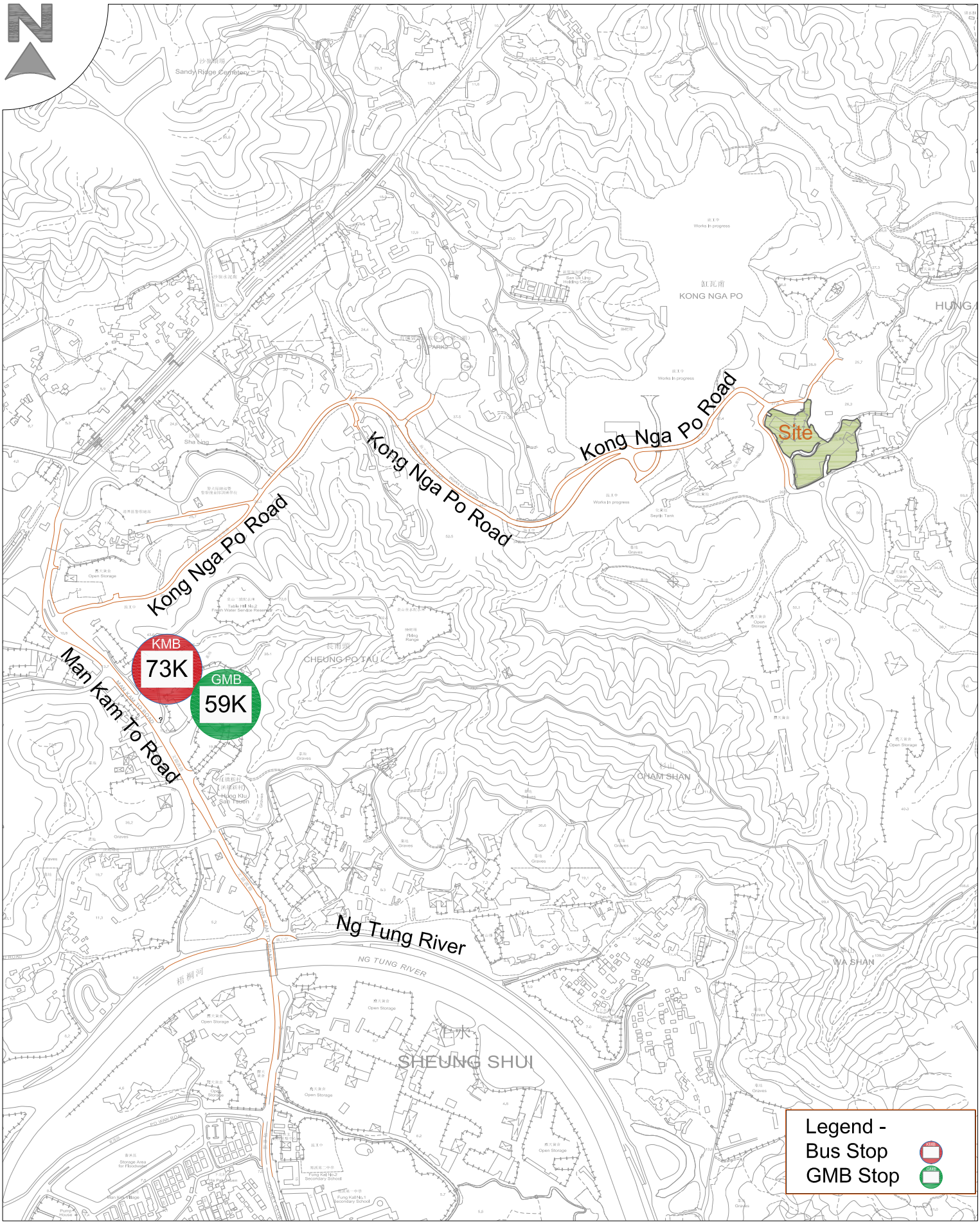
8FM CONSULTANCY LIMITED

F:\8FM\8FM PROJECT\P80115 PL010315_LOT NOS 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP IN D.D. 87 AND ADJOINING GOVERNMENT LAND, PING CHE, HUNG LUNG HANG, NT\DATA\DRAWING\FIGURE 2.1.DWG



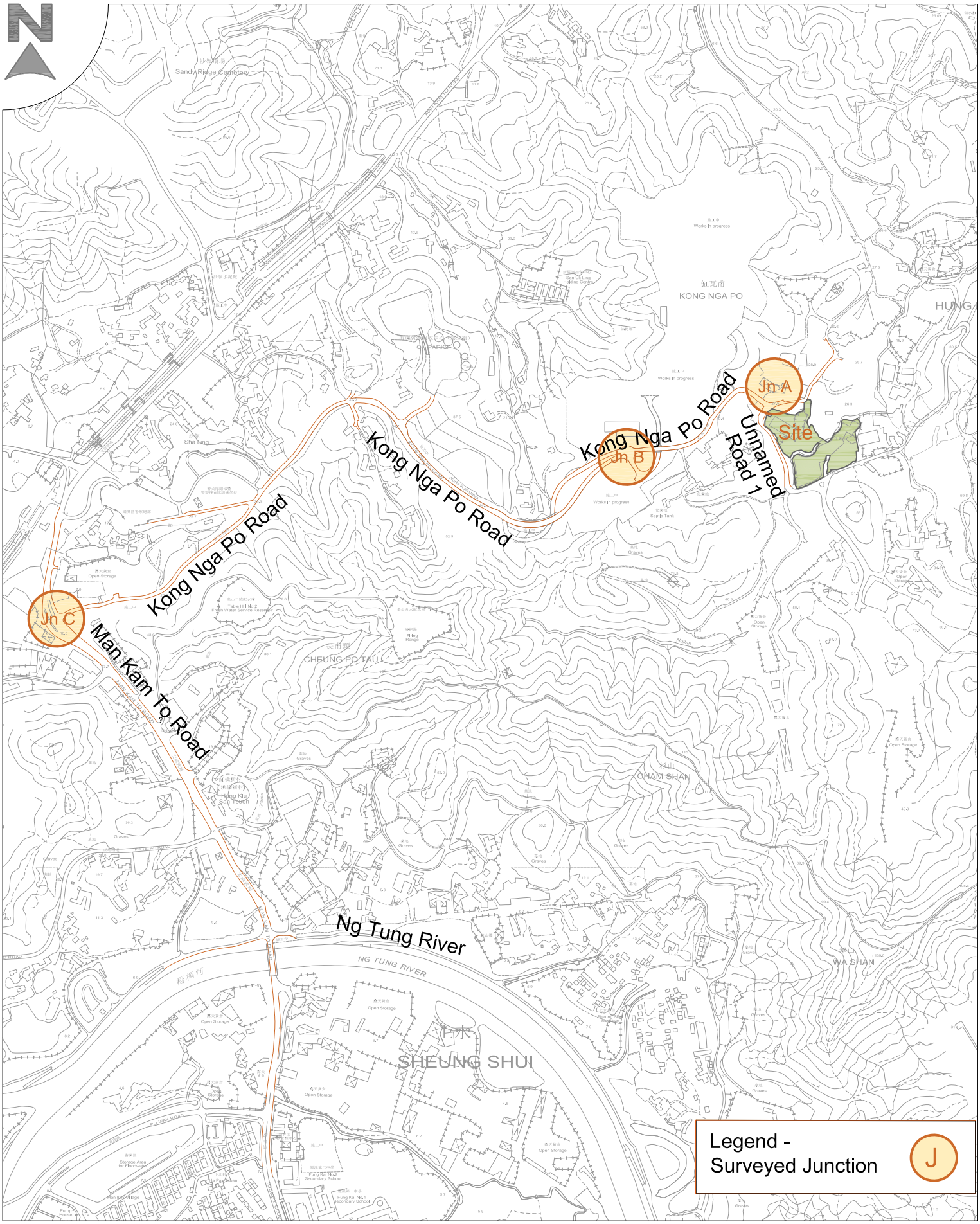
F:\8FM\8FM PROJECT\P80115 PLC10315_LOT NOS 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP IN D.D. 87 AND ADJOINING GOVERNMENT LAND, PING CHE, HUNG LUNG HANG, NT\DATA\DRAWING\FIGURE 2.2.DWG

Proposal - Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories			
Drawing Title - Swept Path Analysis for 12m Large Fire Appliance	Dwg No. - Figure 2.2	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:1500@A4	Date - May 2025	



F:\8FM\8FM PROJECT\P80115 PL010315_LOT NOS 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP IN D.D. 87 AND ADJOINING GOVERNMENT LAND, PING CHE, HUNG LUNG HANG, NT\DATA\DRAWING\FIGURE 3.1.DWG

Proposal -	Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories		
Drawing Title - Public Transport Facilities	Dwg No. - Figure 3.1	Rev. - --	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	

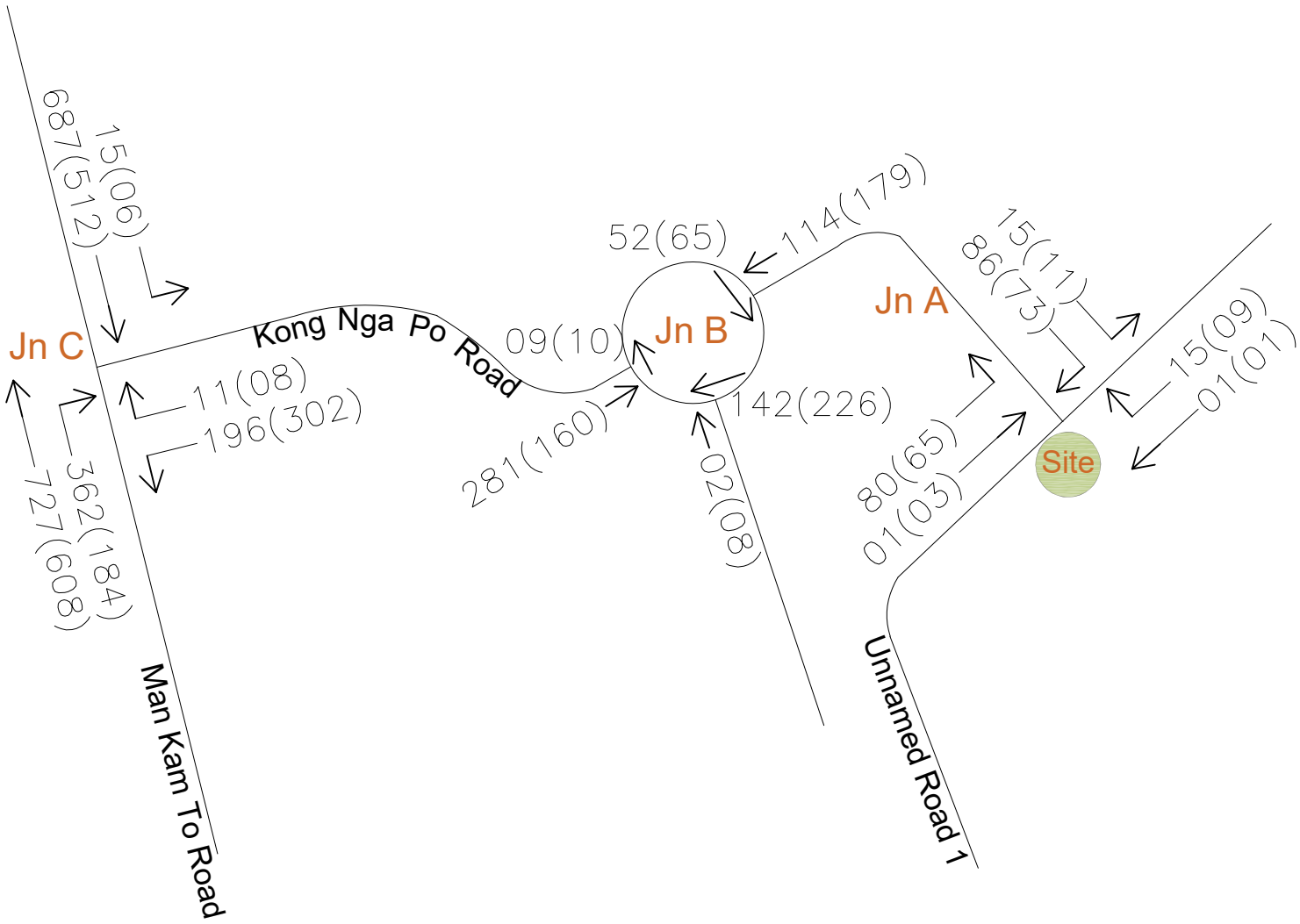


Proposal -	Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories		
Drawing Title - Key Junction		Dwg No. - Figure 3.2	Rev. - --
		Scale - 1:10000@A4	Date - May 2025

8FM CONSULTANCY LIMITED

F:\8FM\8FM PROJECT\P80115 PLG10315_LOT NOS 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP IN D.D. 87 AND ADJOINING GOVERNMENT LAND, PING CHE, HUNG LUNG HANG, NT\DATA\DRAWING\FIGURE 3.2.DWG

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 3.3.DWG



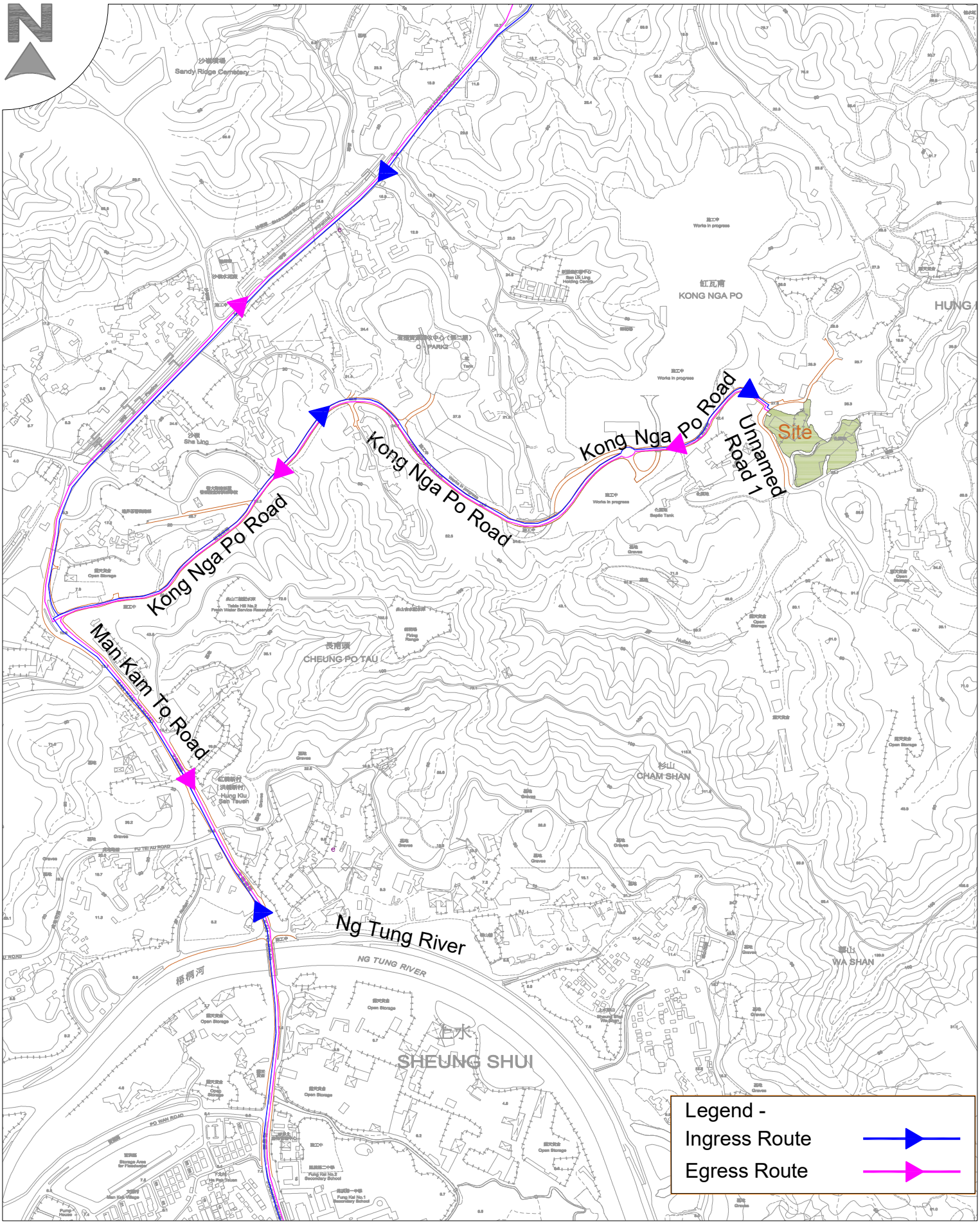
Legend -

Traffic Flows at AM Peak Hr (PCU/HR)

Traffic Flows at PM Peak Hr (PCU/HR)

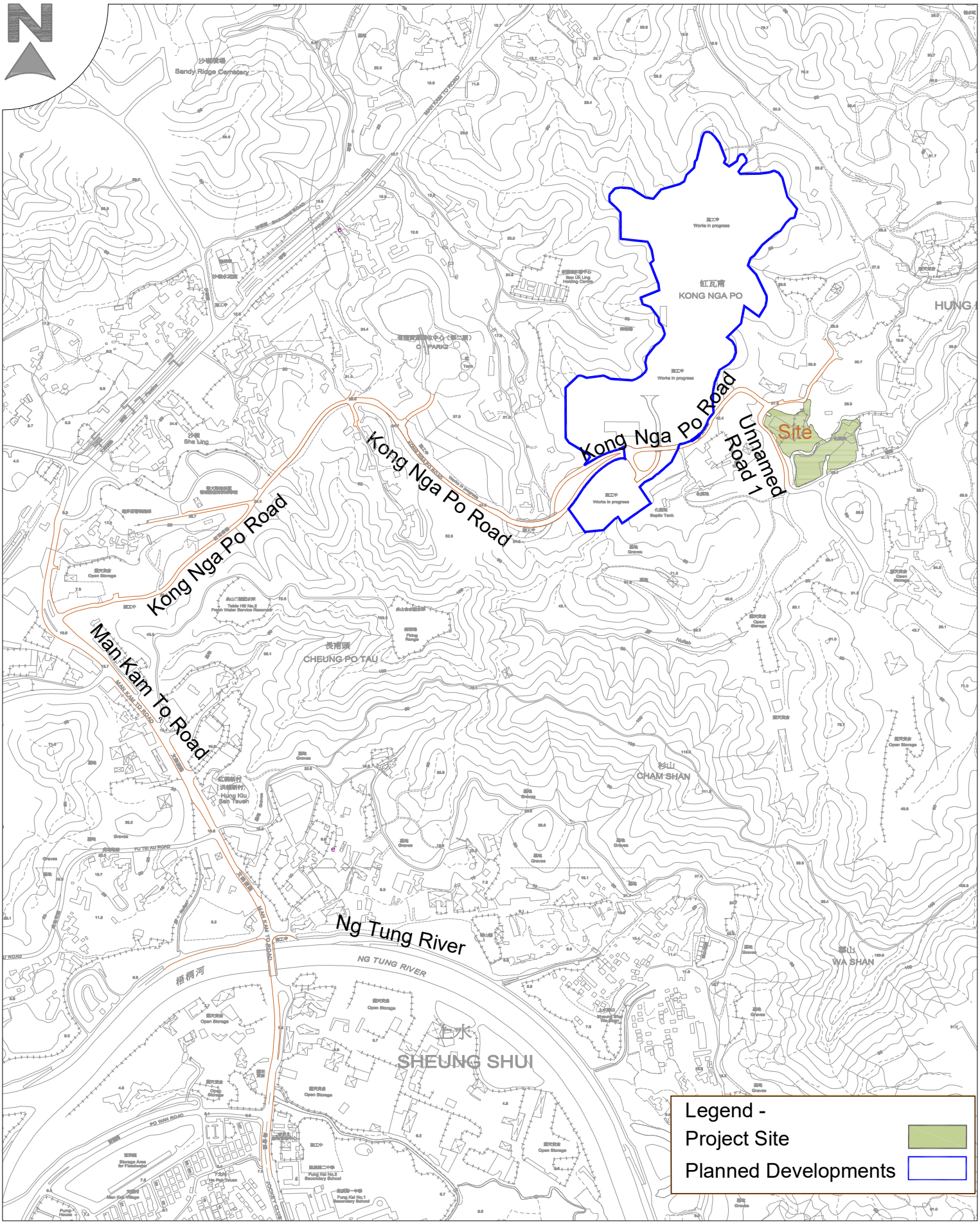
100(100)

Proposal - Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories			
Drawing Title - Observed Flows during AM & PM Peak Hours	Dwg No. - Figure 3.3	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - ---	Date - May 2025	



Proposal - Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories			
Drawing Title - Vehicular Ingress and Egress Route	Dwg No. - Figure 4.1	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	

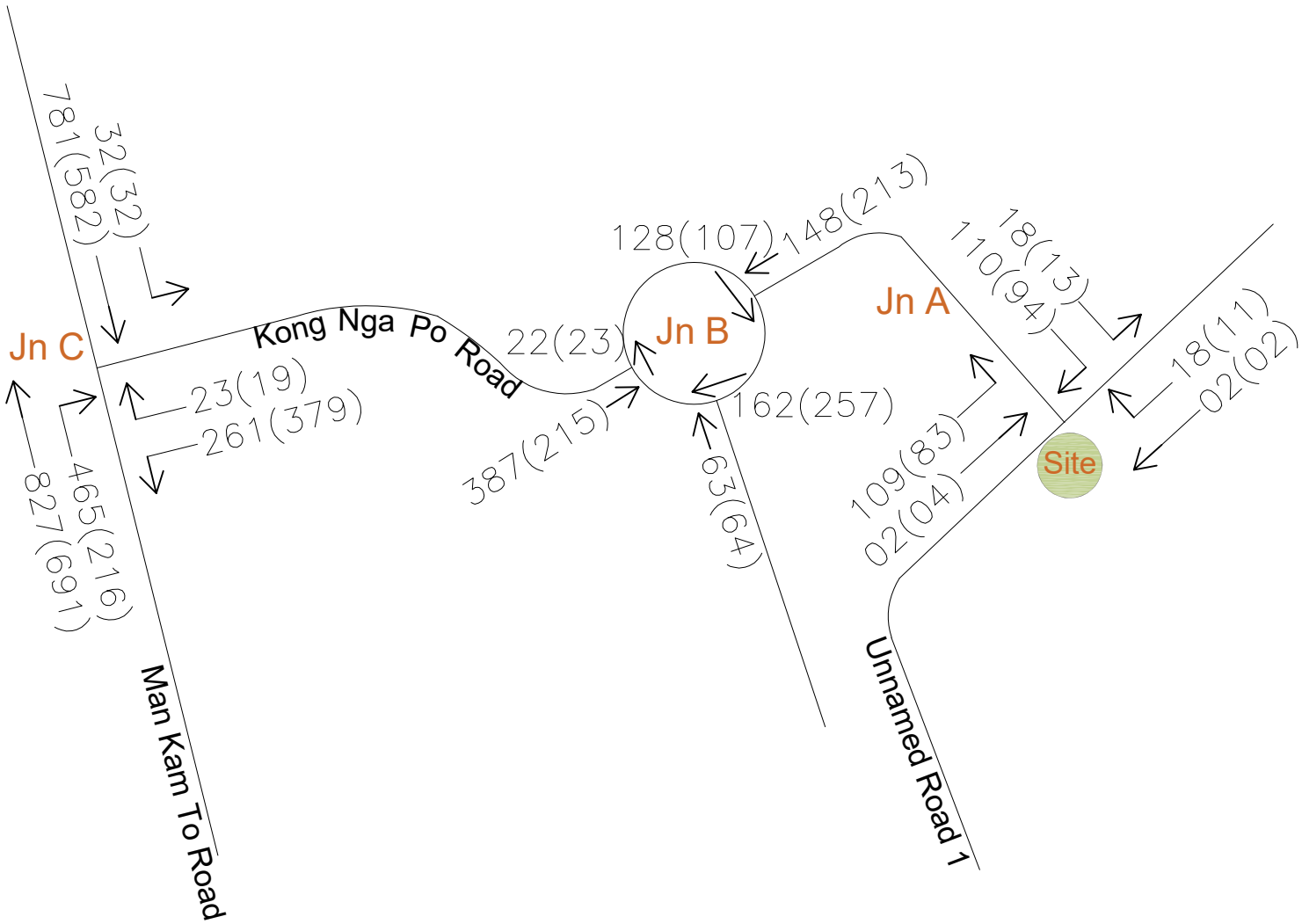
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 4-2.DWG



C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 5.1.DWG

Proposal -	Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories		
Drawing Title -	Dwg No. - Figure 4.1	Rev. - ---	8FM CONSULTANCY LIMITED
Location of Planned Developments	Scale - 1:10000@A4	Date - May 2025	

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 5.2.DWG



Legend -

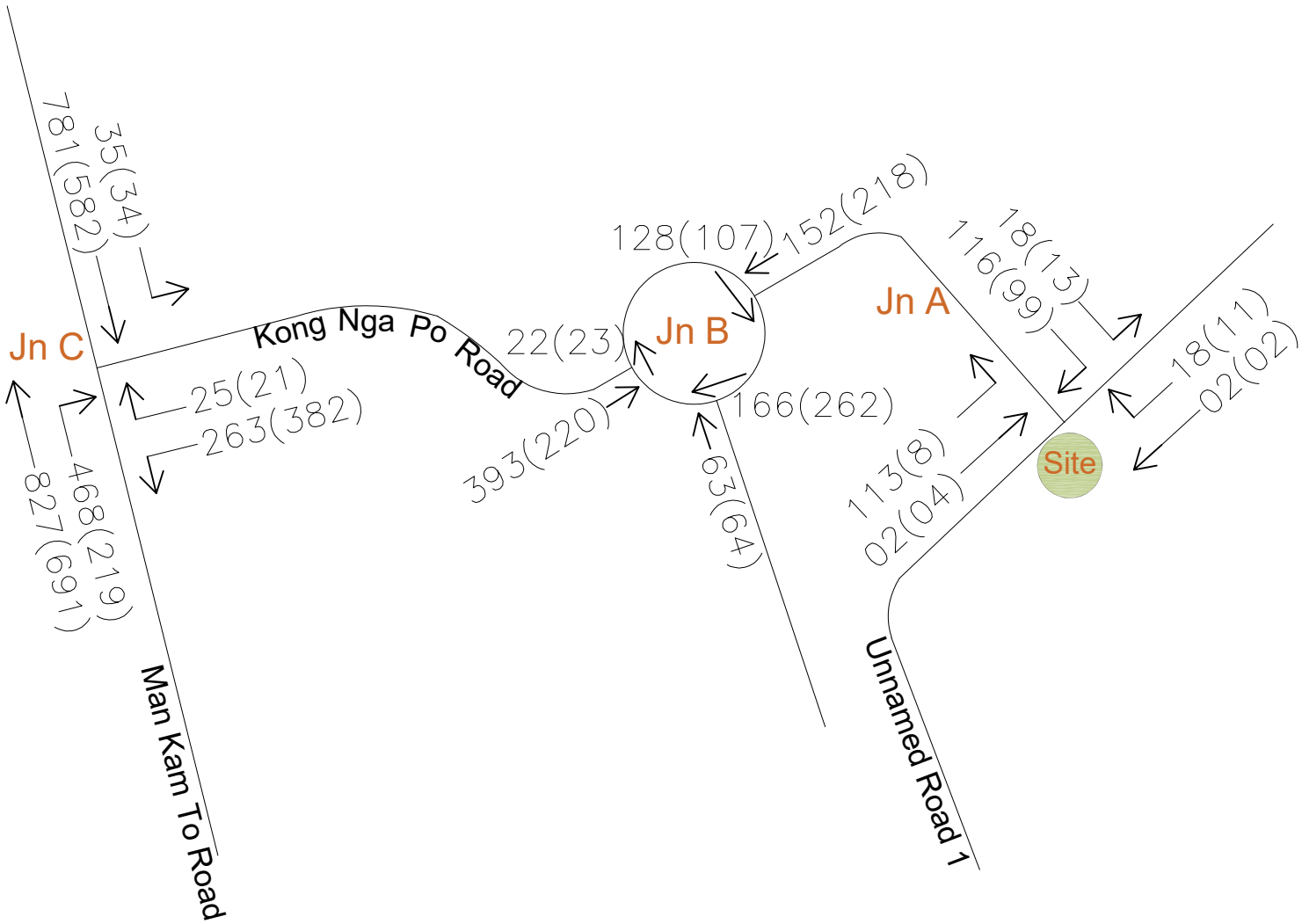
Traffic Flows at AM Peak Hr (PCU/HR)

Traffic Flows at PM Peak Hr (PCU/HR)

100(100)

Proposal - Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories			
Drawing Title - 2028 Reference Traffic Flows during Peak Hours	Dwg No. - Figure 5.2	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - ---	Date - May 2025	

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 5.3.DWG



Legend -

Traffic Flows at AM Peak Hr (PCU/HR)

Traffic Flows at PM Peak Hr (PCU/HR)

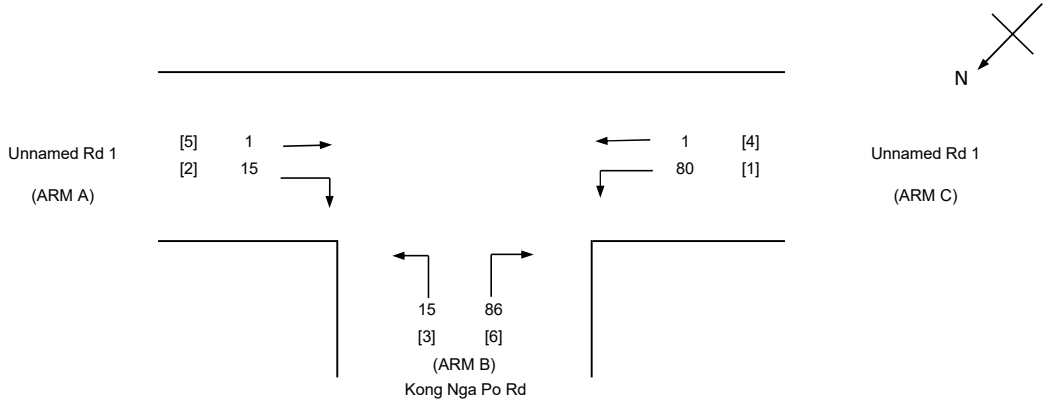
100(100)

Proposal - Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories			
Drawing Title - 2028 Design Traffic Flows during Peak Hours	Dwg No. - Figure 5.3	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - ---	Date - May 2025	

Appendix A

Junction Calculation Sheets

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2025 Observed - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	15	(pcu/hr)
q a-c	=	1	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	1	(pcu/hr)
q c-b	=	80	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	15	(pcu/hr)
q b-c	=	86	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.85

THE CAPACITY OF MOVEMENT :

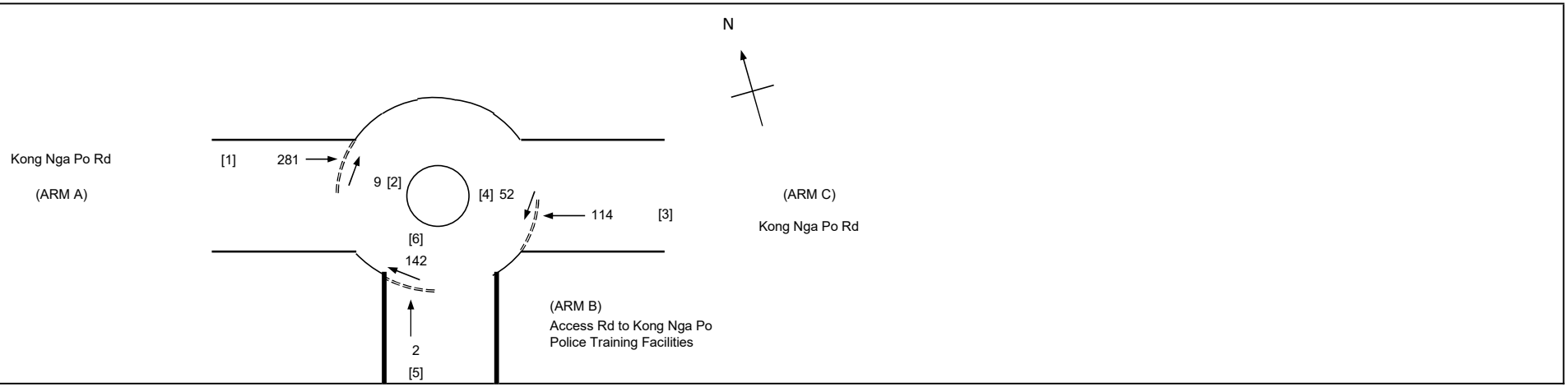
Q b-a	=	464	(pcu/hr)
Q b-c	=	619	(pcu/hr)
Q c-b	=	663	(pcu/hr)
Q b-ac	=	589	(pcu/hr)
Q c-a	=	1583	(pcu/hr)
TOTAL FLOW	=	198	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0328
DFC b-c	=	0.1386
DFC c-b	=	0.1204
DFC b-ac	=	0.1714
(Share Lane)		
DFC c-a	=	0.0006

CRITICAL DFC = 0.17

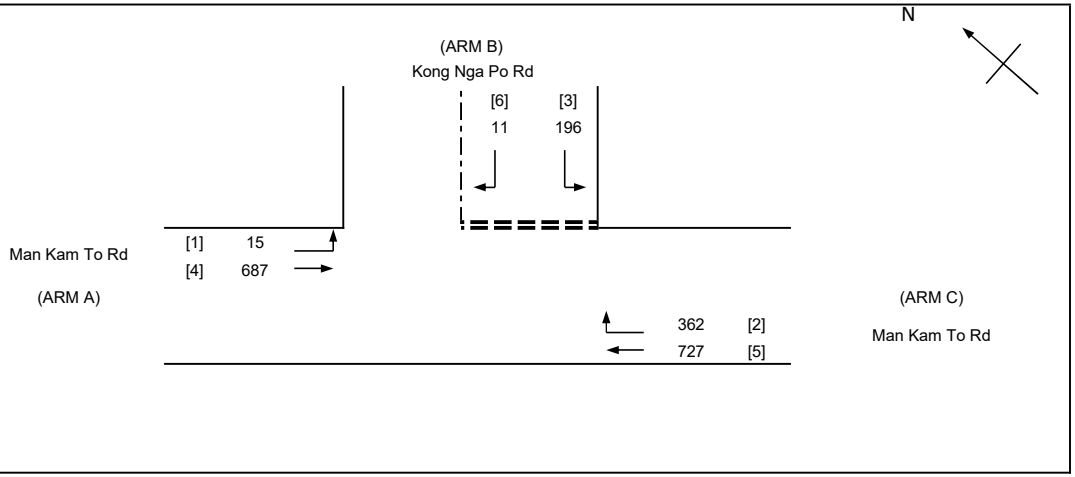
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2025 Observed - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		281	2	114
Qc	=	Circulating flow across entry (pcu/h)		9	142	52
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1417	1338	1308
DFC	=	Design flow/Capacity = Q/Qe		0.20	0.00	0.09

TOTAL FLOW = 599 (pcu/hr)
CRITICAL DFC = 0.20

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2025 Observed - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	15	(pcu/hr)
q a-c	=	687	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	727	(pcu/hr)
q c-b	=	362	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	11	(pcu/hr)
q b-c	=	196	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.949

THE CAPACITY OF MOVEMENT :

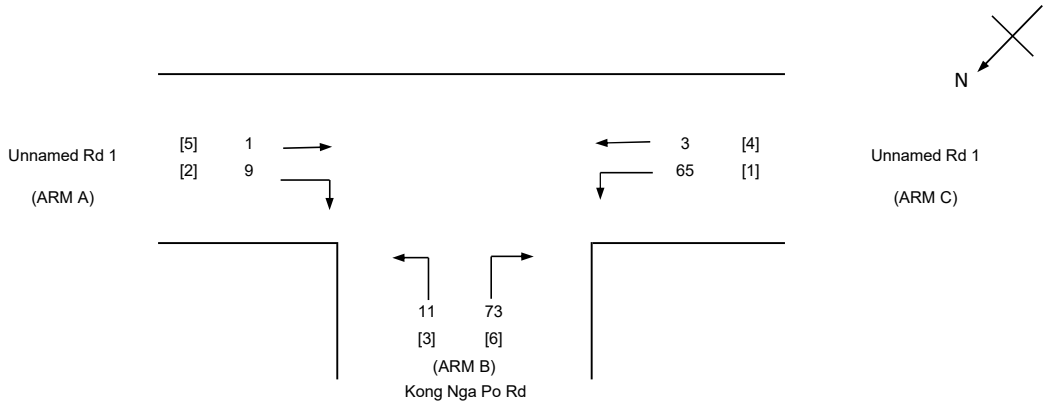
Q b-a	=	306	(pcu/hr)
Q b-c	=	496	(pcu/hr)
Q c-b	=	587	(pcu/hr)
Q b-ac	=	481	(pcu/hr)
TOTAL FLOW	=	1997	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0346
DFC b-c	=	0.3948
DFC c-b	=	0.6160
DFC b-ac (Share Lane)	=	0.4294

CRITICAL DFC = 0.62

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2025 Observed - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	9	(pcu/hr)
q a-c	=	1	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	3	(pcu/hr)
q c-b	=	65	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	11	(pcu/hr)
q b-c	=	73	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.865

THE CAPACITY OF MOVEMENT :

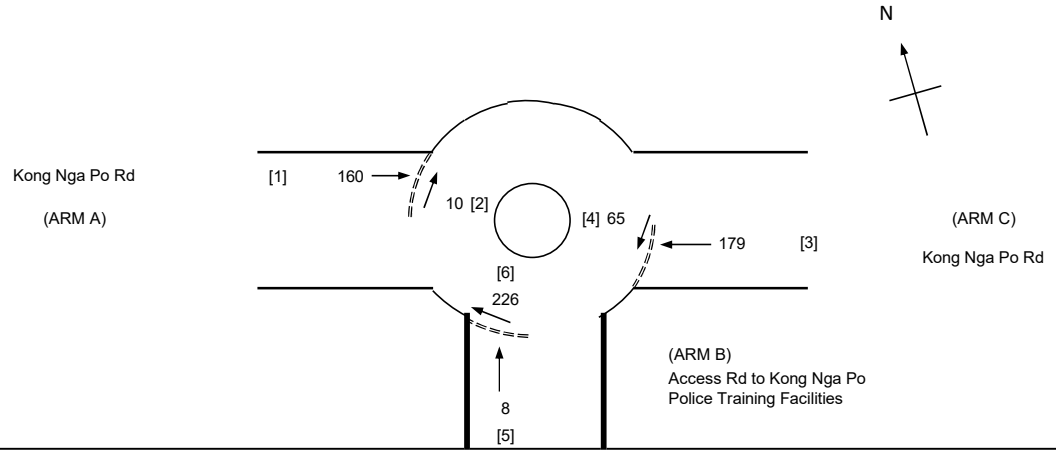
Q b-a	=	468	(pcu/hr)
Q b-c	=	620	(pcu/hr)
Q c-b	=	664	(pcu/hr)
Q b-ac	=	594	(pcu/hr)
Q c-a	=	1625	(pcu/hr)
TOTAL FLOW	=	162	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0244
DFC b-c	=	0.1177
DFC c-b	=	0.0973
DFC b-ac	=	0.1421
(Share Lane)		
DFC c-a	=	0.0017

CRITICAL DFC = 0.14

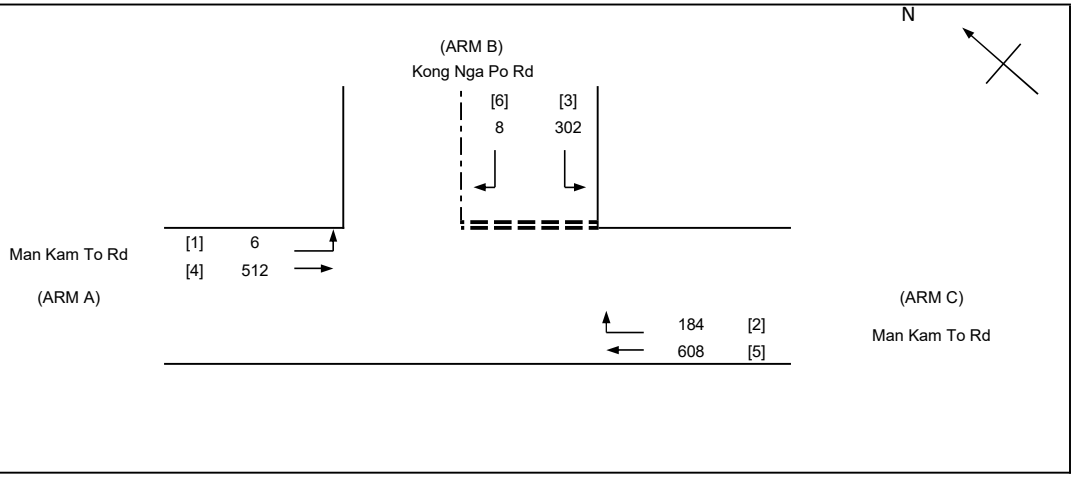
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2025 Observed - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		160	8	179
Qc	=	Circulating flow across entry (pcu/h)		10	226	65
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1416	1287	1300
DFC	=	Design flow/Capacity = Q/Qe		0.11	0.01	0.14

TOTAL FLOW = 648 (pcu/hr)
CRITICAL DFC = 0.14

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2025 Observed - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	6	(pcu/hr)
q a-c	=	512	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	608	(pcu/hr)
q c-b	=	184	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	8	(pcu/hr)
q b-c	=	302	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.974

THE CAPACITY OF MOVEMENT :

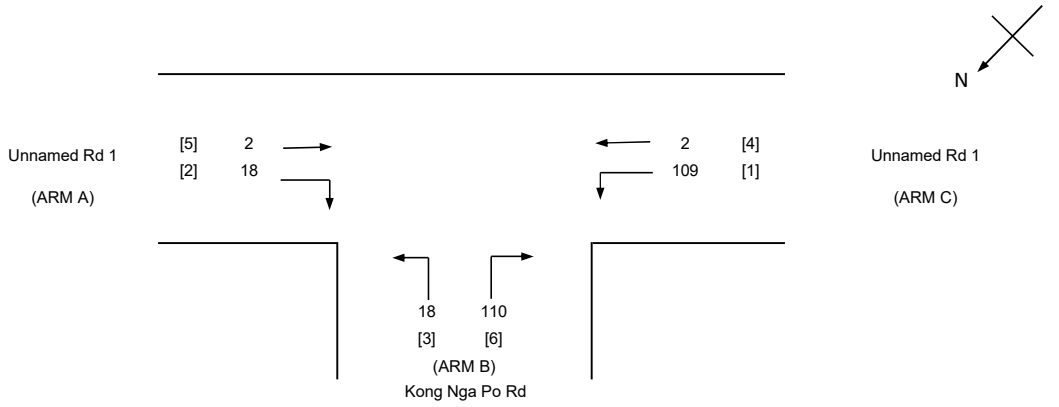
Q b-a	=	380	(pcu/hr)
Q b-c	=	523	(pcu/hr)
Q c-b	=	621	(pcu/hr)
Q b-ac	=	518	(pcu/hr)
TOTAL FLOW	=	1620	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0211
DFC b-c	=	0.5782
DFC c-b	=	0.2960
DFC b-ac (Share Lane)	=	0.5993

CRITICAL DFC = 0.60

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Reference - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	18	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	2	(pcu/hr)
q c-b	=	109	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	18	(pcu/hr)
q b-c	=	110	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.859

THE CAPACITY OF MOVEMENT :

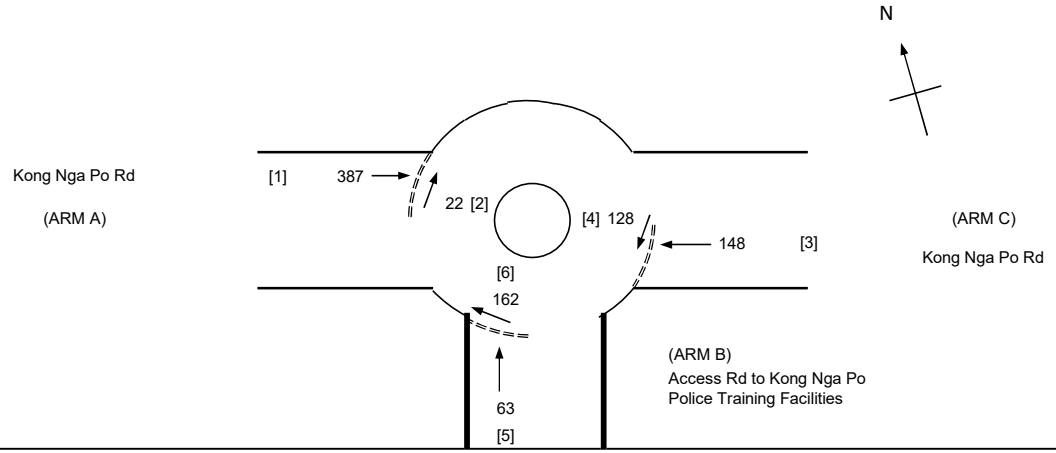
Q b-a	=	455	(pcu/hr)
Q b-c	=	619	(pcu/hr)
Q c-b	=	662	(pcu/hr)
Q b-ac	=	589	(pcu/hr)
Q c-a	=	1504	(pcu/hr)
TOTAL FLOW	=	259	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0396
DFC b-c	=	0.1777
DFC c-b	=	0.1647
DFC b-ac	=	0.2173
(Share Lane)		
DFC c-a	=	0.0013

CRITICAL DFC = 0.22

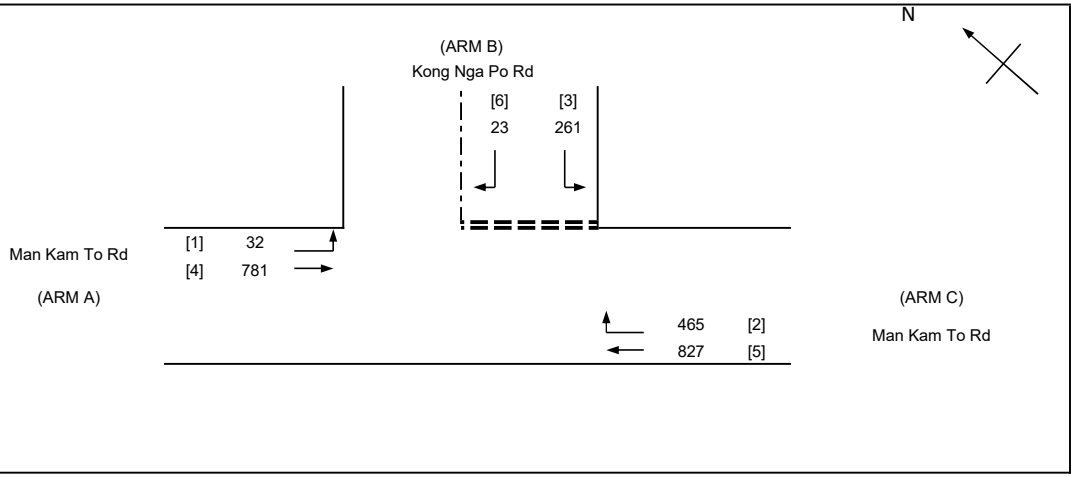
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Reference - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		387	63	148
Qc	=	Circulating flow across entry (pcu/h)		22	162	128
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1409	1326	1264
DFC	=	Design flow/Capacity = Q/Qe		0.27	0.05	0.12

TOTAL FLOW = 910 (pcu/hr)
CRITICAL DFC = 0.27

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Reference - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	32	(pcu/hr)
q a-c	=	781	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	827	(pcu/hr)
q c-b	=	465	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	23	(pcu/hr)
q b-c	=	261	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.919

THE CAPACITY OF MOVEMENT :

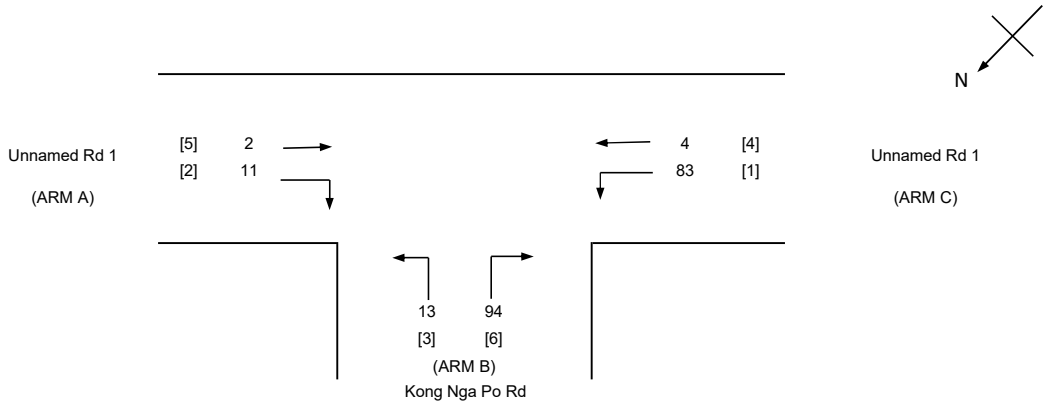
Q b-a	=	261	(pcu/hr)
Q b-c	=	481	(pcu/hr)
Q c-b	=	567	(pcu/hr)
Q b-ac	=	450	(pcu/hr)
TOTAL FLOW	=	2389	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0881
DFC b-c	=	0.5426
DFC c-b	=	0.8201
DFC b-ac (Share Lane)	=	0.6307

CRITICAL DFC = 0.82

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Reference - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	11	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	4	(pcu/hr)
q c-b	=	83	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	13	(pcu/hr)
q b-c	=	94	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.879

THE CAPACITY OF MOVEMENT :

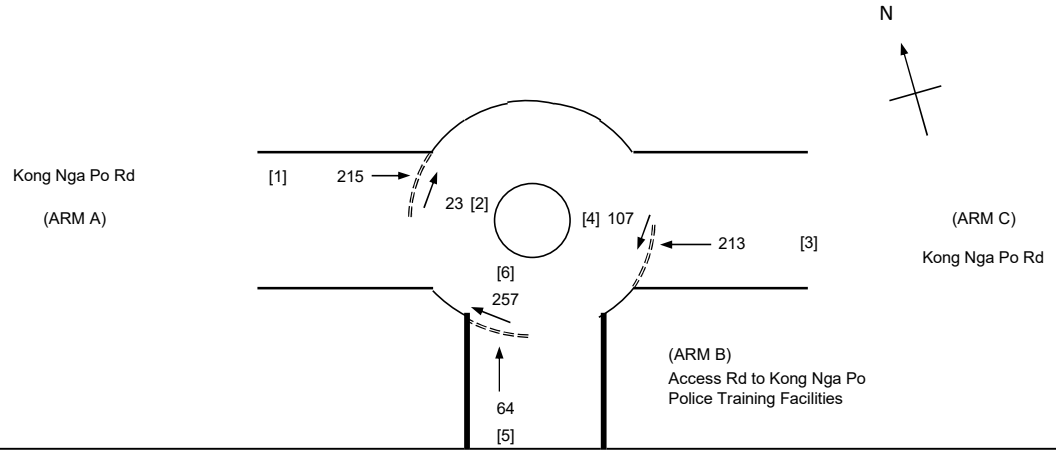
Q b-a	=	462	(pcu/hr)
Q b-c	=	620	(pcu/hr)
Q c-b	=	663	(pcu/hr)
Q b-ac	=	595	(pcu/hr)
Q c-a	=	1575	(pcu/hr)
TOTAL FLOW	=	207	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0281
DFC b-c	=	0.1516
DFC c-b	=	0.1252
DFC b-ac	=	0.1798
(Share Lane)		
DFC c-a	=	0.0025

CRITICAL DFC = 0.18

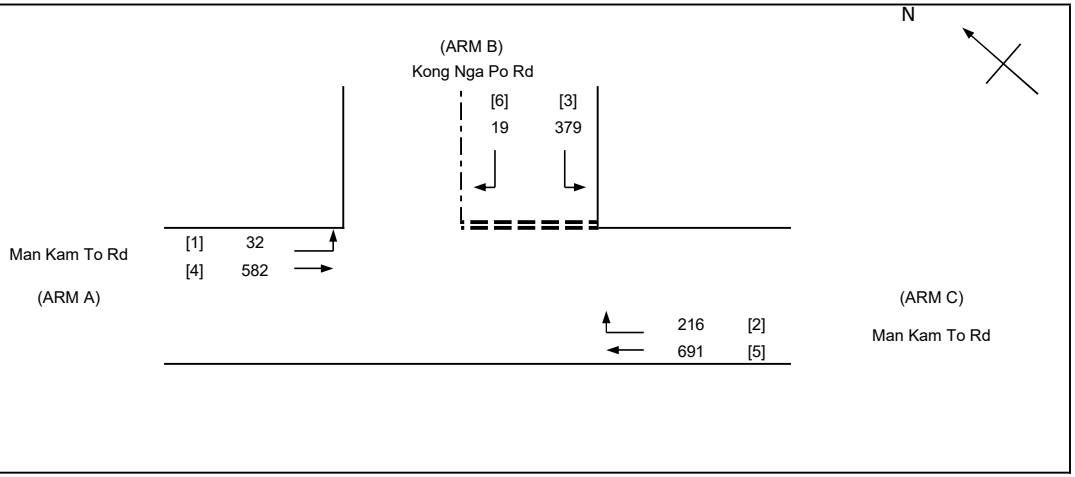
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Reference - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		215	64	213
Qc	=	Circulating flow across entry (pcu/h)		23	257	107
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1408	1269	1276
DFC	=	Design flow/Capacity = Q/Qe		0.15	0.05	0.17

TOTAL FLOW = 879 (pcu/hr)
CRITICAL DFC = 0.17

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Reference - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	32	(pcu/hr)
q a-c	=	582	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	691	(pcu/hr)
q c-b	=	216	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	19	(pcu/hr)
q b-c	=	379	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.952

THE CAPACITY OF MOVEMENT :

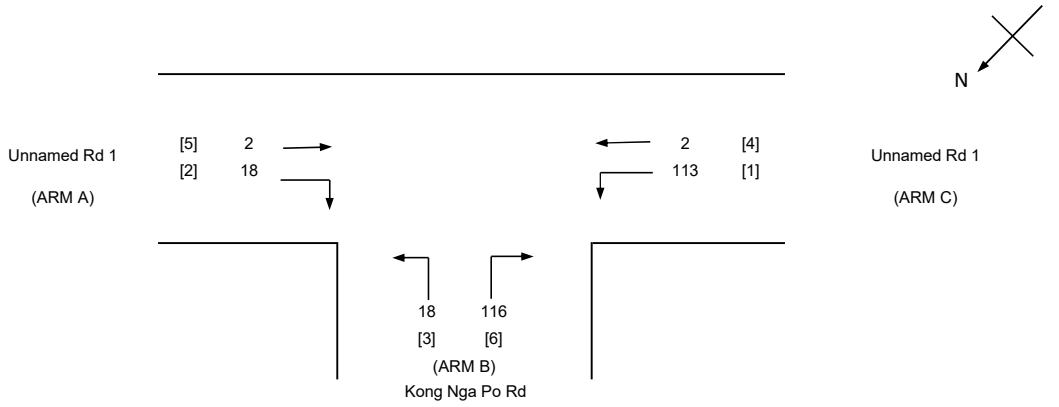
Q b-a	=	354	(pcu/hr)
Q b-c	=	511	(pcu/hr)
Q c-b	=	603	(pcu/hr)
Q b-ac	=	500	(pcu/hr)
TOTAL FLOW	=	1919	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0537
DFC b-c	=	0.7417
DFC c-b	=	0.3582
DFC b-ac (Share Lane)	=	0.7954

CRITICAL DFC = 0.80

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Design - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	18	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	2	(pcu/hr)
q c-b	=	113	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	18	(pcu/hr)
q b-c	=	116	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.866

THE CAPACITY OF MOVEMENT :

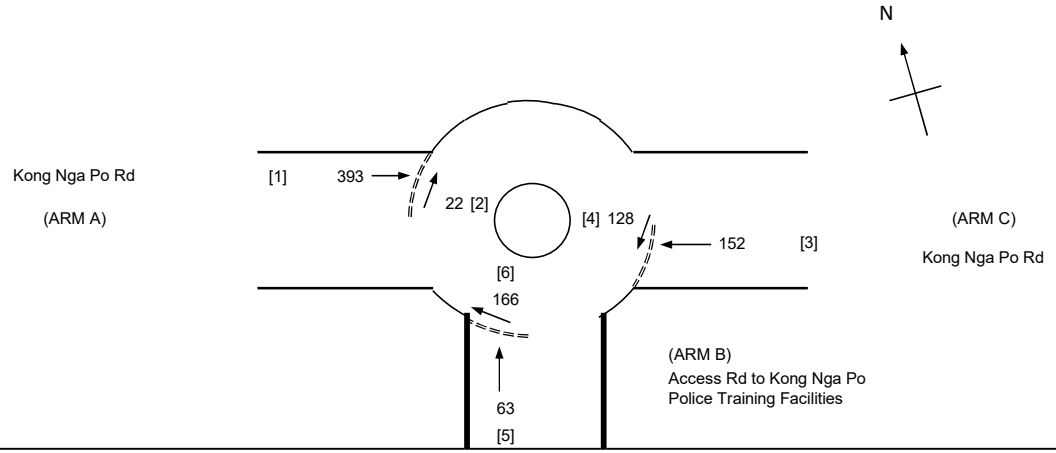
Q b-a	=	453	(pcu/hr)
Q b-c	=	619	(pcu/hr)
Q c-b	=	662	(pcu/hr)
Q b-ac	=	590	(pcu/hr)
Q c-a	=	1493	(pcu/hr)
TOTAL FLOW	=	269	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0397
DFC b-c	=	0.1874
DFC c-b	=	0.1707
DFC b-ac	=	0.2271
(Share Lane)		
DFC c-a	=	0.0013

CRITICAL DFC = 0.23

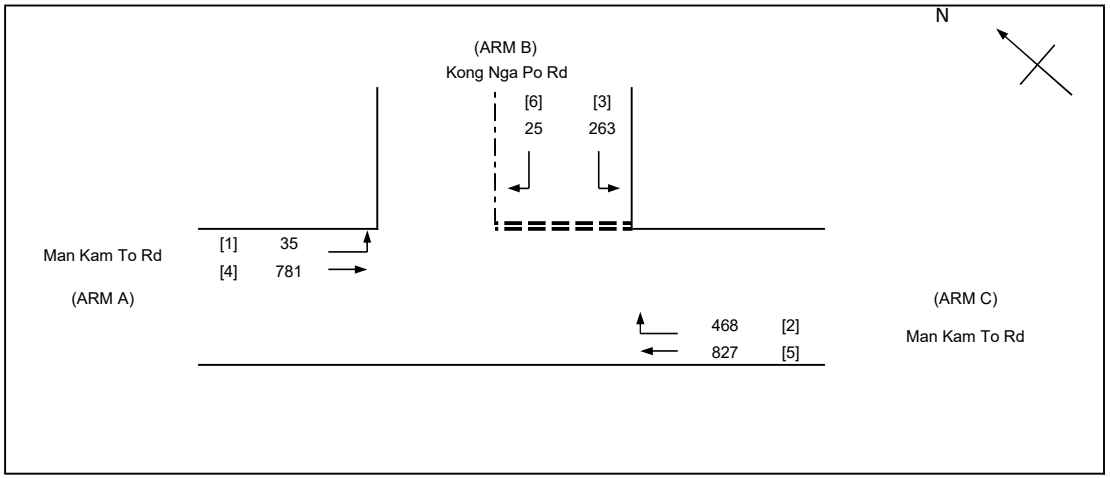
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Design - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		393	63	152
Qc	=	Circulating flow across entry (pcu/h)		22	166	128
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1409	1324	1264
DFC	=	Design flow/Capacity = Q/Qe		0.28	0.05	0.12

TOTAL FLOW = 924 (pcu/hr)
CRITICAL DFC = 0.28

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Design - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	35	(pcu/hr)
q a-c	=	781	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	827	(pcu/hr)
q c-b	=	468	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	25	(pcu/hr)
q b-c	=	263	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.913

THE CAPACITY OF MOVEMENT :

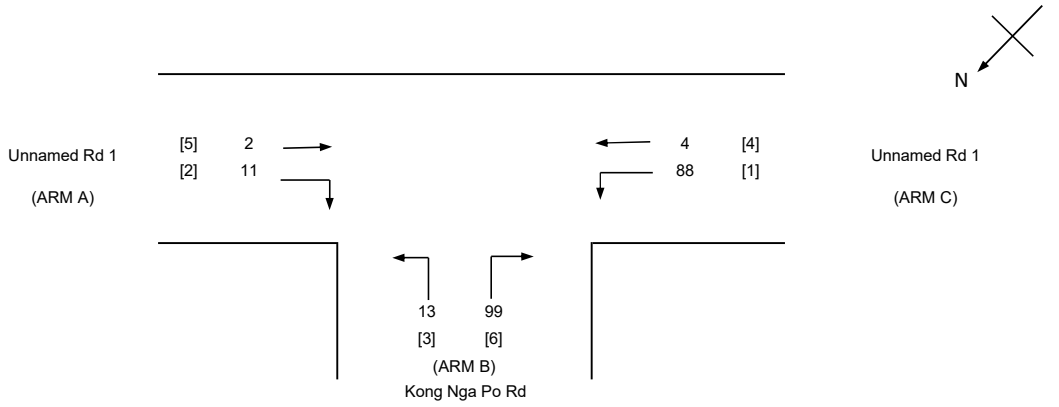
Q b-a	=	260	(pcu/hr)
Q b-c	=	480	(pcu/hr)
Q c-b	=	567	(pcu/hr)
Q b-ac	=	447	(pcu/hr)
TOTAL FLOW	=	2399	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0962
DFC b-c	=	0.5479
DFC c-b	=	0.8254
DFC b-ac (Share Lane)	=	0.6441

CRITICAL DFC = 0.83

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Design - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	11	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	4	(pcu/hr)
q c-b	=	88	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	13	(pcu/hr)
q b-c	=	99	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.884

THE CAPACITY OF MOVEMENT :

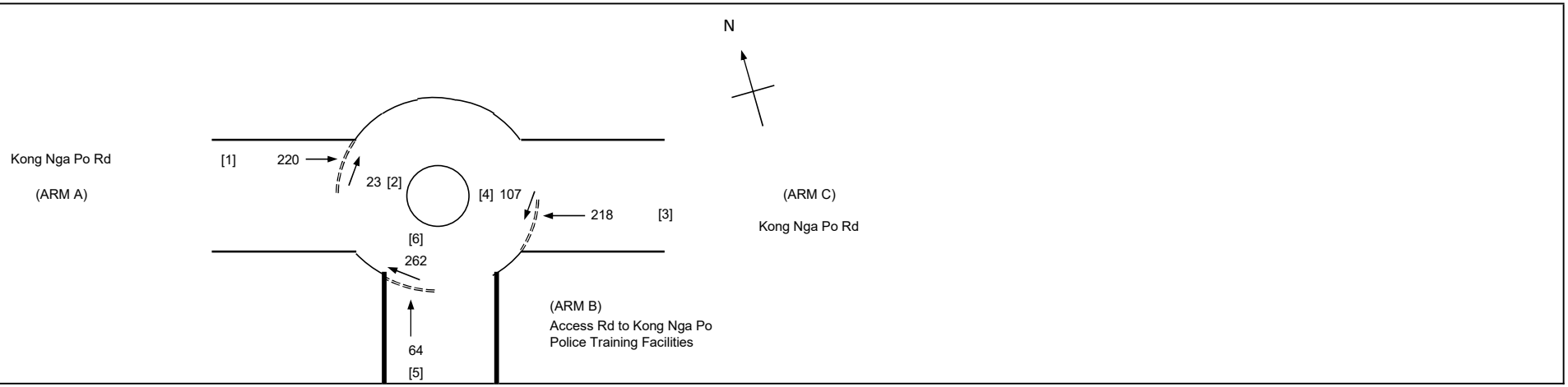
Q b-a	=	461	(pcu/hr)
Q b-c	=	620	(pcu/hr)
Q c-b	=	663	(pcu/hr)
Q b-ac	=	596	(pcu/hr)
Q c-a	=	1561	(pcu/hr)
TOTAL FLOW	=	217	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0282
DFC b-c	=	0.1597
DFC c-b	=	0.1327
DFC b-ac	=	0.1879
(Share Lane)		
DFC c-a	=	0.0026

CRITICAL DFC = 0.19

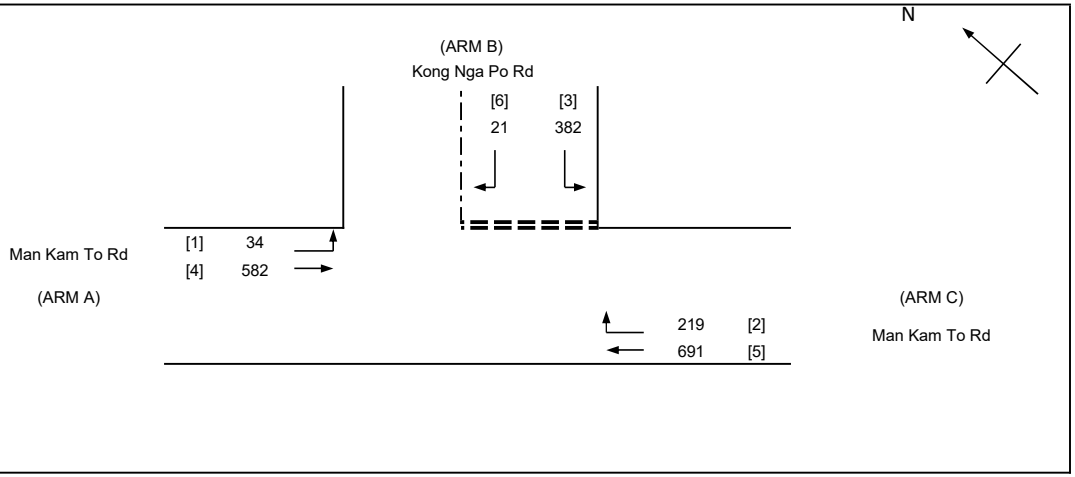
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Design - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		220	64	218
Qc	=	Circulating flow across entry (pcu/h)		23	262	107
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1408	1266	1276
DFC	=	Design flow/Capacity = Q/Qe		0.16	0.05	0.17

TOTAL FLOW = 894 (pcu/hr)
CRITICAL DFC = 0.17

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Design - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	34	(pcu/hr)
q a-c	=	582	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	691	(pcu/hr)
q c-b	=	219	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	21	(pcu/hr)
q b-c	=	382	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.948

THE CAPACITY OF MOVEMENT :

Q b-a	=	353	(pcu/hr)
Q b-c	=	511	(pcu/hr)
Q c-b	=	603	(pcu/hr)
Q b-ac	=	499	(pcu/hr)
TOTAL FLOW	=	1929	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0595
DFC b-c	=	0.7476
DFC c-b	=	0.3632
DFC b-ac (Share Lane)	=	0.8070

CRITICAL DFC = 0.81

Appendix III

Drainage Proposal

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

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Drainage Proposal

1st Submission

Prepared by: Matthew Poon
Date: 02/06/2025

Wings & Associates Consulting Engineers Ltd.
22/F, Elite Centre,
22 Hung To Road,
Kwun Tong, Kowloon
Hong Kong

CONTENTS

1. INTRODUCTION
2. SITE DESCRIPTION
3 DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE
4. CONCLUSION

APPENDICE

Appendix A Photo Record
Appendix B Topography Survey Record
Appendix C Drainage Design Calculation
Appendix D Design Drawings

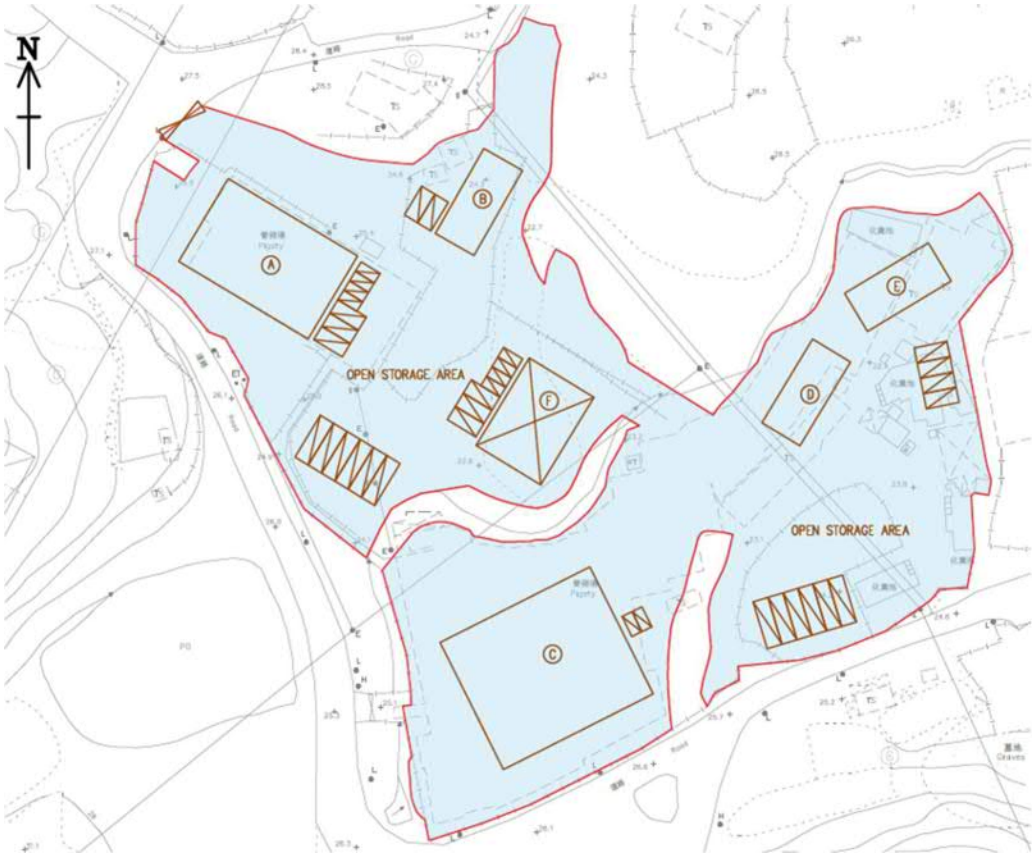
1. INTRODUCTION

The drainage proposal is under the application of Section 16 Planning Application. The proposed uses of the subject lots are temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities for a period of 3 years at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories.

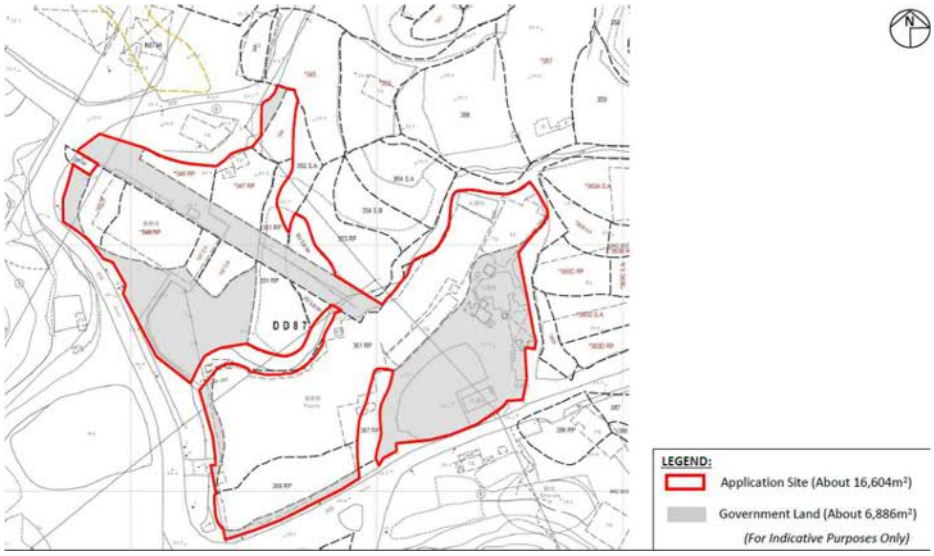
Wings & Associates Consulting Engineers Limited is appointed to be the consultant to prepare for the Drainage Proposal in support of the construction works for the proposed application and address the Drainage Services Department's general comments.

2. SITE DESCRIPTION

2.1 The general views of the application area can be referred to in the figures below. The combined parts of the lot cover an area of about 16,604m^2.

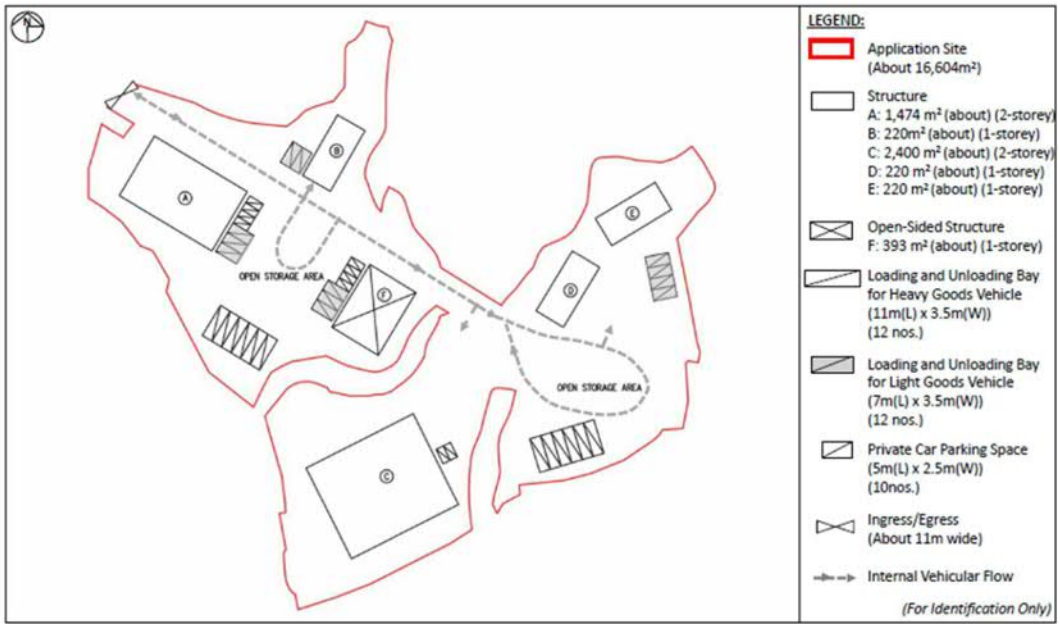


Lot information of the Subject Site



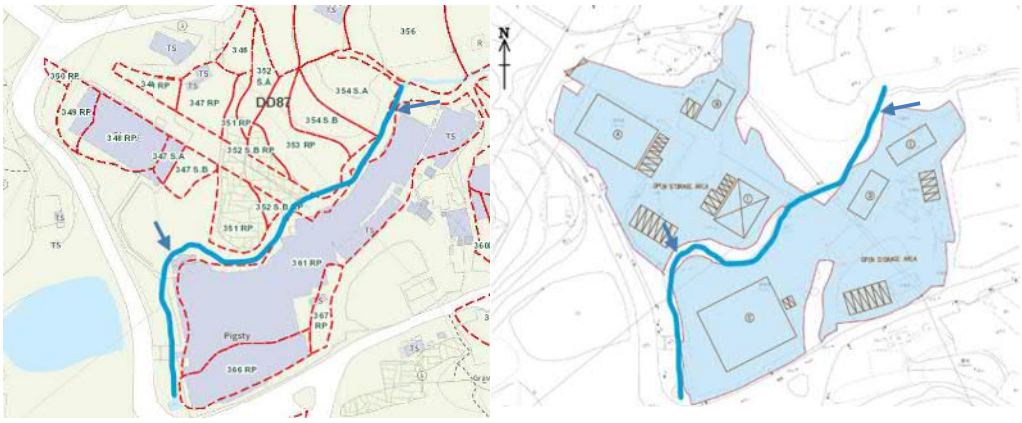
Boundary of the Subject Site surrounded by fencing

2.3 The figure below shows the proposed layout of the structures and parking provision within the boundary of the fencing. The subject site consists of six single-storey temporary structures, including 5 nos. of enclosed structures and 1 open-sided structure. No permanent structures and buildings will be placed within the subject site, the flow direction will not be affected by any blockage. All proposed structures will be placed 3m away from the existing stream course.



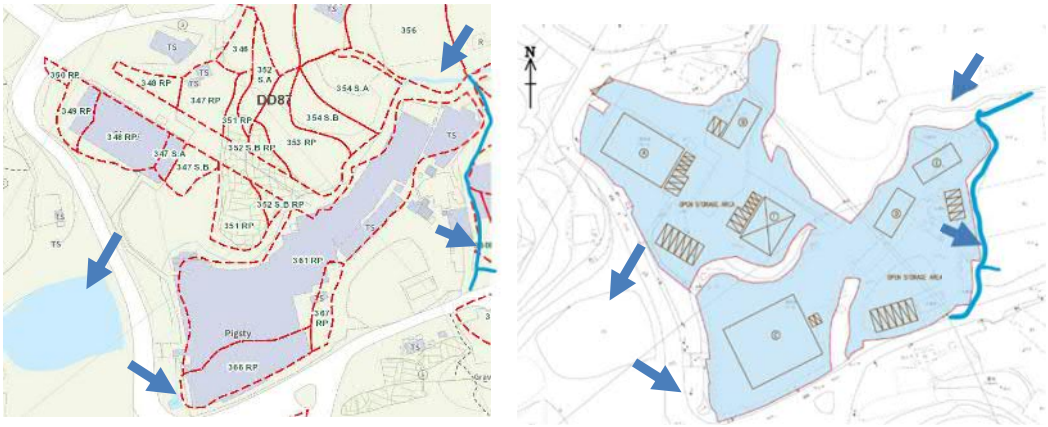
Location of the structures and parking areas inside the Subject Site

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



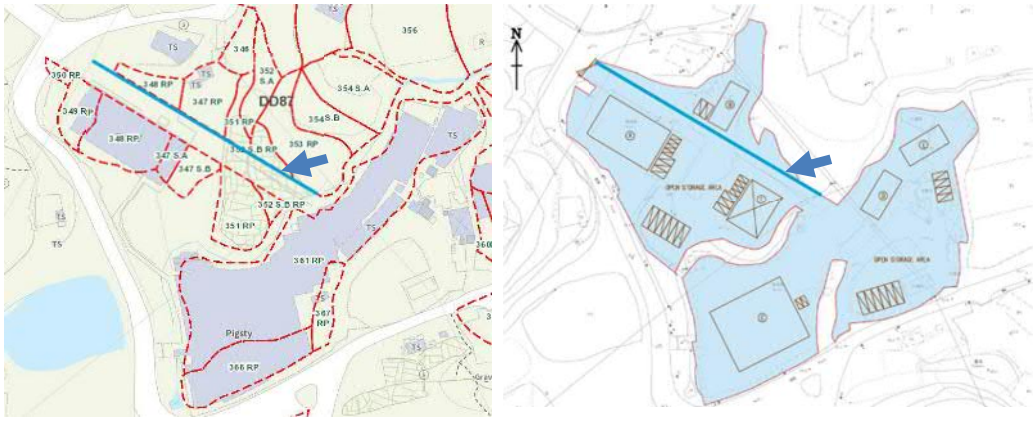
Existing drainage features inside the Subject Site

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



Existing drainage features outside the Subject Site

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



Existing U-Channels inside the Subject Site

2.7 The existing ground level of the subject site ranges between +22.1mPD to +27.8mPD. With reference to the Stormwater Drainage Manual, the mean higher high-water level for Tai Po Kau is +2.02mPD. Water level information from Hong Kong Observatory shows the existing highest water level is recorded as +5.03mCD (+5.176mPD) with tide gauge established in Tai Po Kau.

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

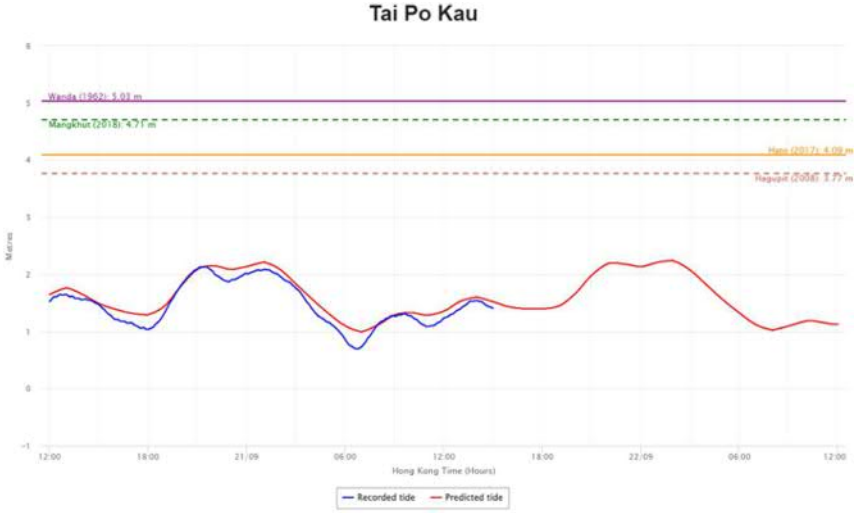


Table 8 – Design Extreme Sea Levels (in mPD)

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

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

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

3. DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE

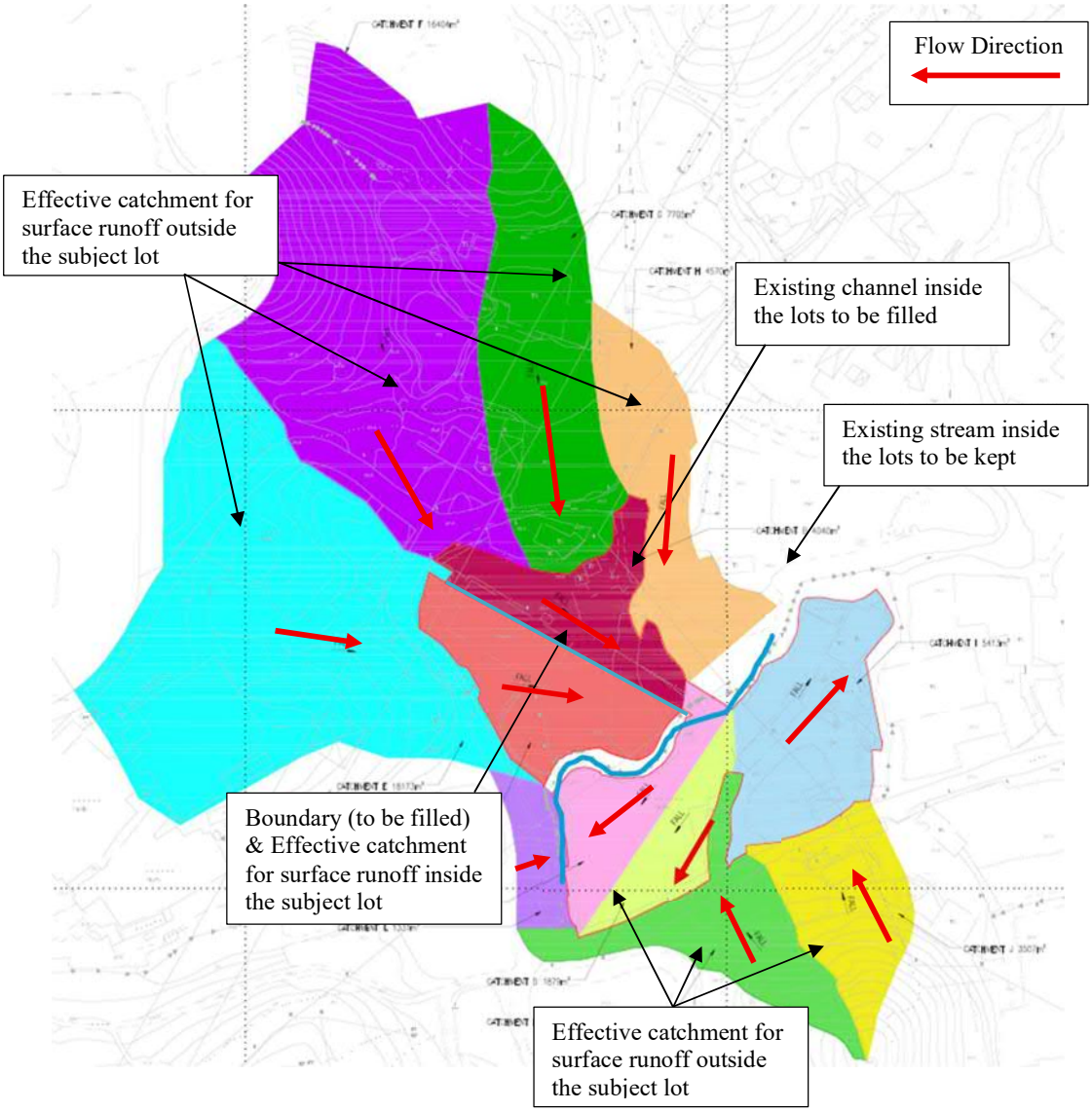
3.1 General Planning

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

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

3.2 Identification of the Effective Catchment Area

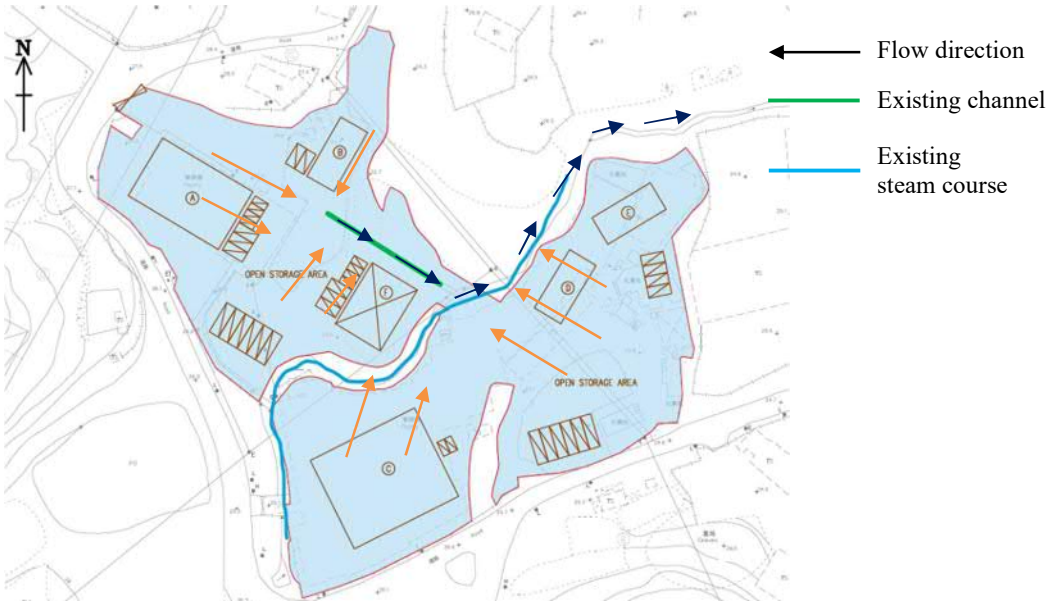
Referring to the location plan and the existing ground level, the considered effective catchment area of surface runoff includes: the area of the subject lots and the adjacent area with higher cover level (including uphill and carriageway).
The other adjacent area will be determined as the anticipated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



Flow Direction of the Effective Catchment Area inside the Subject Site

3.3 Studying on the Existing Drainage System

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



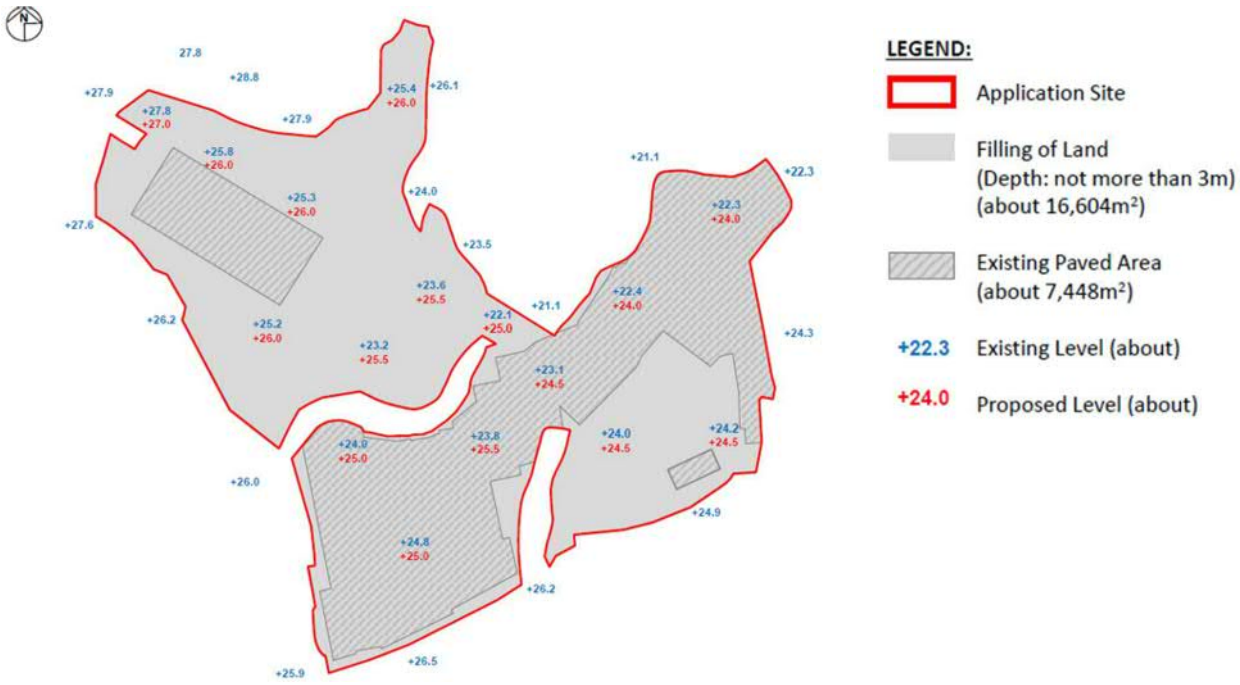
Original drainage network inside the Subject Site

3.4 Filling the subject site to rearrange cover level

The area inside the lots will be completely filled up to create a flat surface with slight gradient to provide falls to drainage features and match the existing road surface outside the lot boundary. The existing channel inside the lot boundary will be removed.

The existing concrete pipe at the connection point between the northwest and southeast sections of the lot are proposed to be replaced with a new 800mm diameter concrete pipe. Connecting the upstream and downstream sections. The design checking for the concrete pipe can be found in **Appendix C**.

The ground level is proposed to be raised to a level between +24.0mPD and +27.0mPD for feasible traffic flow and heavy vehicle access. The cover level at the boundary will be between +24.0mPD and +27.0mPD. The details of the cover levels and the flow direction of the surface runoff can be referred to the drawings and the figure below.



Filling plan of the Subject Site

3.5 Proposed Flow Direction and Drainage System

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

3.6 Design of Channels and Catchpits

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

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

3.7 Discharge Point

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

4. CONCLUSIONS

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

4.2 The stormwater and surface runoff in the effective catchment area will be discharged to the existing drainage system outside the subject lot area (existing river, culverts, and surface channels). The discharge has been incorporated into the checking of drainage capacity of the existing drainage system (design calculation refers to **Appendix C**)

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

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

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

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

4.7 The development will not have any adverse impact on the drainage in the surrounding area. The construction and development within the subject lot will not alter the flow direction of surface runoff. There will be no increased risk of flooding, and the capacity of existing drainage utilities will not be exceeded.

END OF TEXT

APPENDIX A

Photo Record


N
OPEN STORAGE AREA
OPEN STORAGE AREA
1-2
3
4-5

Photo No. 1



Photo No. 2



Photo No. 3



Photo No. 4

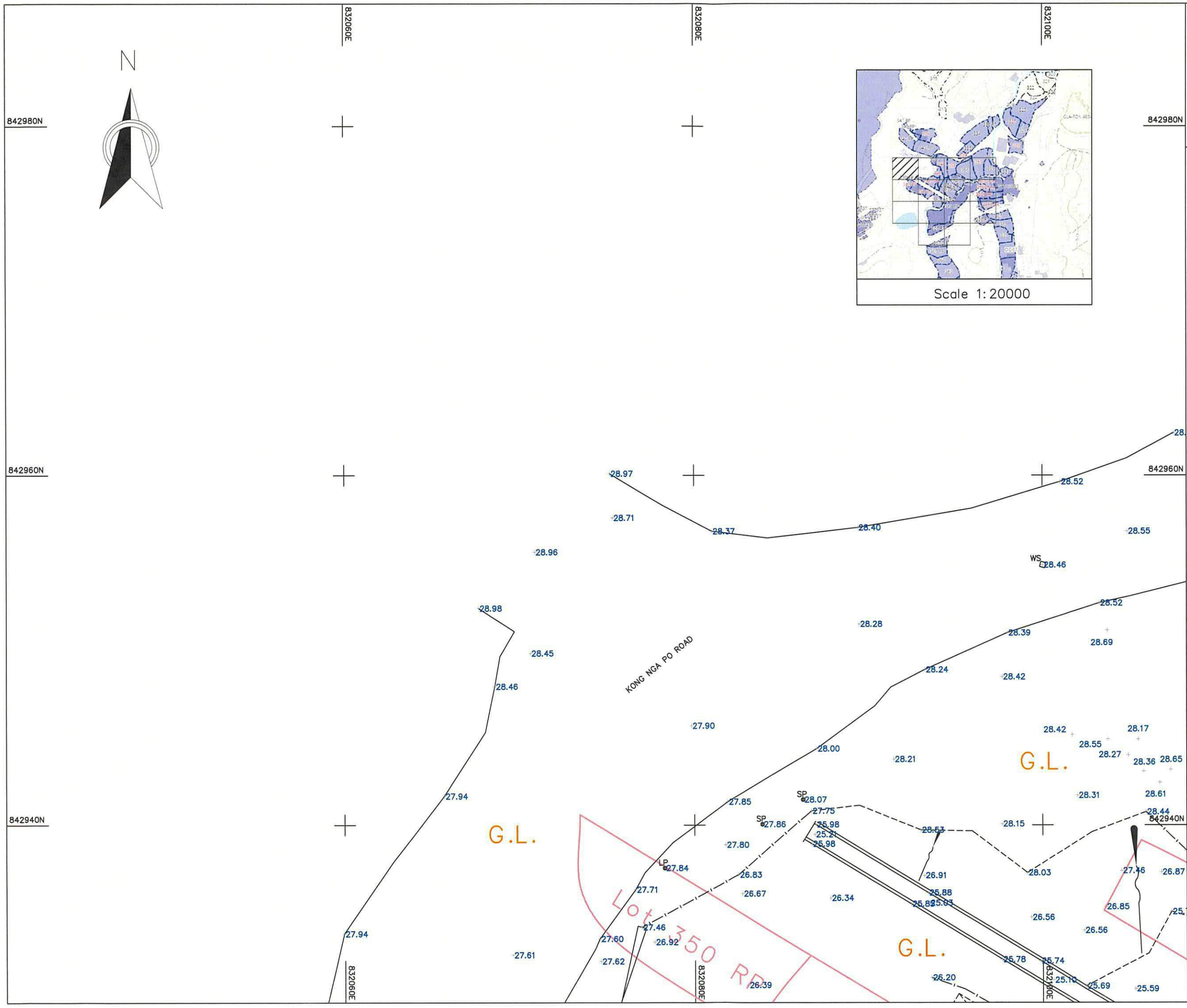


Photo No. 5



APPENDIX B

Topography Survey Record



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Legend :

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- ADJACENT LOT BOUNDARY LINE
- FENCE,RAILING
- PIPE
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- UC — CONCRETE DRAIN & CATCHPIT
- COL — COLUMN
- CUL — CULVERT
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- OS — OPEN-SIDED STRUCTURE
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- STEPS
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- GATE
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- TP — TELEPHONE POLE
- EP — ELECTRIC POLE
- 1.23 — SPOT LEVEL
- 20 — CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 1 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
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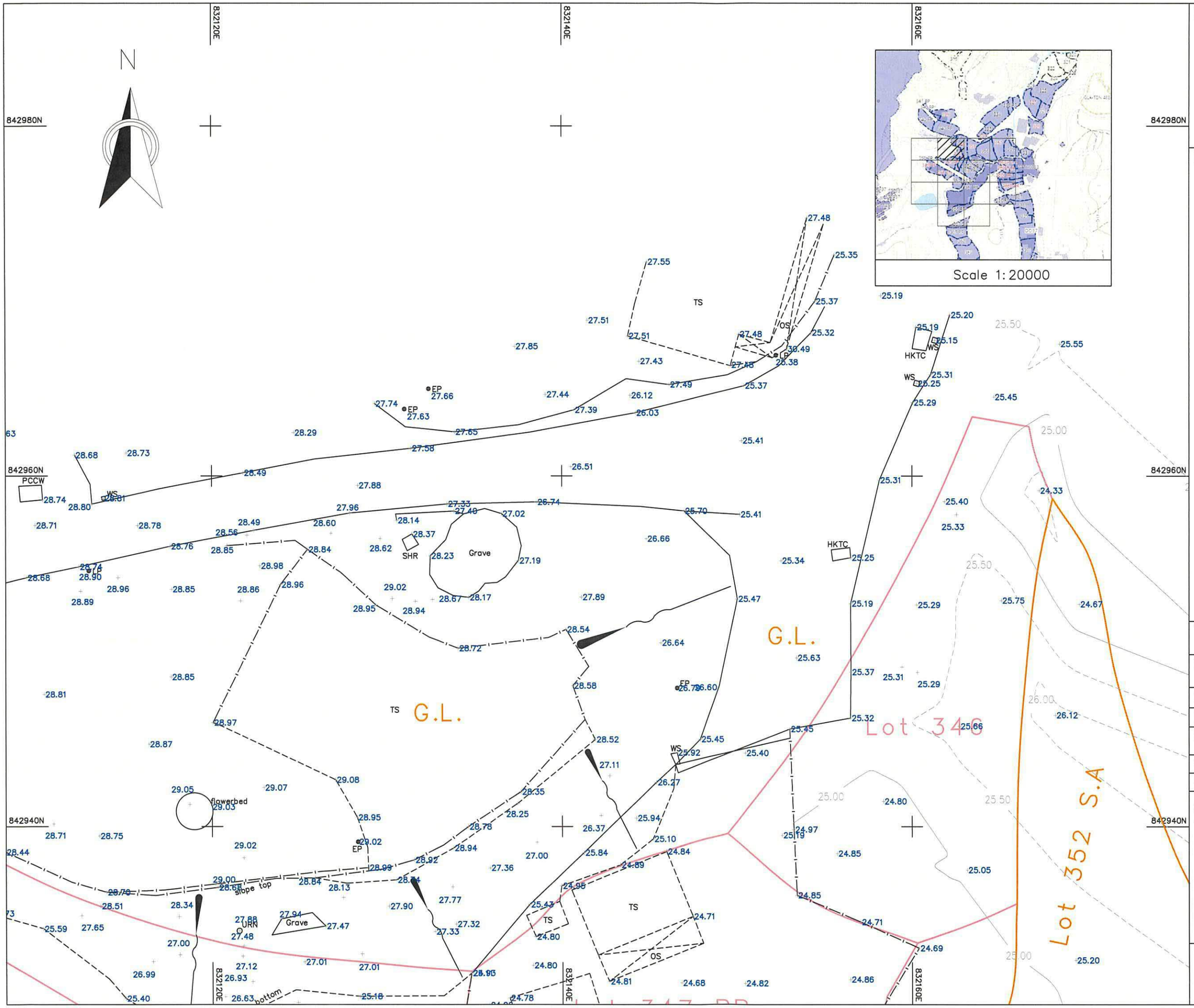

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Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 2 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
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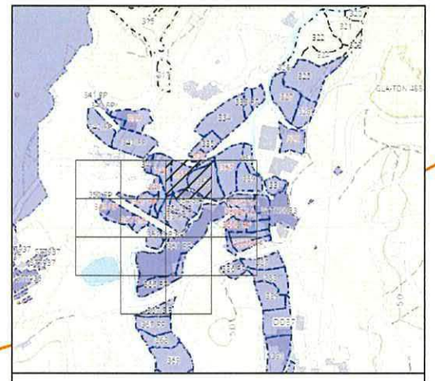
832180E 832200E 832220E 832240E

842980N 842960N 842940N

N



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Lot 356

5.50 25.00 25.50 26.00 26.50

26.75 26.07 25.50 25.00 24.50 23.80 26.10 25.90 23.06

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(SHEET 3 OF 14)

Scale: 1:200 (A3)

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832260E

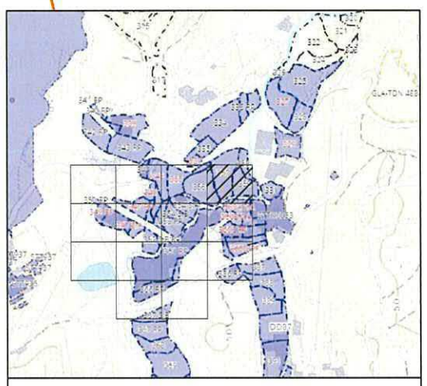
832280E

832300E

842980N

842960N

842940N



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Lot 357

Lot 358

Lot 359

G.L.

N

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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 4 OF 14)

Scale: 1:200 (A3)

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N

832060E

832080E

832100E

842920N

842900N

842880N

G.L.

Lot 349 RP

Lot 348 RP

TS

WT

OS

LP

27.52 27.08 28.00 26.86 26.51 25.91 25.14 25.93 25.81 25.62 25.61 26.17 27.46 25.43 25.66 26.86 27.38 26.74 26.58 26.18 27.60 26.16 27.86 26.54 26.70 27.43 27.33 26.39 26.78 27.35 27.28 26.31 27.49 27.66 25.81 25.70 26.79 26.87 27.20 26.00 26.97 27.05 25.93 26.78 27.40 26.95 25.90 26.53 25.82 25.79 27.17 26.95 25.74 26.67 26.34 26.87 25.80 25.59 26.64 26.54 26.55 25.94 25.56 25.71 26.44 25.81 25.76 26.44 25.71 26.43 26.08 25.56 26.29 25.96 25.42 26.21 26.23 26.21 25.24 26.16

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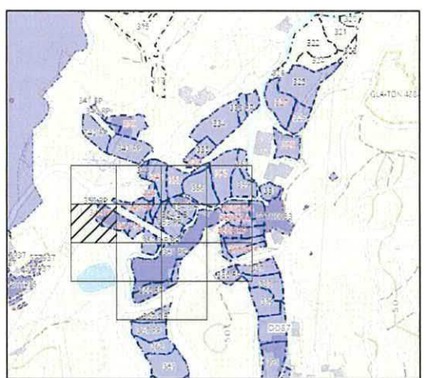

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 5 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

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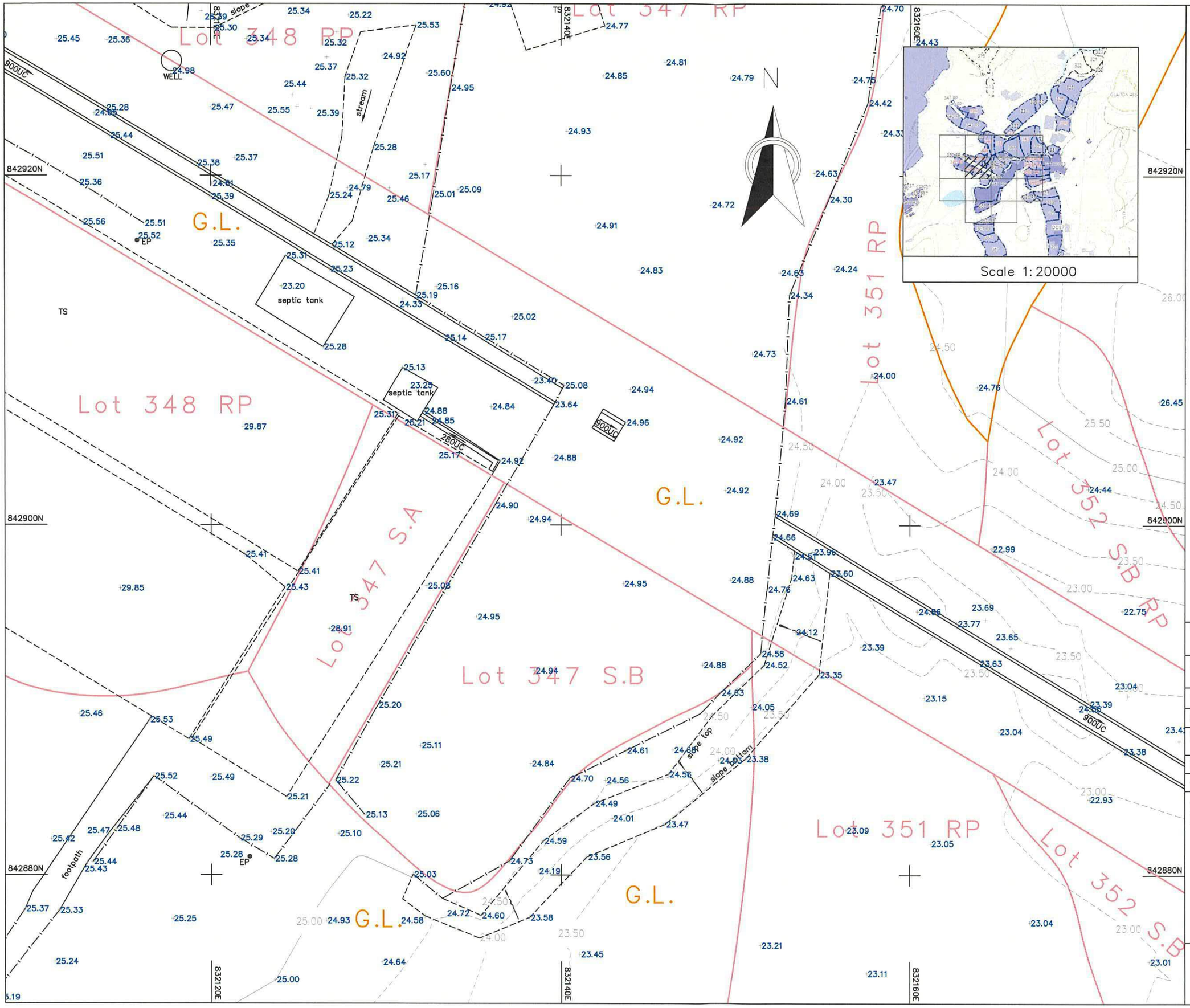

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Locality :
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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 6 OF 14)

Scale: 1:200 (A3)

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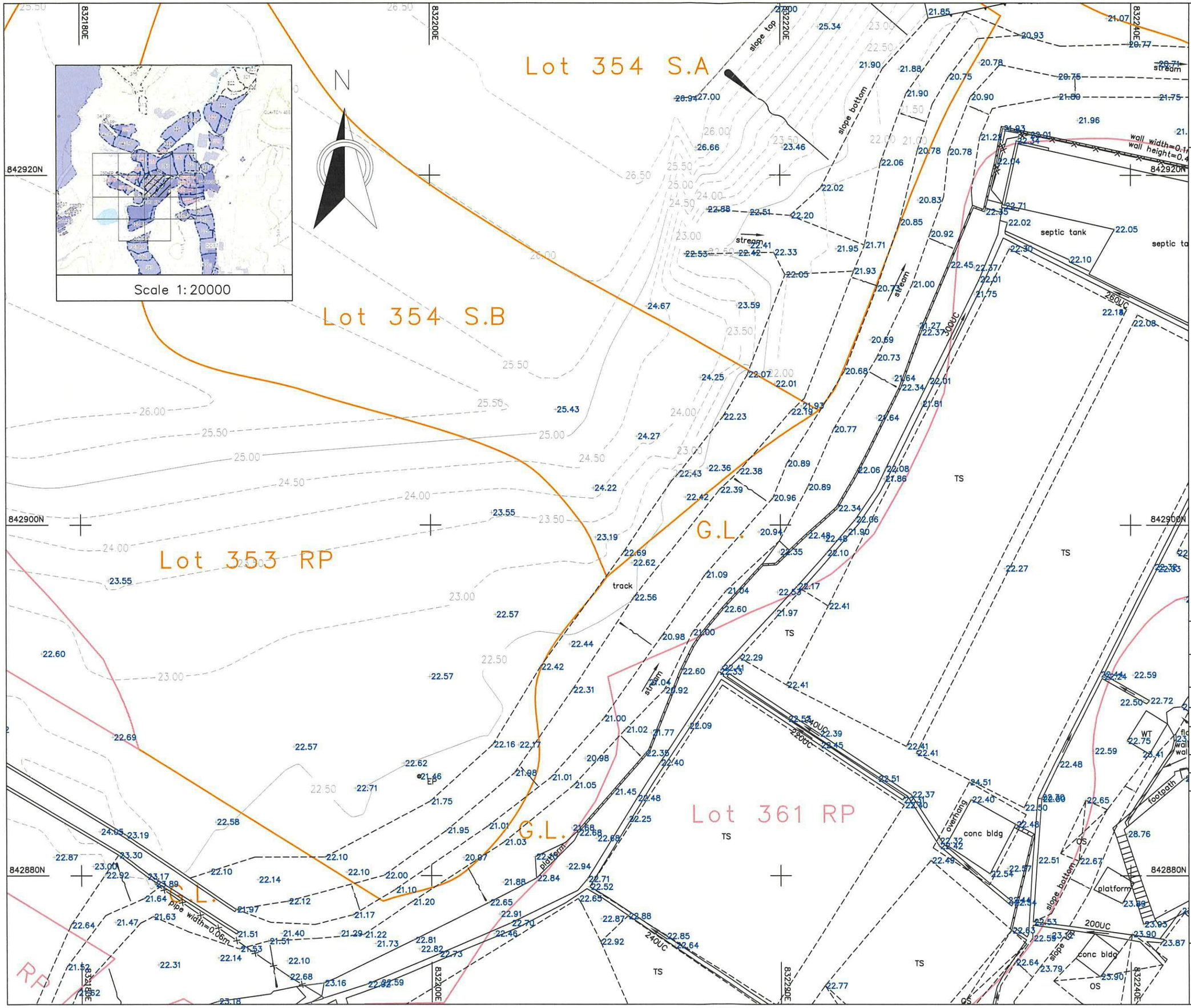

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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 7 OF 14)

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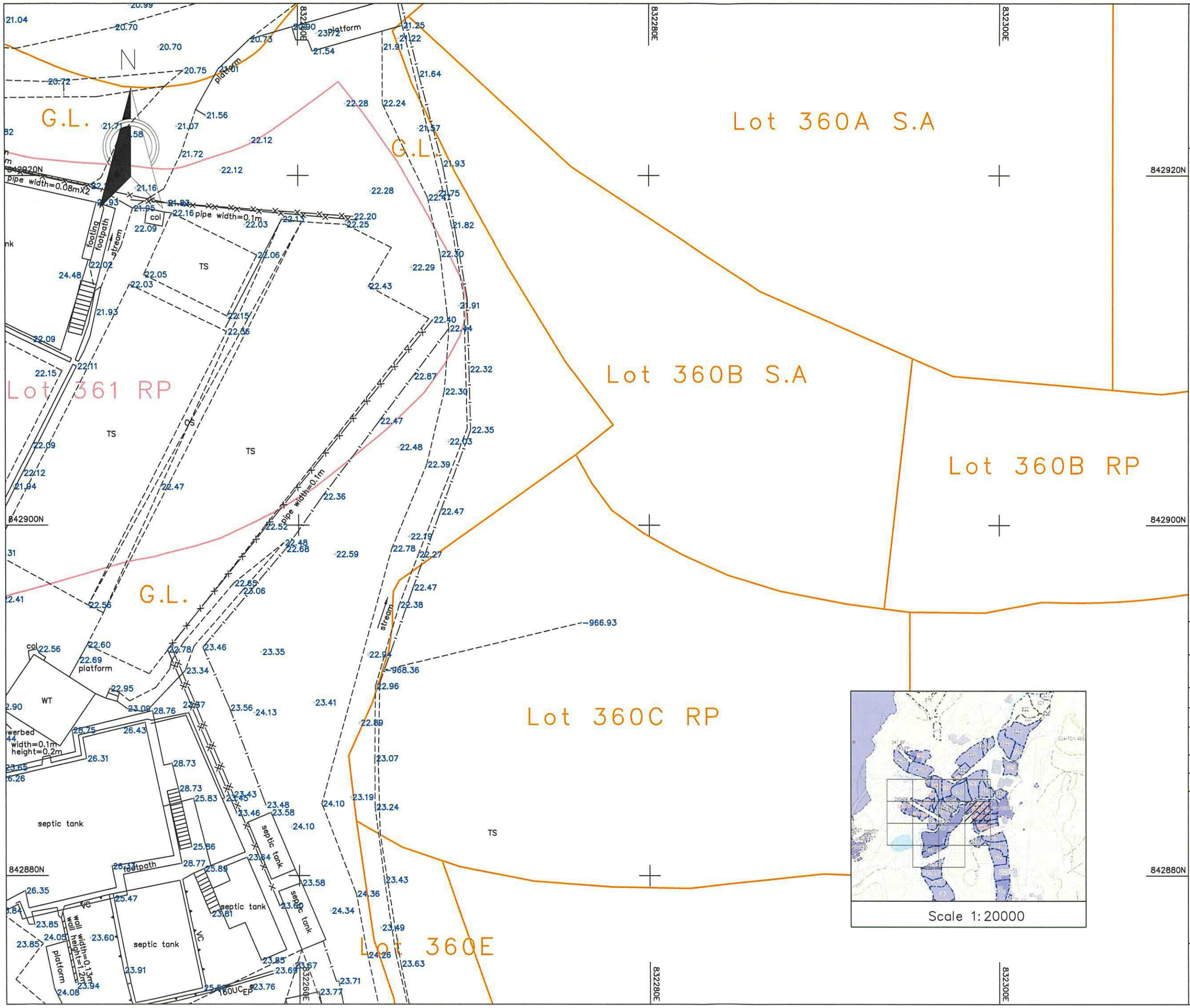

Scale 1:20000

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Plan No: DN/2212/87/351RP-TOPO (SHEET 8 OF 14)

Scale: 1:200 (A3)

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N

832060E

832080E

832100E

842860N

842840N

842820N

25.19 25.19 25.00

26.03

26.10

25.64 25.08 24.99

25.02

25.73 25.76

26.03

25.99

26.07 25.73

25.49

26.04

26.07

25.79

25.99

26.02

25.98

26.05

25.34

25.40

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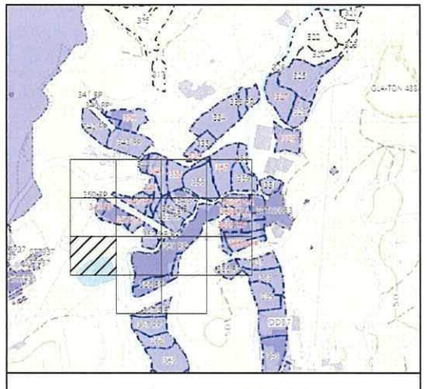

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Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 9 OF 14)

Scale: 1:200 (A3)

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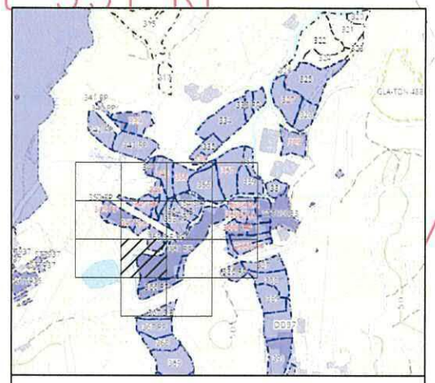
Lot 351 RP

Lot 361 RP

G.L.

G.L.

N



Scale 1: 20000

832120E

832140E

832160E

842860N

842840N

842820N

container

conc bldg

conc bldg

TS

stream

footpath

OS

EP

TP

WT

270UC

210UC

200UC

160UC

140UC

120UC

150

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- UC — CONCRETE DRAIN & CATCHPIT
- COL — COLUMN
- CUL — CULVERT
- TS — TEMPORARY STRUCTURE
- OS — OPEN-SIDED STRUCTURE
- VERTICAL MASONRY (RETAINING WALL)
- PARAPET OR WALL
- STEPS
- GULLY
- GATE
- TC — HONG KONG TELECOM
- MH — MANHOLE FOUL WATER
- WS — WATER SERVICE
- IC — INSPECTION COVER
- LP — LAMP POLE
- SP — SIDE POLE
- TP — TELEPHONE POLE
- EP — ELECTRIC POLE
- 1.23 — SPOT LEVEL
- CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 10 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
Registered Professional Surveyor
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Room 502, 5/F, Keader Centre,
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Tel.: 2652 2351 Fax: 2652 2322

Lot 361 RP

Lot 367 RP

G.L.

conc bldg

container

septic tank

bamboo

stream

footpath

wall width=0.1m
wall height=0.3m

MH

WELL

TS

OS

842860N

842840N

842820N

832180E

832200E

832220E

832240E

N

Scale 1: 20000

Notes :

1. All levels are in meters referenced to Hong Kong principal datum (HKPD).
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Legend :

- SUBJECT LOT BOUNDARY LINE
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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 11 OF 14)

Scale: 1:200 (A3)

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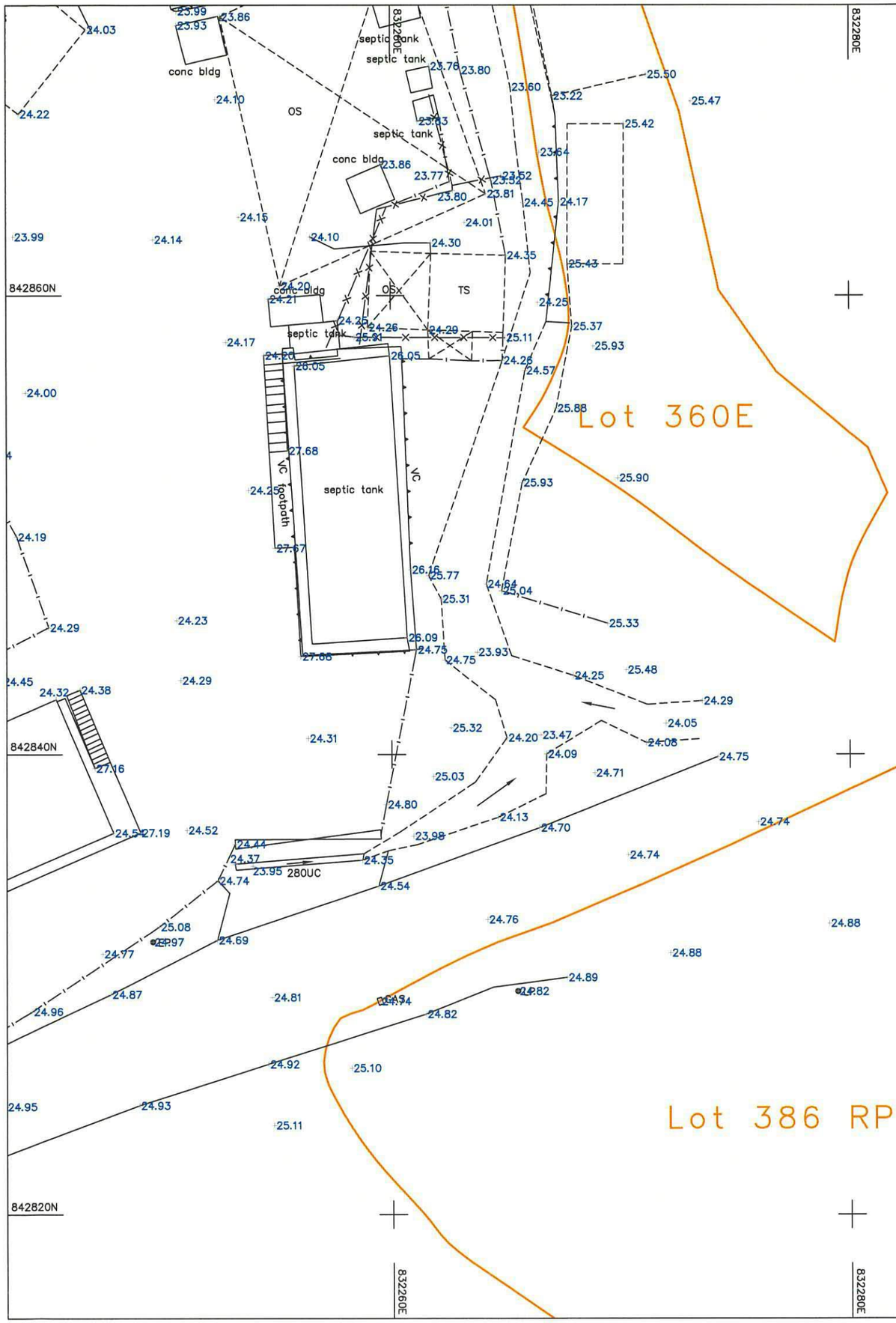

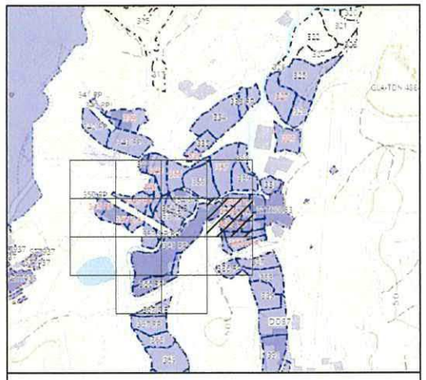

Scale 1: 20000

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 12 OF 14)

Scale: 1:200 (A3)

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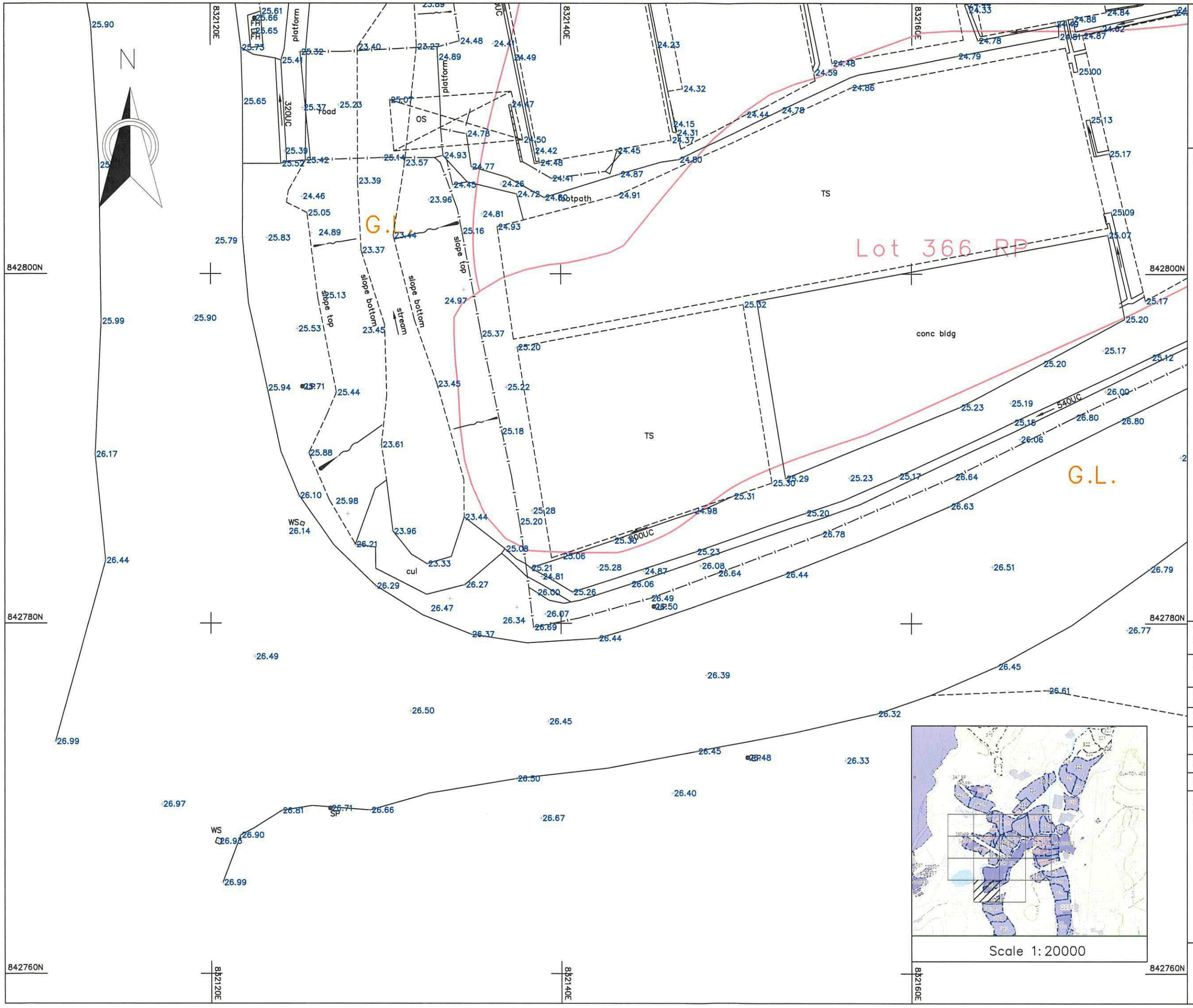

Scale 1:20000

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 13 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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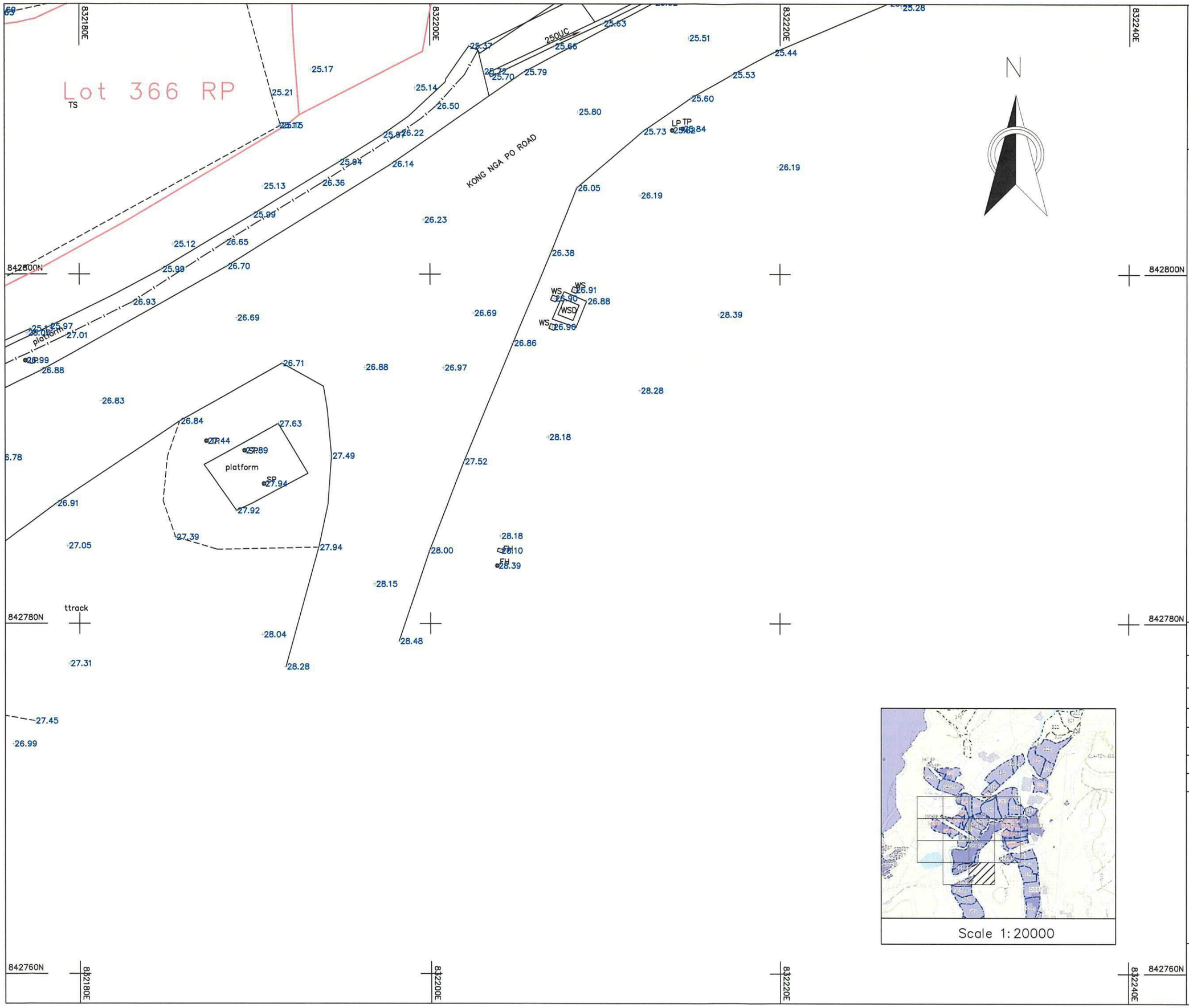

Scale 1:20000

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 14 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

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APPENDIX C

Drainage Design Calculation

Design Calculation of U-Channel

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

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

Assumption:

Runoff Coefficient for grass	0.2	(Steep and sandy grassland)				
Runoff Coefficient for concrete	1.0					
Catchment A	3250	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	229.4	mm/hr
Catchment B	4040	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	228.8	mm/hr
Catchment C	2480	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	206.2	mm/hr
Catchment D	1879.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	210.8	mm/hr
Catchment E	18173.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	224.7	mm/hr
Catchment F	16464.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	212.6	mm/hr
Catchment G	7705.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	221.2	mm/hr
Catchment H	4570.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	215.3	mm/hr
Catchment I	5413.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	206.0	mm/hr
Catchment J	3507.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	267.7	mm/hr
Catchment K	4257.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	252.1	mm/hr
Catchment L	1497.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	231.8	mm/hr
Allowance	10.0	% reduction in flow area due to permissible degradation between desilting cycles				

Abbreviation and Terms:

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

Cathcment		USGL mPD	DSGL mPD	USIL mPD	DSIL mPD	AVG. DEPTH m	INVERT DIFF. m	LENGTH m	GRADIENT 1 in	RAINFALL INTENSITY mm/hr	RUNOFF COEF.	CATCH MENT m^2	Affected Area (catchment	EFF. AREA m^2	DESIGN FLOW m^3/s	CUM. DESIGN FLOW m^3/s	SIZE mm	TYPE	VEL m/s	ALLOWANCE (REDUCTION %)	FLOW CAP. m^3/s	SPARE CAP. m^3/s	UTILISATION %	RESULT	A (m^2)	P (m)	R (m)
E	Branch 1	27.00	26.00	26.50	25.51	0.49	0.99	99.0	100	224.7	0.2	18173	E	3634.6	0.22702	0.22702	375	UC	1.9	10	0.295	0.068	77	OK	0.152	1.194	0.127
Resultant & Discharge															0.22702	0.22702	375	UC	1.9	10	0.295	0.068	77	OK	0.152	1.194	0.127
A	Branch 2	26.00	25.00	25.30	24.58	0.42	0.71	71.0	100	229.4	1	3250	A	3250	0.20725	0.20725	375	UC	1.9	10	0.239	0.032	87	OK	0.127	1.046	0.121
Resultant & Discharge															0.20725	0.20725	375	UC	1.9	10	0.239	0.032	87	OK	0.127	1.046	0.121
C	Branch 3	25.00	24.50	24.50	23.25	1.25	1.25	124.0	100	206.2	1	2480	C	2480	0.14214	0.14214	350	UC	2.1	10	0.796	0.654	18	OK	0.381	2.691	0.141
L		25.00	25.00	24.50	23.25	1.75	1.25	124.0	100	231.8	0.2	1497	L	299.4	0.01929	0.01929	350	UC	2.1	10	1.149	1.130	2	OK	0.538	3.691	0.146
Resultant & Discharge															0.16143	0.16143	350	UC	2.1	10	0.796	0.635	20	OK	0.381	2.691	0.141
D	Branch 4	25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	210.8	1	1879	D	1879	0.11013	0.11013	350	UC	2.0	10	0.524	0.414	21	OK	0.259	1.920	0.135
K		25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	252.1	0.2	4257	K	851.4	0.05966	0.05966	350	UC	2.0	10	0.524	0.465	11	OK	0.259	1.920	0.135
Resultant & Discharge															0.16979	0.16979	350	UC	2.0	10	0.524	0.355	32	OK	0.259	1.920	0.135
I	Branch 5	24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	206.0	1	5413	I	5413	0.31001	0.31001	350	UC	2.1	10	0.983	0.673	32	OK	0.467	3.240	0.144
J		24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	267.7	0.2	3507	J	701.4	0.05220	0.05220	350	UC	2.1	10	0.983	0.931	5	OK	0.467	3.240	0.144
Resultant & Discharge															0.36221	0.36221	350	UC	2.1	10	0.983	0.621	37	OK	0.467	3.240	0.144
I	Branch 6	24.50	24.00	24.10	23.24	0.76	0.86	85.0	99	206.0	1	5413	I	5413	0.31001	0.31001	350	UC	2.0	10	0.457	0.147	68	OK	0.228	1.720	0.132
Resultant & Discharge															0.31001	0.31001	350	UC	2.0	10	0.457	0.147	68	OK	0.228	1.720	0.132

I	Branch 7	24.50	24.00	24.10	23.27	0.73	0.83	83.1	100	206.0	1	5413	I	5413	0.31001	0.31001	350	UC	2.0	10	0.433	0.123	72	OK	0.218	1.660	0.131
Resultant & Discharge															0.31001	0.31001	350	UC	2.0	10	0.433	0.123	72	OK	0.218	1.660	0.131
B	Branch 8	26.00	25.00	25.30	24.43	0.57	0.87	87.0	100	228.8	1	4040	B	4040	0.25694	0.25694	375	UC	2.0	10	0.356	0.099	72	OK	0.179	1.354	0.132
H		26.00	25.00	25.30	24.43	0.57	0.87	87.0	100	215.3	0.2	4570	H	914	0.05471	0.05471	375	UC	2.0	10	0.356	0.301	15	OK	0.179	1.354	0.132
Resultant & Discharge															0.31165	0.31165	375	UC	2.0	10	0.356	0.044	88	OK	0.179	1.354	0.132
F	Branch 9	26.00	26.00	25.50	24.90	1.10	0.60	60.2	100	221.2	1	7705	G	7705	0.47384	0.47384	375	UC	2.2	10	0.769	0.295	62	OK	0.358	2.414	0.148
Resultant & Discharge															0.47384	0.47384	375	UC	2.2	10	0.769	0.295	62	OK	0.358	2.414	0.148
F	Branch 10	27.00	26.00	25.97	25.61	0.39	0.36	35.5	100	212.6	0.2	16464	F	3292.8	0.19464	0.19464	375	UC	1.9	10	0.220	0.025	89	OK	0.118	0.994	0.119
Resultant & Discharge															0.19464	0.19464	375	UC	1.9	10	0.220	0.025	89	OK	0.118	0.994	0.119

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : A

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3250.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.1	m
L =	length which water takes the longest time to reach the design section	=	117.8	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.53 min say 6.53 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

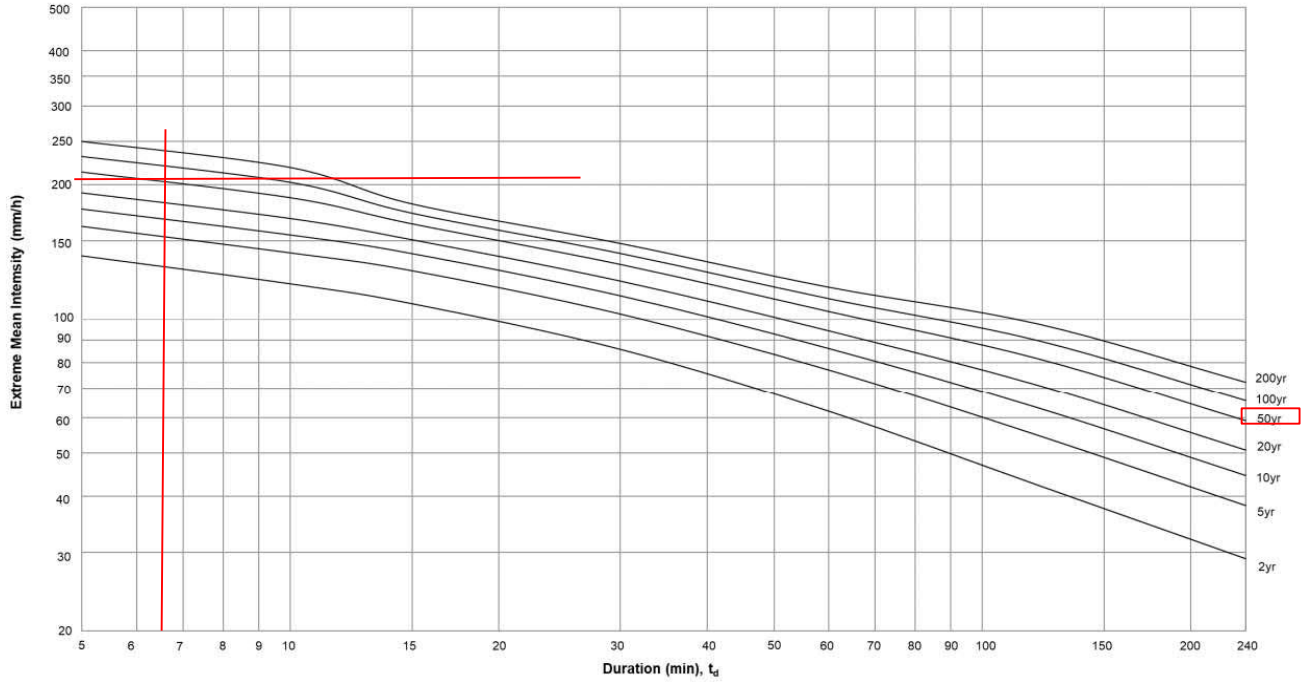


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	206.5	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	229.4	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : B

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4040.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.07	m
L =	length which water takes the longest time to reach the design section	=	121.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.59 min say 6.59 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

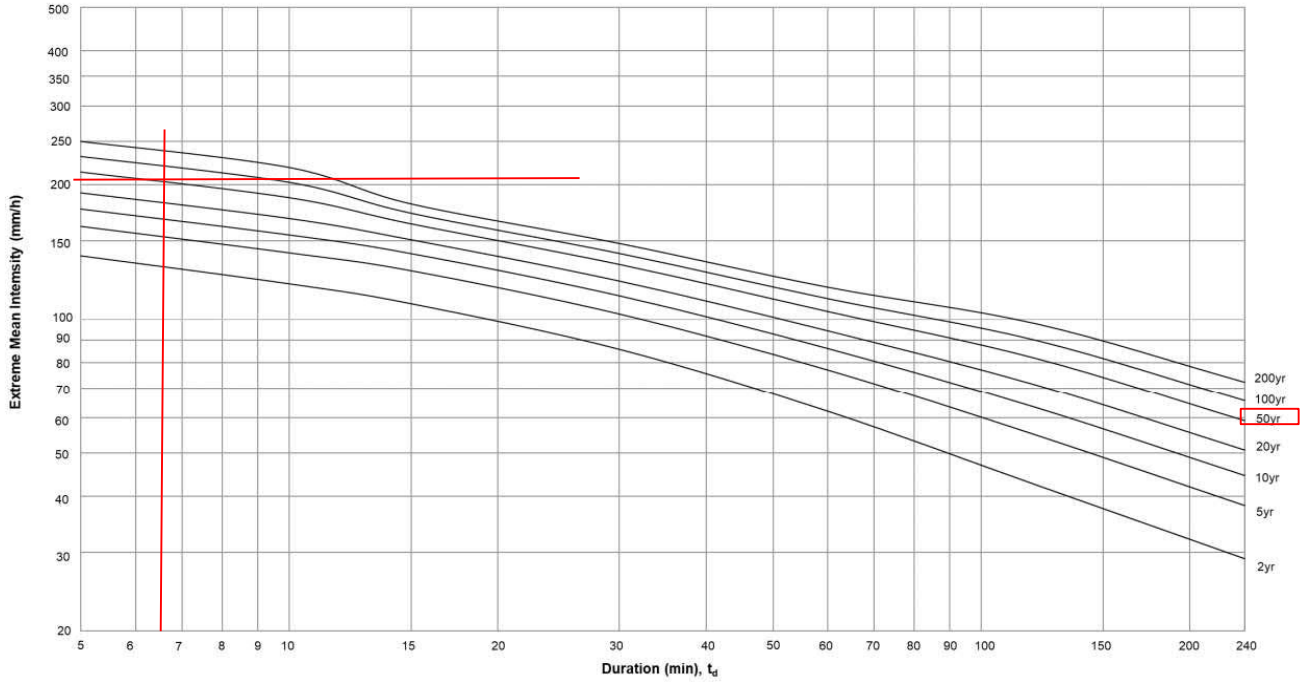


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	205.9	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	228.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : C

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	2480.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.41	m
L =	length which water takes the longest time to reach the design section	=	122.2	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.67 min say 9.67 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

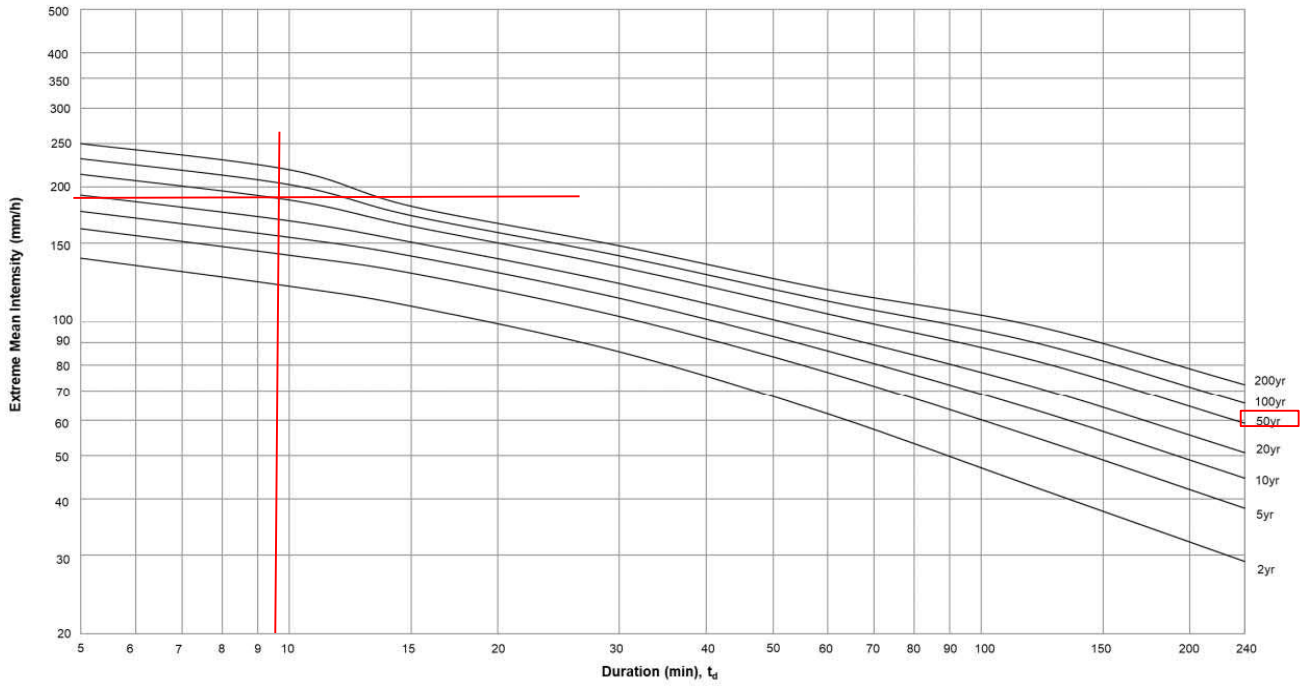


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	185.6	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	206.2	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : D

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1879.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.45	m
L =	length which water takes the longest time to reach the design section	=	111.8	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.93 min say 8.93 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

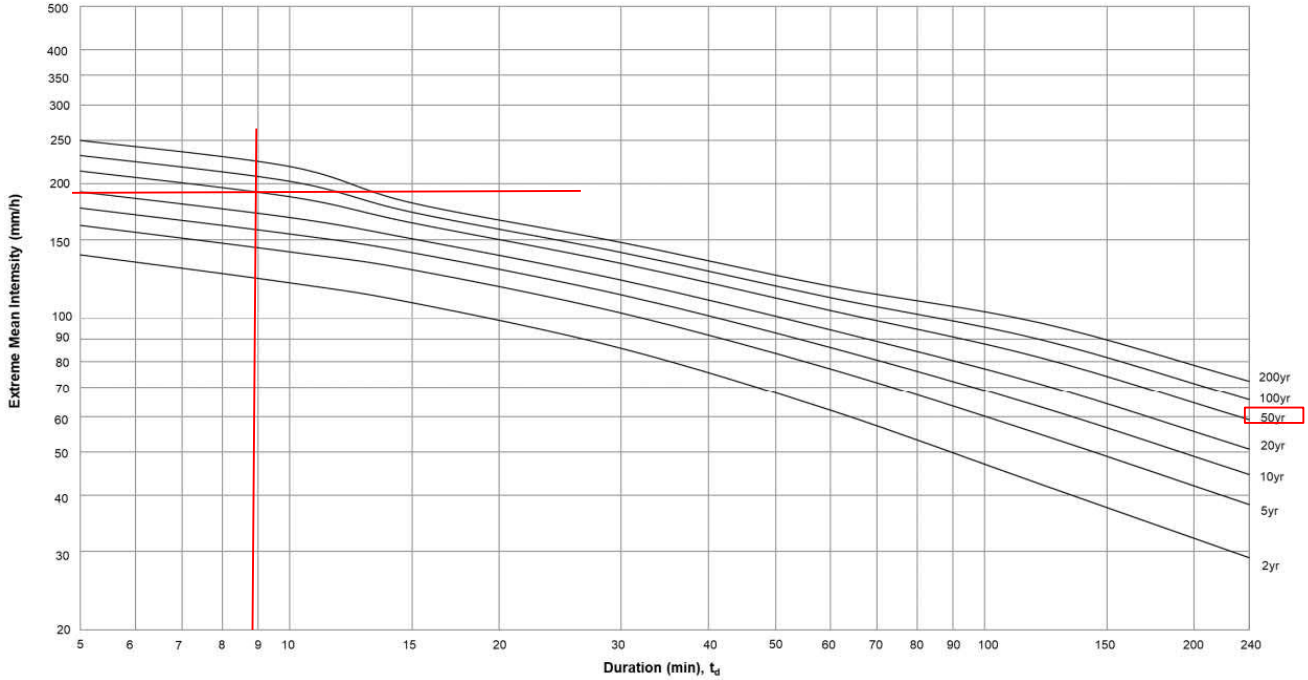


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	189.8	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	210.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : E

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	18173.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	8.50	m
L =	length which water takes the longest time to reach the design section	=	200.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.07 min say 7.07 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

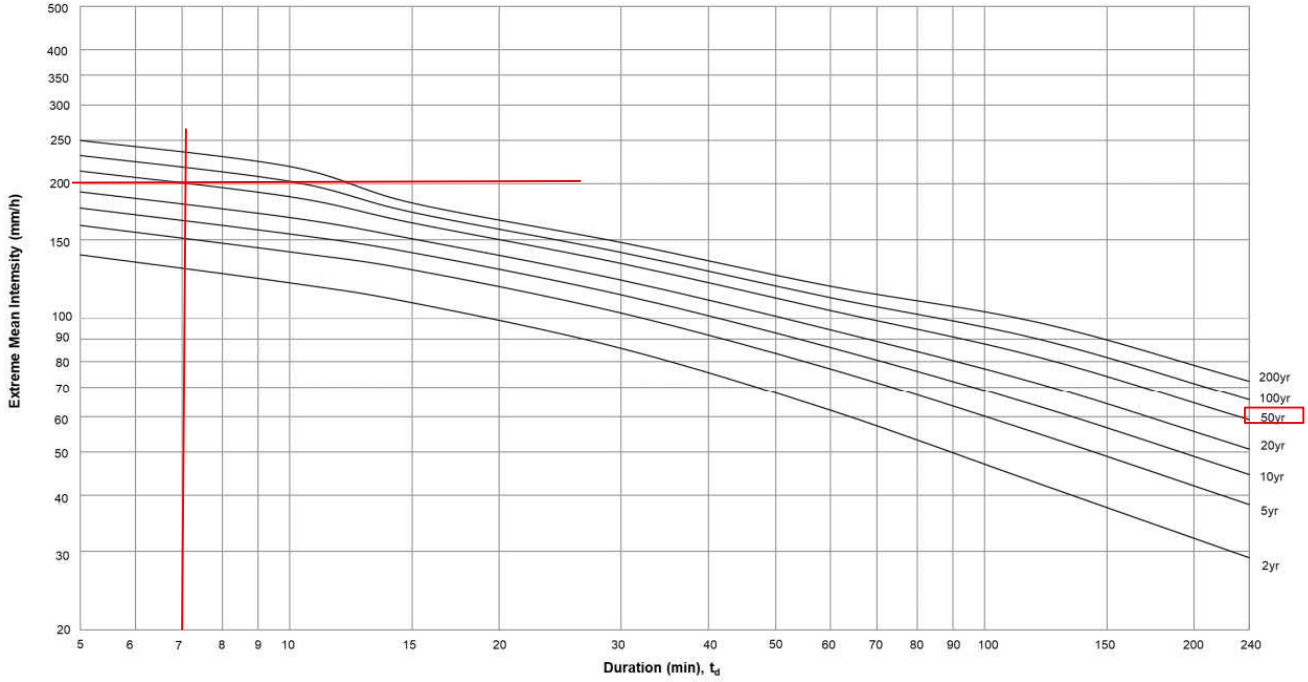


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	202.2	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	224.7	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : F

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	16464.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	7.37	m
L =	length which water takes the longest time to reach the design section	=	236.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.67 min say 8.67 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

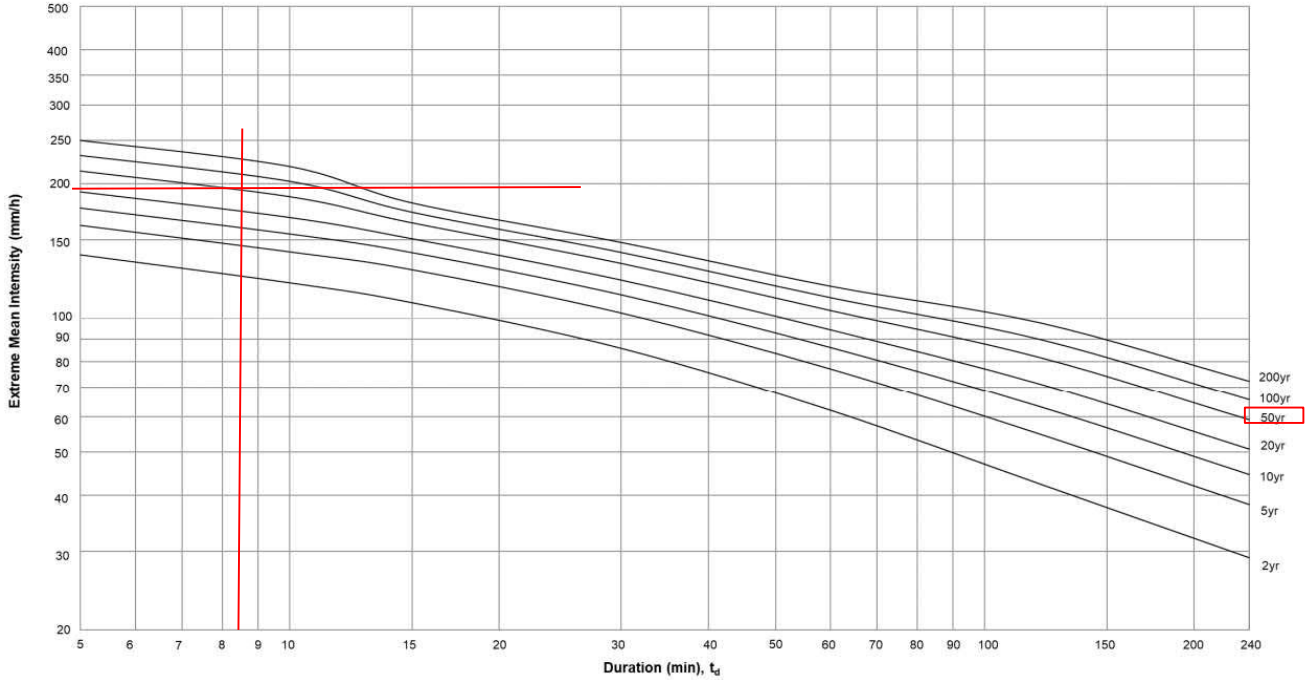


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	191.4	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	212.6	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : G

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	7705.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	9.50	m
L =	length which water takes the longest time to reach the design section	=	199.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.49 min say 7.49 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

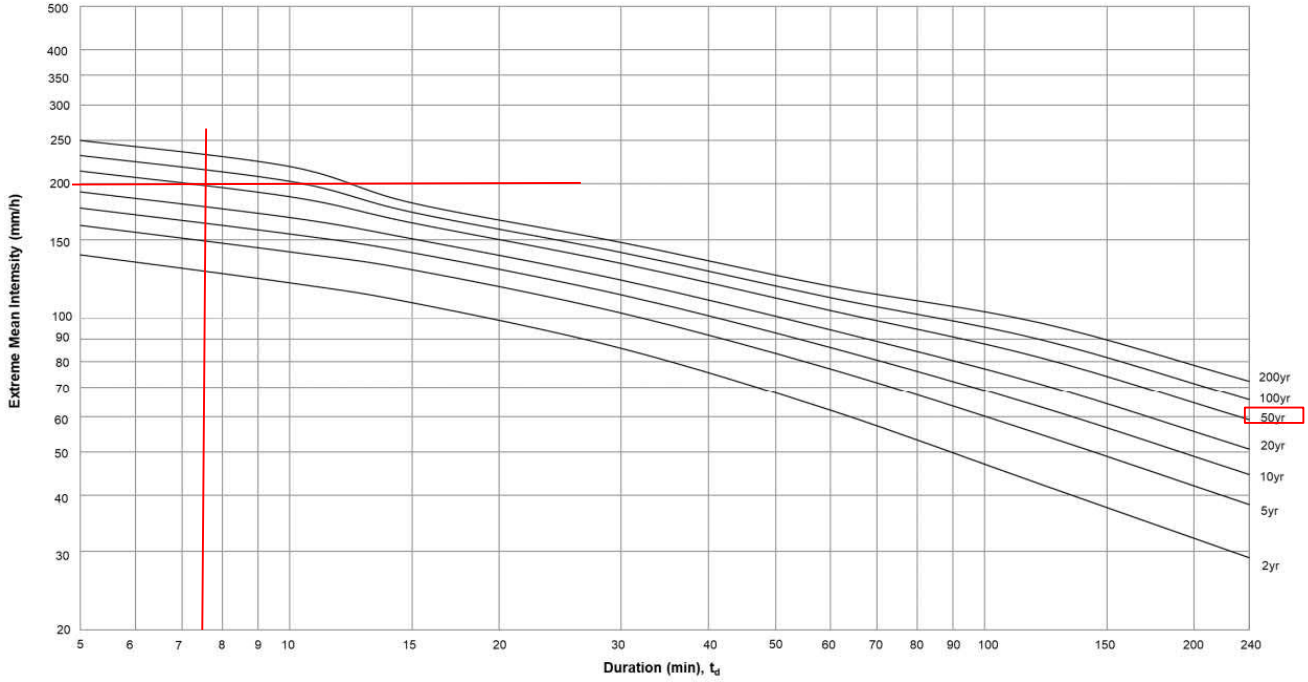


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	199.1	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	221.2	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : H

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4570.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.76	m
L =	length which water takes the longest time to reach the design section	=	163.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.28 min say 8.28 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

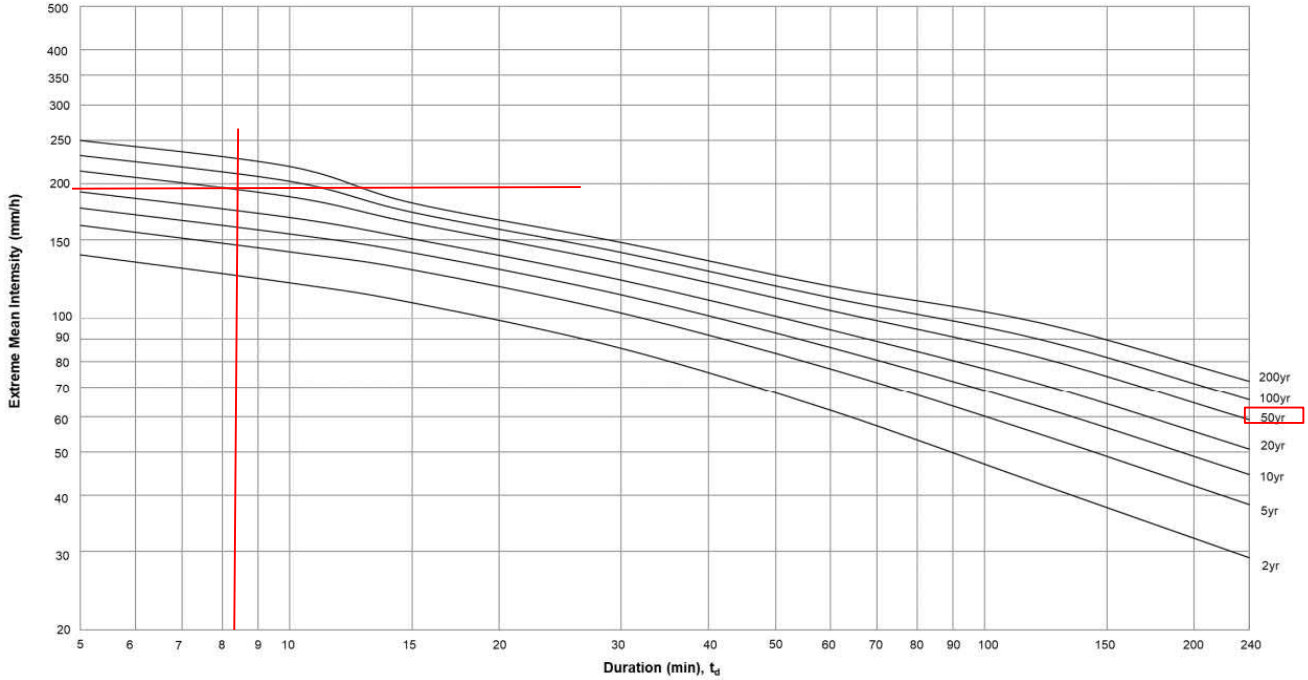


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	193.8	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	215.3	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : I

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	5413.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.38	m
L =	length which water takes the longest time to reach the design section	=	130.7	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.69 min say 9.69 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

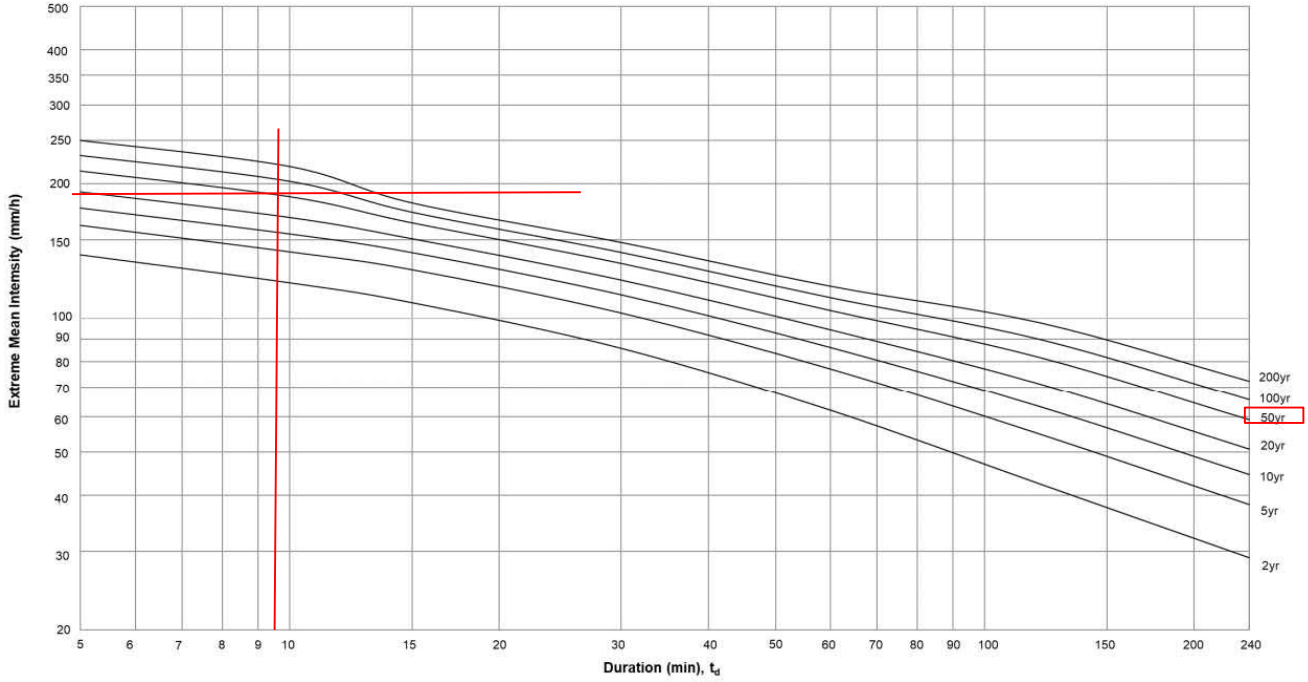


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	185.4	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	206.0	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : J

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3507.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	31.10	m
L =	length which water takes the longest time to reach the design section	=	103.2	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 3.32 min say 3.32 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

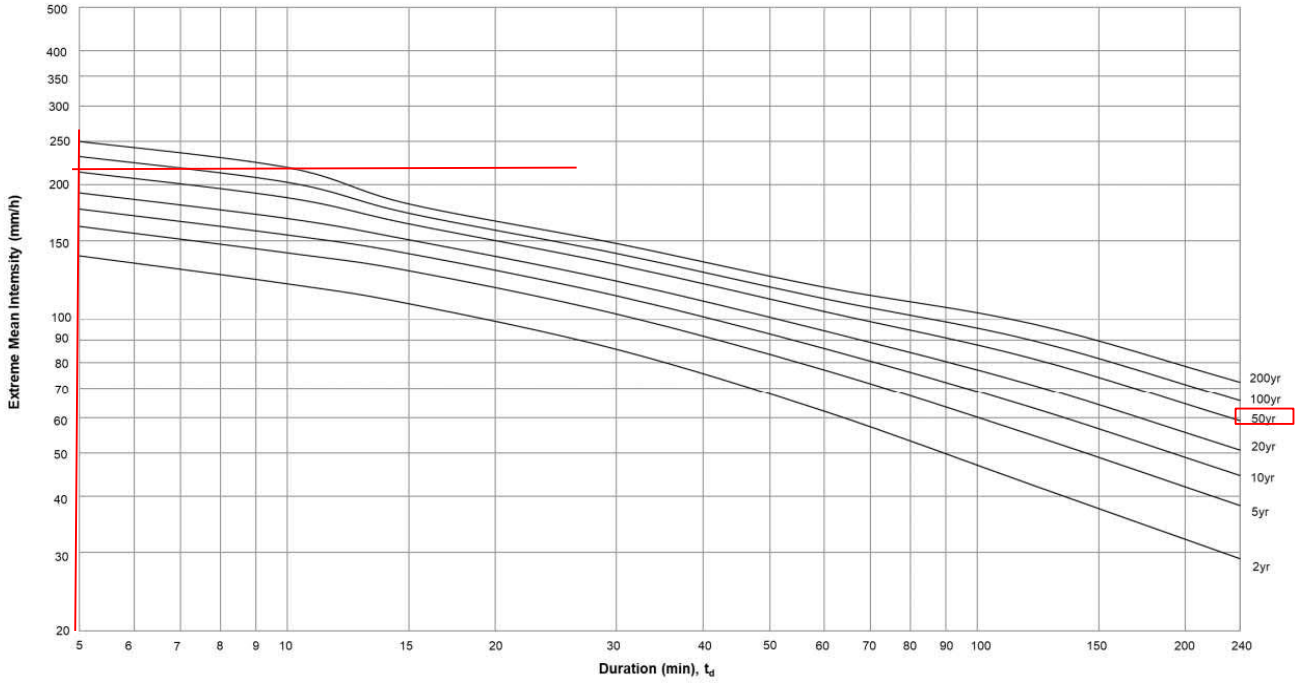


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	240.9	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	267.7	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : K

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4257.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	23.51	m
L =	length which water takes the longest time to reach the design section	=	132.3	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 4.41 min say 4.41 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

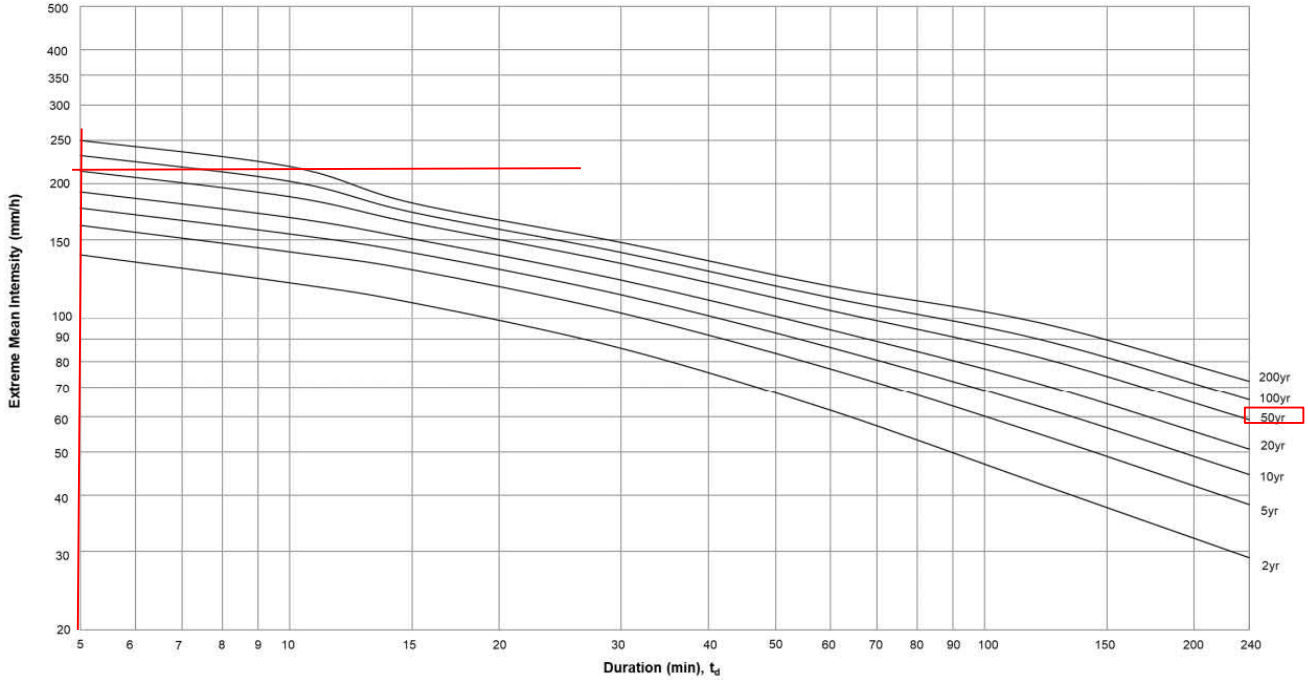


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	226.9	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	252.1	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : L

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1497.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.40	m
L =	length which water takes the longest time to reach the design section	=	75.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.27 min say 6.27 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

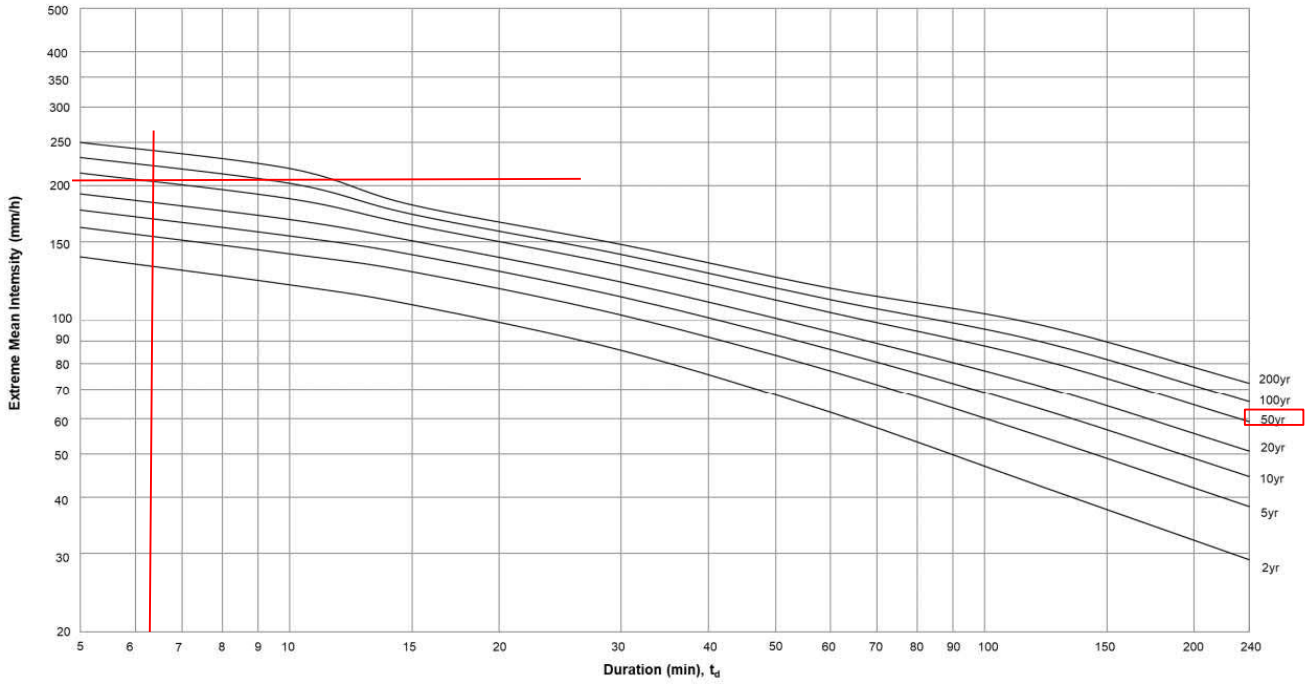


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	208.6	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	231.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Downstream Capacity Check

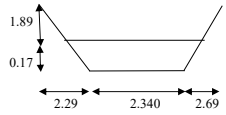
Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87**

Total Discharge from Channels (data from U-channel calculation)

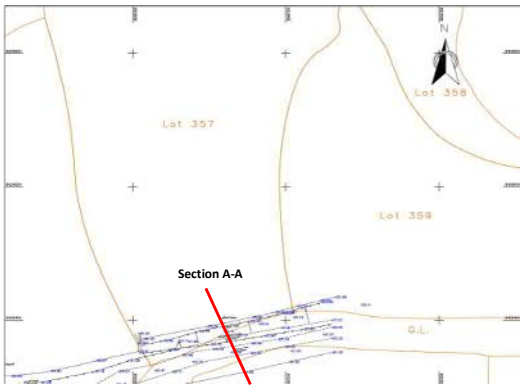
Branch 1	=	0.22702	m^3/s
Branch 2	=	0.20725	m^3/s
Branch 3	=	0.16143	m^3/s
Branch 4	=	0.16979	m^3/s
Branch 5	=	0.36221	m^3/s
Branch 6	=	0.31001	m^3/s
Branch 8	=	0.31165	m^3/s
Additional flow from channels		**1.74936**	m^3/s

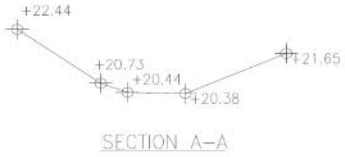
Calculation of Capacity of Existing Stream Course at Section A-A

Water level (from Ginfo)	=	20.55	mPD	
b = stream bottom width	=	5.856	m	Say 0.8t
t = stream top width	=	7.320	m	
z = stream side slope gradient	=	0.900		
y = remaining depth	=	1.89	m	Reference from Geotechnical Information Infrastructure (Ginfo) and topographic survey
P = stream wetted perimeter	=	8.70	m	
A = cross sectional flow area	=	12.45	m^2	
R = hydraulic radius (A/P)	=	1.431	m	
S = stream gradient	=	0.003		
n = Manning coefficient of roughness	=	0.03		
V = mean velocity = $R^{(2/3)}S^{(1/2)}/n$	=	2.33	m/s	
Q = remaining capacity of stream (VA)	=	29.01	m^3/s	
Additional flow from channels	>	**1.7494**	m^3/s	OK



S = 0.010538
(measure from Topo)
y = 1.89





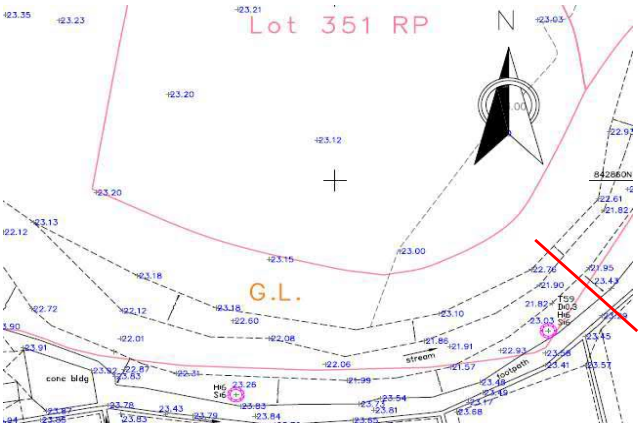
Plan view of Section A



Water level reference from Geotechnical Information Infrastructure (Ginfo)

Concrete Pipe Capacity Check

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87**

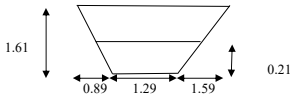


Section B-B

Plan view of Section B



Water level reference from Geotechnical Information Infrastructure (Ginfo)



Calculation of Flow of Existing Stream Course at Section A-A

	Water level (from Ginfo)	=	22.03	mPD	
b =	stream bottom width	=	1.290	m	
t =	stream top width	=	3.770	m	
z =	stream side slope gradient	=	1.81	m	
y =	water depth	=	0.21	m	Reference from Geotechnical Information Infrastructure (Ginfo) and topographic survey
P =	stream wetted perimeter	=	1.77	m	
A =	cross sectional flow area	=	0.19	m^2	
R =	hydraulic radius (A/P)	=	0.106	m	
S =	stream gradient	=	0.020		
n =	Manning coefficient of roughness	=	0.03		
V =	mean velocity = $R^{(2/3)}S^{(1/2)}/n$	=	1.06	m/s	
Q =	Flow of Existing Stream (VA)	=	0.20	m^3/s	

Discharge form Channels

	Branch 1	=	0.22702	m^3/s
	Branch 2	=	0.20725	m^3/s
	Branch 3	=	0.16143	m^3/s
	Branch 4	=	0.16979	m^3/s
	Branch 5	=	0.36221	m^3/s
			1.12770	m^3/s
Total Upstrean Flow		=	1.32633	m^3/s

Calculation of Capacity of Concrete Pipe

D =	pipe diameter	=	0.8	m	
	number of pipe	=	1		
P =	pipe wetted perimeter	=	2.51	m	
A =	cross sectional flow area	=	0.50	m^2	
R =	hydraulic radius (A/P)	=	0.200	m	
S =	pipe gradient	=	0.023		
n =	Manning coefficient of roughness	=	0.015		
V =	mean velocity = $R^{(2/3)}S^{(1/2)}/n$	=	3.42	m/s	
Q =	capacity of concrete pipe (VA)	=	1.72	m^3/s	
		>	**1.32633**		OK
					77.06 %

APPENDIX D

Design Drawings

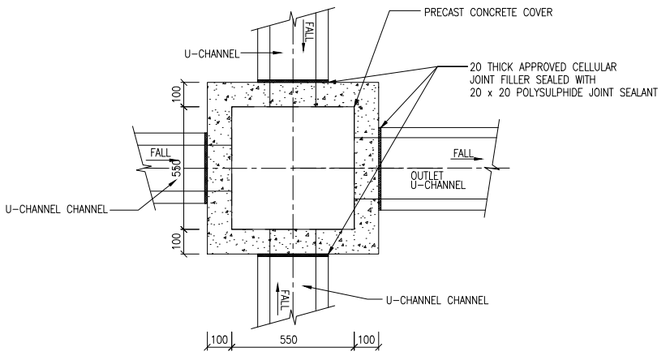
ISO A1 594mm x 841mm

GENERAL NOTES:

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

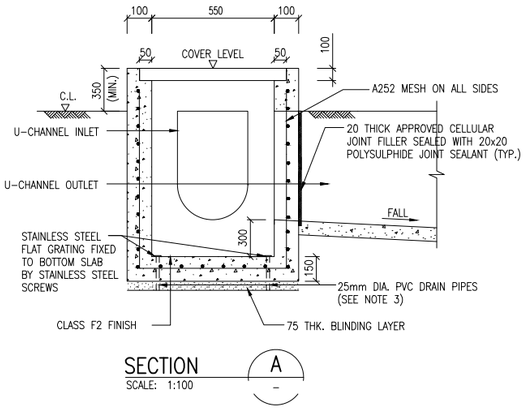
SCHEDULE OF CATCHPIT WITH SAND TRAP

CATCHPIT NO.	CATCHPIT TYPE	COVER LEVEL (mPD)	BTM. LEVEL (mPD)	INLET LEVEL (mPD)	OUTLET LEVEL (mPD)
CP1	2	+26.00	+25.35	+25.51	+25.50
CP2	2	+25.00	+24.39	+24.55	+24.54
CP3	2	+24.50	+22.82	A: +22.98	+22.97
				B: +23.30	
CP4	2	+25.00	+23.73	+23.89	A: +23.88
					B: +23.88
CP5	1	+25.00	+23.98	+24.14	+24.13
CP6	1	+25.00	+24.51	+24.67	+24.66
CP7	1	+24.50	+23.12	+23.28	+23.27
CP8	1	+24.50	+23.40	+23.56	+23.55
CP9	2	+24.00	+23.08	A: +23.24	+23.23
				B: +23.27	
CP10	1	+24.00	+23.38	+23.54	+23.53
CP11	2	+25.00	+24.27	+24.43	+24.42
CP12	1	+26.00	+25.28	+25.44	+25.43
CP13	1	+26.00	+24.65	A: +24.90	+24.89
				B: +25.61	



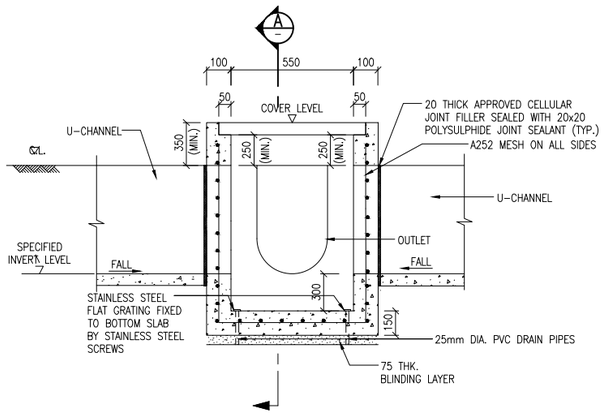
PLAN OF CATCHPIT (TYPE 1&2)

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



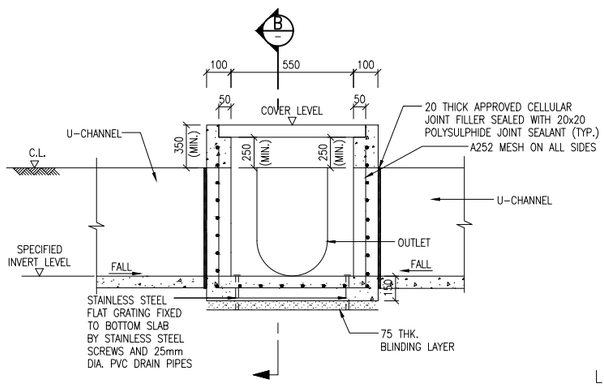
SECTION A

SCALE: 1:100



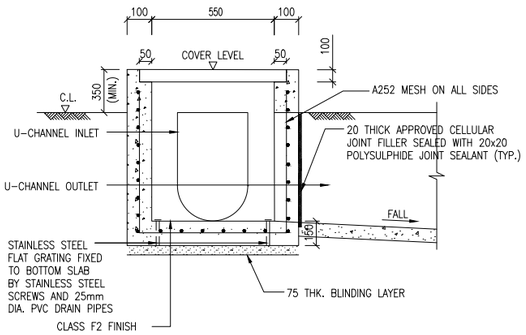
SECTION OF TYPE 2 CATCHPIT

SCALE 1:100



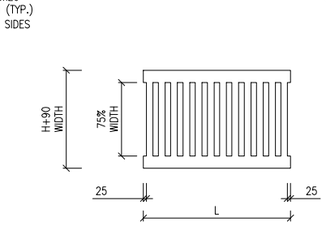
SECTION OF TYPE 1 CATCHPIT

SCALE 1:100

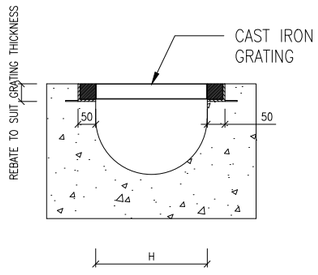


SECTION B

SCALE: 1:100

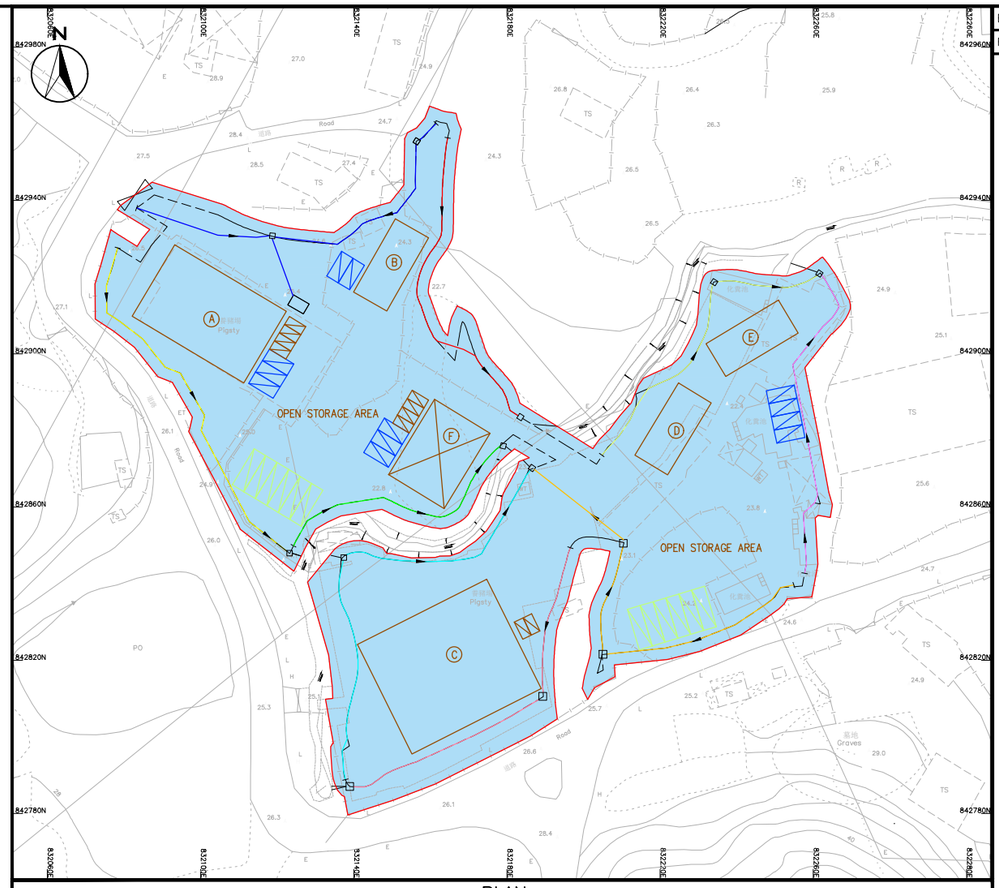


L = 600mm FOR H < 375mm
L = 400mm FOR H > 375mm



CAST IRON GRATING FOR U-CHANNELS

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



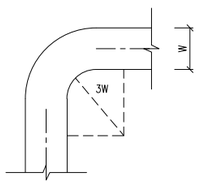
PLAN

SCALE 1:600

LEGEND:

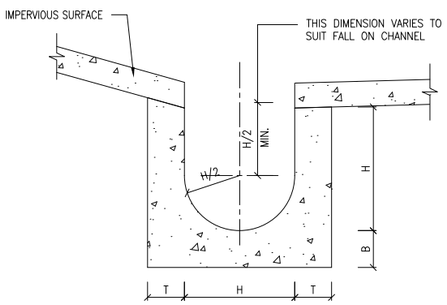
- PROPOSED APPLICATION SITE
- STRUCTURE
  - A: 737 sq.m (about)
  - B: 220 sq.m (about)
  - C: 1200 sq.m (about)
  - D: 220 sq.m (about)
  - E: 220 sq.m (about)
- OPEN-SIDED STRUCTURE
  - F: 393 sq.m (about)
- PRIVATE CARPARKING SPACE 5m(L) X 2.5m(W) (10 nos.)
- L/UL BAY FOR LGVS 7m(L) X 3.5m(W) (12 nos.)
- L/UL BAY FOR HGVS 11m(L) X 3.5m(W) (12 nos.)
- PROPOSED 11m WIDE VEHICULAR ACCESS

NOMINAL SIZE H	THICKNESS T	THICKNESS B
225-600	175	225
675-1200	175	225



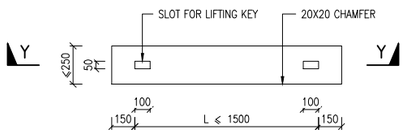
CHANNEL CHANGING DIRECTION THROUGH BENDS

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



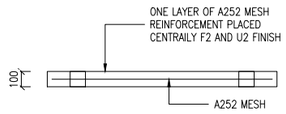
DETAILS OF U-CHANNEL

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



PLAN OF PRECAST CONCRETE COVERS

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



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

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

B.D. REF.

F.S.D. REF.

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MP		05/25
DESIGNED BY:	MP		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	AS SHOWN (A3)		
CAD FILE:	WNG_25086_C_DRA_001		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:
GENERAL NOTES AND LAYOUT PLAN

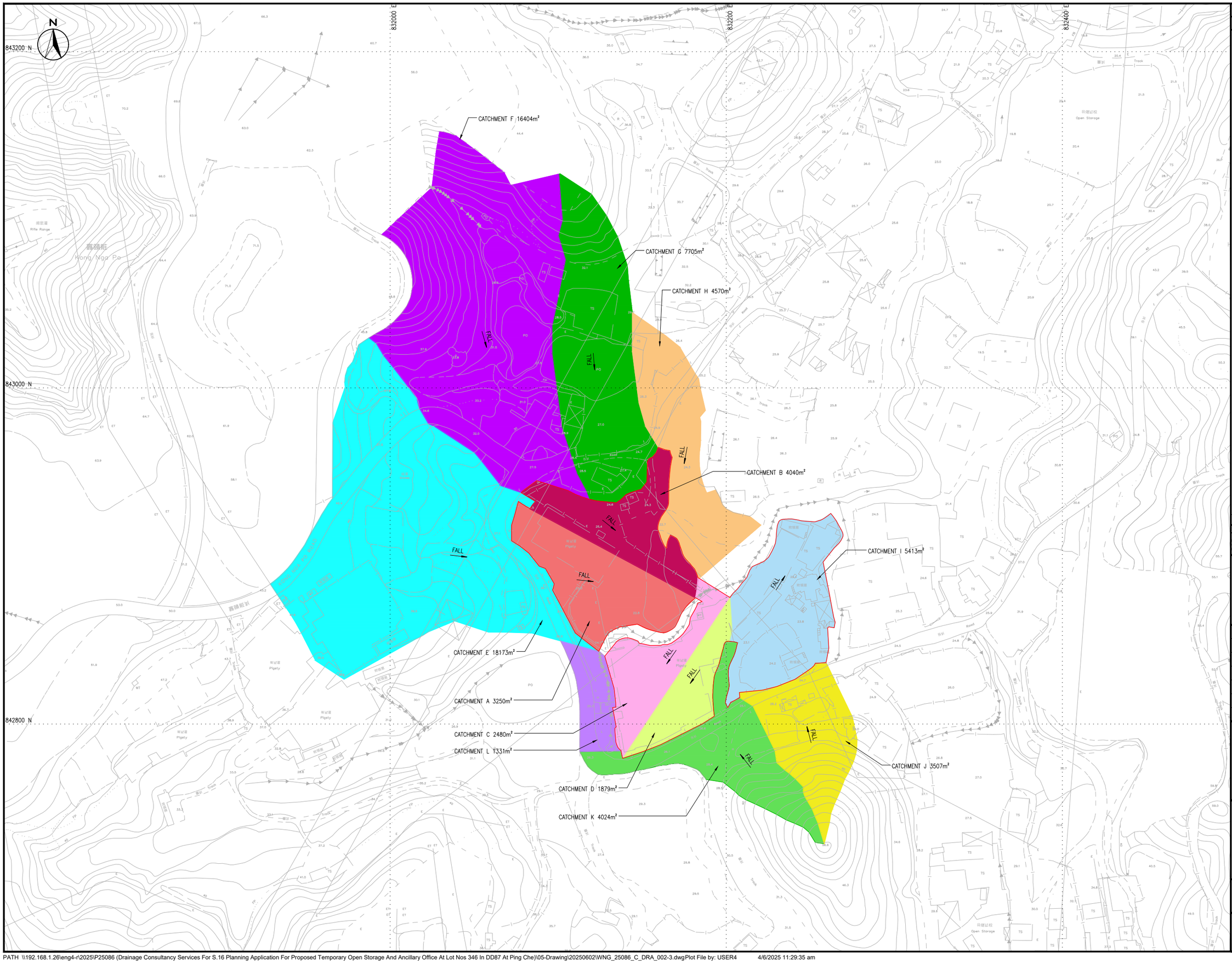
DRAWING NO: WNG/25086/C/DRA/001

REV: –

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.
和昇顧問工程師有限公司

Plot File by: USER31 6/4/2025 2:43:33 PM
PATH \\192.168.1.26\eng4-r\2025\P25086 (Drainage Consultancy Services For S.16 Planning Application For Proposed Temporary Open Storage And Ancillary Office At Lot Nos 346 In DD87 At Ping Che)\05-Drawing\20250602\WNG_25086_C_DRA_001.dwg

ISO A3 297mm x 420mm



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

LEGEND:

FLOW DIRECTION

BOUNDARY OF LOTS FOR THIS APPLICATION

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:

DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:

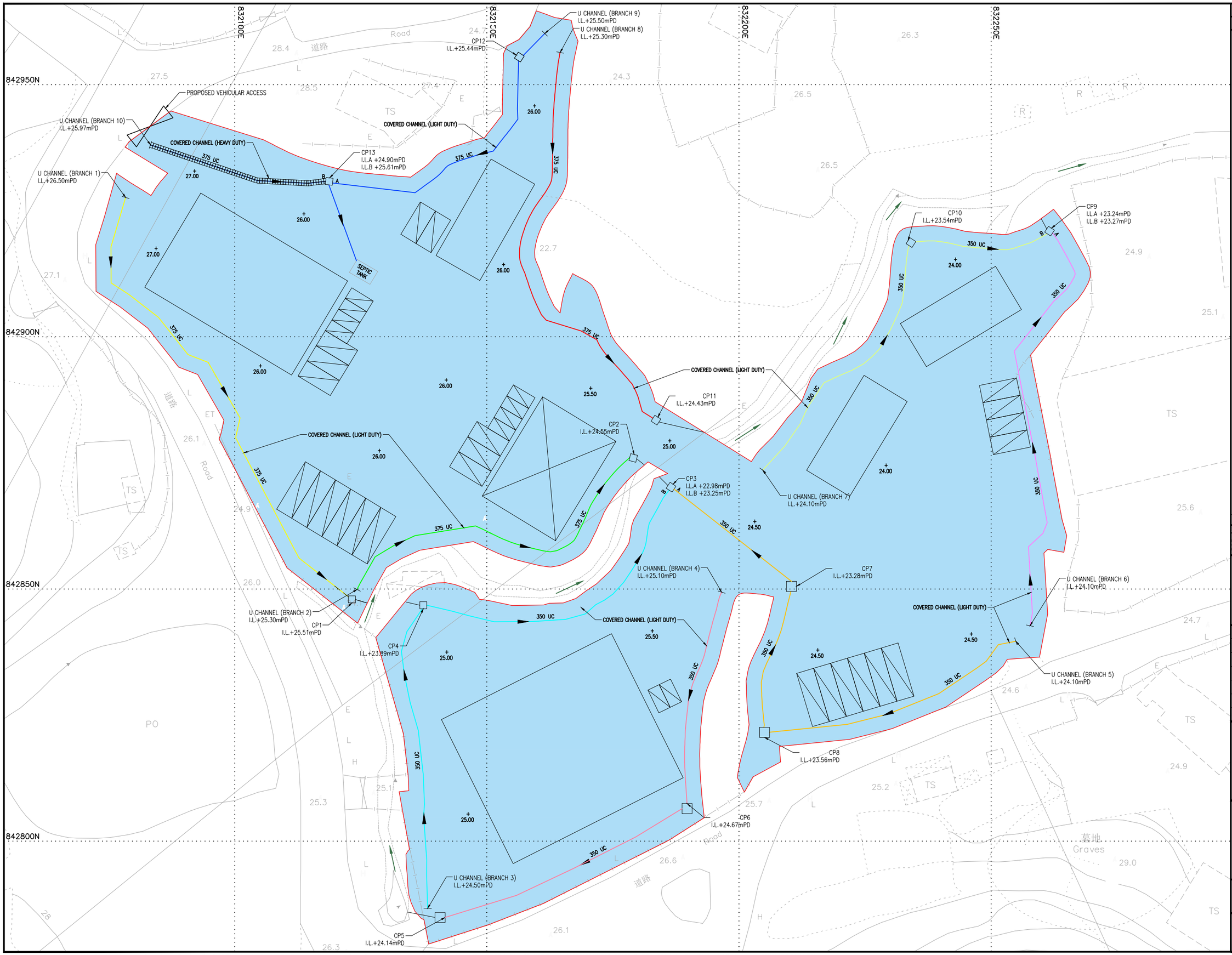
PROPOSED EFFECTVE CATCHMENT AREA FOR SURFACE RUNOFF AFFECTING SUBJECT LOTS

DRAWING NO:	REV:
WNG/25086/C/DRA/002	–

翱翔顧問工程師有限公司
WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.

PATH \\192.168.1.26\eng4-r\2025\P25086 (Drainage Consultancy Services For S.16 Planning Application For Proposed Temporary Open Storage And Ancillary Office At Lot Nos 346 In DD87 At Ping Che)\05-Drawing\20250602\WNG_25086_C_DRA_002-3.dwgPlot File by: USER4 4/6/2025 11:29:35 am

ISO A3 297mm x 420mm



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

LEGEND:

- FLOW DIRECTION OF STREAM
- BOUNDARY OF LOTS FOR THIS APPLICATION
- PROPOSED 11m WIDE VEHICULAR ACCESS

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:
PROPOSED DRAINAGE SYSTEM

DRAWING NO:	REV:
WNG/25086/C/DRA/003	–

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.

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

Audrey Hiu Tung SOO/PLAND

寄件者: [redacted]
寄件日期: 2025年07月18日星期五 10:50
收件者: Audrey Hiu Tung SOO/PLAND
主旨: [PLG10315] Planning Application No. A/NE-FTA/264 - Replacement pages of the planning statement
附件: ADCL_PLG_10315_R001a (Replacement Pages).pdf

類別: Internet Email

Dear Audrey,

As discussed earlier, enclosed the replacement pages of the planning statement for your processing please. Para 4.1.1 and 4.2.2 have been amended accordingly.

We apologize for any inconvenience this may have caused. Thank you.

Best regards,
Isa Yuen Town Planner

毅勤發展顧問有限公司
Aikon Development Consultancy Limited
Estate Agent's License (Company): C-045740

[redacted]

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4. THE DEVELOPMENT PROPOSAL

4.1 Site Configuration and Layout

4.1.1 The application site has a total area of about 16,604m^2 (including about 6,886m^2 of Government land). The application site consists of six temporary structures (including 5 nos. of enclosed structures and one open-sided structure), with a maximum height of 15m, providing a gross floor area (GFA) of about 4,927m^2 for the proposed use. The uncovered land area would be served as open storage purposes and circulation/manoeuvring space as well as provision of 10 parking spaces for private cars, 12 loading and unloading (L/UL) bay for light goods vehicles (LGVs) and 12 L/UL bays for medium/heavy goods vehicles (M/HGVs). The Indicative Layout Plan is shown in **Figure 5** whilst the key development parameters for the proposed use are detailed in **Table 3**.

4.1.2 Access to the application site will be provided through an ingress/egress point (in about 11m) located at the northwestern boundary (**Figure 5** refers), which is connected to a local access leading to Kong Nga Po Road (**Figure 1** refers). Should the current application be approved, the existing fencing will be adjusted, and new fencing of about 3m will be erected along the periphery of the application site. The proposed use would make use of the internal circulation road to supports distribution and efficient vehicle maneuvering.

4.1.3 A majority part of the application site has been paved to serve the pigsty, and it is proposed to raise the ground level feasible traffic flow and heavy vehicle access. Considering the existing topographic profile of the application site, the current level of the site ranges from about +22.1mPD to about +27.8mPD, with the majority portion being approximately 1 to 4m lower than Kong Nga Po Road the access road to the south. The ground level is proposed to be raised to a level between +24.0mPD to 27.0mPD. The application site will be filled with soil and concrete, covering the entire application site (16,604m^2) and with a depth of not more than 3m. (**Figure 4** refers).

4.1.4 The western and eastern portions of the application site is currently connected by a platform structure with pipe underneath to maintain streamflow (**Illustration 1-III** refers). According to the applicant, this structure has been in place since the pigsty operation. To facilitate future operation and ensure safety, the structured platform area is proposed to be filled. An 800mm diameter concrete pipe is proposed to replace the existing concrete pile and install underneath a structured platform to ensure no disturbance to the existing drainage performance of the drainage system. (**Appendix III** refers).

4.2 Operation

4.2.1 The proposed use (i.e. temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities)

will provide a well-managed venue for storage of goods and construction materials and machinery.

4.2.2 Structure A and Structure C are designated as warehouses of not more than 2-storey for storage of goods. All goods stored within the application site will be non-polluted and non-dangerous in nature and will remain stagnant all the time. The operation hours of the proposed use are from 9:00a.m. to 6:00p.m. from Mondays to Saturdays and there will be no operations on Sundays and public holidays. Structures B, D and E are designated as ancillary office and storeroom to support the proposed use. Open area with sufficient manoeuvring space will be served as open storage purposes.

4.2.3 Regarding the implementation of the development proposal, the Applicant stands ready to apply to the Lands Department for the Short-Term Tenancy (STT) and the Short-Term Waiver (STW) for occupying the Government land, and permitting the structures to be erected or to regularise any irregularities on site, once the current application is approved.

毅勤發展顧問有限公司
Tel 電話：[redacted]
Fax 傳真：
Email 電郵：
Web 網址：

Date : 19th September, 2025
Our Ref. : ADCL/PLG-10315/L003

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

By Email

Dear Sir/Madam,

Re: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(Planning Application No. A/NE-FTA/264)

We refer to the departmental comments received from the Transport Department, Planning Department and Lands Department regarding the subject application and would like to provide a Responses-to-Comments Table and Revised Traffic Impact Assessment to address the abovementioned departmental comments and facilitate considerations by the Board.

Thank you for your kind attention and should you have any queries, please do not hesitate to contact our Mr. Thomas LUK at [redacted].

Yours faithfully,
For and on behalf of
Aikon Development Consultancy Limited

Thomas LUK

Encl.
c.c. Client

Address 地址：
[redacted]

Department	Date	Comments	Responses to Departmental Comments
Lands Department	15.9.2025	1. The application site comprises Government land (GL) and Old Schedule Agricultural Lots held under the Block Government Lease which contains the restriction that no structures are to be erected without the prior consent of the Government. The applicant is required to seek permission to erect structures on GL but no right of access via GL is granted to the application site.	Noted. The current application aims to better utilize available land resources that have previously been developed and used as a pigsty. It is intended to utilize GL directly connecting to private lots as access for the proposed use. The proposed use allows better utilization of the application site, offering favorable relocation options for future relocations of brownfield operations in the New Territories, thus allowing smooth implementation of the New Development Areas whilst ensuring the continuity of local businesses. The applicant is committed to managing to subject GL at their own cost.
		2. Lot No. 347 RP in D.D. 87 is currently covered by Modification of Tenancy (MoT) No. 38957 for erection of temporary structures for dwelling, bathroom, kitchen and shade. This office reserve the rights to take enforcement action for any irregularities and cancel the MoT as appropriate.	Noted. It is intended to utilize the application site for the proposed use, existing structures would be demolished and replaced by new temporary structures.
		3. I must point out the following irregularities covered by the subject planning application have been detected by this office: <u>Unauthorised structures within the said private lots covered by the planning application</u> There are unauthorised structures on the private lots. The applicant should immediately rectify the lease breaches and this office reserves the rights to take necessary lease enforcement action against the breaches without further notice.	A majority of the application site has been operated as a pigsty by the former user which is under a valid Pigsty Farm Licence (No.LK148) issued by Agriculture, Fisheries and Conservation Department (AFCD) for the erection of these structures for agricultural purposes including incorporating the government land (See Attached). Therefore, the existing farm structures are not considered unauthorized as they has been approved by relevant government departments under the process of granting the Farm Licence. Regarding the occupation of government land, a tolerance fee was paid for the occupation of government land, and an application for a Short-Term Tenancy was submitted by the former user in 2023 pending for reply from the Lands Department. As operations of the pigsty gradually ceased in 2024, leaving the application site idle and unutilized, the applicant became the new owner of the lots in 2025 and intends to utilize the application site for the proposed use, submitting the current application to activate the idle

		Unlawful occupation of Government land adjoining the said private lots with unauthorised structures covered by the planning application LandsD objects to the planning application since there is illegal occupation of GL which regularization would not be considered according to the prevailing land policy. The lot owners should immediately cease the illegal occupation of GL and remove the unauthorised structures as demanded by LandsD. Notwithstanding the applicant's submission and the Town Planning Board's approval (if any) of the subject planning application, this office reserves the rights to take necessary land control action against the illegal occupation of GL without further notice.	site. At present, the application site is partly occupied by the applicant, who has not engaged in any operations on government land. The current application aims to utilize the application site by demolishing the existing structures and constructing new temporary ones. The applicant is committed to removing the existing structures at their own expense upon approval of this application. They will apply to the Lands Department for a Short-Term Waiver and Short-Term Tenancy to permit the erection of structures within the private lots and the occupation of government land within the application site boundary, contingent upon approval of the current application. The applicant intends to utilize the application site along with the government land only after receiving the necessary planning approvals. Therefore, there will be no occupation of government land by the applicant prior to the application's approval.
		4. The following irregularities not covered by the subject planning application have been detected by this office: Unauthorised structures extended from Lot No. 361 RP in D.D. 87 to adjoining private lot not covered by the planning application There are unauthorised structures extended from Lot No. 361 RP in D.D. 87 to adjoining private lot not covered by the subject planning application. The lot owner should immediately rectify the lease breaches and this office reserves the rights to take necessary lease enforcement action against the breaches without further notice. Unlawful occupation of Government land not covered by the planning application The GL adjoining Lot No. 361 RP in D.D. 87 has been illegally occupied with unauthorised structures without permission.	The structures extended from Lot No. 361 RP in D.D. 87 to adjoining private lot is not owned/ utilized by the applicant. The applicant is committed to liaise the adjoining lot owner in removing the subject structures, so as to utilise the application site as intended. The applicant is committed to removing the unauthorised structures not covered by the subject planning application within the application site.

		The GL being illegally occupied is not included in the application. Any occupation of GL without Government's prior approval is an offence under Cap. 28. This office reserves the rights to take necessary land control action against the illegal occupation of GL without further notice.	It is intended to utilize the application site with government land after receiving planning approval, hence, there will be no occupation of government land by the applicant before the application is approved.
		5. The lot owners shall <u>either</u> (i) remove the unauthorised structures not covered by the subject planning application and cease the illegal occupation of the GL immediately; or (ii) include the unauthorised structures in the subject planning application for further consideration by the relevant departments <u>and</u>, subject to the approval of the Town Planning Board to the planning application which shall have reflected the rectification or amendments as aforesaid required, apply to this office for Short Term Waiver (STW) and Short Term Tenancy (STT) to permit the structures to be erected and the occupation of GL. The applications for STW and STT will be considered by the Government in its capacity as a land owner and there is no guarantee that they will be approved. In particular, notwithstanding the approval of the Town Planning Board, the GL might be capable of separate alienation, hence, the size of GL (if approved under the STT) is subject to further consideration by the Government and would not necessarily follow the size of the GL in the subject planning application. Besides, the STW would be processed on whole lot basis. And the STW and the STI, if approved, will be subject to such terms and conditions including the payment of backdated waiver fee/rent from the first date when the unauthorised structures were erected and the occupation of GL as well as administrative fees considered appropriate to be imposed by LandsD. In addition, LandsD reserves the right to take enforcement action against the lot owners for any breach of the lease conditions, including the breach(s) already in existence or to be detected at any point in time and land control action for any unlawful occupation of GL. Besides, given the proposed use is temporary in nature, only erection	The lot owners is committed to removing the unauthorised structures not covered by the subject planning application within the application site. It is intended to utilize the application site along with the government land only after receiving the necessary planning approvals. Therefore, there will be no occupation of government land by the applicant prior to the application's approval. Upon approval of the application, the applicant will apply to the Lands Department for a Short-Term Waiver and Short-Term Tenancy to permit the structure(s) erected within the private lots and the occupation of Government land within the application site boundary upon approval of the current application.

		of temporary structure(s) will be considered.	
		6. Unless and until the unauthorized structures and unlawful occupation of GL are duly rectified by the lot owners, please take it as this office's objection to the application which must be brought to the attention of the Town Planning Board when they consider the application.	Ditto.

香港法例第139L章
《公眾衞生 (動物及禽鳥) (禽畜飼養的發牌) 規例》
Public Health (Animals and Birds)
(Licensing of Livestock Keeping) Regulation, Cap. 139L

飼養禽畜牌照
LIVESTOCK KEEPING LICENCE

持牌人相片
Photo of Licensee

(只適用於個人持牌人)
(For individual licensee only)

飼養禽畜牌照編號：LK148
Livestock Keeping Licence No.

~~現批准*~~ _____ ~~先生 / 女士~~
~~Permission is hereby granted to Mr. / Ms.*~~

~~香港身份證號碼* (首4個字母連數字)：~~ _____
~~Hong Kong Identity Card No.* (First 4 alphanumeric characters)~~

現批准* CHARM GRAND LIMITED (公司/機構名稱)
Permission is hereby granted to * (Name of Company/Organisation)

商業／機構登記號碼 (首8位數字) 74825688 獲授權代表姓名 謝志洪 先生／~~女士~~
Business / Organisation Registration No. (First 8 digits) Name of Authorised Representative (Mr. / ~~Ms.~~)

飼養 4000隻 ~~雞~~／豬／~~其他~~，請註明：_____
to keep ~~chickens~~ / pigs / ~~others, please specify~~

於* 新界打鼓嶺恐龍坑李屋村第87約348, 349RP, 361RP, 366RP號地段及政府土地 。
at*

獲批採用的禽畜廢物處理系統為 濕處理法 。
The approved livestock waste treatment system is

隨附的農場圖則塗上紅色處為獲批給牌照用以飼養禽畜的處所 (獲批處所)**。持牌人照片貼於右上角。
The premises licensed for livestock keeping (the Approved Premises)** are coloured red on the farm plan attached. A photograph of the licensee is attached at the top right hand corner.

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This licence is issued in accordance with the Public Health (Animals and Birds) (Licensing of Livestock Keeping) Regulation, Cap. 139L and the licensee shall comply with the licence conditions attached.

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(MA Wai-chung, Peter)

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for *Director of Agriculture, Fisheries and Conservation*

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* If there is any change in the name or the identity card number / business / organisation registration number or the authorised representative of the licensee, the Livestock Farm Licensing Section should be notified of the change within 72 hours by post to Tai Lung Experimental Station, Lin Tong Mei, Fan Kam Road, Sheung Shui, New Territories or by fax on 2461 4649.

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AF282 (Rev. 2024)

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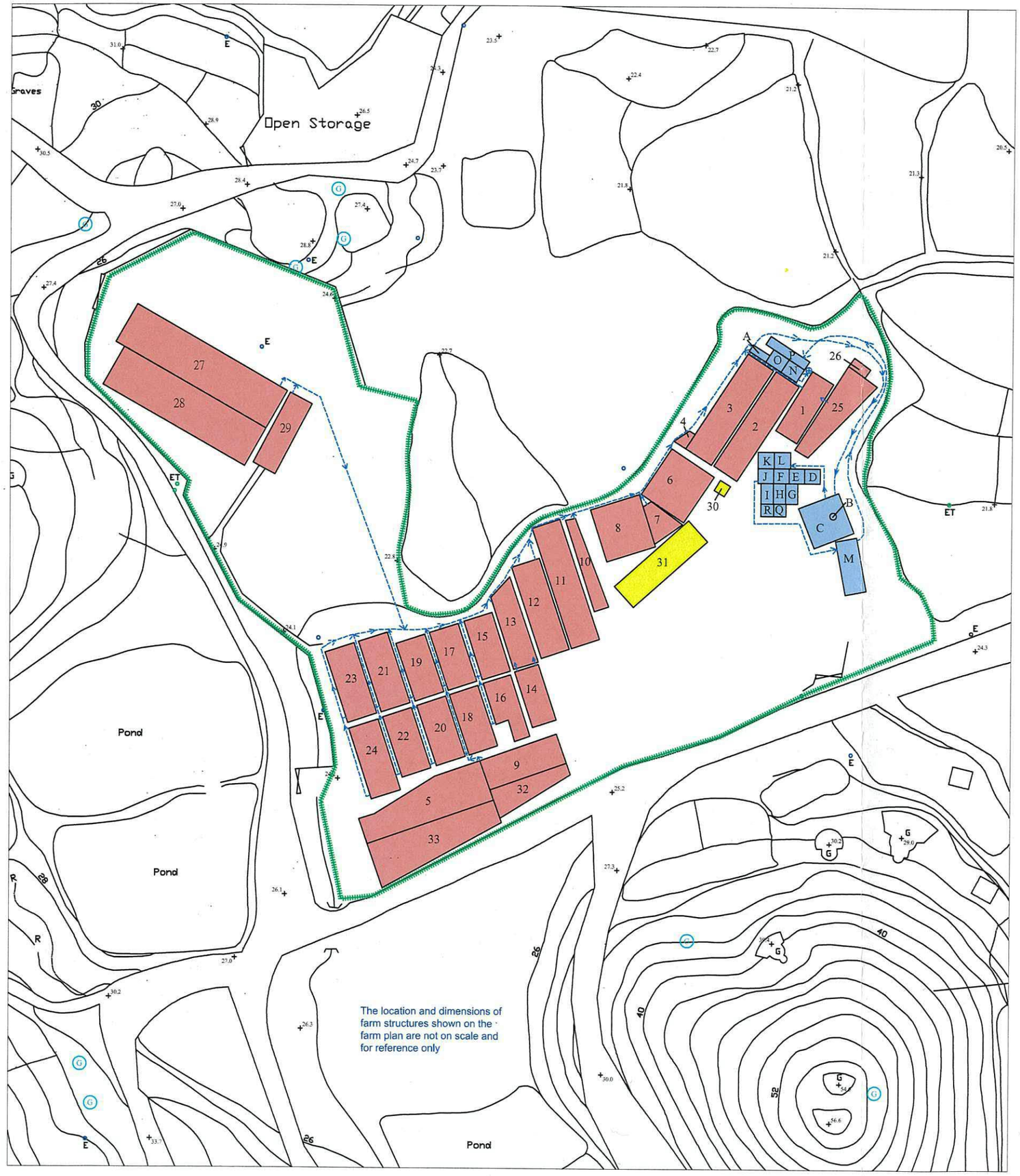

農場圖則

農場編號 : LK 148

持牌公司 : Charm Grand Limited

農場地址 : 新界打鼓嶺恐龍坑李屋村第87約348RP, 349RP, 361RP, 366RP號地段及政府土地

測量圖編號 : 3-NW-22A / 22B

序號	農用構築物編號	用途	尺寸
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2	* Nil	豬屋	6.80 米 x 27.90 米
3	* Nil	豬屋	7.50 米 x 27.90 米
4	* Nil	豬屋	10.50 平方米
5	* Nil	豬屋	290.00 平方米
6	* Nil	豬屋	12.60 米 x 13.50 米
7	* Nil	豬屋	49.25 平方米
8	* Nil	豬屋	12.60 米 x 13.40 米
9	* Nil	豬屋	20.00 米 x 7.60 米
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12	* Nil	豬屋	7.25 米 x 23.60 米
13	* Nil	豬屋	126.38 平方米
14	* Nil	豬屋	6.15 米 x 14.40 米
15	* Nil	豬屋	7.25 米 x 15.10 米
16	* Nil	豬屋	95.84 平方米
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25	* Nil	豬屋	151.72 平方米
26	* Nil	豬屋	2.50 米 x 5.00 米
27	* Nil	豬屋	10.67 米 x 42.68 米
28	* Nil	豬屋	10.67 米 x 40.24 米
29	* Nil	豬屋	6.10 米 x 19.52 米
30	* Nil	農用貯物室	2.90 米 x 2.95 米
31	* Nil	農用貯物室	6.95 米 x 24.40 米
32	* Nil	豬屋	104.00 平方米
33	* Nil	豬屋	286.00 平方米

編序	廢物處理設施	尺寸
A	收集池	4.85 米 x 1.90 米 x 1.00 米
B	固液分離機	1台
C	廢物貯藏所	110.67 平方米 x 4.00 米
D	凝聚池	3.83 米 x 3.70 米 x 2.50 米
E	凝聚池	3.83 米 x 3.70 米 x 2.50 米
F	兼氣池	3.83 米 x 3.70 米 x 2.50 米
G	兼氣池	5.00 米 x 3.03 米 x 2.50 米
H	兼氣池	5.00 米 x 3.03 米 x 2.50 米
I	兼氣池	5.00 米 x 3.03 米 x 2.50 米
J	兼氣池	3.83 米 x 3.70 米 x 2.50 米
K	調節池	16.08 平方米 x 2.50 米
L	調節池	16.08 平方米 x 2.50 米
M	曝氣池	13.40 米 x 5.30 米 x 5.00 米
N	曝氣池	4.52 米 x 3.70 米 x 4.94 米
O	曝氣池	4.52 米 x 3.70 米 x 4.94 米
P	曝氣池	11.35 米 x 2.30 米 x 5.44 米
Q	凝聚池	9.69 平方米 x 2.50 米
R	凝聚池	9.69 平方米 x 2.50 米

說明：

- 飼養禽畜農用構築物
- 非飼養禽畜之農用構築物
- 廢物處理設施
- 管道
- 排放點
- 農場邊界

* 未獲政府批准而搭建的農舍，將來仍可能會被政府有關部門清拆

授權批准人：

漁農自然護理署署長
(馬惠忠代行)

No.	Comments	Responses
Comments from Transport Department on 20 Aug 2025		
(i)	The applicant should advise and further substantiate the traffic generation and attraction rates used in the TIA can reflect the particular traffic characteristics of the proposed developments;	For the proposed development, the following considerations have been made: • Warehouses and open storage areas: The trip rates for *industrial buildings* have been adopted. This reflects the nature of activities within warehouses and open storage areas, where vehicle trips are primarily associated with the loading/unloading and movement of goods, which is consistent with the operational characteristics of industrial buildings. • Ancillary site/general storage uses: The trip rates for *office use* have been applied. This reflects the operational function of these facilities, which are mainly administrative in nature and are expected to generate staff-related traffic patterns similar to general office use. To ensure that the adopted trip rates adequately reflect the particular traffic characteristics of the proposed developments, the mean rates in the TPDM have been applied in the assessment. This approach provides a balanced and representative estimate of traffic demand. In addition, reference has also been made to previous planning applications (e.g. A/YL-LFS/555) for developments of a similar nature.
(ii)	The applicant shall update the layout plan to indicate the open storage areas and demonstrate the areas would not cause any obstruction to the maneuvering of vehicles;	The layout plan has been updated with the indication of the open storage areas and maneuvering space, as shown in **Figure 2.1A**. Swept path analyses for 11m HGV, 7m LGV, and 5m private car have been conducted, as shown in **Figures 2.2A, 2.3A, and 2.4A**. The results demonstrate that the ingress/egress points and parking space arrangements are adequate to accommodate the maneuvering of the above vehicle types without obstruction.
(iii)	The applicant should review and revise the floor area used in Table 4.2 of the TIA, which should include the sum of areas for Structure A,	**Table 4.2** has been revised and updated to include the total floor areas of Structure A, Structure C, and the open storage areas. Consequently, **Table 4.5** - Estimated Development Flow has also been updated. The 2028 Design Scenario in **Table 5.4** - Future Year Junction Capacity Assessment has been revised accordingly, together with **Figure 5.3A** and the

	Structure C and the open storage areas;	associated junction capacity calculation sheets.
(iv)	The applicant shall update the layout plan to indicate the width of the ingress / egress point;	**Figure 2.1** has been updated (Revision **A**) to indicate the width of the ingress/egress point, which measures 11.57m.
(v)	The applicant should advise its adequacy on the ingress / egress point for vehicular access arrangement;	**Figures 2.2A, 2.3A and 2.4A** refer. The swept path analyses demonstrate that there will be no difficulties in the maneuvers of 11m HGVs, 7m LGVs, and 5m private cars on the ingress / egress point.
(vi)	The applicant shall demonstrate the satisfactory maneuvering of the goods vehicles entering and exiting the subject site, maneuvering within the subject site and into / out of the parking and loading/unloading spaces, preferably using the swept path analysis;	Swept path analyses for 11m HGVs, 7m LGVs have been conducted and are presented in **Figures 2.2A and 2.3A**. The results demonstrate that goods vehicles can satisfactorily maneuver when entering and exiting the site, circulating within the site, and accessing the parking and loading/unloading spaces.
(vii)	The planned and committed developments listed in Table 5.3 of the TIA should be confirmed with PlanD;	Confirmation has been sought from the PlanD regarding the planned and committed developments listed in Table 5.3 of the TIA. Please refer to bullet point (ii) of reply from PlanD.
(viii)	The applicant shall advise the provision of pedestrian facilities and management measures to ensure pedestrian safety;	A road sign (TS460) will be installed at the site's ingress/egress point to alert both pedestrians and drivers of vehicular movements. Flashing lights will also be provided at the ingress and egress points to further enhance visibility and awareness. Light poles will be provided at the application site to ensure adequate lighting for both vehicles and pedestrians.
(ix)	The applicant shall advise the management/control measures to be	**Figures 2.2A, 2.3A and 2.4A** refer. The swept path analyses demonstrate that there will be no difficulties in internal traffic circulation, as sufficient space for maneuvering vehicles is

	implemented to ensure no queuing of vehicles outside the subject site;	provided throughout the application site. Furthermore, the following management and control measures will be implemented by the Applicant to ensure that there is no queuing of vehicles outside the subject site: 1. Deployment of traffic controllers to regulate vehicle entry and exit from the application site, minimizing conflicts with road traffic; 2. When vehicles are anticipated to enter or leave the site, at least one traffic controller will be stationed at the access point, ensuring vehicles can pass through the site unobstructed.
(x)	The applicant shall advise the measures for preventing illegal parking of visitors' vehicles outside the subject site; and	To prevent illegal parking of visitors' vehicles outside the subject site, the following measures will be implemented: 1. A permit system for visitors will be introduced, allowing only vehicles with prior registration to enter the site. This measure will ensure that sufficient parking space is available on-site and will help prevent illegal parking of visitors' vehicles outside. 2. A trained traffic controller will be deployed to monitor vehicle movements and direct visitors to the designated on-site parking areas.
(xi)	The proposed vehicular access between Kong Nga Po Road and the application site is not managed by TD. The applicant should seek comments from the responsible party.	Noted.

No.	Comments	Responses
Comments from Planning Department on 29 Aug 2025		
(i)	As the Area of Influence (AOI) is not indicated in the TIA, the planned and committed developments could not be ascertained. Please indicate the AOI on plan for our further consideration.	**Section 3.1 – Study Area** has been added to the TIA to describe the extent of the Area of Influence (AOI). In addition, **Figure 3.4** has been included to illustrate the AOI on the plan for reference. The AOI has been defined to cover all relevant junctions along the major access routes of the Proposed Development.
(ii)	Table 5.3 – According to the Explanatory Statement of the approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18, the police facilities to be accommodated at the Kong Nga Po site will have a total floor area of about 35,000m^2. As such, I have no comment on the GFA as shown in Table 5.3.	Noted.
(iii)	It is noted that the proposed use, number of storey of the temporary structures, use of Structure F in Section 2.2, Table 2.1 and Table 2.2 of the TIA do not tally with those in Tables 3 and 4 of the Planning Statement. Please review and amend accordingly.	The proposed use, number of storeys of the temporary structures, and the use of Structure F in **Section 2.2**, **Table 2.1** and **Table 2.2** of the TIA have been revised and updated to align with the Planning Statement.
(iv)	Section 2.2 and Table 2.1 – Apart	Information regarding the uncovered area in **Section 2.2** and **Table 2.1** has been amended

	from circulation/maneuvering space and parking space, the uncovered area should also include area for open storage. Please review and amend accordingly.	to include the area for open storage, in addition to circulation/maneuvering space and parking space.
(v)	According to Section 5.4, the locations of the planned developments are illustrated in Figure **5**.1. However, the drawing no. of "Location of Planned Developments" is Figure **4**.1. Please review and amend accordingly.	The drawing number of "Location of Planned Developments" has been revised to **Figure 5.1** accordingly.

S.16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

TRAFFIC IMPACT ASSESSMENT

Reference: 80115-R01-02
Date: September 2025
Prepared by: 8FM Consultancy Limited

8FM Consultancy Limited

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1 INTRODUCTION

1.1 Background

The Applicant intends to seek planning permission for the Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos. 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories ("Project Site").

The location of the Project Site is shown in **Figure 1**.

8FM Consultancy Limited was commissioned as the traffic consultant to carry out a Traffic Impact Assessment (TIA) Study in support of this planning application.

1.2 Study Objectives

The objectives of this TIA are listed as follows:

- To review the existing traffic conditions in the vicinity of the Project Site;
- To present and evaluate the internal transport facilities;
- To estimate the traffic forecasts of the adopted design year and assess the future traffic situation in the surrounding network;
- To evaluate the potential traffic impact of the proposed development; and
- To suggest traffic improvement proposals, if necessary.

1.3 Report Structure

The report is structured as follows:

- Chapter 2 -Proposed Development

  Describing the project site, vehicular access arrangement, development schedule and the proposed internal transport facilities;
- Chapter 3 -Existing Traffic Situation

  Presenting the existing traffic context, the traffic survey, and the traffic assessment of the existing traffic conditions;
- Chapter 4 -Development Traffic Generation

  Estimating the traffic flows arising from the proposed development;
- Chapter 5 -Future Traffic Situation

Describing the traffic forecast methodology and presenting the traffic assessment results under reference and design scenarios;

- Chapter 6 -Summary and Conclusion

  Summarizing the findings and conclusion of this traffic impact assessment study.

2 PROPOSED DEVELOPMENT

2.1 The Site Location

The Project Site is located in Kong Nga Po, Sheung Shui, and it can be accessible from Kong Nga Po Road via a local track. The location of the Project Site is shown in **Figure 1**.

2.2 The Development Schedule

The project site is proposed to be utilised as warehouse, open storage for construction materials and equipment and ancillary office on a temporary basis of 3 years. Based on the planning statement, the operation hours of the proposed use are from 9:00 a.m. to 6:00 p.m. from Mondays to Saturdays, and there will be no operation on Sundays and public holidays.

In accordance with the planning statement, the project site has a total area of about 16,604m^2, including (i). uncovered area for open storage purposes, circulation/manoeuvring space and provision of 10 parking spaces for private cars, 12 loading and unloading (L/UL) bay for light goods vehicles (LGVs) and 12 L/UL bays for medium/heavy goods vehicles (M/HGVs)\; and (ii). covered area with six double/single-storey temporary structures. The layout of the project site is shown in **Figure 2.1**. Key development parameters of the proposed use are tabulated in **Table 2.1**. The details of the temporary structures in the site are tabulated in **Table 2.2**.

Table 2.1 Key Development Parameters

Proposed Use	Temporary Open Storage of Construction Materials and Equipment and Ancillary Office
Operation Hours	9:00am - 6:00pm (Mondays – Saturdays, Except Sundays and Public Holidays)
Total Site Area	16,604m^2 (including about 6,886m^2 of Government land)
Covered Area	About 2,990m^2 (Warehouse and Ancillary Use)
Uncovered Area	About 13,614m^2 (including Open Storage Area, Maneuvering Space and Parking Space)

Table 2.2 Details of the Temporary Structures

Structure	Uses	Floor Area (about)	Building Height
Structure A	Warehouse	1,474m^2	15m (2 storey)
Structure B	Ancillary Site Office/General Storage Uses	220m^2	7m (1 storey)
Structure C	Warehouse	2,400m^2	15m (1 storey)
Structure D	Ancillary Site Office/General Storage Uses	220m^2	7m (1 storey)
Structure E	Ancillary Site Office/General Storage Uses	220m^2	7m (1 storey)
Structure F	General Storage Uses	393m^2	7m (1 storey)

2.3 Vehicle Access Arrangement

Access to the project site will be provided through an about 11m-wide ingress/egress point located at the northwestern boundary, which is connected to a local track leading to Kong Nga Po Road. The vehicle access arrangement is presented in **Figure 2.1** for reference.

Swept path analysis is conducted for the 11m-wide ingress/egress point, internal manoeuvring space, and the loading/unloading spaces. **Figure 2.2A, Figure 2.3A,** and **Figure 2.4A** demonstrate that the ingress/egress point and parking space arrangement are adequate for manoeuvring 11m HGVs, 7m LGVs, and 5m Private Cars, respectively.

2.4 Internal Transport Facilities

The internal transport facilities to be provided in the project site are summarised in **Table 2.3**. As there are no specific parking and loading/unloading requirements for temporary open storage development in accordance with HKPSG, ancillary transport facilities are provided based on the Applicant's requirements to meet operational needs.

Table 2.3 Internal Transport Facilities

Type of Ancillary Transport Facilities	Size	Provision based on Applicant's Operational Needs
Private Car Parking Spaces	5m(L) x 2.5m(W)	10
L/UL Bays for LGVs	7m(L) x 3.5m(W)	12
L/UL Bays for HGVs	11m(L) x 3.5m(W)	12

3 EXISTING TRAFFIC SITUATION

3.1 Study Area

To assess the junctions potentially affected by the Proposed Development, the Area of Influence (AOI) has been defined to cover the junctions located along the major vehicular access routes of the project. The AOI adopted for the TIA study is shown in **Figure 3.4**.

3.2 Existing Road Network

As indicated in **Figure 1**, the project site is located at the east of Kong Nga Po Road, and it can be accessible from Kong Nga Po Road via a local unnamed road. The existing condition of the connecting carriageways is summarised as follows:

- Unnamed Road 1 is a single-track access road connecting Kong Nga Po Road in the west to Ping Che Road in the east. It acts as a single carriageway with 1-lane 2-way operation.
- Kong Nga Po Road is a rural road acting as a single carriageway with 2-lane 2-way operation. It connects Man Kam To Road in the west and Kong Nga Po in the east.
- Man Kam To Road is a rural road with 3 to 4 lanes and 2-way operation. It connects Man Kam To Control Point in the north and Jockey Club Road in the south.

3.3 Public Transport Facilities

The project site cannot be immediately accessible by taking public transportation. The nearest franchised bus and GMB services are around 2.3km away from the site, operating along Man Kam To Road. Details of these public transport services are presented in **Table 3.1** and **Figure 3.1**.

Table 3.1 Franchised Bus and GMB Services Close to Project Site

Route	Routing	Peak Frequency (minutes)
KMB 73K	Sheung Shui ↔Man Kam To (San Uk Ling)	10-15
GMB 59K	Sheung Shui Station ↔Lin Ma Hang	15

3.4 Traffic Survey

In order to evaluate the existing traffic conditions in the vicinity, the classified traffic surveys were conducted on 7 May 2025 (Wednesday) from 7:00 to 10:00 in the morning and from 16:00 to 19:00 in the evening. The key junctions of the study area are indicated in **Figure 3.2.**

The traffic flows collected during the traffic surveys have been converted to passenger car units (PCU) based on the PCU factors as indicated in Volume 2 of the Transport Planning and Design Manual (TPDM).

The results of the traffic survey identified that the AM and PM peak hours occur during 7:30 to 8:30 and 16:45 to 17:45, respectively. The 2025 observed peak hours traffic flows in the study area are presented in **Figure 3.3**.

3.5 Existing Traffic Condition

Based on the observed traffic flows, the performance of the key junctions in the vicinity of the project site during the AM and PM peak hours was assessed.

3.5.1 Existing Junction Capacity Assessment

The results of junction performance are indicated in **Table 3.2** and detailed junction calculation sheets are given in **Appendix A**.

Table 3.2 Existing Junction Capacity Assessment

Jn No.	Junction Location	Type/ Capacity Index	AM Peak	PM Peak
A	Unnamed Rd 1 / Kong Nga Po Rd	Priority / DFC(i)	0.17	0.14
B	Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	Roundabout / DFC	0.20	0.14
C	Man Kam To Rd / Kong Nga Po Rd	Priority / DFC	0.62	0.60

**Notes:*

(i) DFC - Design Flow / Capacity Rati. The performance of a priority junction or roundabout is normally measured by its Design Flow / Capacity (DFC) ratio. A DFC ratio less than 1.0 indicates that the junction is operating within design capacity. A DFC ratio greater than 1.0 indicates that the junction is overloaded, resulting in traffic queues and longer delay time to the minor arm traffic.

As shown in Table 3.2, all of the surveyed junctions perform satisfactorily during peak hours with adequate reserve capacities.

4 DEVELOPMENT TRAFFIC GENERATION

4.1 Estimated Development Flows

With reference to the Planning Statement, the proposed development will make use of heavy goods vehicles (HGV), light goods vehicles (LGV), and private cars to travel to/from the application site.

As the proposed development will be operated as warehouses and ancillary site office/general storage uses, the trip generation & attraction arising from the operational needs will be estimated respectively based on the different land use.

4.1.1 Warehouse/Open Storage

With reference to **Table 2.2**, Structures A & C will be proposed as warehouses, while the uncovered area (excluding the parking space and maneuvering space) will be used as open storage. The trip generation & attraction of warehouses and open storage area in the proposed development is estimated with reference to the trip rates of industrial use under TPDM Vol 1, which are tabulated in **Table 4.1**. Mean level is adopted for a conservative estimation of the trip assessment.

Table 4.1 Traffic Rates for Industrial Building

Land Use	Unit	Upper Limit/ Mean/ Lower Limit	AM Peak		PM Peak	
			Generation Rate	Attraction Rate	Generation Rate	Attraction Rate
Industrial Building	(pcu/hr/100 sqm GFA)	Upper Limit	0.1153	0.1727	0.1648	0.1260
		Mean	**0.0926**	**0.1386**	**0.1350**	**0.1049**
		Lower Limit	0.0698	0.1044	0.1053	0.0808

The calculated traffic generation & attraction arising from the operation of warehouses during the identified peak hours are estimated in **Table 4.2**.

Table 4.2 Estimated Traffic Generation & Attraction Arising from Warehouse

Land Use	Area	Unit	AM Peak		PM Peak	
			Generation	Attraction	Generation	Attraction
Warehouse/Open Storage Area	13,932m^2	pcu/hr	13	20	19	15

4.1.2 Ancillary Site Office/General Storage Uses

With reference to **Table 2.2**, Structures B, D，E & F will be proposed as ancillary site office/general storage. The trip generation & attraction of the ancillary site office/general storage uses is estimated with reference to the trip rate for office in the TPDM Vol 1, which is tabulated in **Table 4.3**. The trip rates of both

industrial/office uses under TPDM Vol 1 would be applicable as the structures serve two purposes. For a conservative approach, the mean level of trip rates for office use is adopted.

Table 4.3 Traffic Rates for Office Development

Land Use	Unit	Upper Limit/ Mean/ Lower Limit	AM Peak		PM Peak	
			Generation Rate	Attraction Rate	Generation Rate	Attraction Rate
Office	(pcu/hr/100 sqm GFA)	Upper Limit	0.2361	0.3257	0.1928	0.1510
		Mean	**0.1703**	**0.2452**	**0.1573**	**0.1175**
		Lower Limit	0.1045	0.1646	0.1217	0.084

The calculated traffic generation & attraction arising from the operation of site office during the identified peak hours are estimated in **Table 4.4**.

Table 4.4 Estimated Traffic Generation & Attraction Arising from Ancillary Site Office/General Storage Uses

Land Use	Area	Unit	AM Peak		PM Peak	
			Generation	Attraction	Generation	Attraction
Ancillary Site Office/General Storage Uses	1053m^2	pcu/hr	2	3	2	2

4.1.3 Estimated Development Flow

With the trip generation & attraction estimated for different land use, the development flow is summarized in **Table 4.5.**

Table 4.5 Estimated Development Flow

Unit	AM Peak (pcu/hr)		PM Peak (pcu/hr)	
	Generation	Attraction	Generation	Attraction
pcu/hr	15	23	21	17
Total	38 pcu/hr		38 pcu/hr	

4.2 Traffic Routing for the Project Site

The anticipated routes for project-related vehicles travelling to and from the project site are indicated in **Figure 4.1** and described as follows:

4.2.1 Ingress route

The project vehicles are expected to travel to the project site from Man Kam To Control Point and various locations across the 18 districts. Considering operational needs and accessibility, the vehicle distribution from these origins is estimated to be 50/50.

4.2.2 Egress route

The project vehicles are expected to disperse from the project site and arrive at Man Kam To Control Point and various locations across the 18 districts. Considering operational needs and accessibility, the vehicle distribution to these destinations is estimated to be 50/50.

5 FUTURE TRAFFIC SITUATION

5.1 Design Year

The planning application for the Proposed Temporary Warehouse and Open Storage with Ancillary Facilities and Associated Filling of Land development involves a period of 3 years, it is assumed that the end year for the Project Site would be year 2028. Therefore, the year 2028 is adopted as the design year of this study.

5.2 Traffic Forecast Methodology

To conduct the traffic forecast on the road networks in the vicinity of the project site, the existing traffic flows will be adjusted with the following factors considered:

- Historical traffic data from Annual Traffic Census (ATC) by Transport Department;
- The forecast population and employment from the 2021-based Territorial Population and Employment Data Matrices (TPEDM) planning data by the Planning Department;
- Committed and planned developments adjacent to the project site.

5.3 Regional Traffic Growth

5.3.1 Annual Traffic Census (ATC)

Reference has been made to the ATC reports from year 2019 to 2023. The historical traffic data of the surrounding road links are based on the Annual Average Daily Traffic (AADT) extracted from ATC issued by the Transport Department. The relevant AADT data from year 2019 to 2023 are summarized in **Table 5.1**.

Table 5.1 AADT Extracted from Annual Traffic Census

Station	Road	From	To	2019	2020	2021	2022	2023	Growth Rate p.a.
5465	Man Kam To Rd	Jockey Club Rd	Boundary	16,900	17,270	17,960	17,410	17,820	1.33%
					2.19	4.00	-3.06	2.35	
5218	Jockey Club Rd	Po Shek Wu Rd	Man Kam To Rd	26,450	25,180	26,400	25,230	22,510	-3.95%
					-4.80	4.85	-4.43	-10.78	
6018	Po Shek Wu Rd	Choi Yuen Rd	Jockey Club Rd	37,910	36,090	37,850	33,260	34,190	-2.55%
					-4.80	4.88	-12.13	2.80	
			Total	81,260	78,540	82,210	75,900	74,520	**-2.14%**

Table 5.1 indicates that the overall average annual growth rate of the adjacent road network is -2.14%.

5.3.2 Projected Population Data

Reference has been made to the 2021-based Territorial Population and Employment Data Matrices (TPEDM) planning data provided by the Planning Department. The population data in the North District for the years 2021, 2026, and 2031 are presented in **Table 5.2**.

Table 5.2 2021-Based TPDEM Data for North District

Item	TPDEM Estimation/Projection			Annual Growth Rate		
	2021	2026	2031	2021 to 2026	2026 to 2031	2021 to 2031
Population	309,650	352,000	435,550	2.60%	**4.35%**	3.47%

Source: 2021-based TPEDM by Planning Department

Table 5.2 indicates that the highest annual growth rate for population is 4.35%.

Based on the findings of the above two tables, a conservative growth rate of **4.35%** per annum was adopted to estimate the background traffic growth from 2025 to 2028.

5.4 Planned and Committed Development

Planned and committed developments in the vicinity of the Project Site, which are expected to be completed and in operation within the assessment period (up to 2028), have been identified and considered in the traffic forecast. A summary of the identified developments is presented in **Table 5.3**, and the locations of the planned developments are illustrated in **Figure 5.1**.

Table 5.3 Traffic Generation of Planned Developments

Land Use	GFA	AM Peak (pcu/hr)		PM Peak (pcu/hr)	
		Generation	Attraction	Generation	Attraction
Kong Nga Po Police Training Facilities	35,000m^2	60	86	55	41

Traffic generated by the above major planned and committed developments has been included in the traffic forecast for the design year 2028.

5.5 2028 Traffic Flows

The growth factor will be applied to the 2025 observed peak hours traffic flows to estimate the 2028 reference flows.

The reference and design flows of the design year 2028 are calculated from the following formula:

2028 Reference Flows (Fig. 5.2) = 2025 Observed Flows (Fig 3.3) x $(1+4.35\%)^3$

2028 Design Flows (Fig. 5.3) = 2025 Reference Flows (Fig. 5.2) + Net Change in Development Traffic Flows

Figure 5.2 shows the 2028 Reference Peak Hours Flows in the area. By adding the net development traffic, **Figure 5.3** shows the 2028 Design Peak Hours Traffic Flows.

5.6 Future Traffic Impact Assessment

The traffic impact assessments for design year 2028 were conducted for the key junctions and road links in the vicinity of the project site for both the Reference and Design scenarios.

5.6.1 Future Year Junction Capacity Assessment

Based on the Reference Flows and Design Flows, junction capacity assessments for design year 2028 are carried out and the results are presented in **Table 5.4**, with detailed calculation sheets given in **Appendix A**.

Table 5.4 Future Year Junction Capacity Assessment

Jun No.	Junction Location	Type/ Capacity Index	2028 Reference Scenario		2028 Design Scenario	
			AM	PM	AM	PM
A	Unnamed Rd 1 / Kong Nga Po Rd	Priority / DFC(i)	0.22	0.18	0.25	0.21
B	Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	Roundabout / DFC	0.27	0.17	0.29	0.18
C	Man Kam To Rd / Kong Nga Po Rd	Priority / DFC	0.82	0.80	0.84	0.85

**Notes: DFC - Design Flow / Capacity Ratio*

(i) The performance of a priority junction or roundabout is normally measured by its Design Flow / Capacity (DFC) ratio. A DFC ratio less than 1.0 indicates that the junction is operating within design capacity. A DFC ratio greater than 1.0 indicates that the junction is overloaded, resulting in traffic queues and longer delay time to the minor arm traffic.

Table 5.4 reveals that all the junctions will operate satisfactorily with ample junction capacity in both the 2028 reference and 2028 design scenarios during peak hours.

6 Summary and Conclusion

6.1 Summary

The Applicant intends to seek the Town Planning Board permission to utilise the Project Site as temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities for a period of 3 years and associated filling of land.

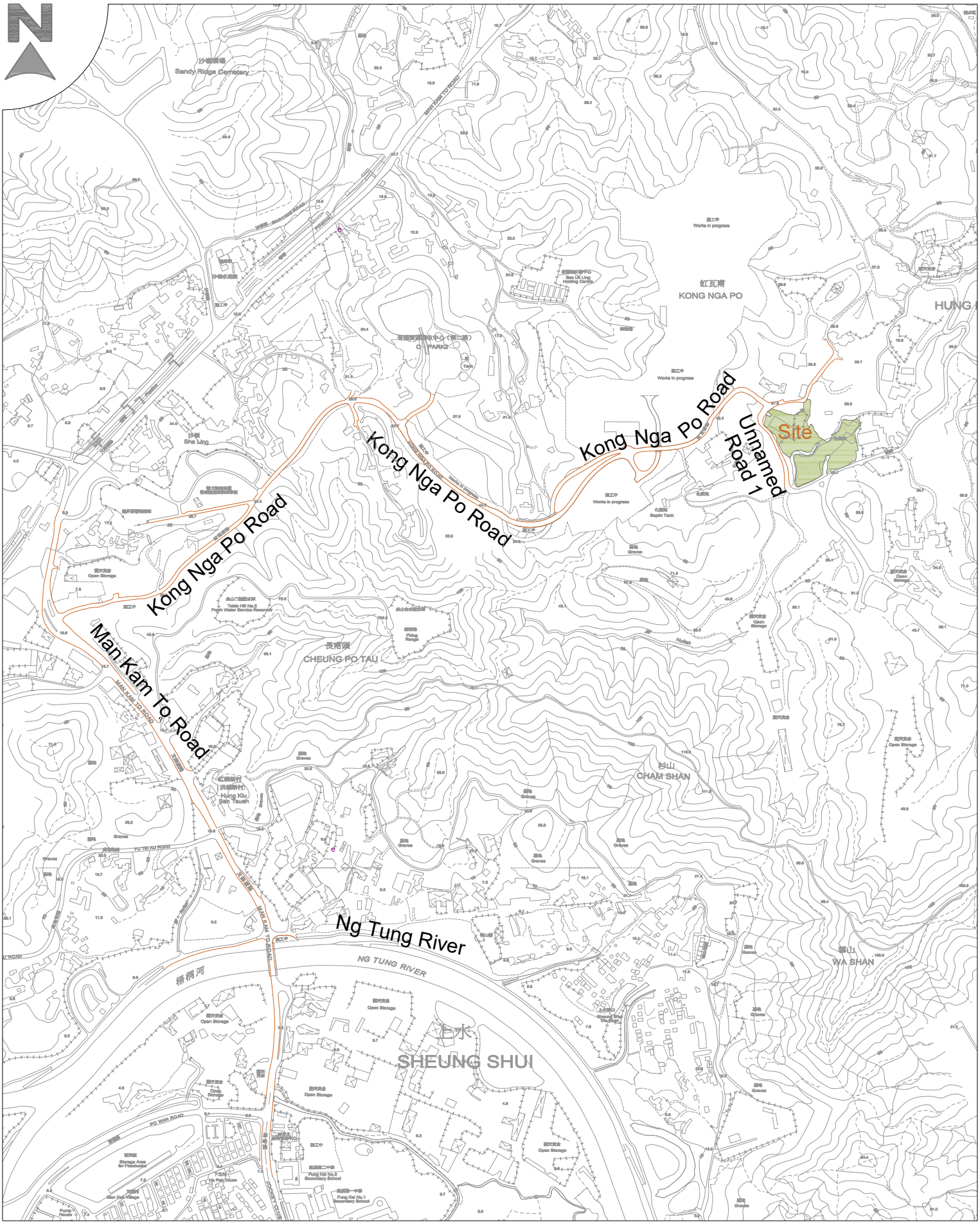
In order to appraise the existing traffic conditions, classified turning movement count surveys have been carried out at the key junctions and road links in the vicinity of project site on 7 May 2025 from 7:00 to 10:00 in the morning and 16:00 to 19:00 in the evening. The morning and evening peak hours of the road network have been identified as 7:30am to 8:30am and 16:45pm to 17:45pm, respectively.

Year 2028 is used as the design year for the traffic impact assessment. Based on the historical data and the future planning data, an annual growth rate of 4.35% was adopted for this study. This growth factor has been applied to the observed traffic flows in 2025 to determine the anticipated traffic flows in design year 2028.
The assessment results reveal that the key junctions identified are expected to operate satisfactorily with sufficient capacity in both 2028 reference and 2028 design scenarios during peak hours.

6.2 Conclusion

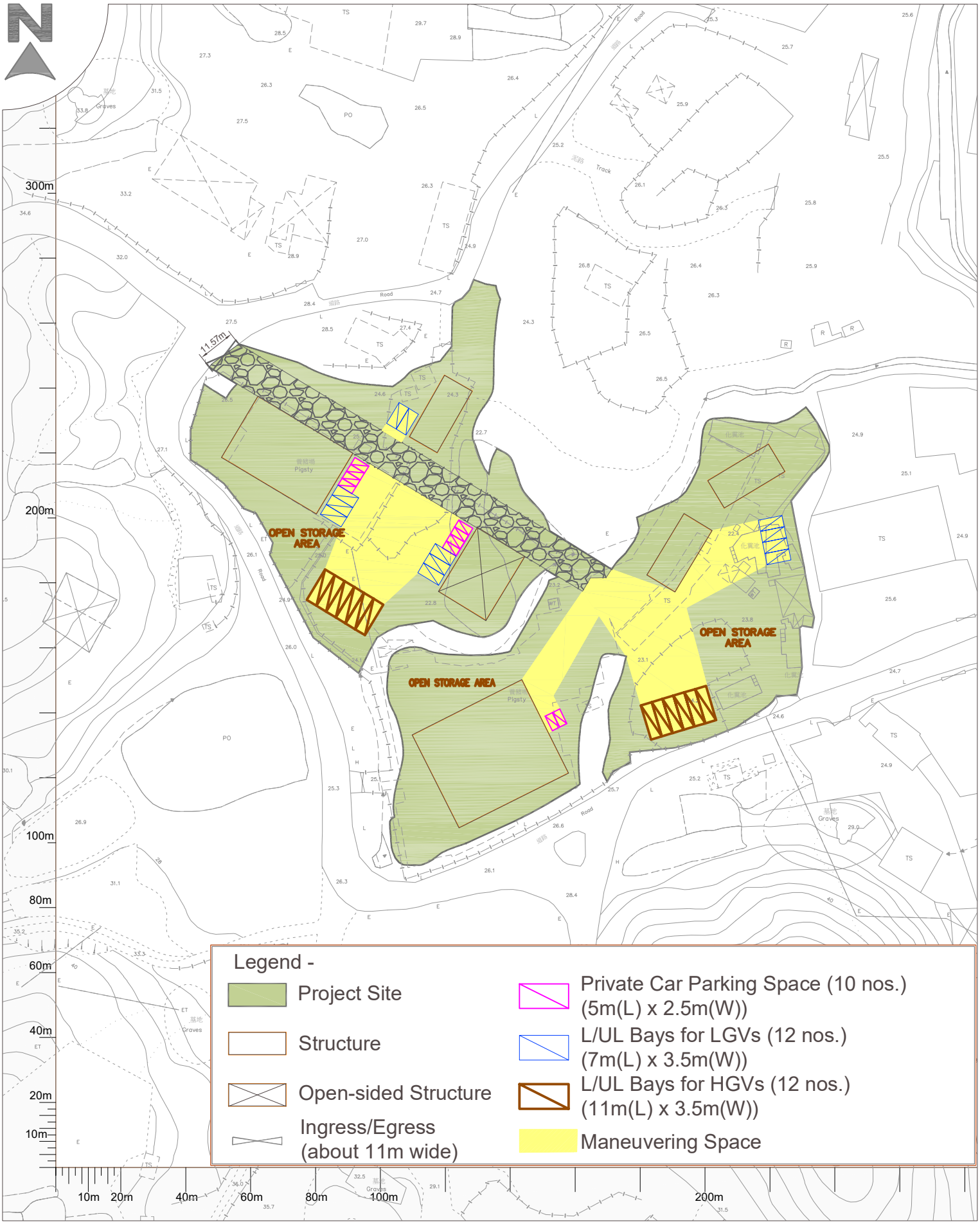
The findings of this study show that the development traffic will not cause adverse traffic impact onto the local road network. The proposed development is therefore supported from the traffic engineering point of view at this stage.

Figures



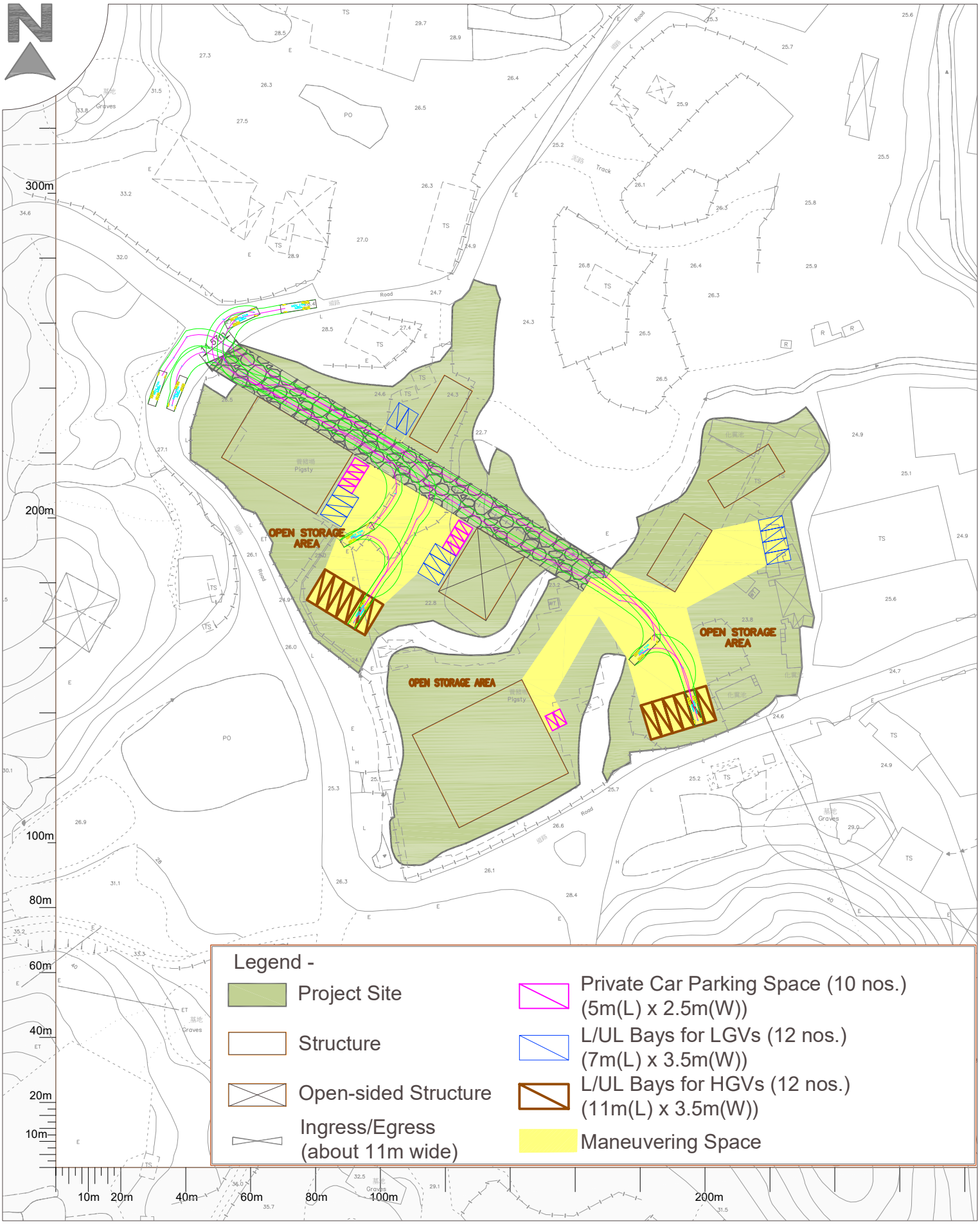
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 1.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Location of the Project Site	Dwg No. - Figure 1	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	



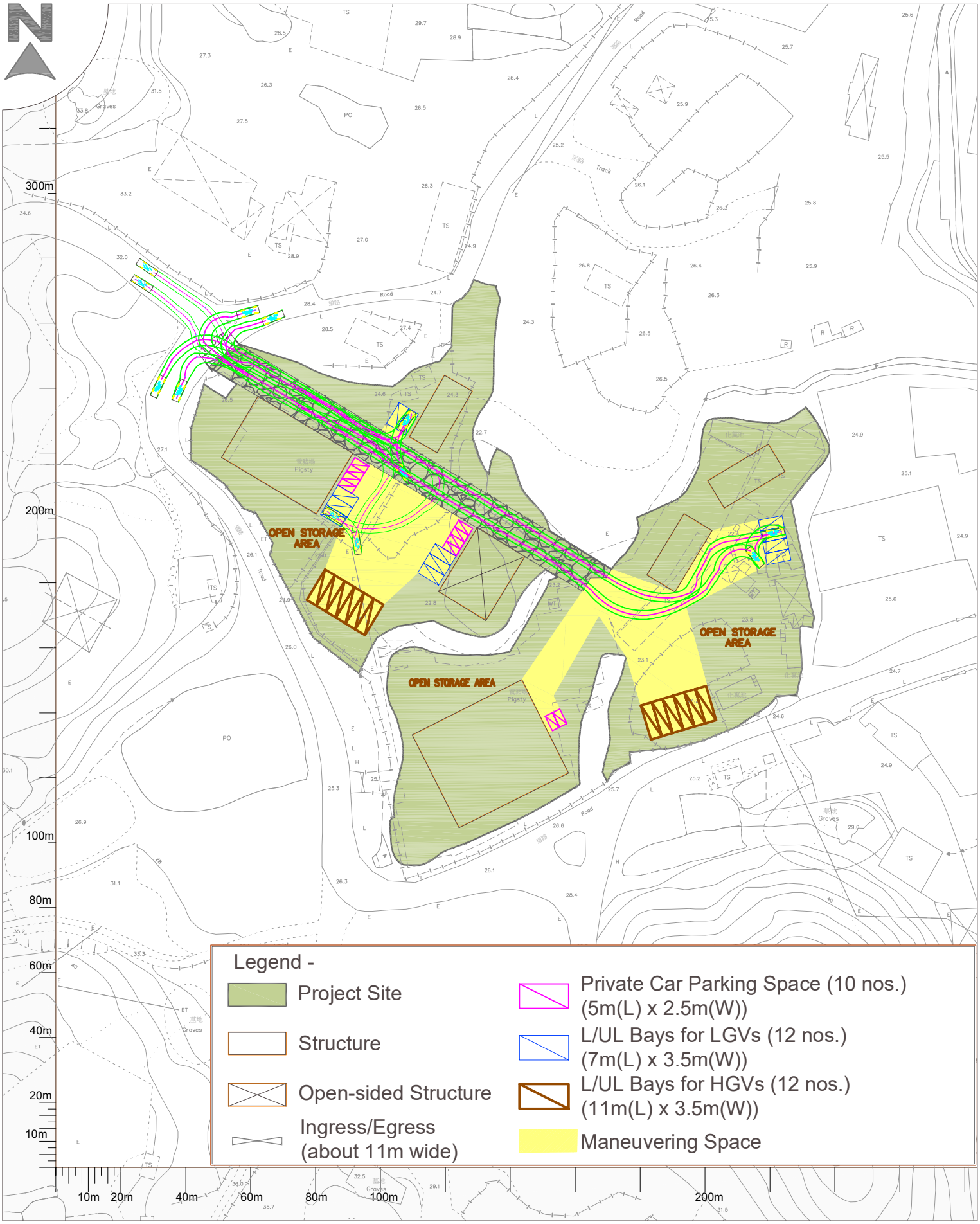
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 2.1A.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Layout of Project Site	Dwg No. - Figure 2.1	Rev. A	8FM CONSULTANCY LIMITED
	Scale - 1:1500@A4	Date - Aug 2025	



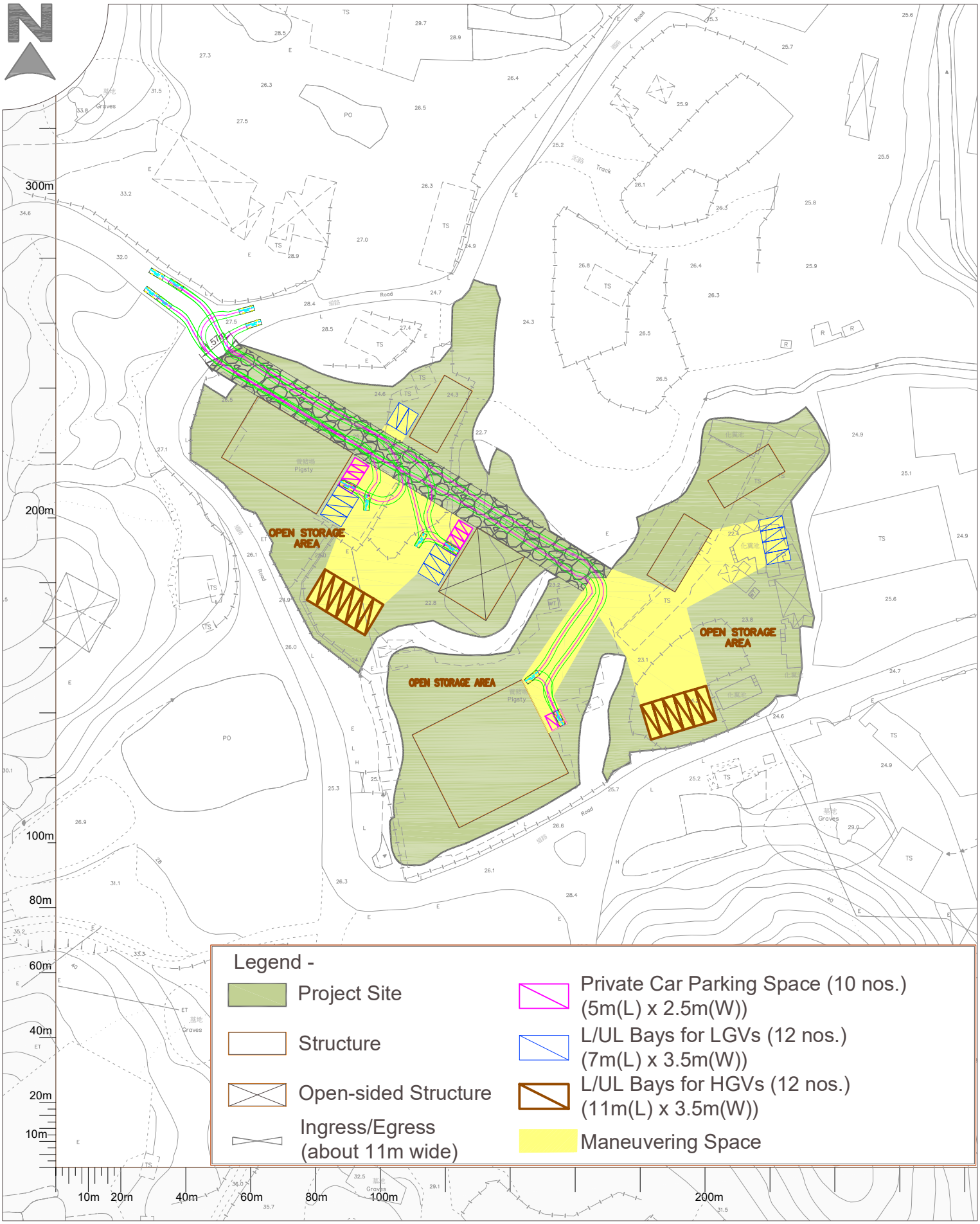
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 2.2A SWEPT PATH FOR HGV.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Swept Path Analysis for 11m HGV	Dwg No. - Figure 2.2	Rev. A	8FM CONSULTANCY LIMITED
	Scale - 1:1500@A4	Date - Aug 2025	



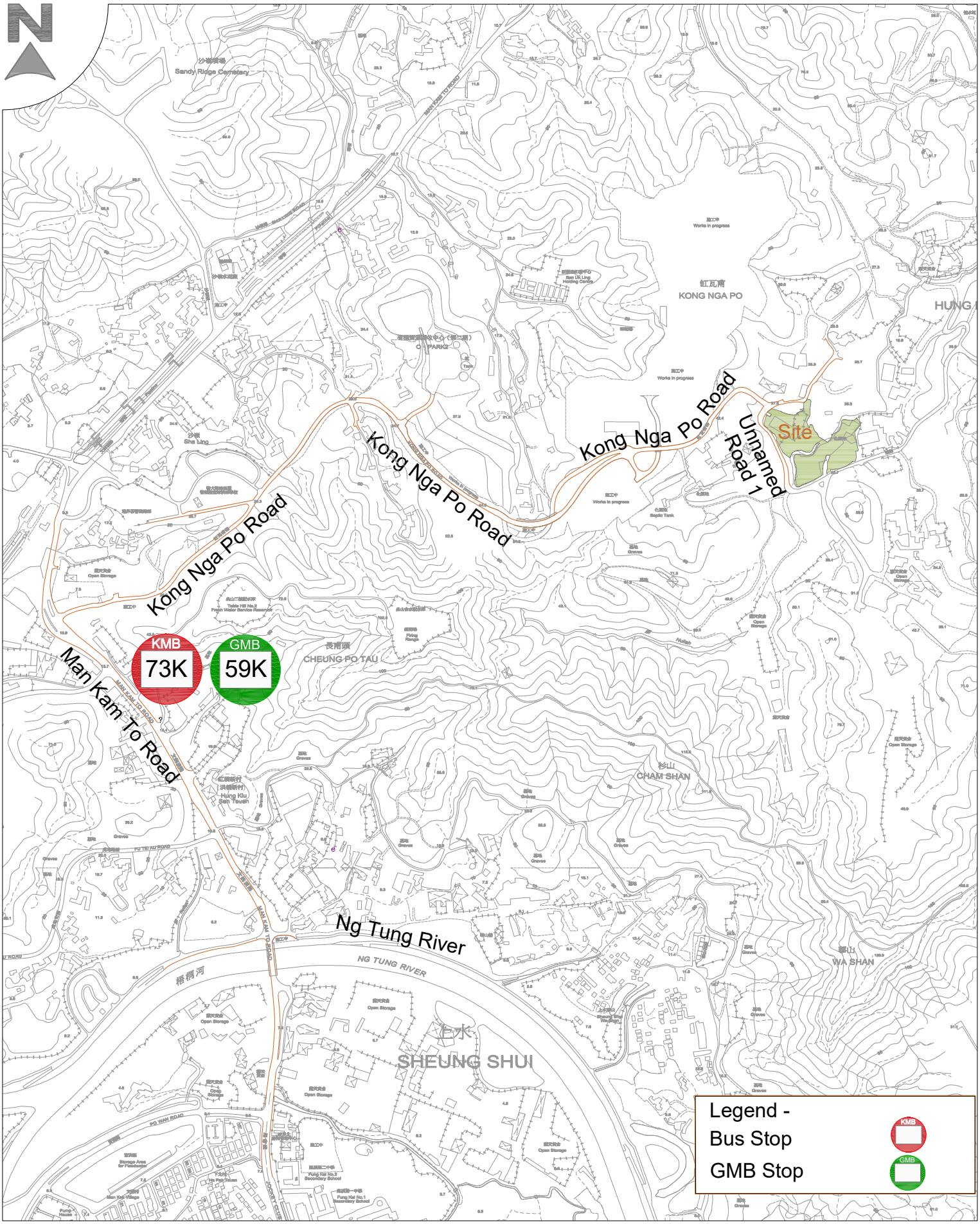
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 2.3A SWEPT PATH FOR LGV.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Swept Path Analysis for 7m LGV	Dwg No. - Figure 2.3	Rev. A	8FM CONSULTANCY LIMITED
	Scale - 1:1500@A4	Date - Aug 2025	



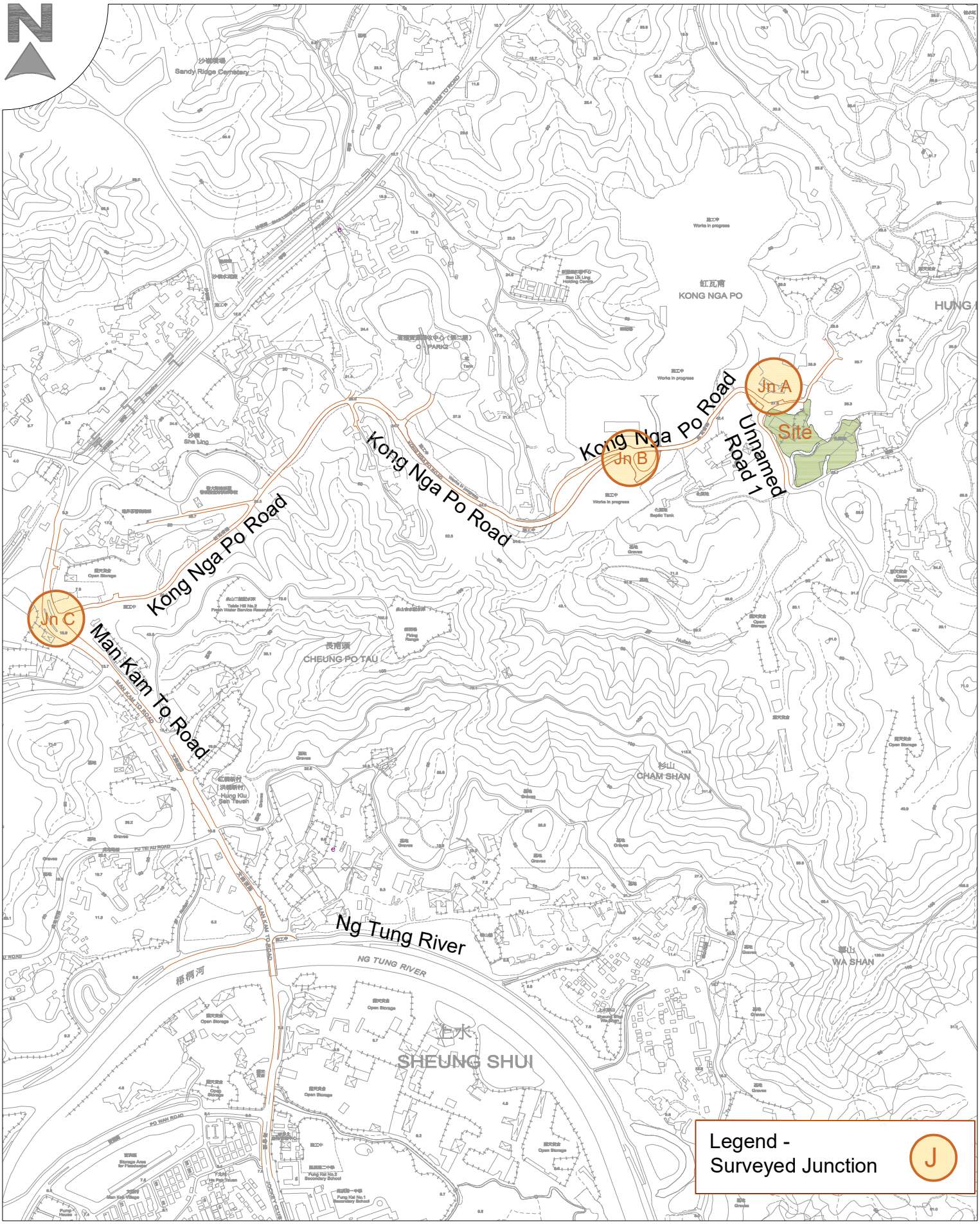
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 2.4A SWEPT PATH FOR PC.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Swept Path Analysis for 5m Private Car	Dwg No. - Figure 2.4	Rev. A	8FM CONSULTANCY LIMITED
	Scale - 1:1500@A4	Date - Aug 2025	



C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 3.1.DWG

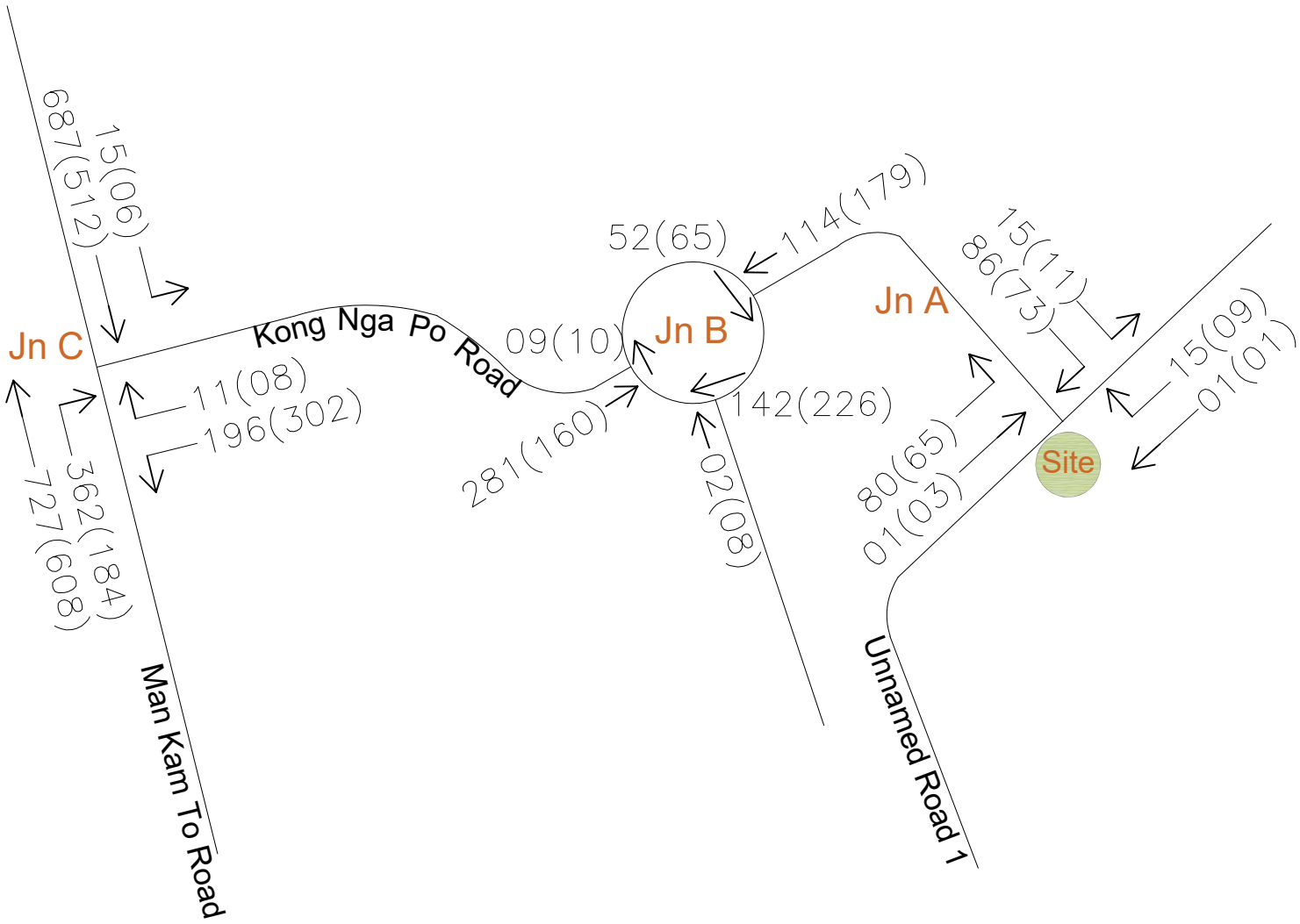
Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Public Transport Facilities	Dwg No. - Figure 3.1	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	



Proposal -	PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT		
Drawing Title - Key Junction	Dwg No. - Figure 3.2	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 3.2.DWG

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 3.3.DWG



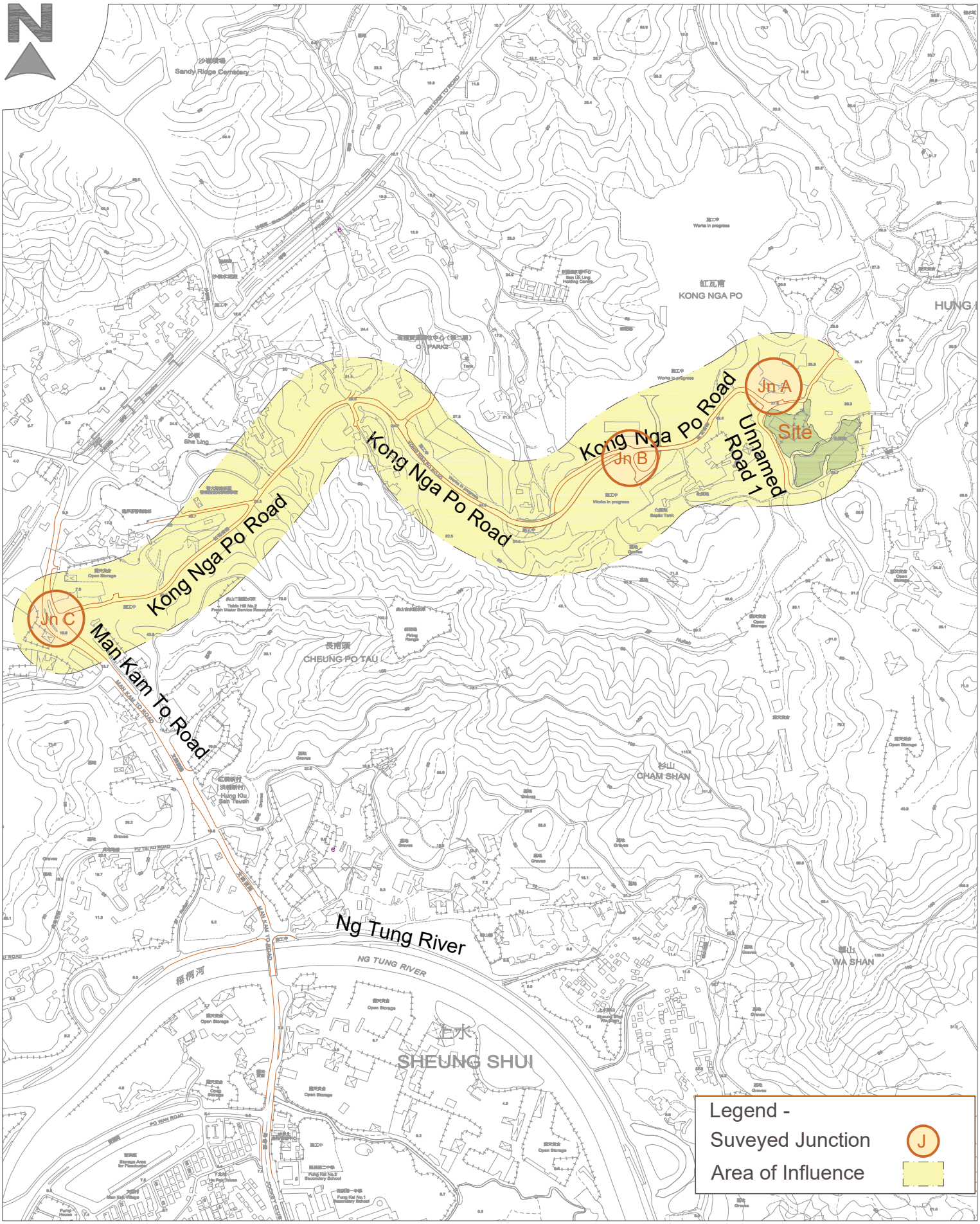
Legend -

Traffic Flows at AM Peak Hr (PCU/HR)

Traffic Flows at PM Peak Hr (PCU/HR)

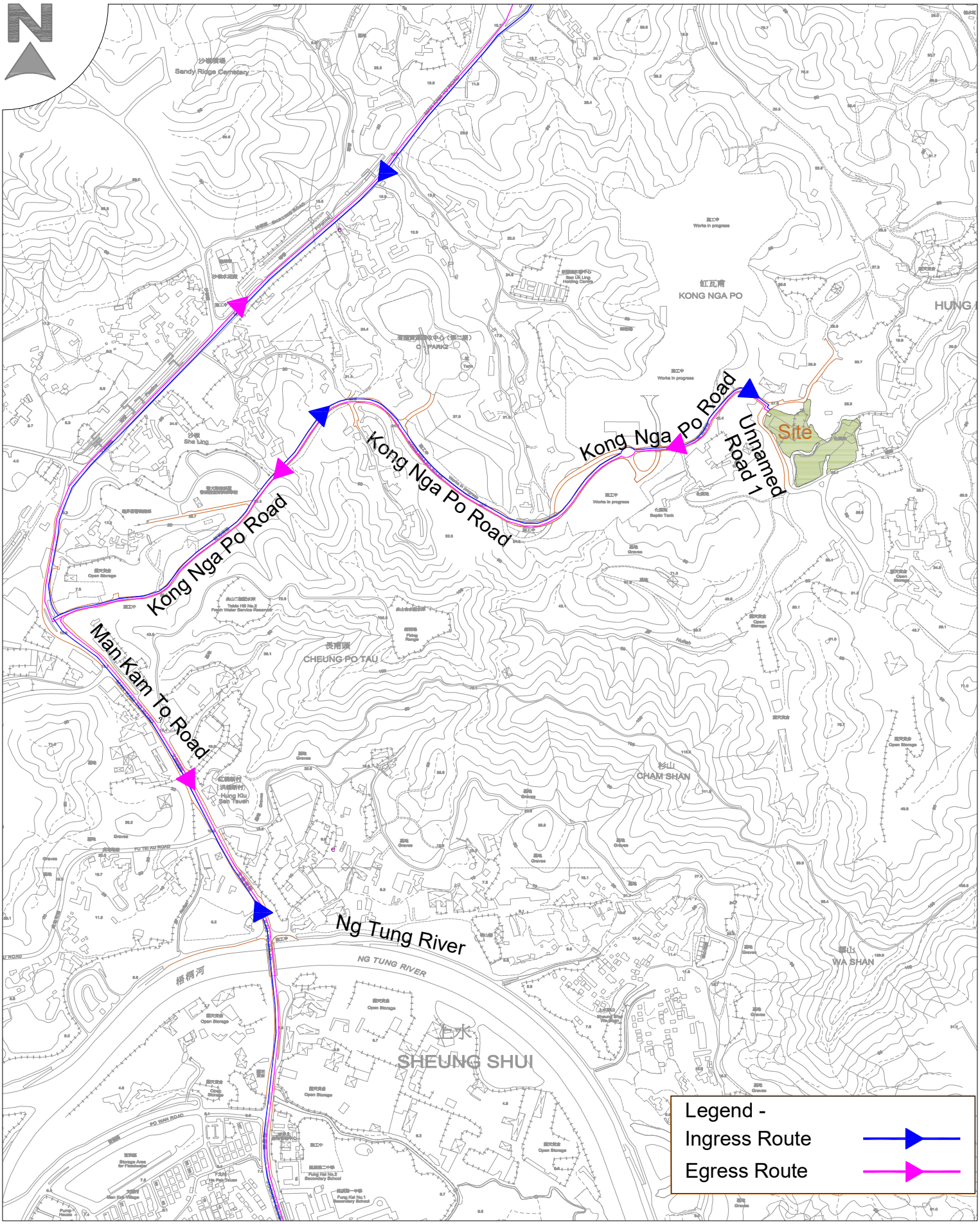
100(100)

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Observed Flows during AM & PM Peak Hours	Dwg No. - Figure 3.3	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - ---	Date - May 2025	



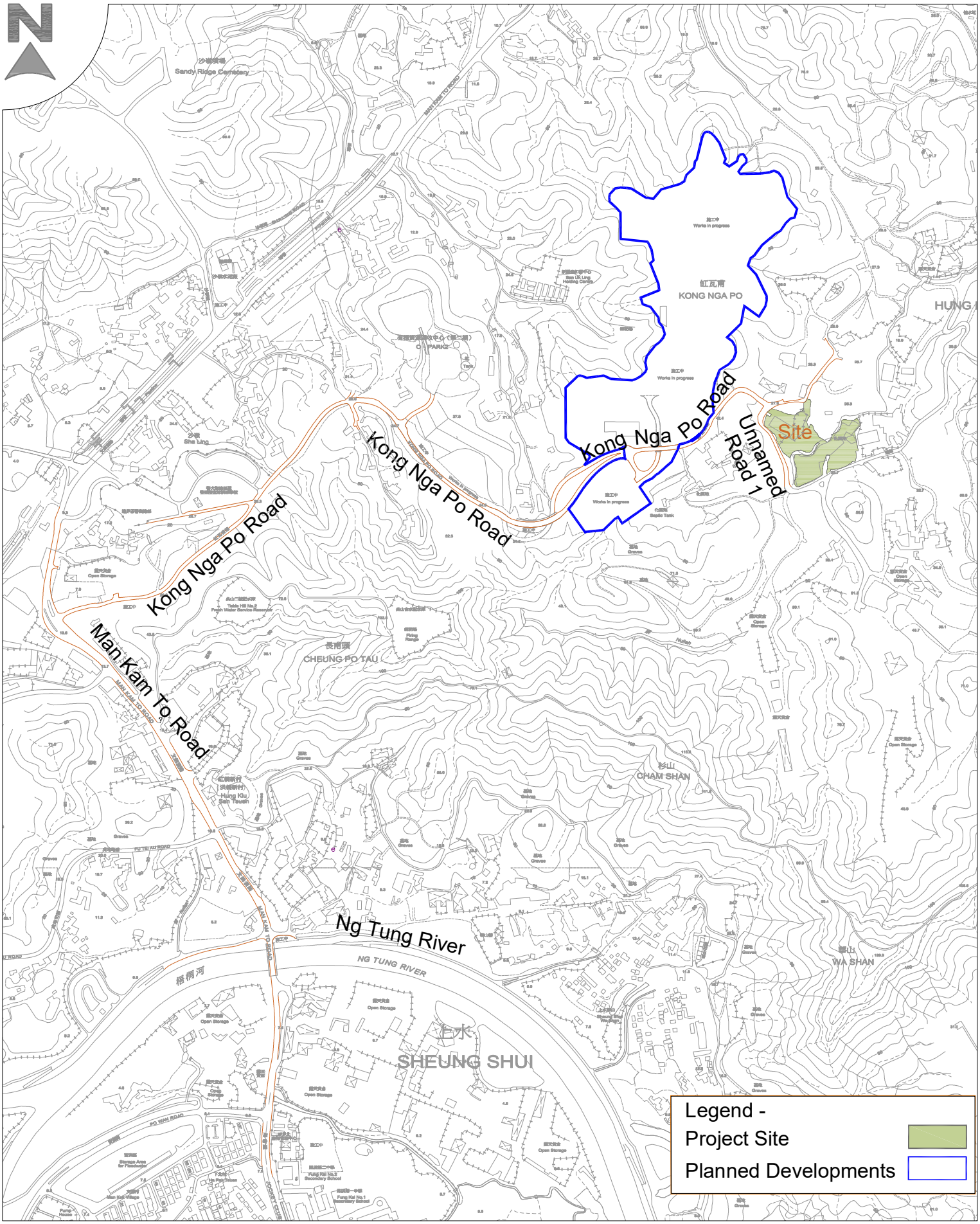
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 3.4.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Area of Influence	Dwg No. - Figure 3.4	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - Sep 2025	



Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - Vehicular Ingress and Egress Route	Dwg No. - Figure 4.1	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - 1:10000@A4	Date - May 2025	

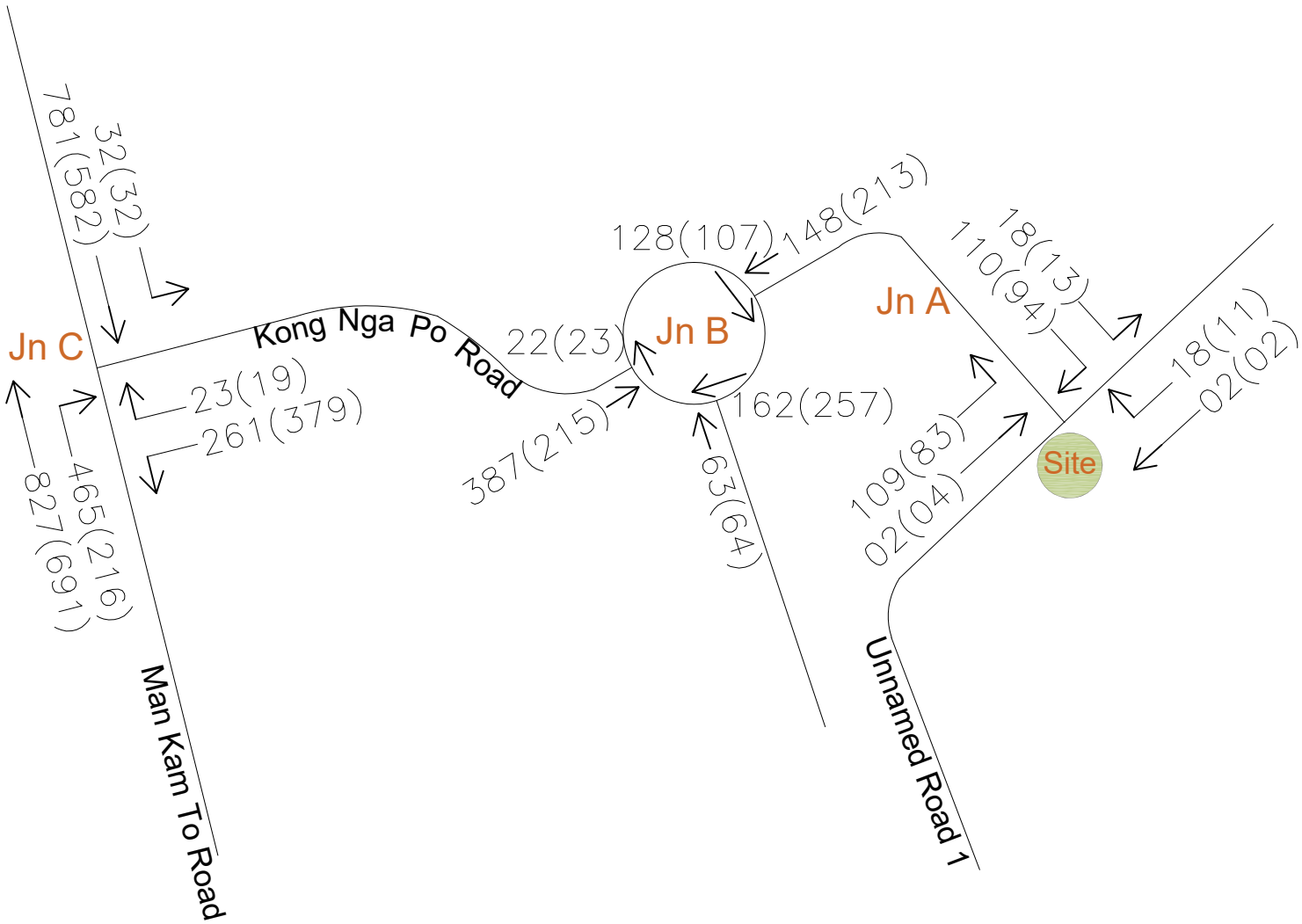
C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 4-2.DWG



C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 5.1.DWG

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title -	Dwg No. - Figure 5.1	Rev. - ---	8FM CONSULTANCY LIMITED
Location of Planned Developments	Scale - 1:10000@A4	Date - May 2025	

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 5.2.DWG



Legend -

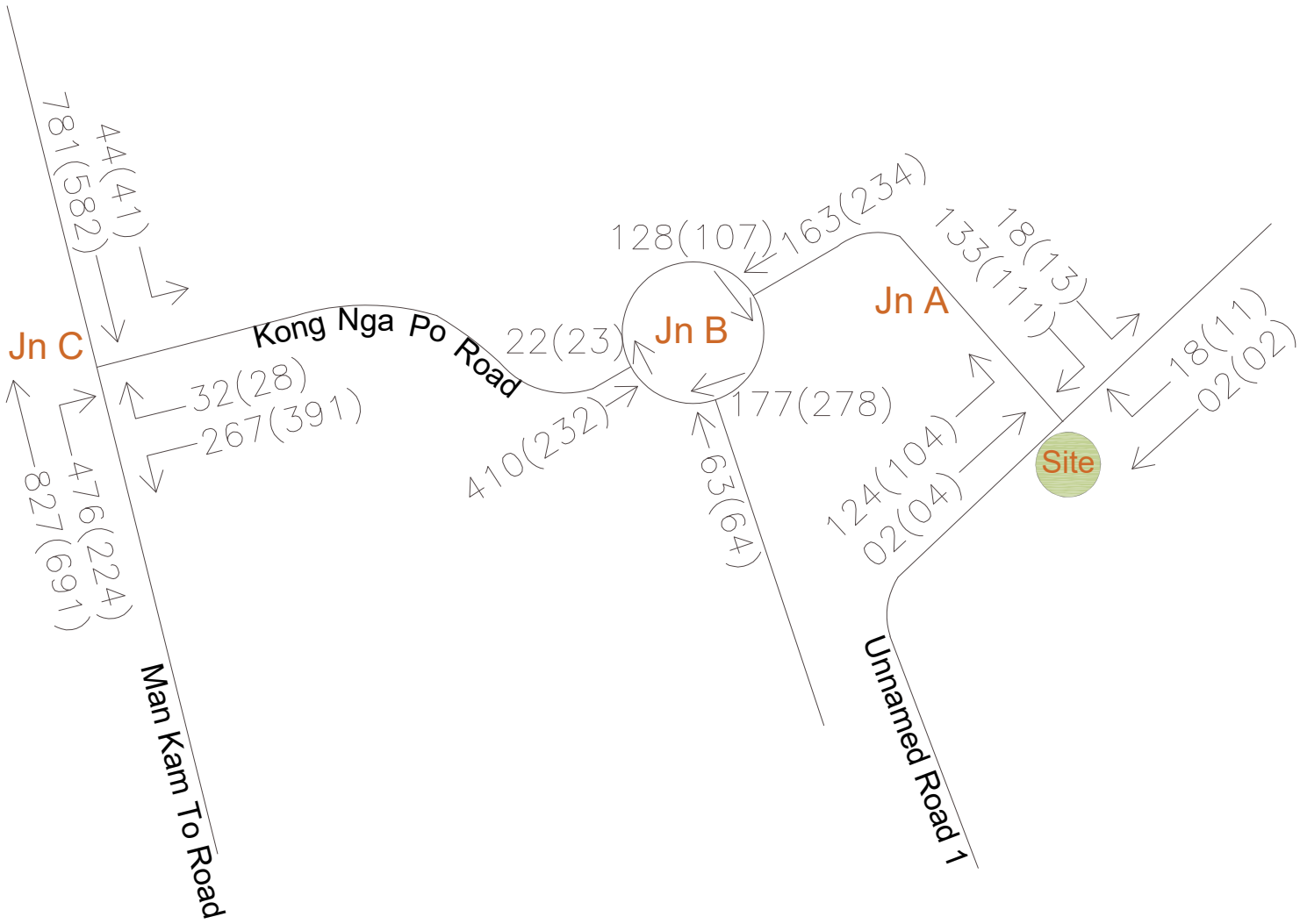
Traffic Flows at AM Peak Hr (PCU/HR)

Traffic Flows at PM Peak Hr (PCU/HR)

100(100)

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - 2028 Reference Traffic Flows during Peak Hours	Dwg No. - Figure 5.2	Rev. - ---	8FM CONSULTANCY LIMITED
	Scale - ---	Date - May 2025	

C:\USERS\BILLY\DOCUMENTS\WORK\P80115\DATA\DRAWING\FIGURE 5.3A.DWG



Legend -

Traffic Flows at AM Peak Hr (PCU/HR)

Traffic Flows at PM Peak Hr (PCU/HR)

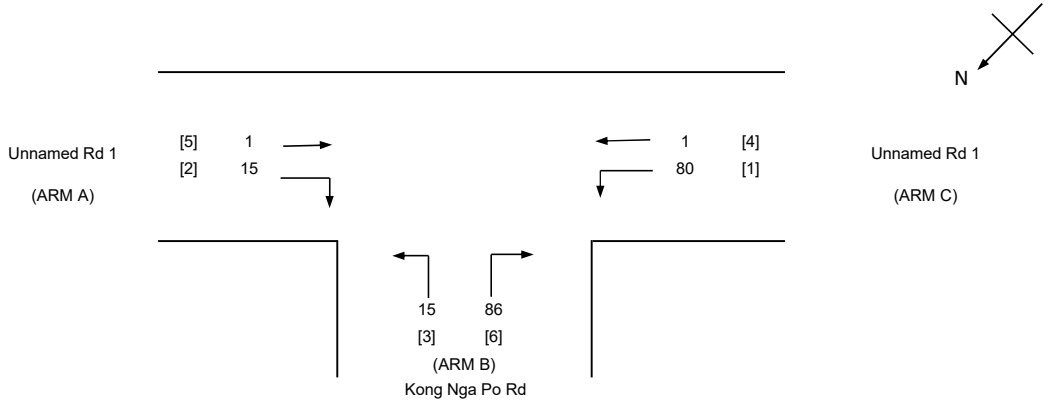
100(100)

Proposal - PLG10315_Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87 And Adjoining Government Land, Ping Che, Hung Lung Hang, NT			
Drawing Title - 2028 Design Traffic Flows during Peak Hours	Dwg No. - Figure 5.3	Rev. A	8FM CONSULTANCY LIMITED
	Scale - ---	Date - Sep 2025	

Appendix A

Junction Calculation Sheets

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2025 Observed - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	15	(pcu/hr)
q a-c	=	1	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	1	(pcu/hr)
q c-b	=	80	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	15	(pcu/hr)
q b-c	=	86	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.85

THE CAPACITY OF MOVEMENT :

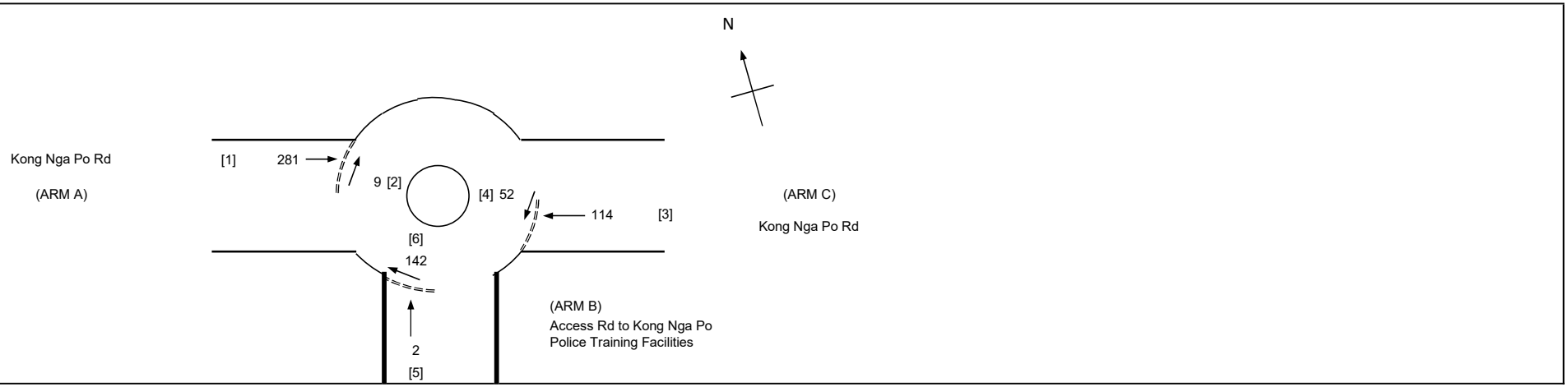
Q b-a	=	464	(pcu/hr)
Q b-c	=	619	(pcu/hr)
Q c-b	=	663	(pcu/hr)
Q b-ac	=	589	(pcu/hr)
Q c-a	=	1583	(pcu/hr)
TOTAL FLOW	=	198	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0328
DFC b-c	=	0.1386
DFC c-b	=	0.1204
DFC b-ac	=	0.1714
(Share Lane)		
DFC c-a	=	0.0006

CRITICAL DFC = 0.17

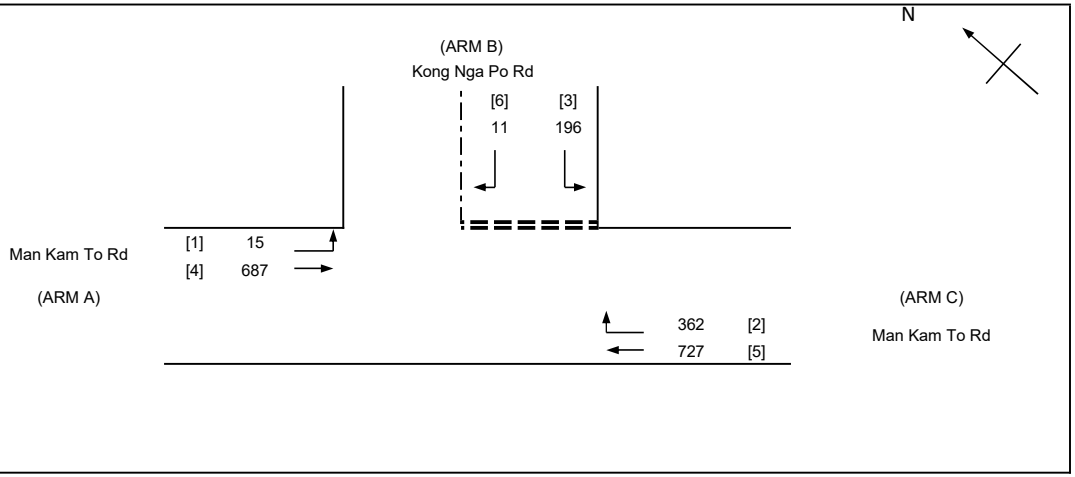
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2025 Observed - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		281	2	114
Qc	=	Circulating flow across entry (pcu/h)		9	142	52
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1417	1338	1308
DFC	=	Design flow/Capacity = Q/Qe		0.20	0.00	0.09

TOTAL FLOW = 599 (pcu/hr)
CRITICAL DFC = 0.20

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2025 Observed - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	15	(pcu/hr)
q a-c	=	687	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	727	(pcu/hr)
q c-b	=	362	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	11	(pcu/hr)
q b-c	=	196	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.949

THE CAPACITY OF MOVEMENT :

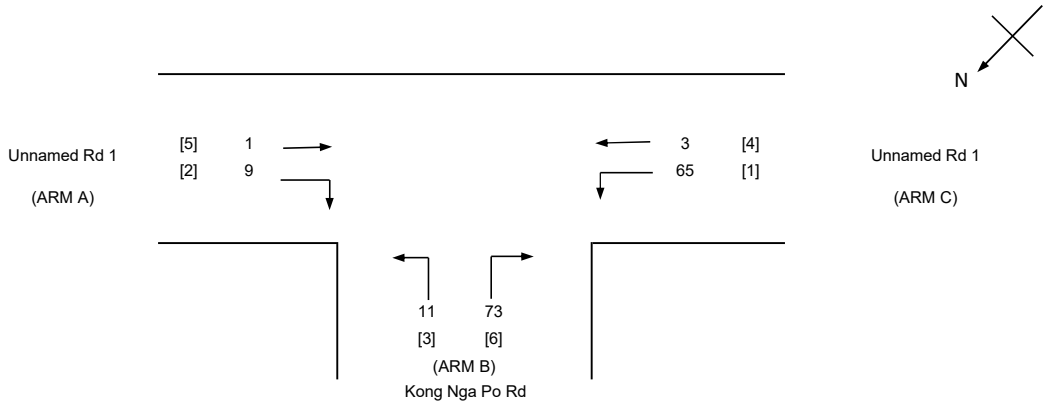
Q b-a	=	306	(pcu/hr)
Q b-c	=	496	(pcu/hr)
Q c-b	=	587	(pcu/hr)
Q b-ac	=	481	(pcu/hr)
TOTAL FLOW	=	1997	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0346
DFC b-c	=	0.3948
DFC c-b	=	0.6160
DFC b-ac (Share Lane)	=	0.4294

CRITICAL DFC = 0.62

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2025 Observed - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	9	(pcu/hr)
q a-c	=	1	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	3	(pcu/hr)
q c-b	=	65	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	11	(pcu/hr)
q b-c	=	73	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.865

THE CAPACITY OF MOVEMENT :

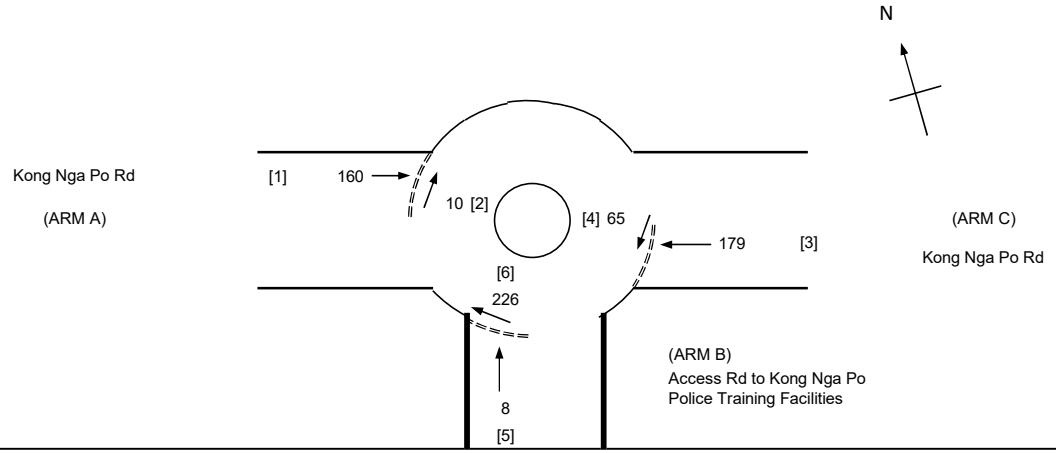
Q b-a	=	468	(pcu/hr)
Q b-c	=	620	(pcu/hr)
Q c-b	=	664	(pcu/hr)
Q b-ac	=	594	(pcu/hr)
Q c-a	=	1625	(pcu/hr)
TOTAL FLOW	=	162	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0244
DFC b-c	=	0.1177
DFC c-b	=	0.0973
DFC b-ac	=	0.1421
(Share Lane)		
DFC c-a	=	0.0017

CRITICAL DFC = 0.14

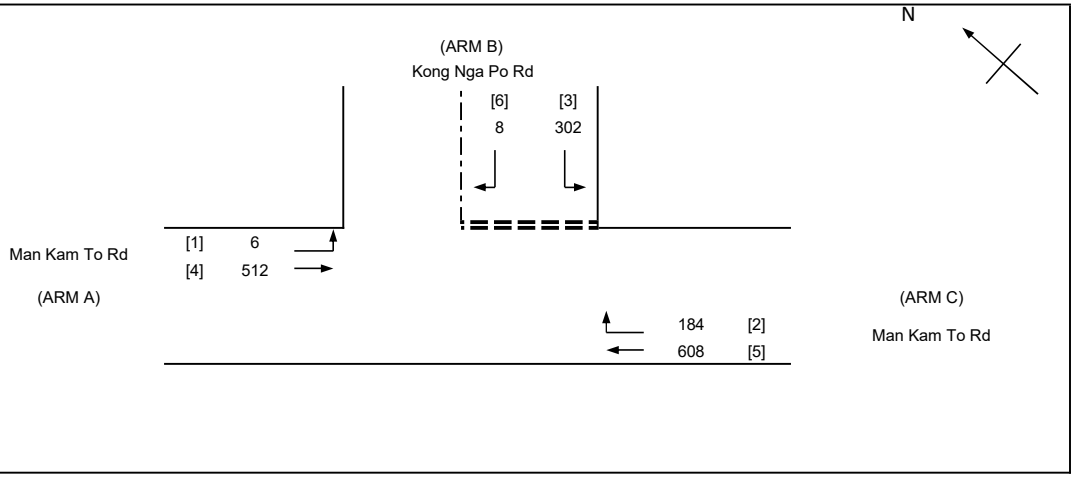
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2025 Observed - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		160	8	179
Qc	=	Circulating flow across entry (pcu/h)		10	226	65
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1416	1287	1300
DFC	=	Design flow/Capacity = Q/Qe		0.11	0.01	0.14

TOTAL FLOW = 648 (pcu/hr)
CRITICAL DFC = 0.14

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2025 Observed - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	6	(pcu/hr)
q a-c	=	512	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	608	(pcu/hr)
q c-b	=	184	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	8	(pcu/hr)
q b-c	=	302	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.974

THE CAPACITY OF MOVEMENT :

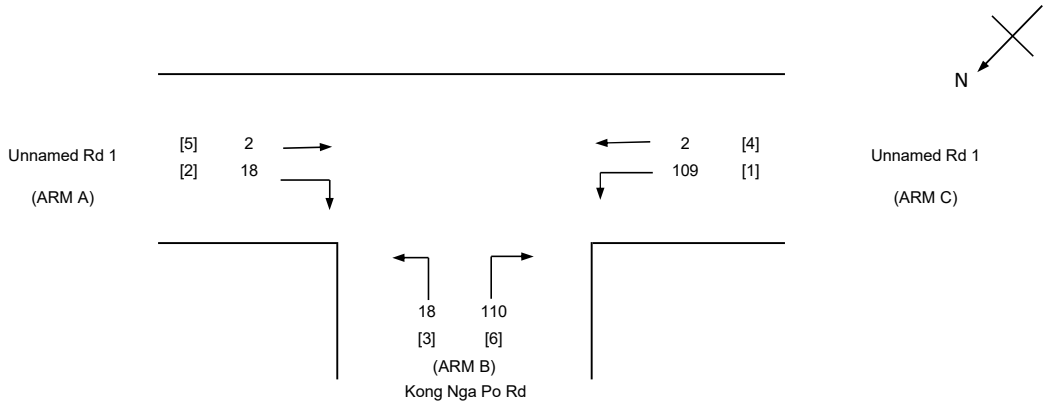
Q b-a	=	380	(pcu/hr)
Q b-c	=	523	(pcu/hr)
Q c-b	=	621	(pcu/hr)
Q b-ac	=	518	(pcu/hr)
TOTAL FLOW	=	1620	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0211
DFC b-c	=	0.5782
DFC c-b	=	0.2960
DFC b-ac (Share Lane)	=	0.5993

CRITICAL DFC = 0.60

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Reference - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	18	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	2	(pcu/hr)
q c-b	=	109	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	18	(pcu/hr)
q b-c	=	110	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.859

THE CAPACITY OF MOVEMENT :

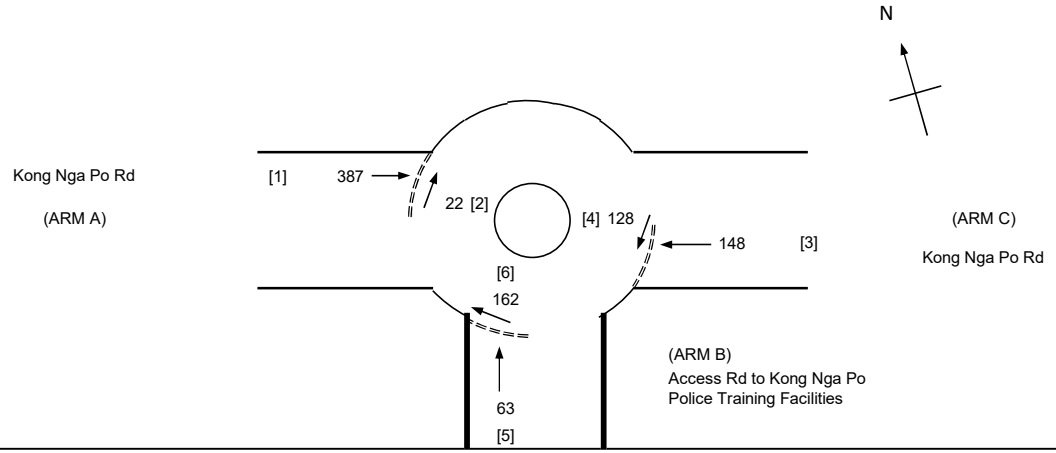
Q b-a	=	455	(pcu/hr)
Q b-c	=	619	(pcu/hr)
Q c-b	=	662	(pcu/hr)
Q b-ac	=	589	(pcu/hr)
Q c-a	=	1504	(pcu/hr)
TOTAL FLOW	=	259	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0396
DFC b-c	=	0.1777
DFC c-b	=	0.1647
DFC b-ac	=	0.2173
(Share Lane)		
DFC c-a	=	0.0013

CRITICAL DFC = 0.22

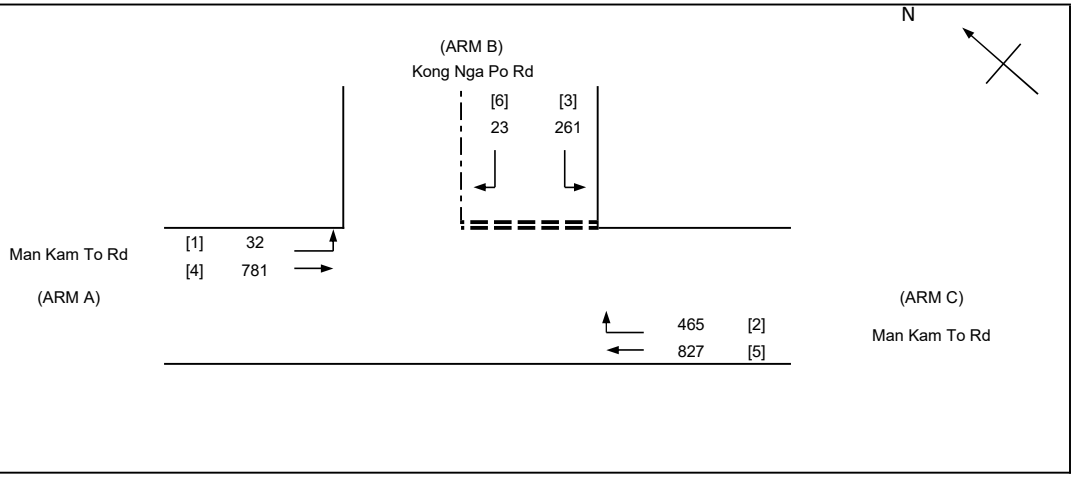
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Reference - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		387	63	148
Qc	=	Circulating flow across entry (pcu/h)		22	162	128
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1409	1326	1264
DFC	=	Design flow/Capacity = Q/Qe		0.27	0.05	0.12

TOTAL FLOW = 910 (pcu/hr)
CRITICAL DFC = 0.27

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Reference - AM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	32	(pcu/hr)
q a-c	=	781	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	827	(pcu/hr)
q c-b	=	465	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	23	(pcu/hr)
q b-c	=	261	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.919

THE CAPACITY OF MOVEMENT :

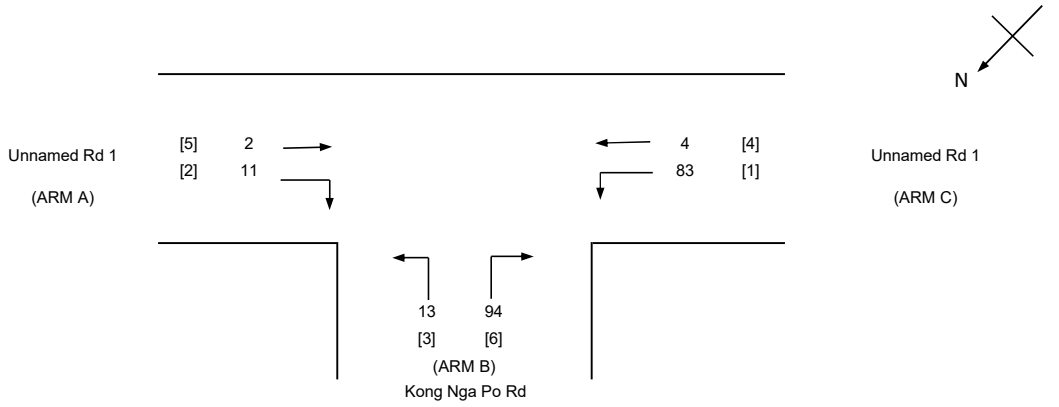
Q b-a	=	261	(pcu/hr)
Q b-c	=	481	(pcu/hr)
Q c-b	=	567	(pcu/hr)
Q b-ac	=	450	(pcu/hr)
TOTAL FLOW	=	2389	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0881
DFC b-c	=	0.5426
DFC c-b	=	0.8201
DFC b-ac (Share Lane)	=	0.6307

CRITICAL DFC = 0.82

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Reference - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	11	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	4	(pcu/hr)
q c-b	=	83	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	13	(pcu/hr)
q b-c	=	94	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.879

THE CAPACITY OF MOVEMENT :

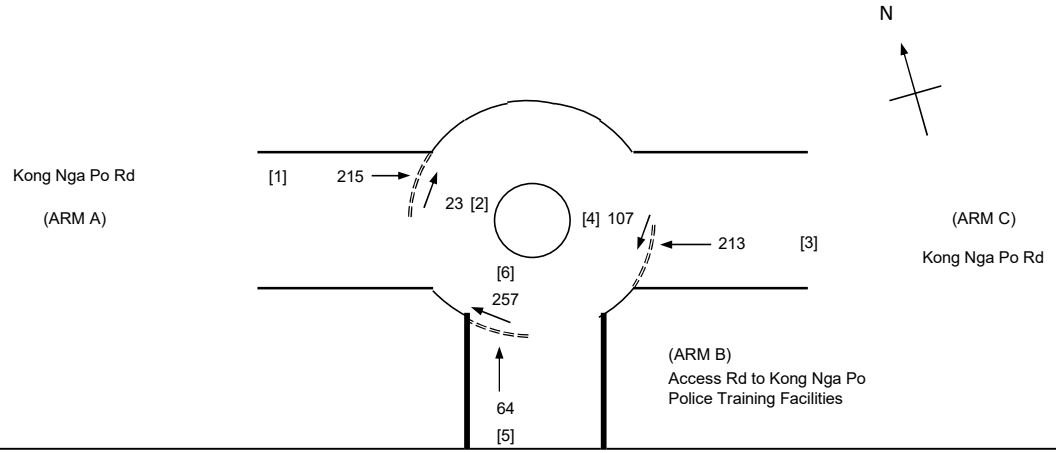
Q b-a	=	462	(pcu/hr)
Q b-c	=	620	(pcu/hr)
Q c-b	=	663	(pcu/hr)
Q b-ac	=	595	(pcu/hr)
Q c-a	=	1575	(pcu/hr)
TOTAL FLOW	=	207	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0281
DFC b-c	=	0.1516
DFC c-b	=	0.1252
DFC b-ac	=	0.1798
(Share Lane)		
DFC c-a	=	0.0025

CRITICAL DFC = 0.18

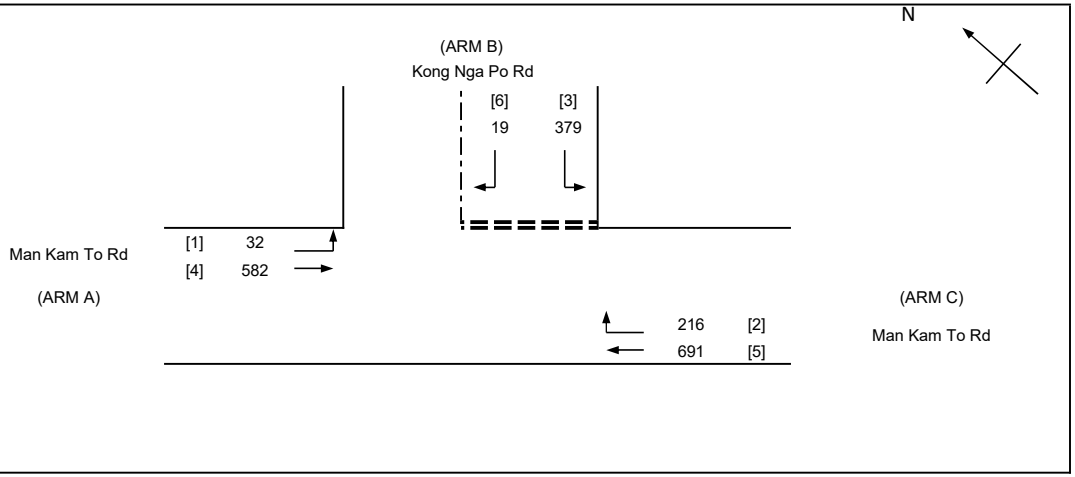
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Reference - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		215	64	213
Qc	=	Circulating flow across entry (pcu/h)		23	257	107
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1408	1269	1276
DFC	=	Design flow/Capacity = Q/Qe		0.15	0.05	0.17

TOTAL FLOW = 879 (pcu/hr)
CRITICAL DFC = 0.17

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	May-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Reference - PM Peak	Project No.: 80115	Checked By:	MM	May-2025
			Reviewed By:	FM	May-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	32	(pcu/hr)
q a-c	=	582	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	691	(pcu/hr)
q c-b	=	216	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	19	(pcu/hr)
q b-c	=	379	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.952

THE CAPACITY OF MOVEMENT :

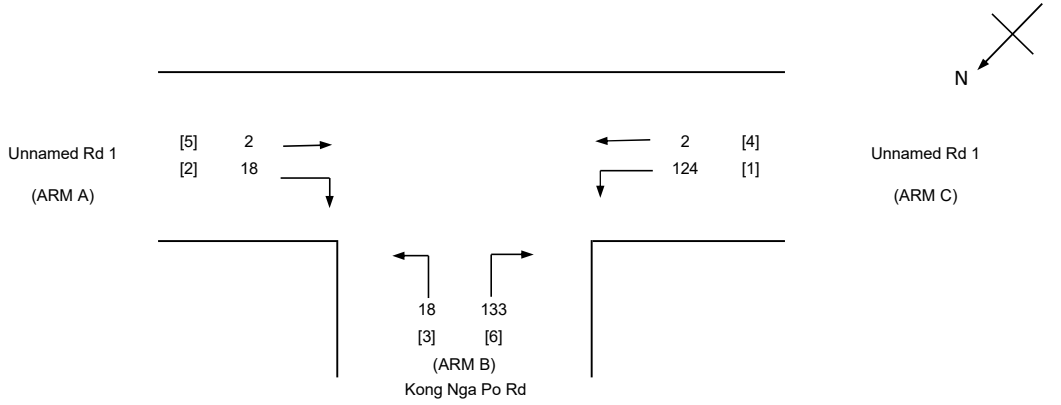
Q b-a	=	354	(pcu/hr)
Q b-c	=	511	(pcu/hr)
Q c-b	=	603	(pcu/hr)
Q b-ac	=	500	(pcu/hr)
TOTAL FLOW	=	1919	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0537
DFC b-c	=	0.7417
DFC c-b	=	0.3582
DFC b-ac (Share Lane)	=	0.7954

CRITICAL DFC = 0.80

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Design - AM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	18	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	2	(pcu/hr)
q c-b	=	124	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	18	(pcu/hr)
q b-c	=	133	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.881

THE CAPACITY OF MOVEMENT :

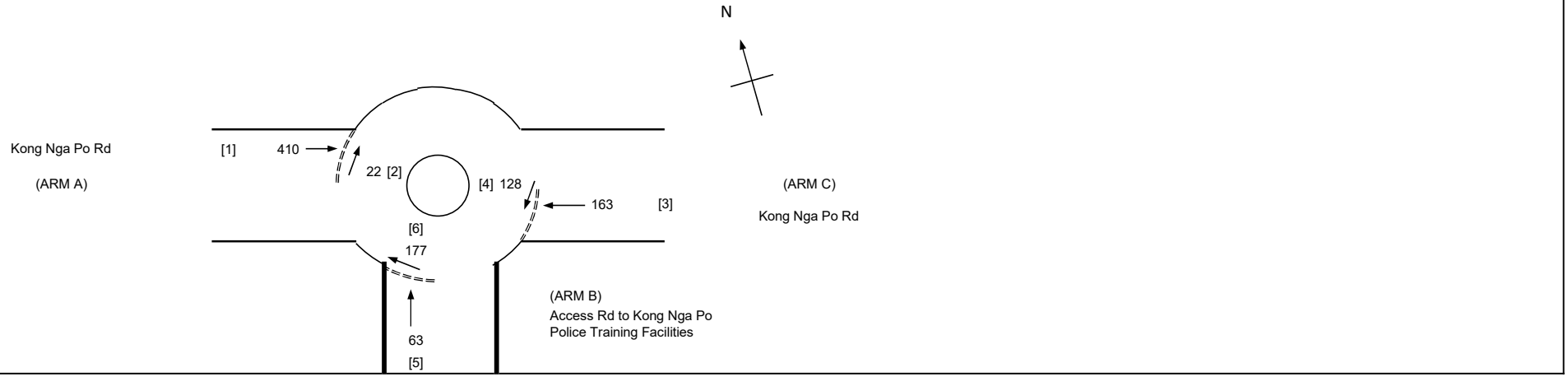
Q b-a	=	450	(pcu/hr)
Q b-c	=	619	(pcu/hr)
Q c-b	=	662	(pcu/hr)
Q b-ac	=	592	(pcu/hr)
Q c-a	=	1463	(pcu/hr)
TOTAL FLOW	=	297	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0400
DFC b-c	=	0.2149
DFC c-b	=	0.1873
DFC b-ac	=	0.2549
(Share Lane)		
DFC c-a	=	0.0014

CRITICAL DFC = 0.25

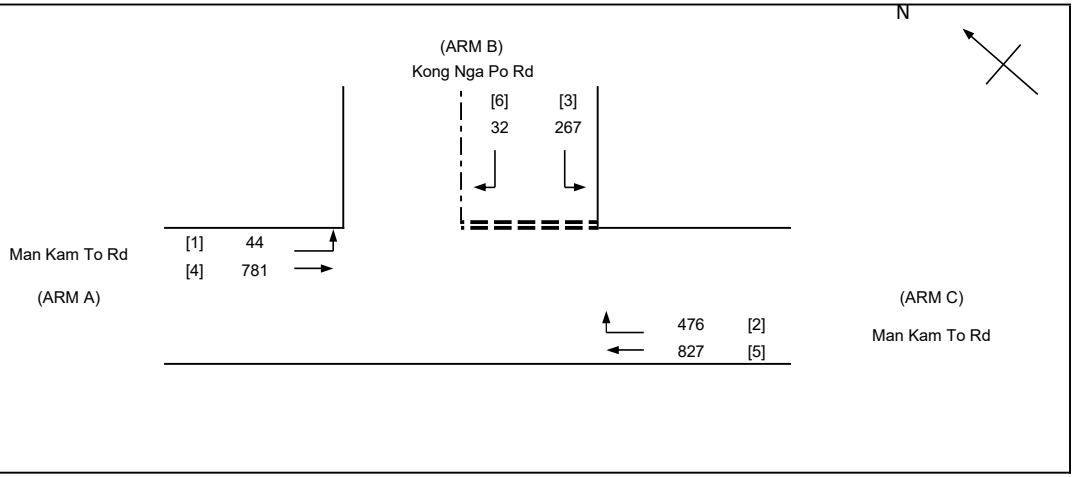
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Design - AM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		410	63	163
Qc	=	Circulating flow across entry (pcu/h)		22	177	128
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1409	1317	1264
DFC	=	Design flow/Capacity = Q/Qe		0.29	0.05	0.13

TOTAL FLOW = 963 (pcu/hr)
CRITICAL DFC = 0.29

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Design - AM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	44	(pcu/hr)
q a-c	=	781	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	827	(pcu/hr)
q c-b	=	476	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	32	(pcu/hr)
q b-c	=	267	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.893

THE CAPACITY OF MOVEMENT :

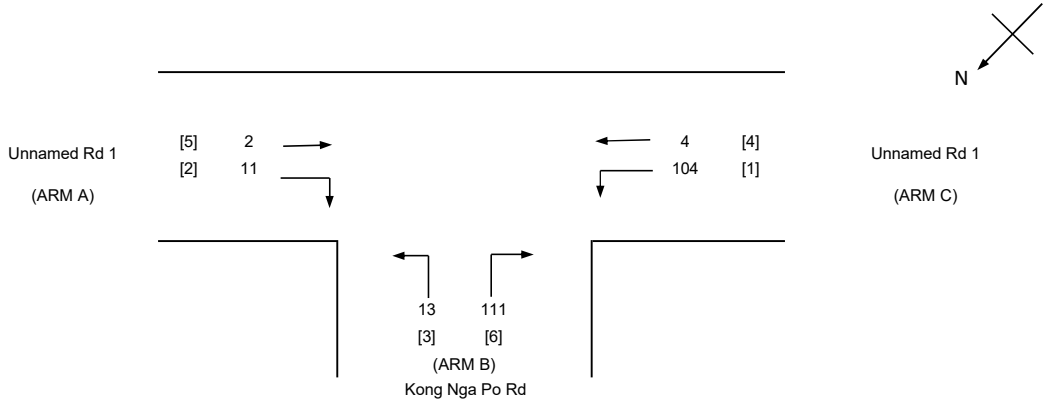
Q b-a	=	258	(pcu/hr)
Q b-c	=	480	(pcu/hr)
Q c-b	=	565	(pcu/hr)
Q b-ac	=	440	(pcu/hr)
TOTAL FLOW	=	2427	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.1240
DFC b-c	=	0.5563
DFC c-b	=	0.8425
DFC b-ac (Share Lane)	=	0.6803

CRITICAL DFC = 0.84

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn A - Unnamed Rd 1 / Kong Nga Po Rd	2028 Design - PM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	8.0	(metres)
W cr	=	0	(metres)
q a-b	=	11	(pcu/hr)
q a-c	=	2	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	3.4	(metres)
Vr c-b	=	24.8	(metres)
q c-a	=	4	(pcu/hr)
q c-b	=	104	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.6	(metres)
W b-c	=	2.5	(metres)
Vl b-a	=	25.4	(metres)
Vr b-a	=	47.3	(metres)
Vr b-c	=	47.3	(metres)
q b-a	=	13	(pcu/hr)
q b-c	=	111	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.779
E	=	0.834
F	=	0.895
Y	=	0.724
F for (Qb-ac)	=	0.895

THE CAPACITY OF MOVEMENT :

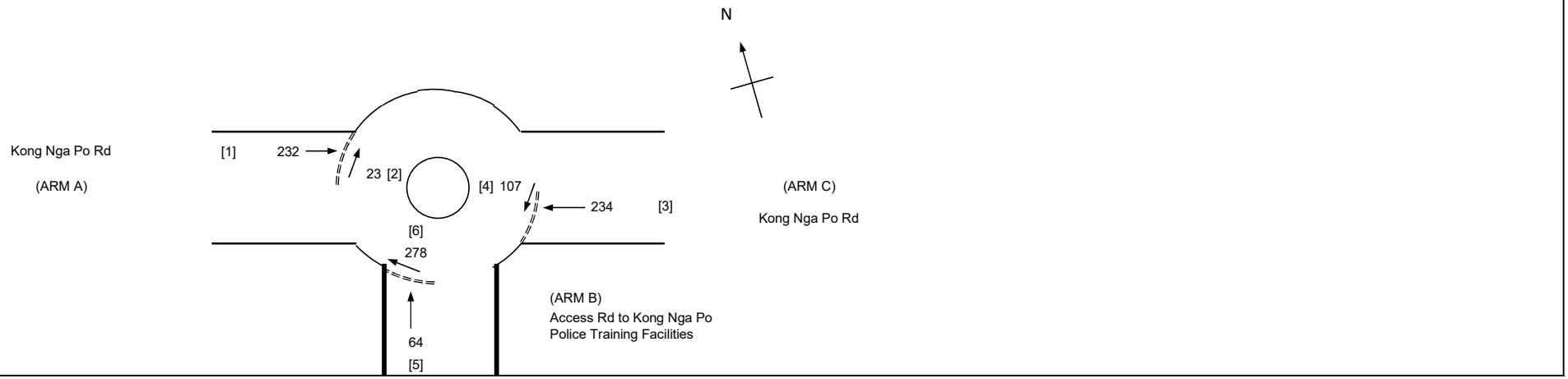
Q b-a	=	456	(pcu/hr)
Q b-c	=	620	(pcu/hr)
Q c-b	=	663	(pcu/hr)
Q b-ac	=	597	(pcu/hr)
Q c-a	=	1518	(pcu/hr)
TOTAL FLOW	=	245	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0285
DFC b-c	=	0.1790
DFC c-b	=	0.1569
DFC b-ac	=	0.2075
(Share Lane)		
DFC c-a	=	0.0026

CRITICAL DFC = 0.21

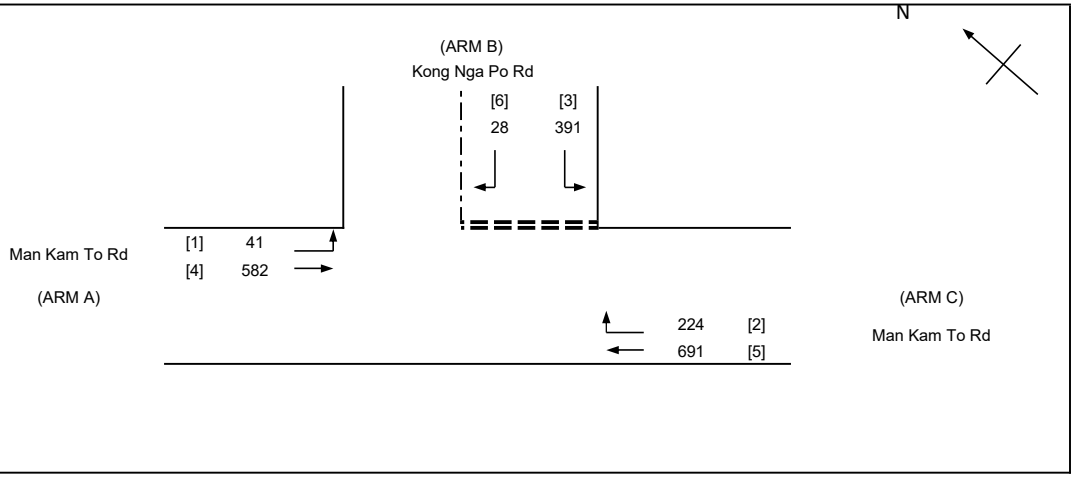
8FM CONSULTANCY LIMITED	ROUNDABOUT JUNCTION ANALYSIS			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn B - Kong Nga Po Rd / Access Rd to Kong Nga Po Police Training Facilities	2028 Design - PM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



GEOMETRIC DETAILS:			**ARM**	**A**	**B**	**C**
V	=	Approach half width (m)		3.7	4.1	3.9
E	=	Entry width (m)		7.3	5.9	5.5
L	=	Effective length of flare (m)		4.0	3.7	4.9
R	=	Entry radius (m)		25.1	18.5	12.3
D	=	Inscribed circle diameter (m)		13.4	13.4	13.4
A	=	Entry angle (degree)		31.0	34.0	37.0
Q	=	Entry flow (pcu/h)		232	64	234
Qc	=	Circulating flow across entry (pcu/h)		23	278	107
OUTPUT PARAMETERS:						
S	=	Sharpness of flare = 1.6(E-V)/L		1.42	0.77	0.52
K	=	1-0.00347(A-30)-0.978(1/R-0.05)		1.01	0.98	0.95
X2	=	V + ((E-V)/(1+2S))		4.66	4.78	4.67
M	=	EXP((D-60)/10)		0.01	0.01	0.01
F	=	303*X2		1413	1450	1415
Td	=	1+(0.5/(1+M))		1.50	1.50	1.50
Fc	=	0.21*Td(1+0.2*X2)		0.61	0.61	0.61
Qe	=	K(F-Fc*Qc)		1408	1256	1276
DFC	=	Design flow/Capacity = Q/Qe		0.16	0.05	0.18

TOTAL FLOW = 938 (pcu/hr)
CRITICAL DFC = 0.18

8FM CONSULTANCY LIMITED	PRIORITY JUNCTION CALCULATION			INITIALS	DATE
Traffic Impact Assessment for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Various Lo			Prepared By:	FF	Sep-2025
Jn C - Man Kam To Rd / Kong Nga Po Rd	2028 Design - PM Peak	Project No.: 80115	Checked By:	MM	Sep-2025
			Reviewed By:	FM	Sep-2025



NOTES : (GEOMETRIC INPUT DATA)

W	=	MAJOR ROAD WIDTH
W cr	=	CENTRAL RESERVE WIDTH
W b-a	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-a
W b-c	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM b-c
W c-b	=	LANE WIDTH AVAILABLE TO VEHICLE WAITING IN STREAM c-b
Vl b-a	=	VISIBILITY TO THE LEFT FOR VEHICLES WAITING IN STREAM b-a
Vr b-a	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-a
Vr b-c	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM b-c
Vr c-b	=	VISIBILITY TO THE RIGHT FOR VEHICLES WAITING IN STREAM c-b
D	=	STREAM-SPECIFIC B-A
E	=	STREAM-SPECIFIC B-C
F	=	STREAM-SPECIFIC C-B
Y	=	(1-0.0345W)

GEOMETRIC DETAILS:

MAJOR ROAD (ARM A)

W	=	14.0	(metres)
W cr	=	5.9	(metres)
q a-b	=	41	(pcu/hr)
q a-c	=	582	(pcu/hr)

MAJOR ROAD (ARM C)

W c-b	=	4.0	(metres)
Vr c-b	=	40	(metres)
q c-a	=	691	(pcu/hr)
q c-b	=	224	(pcu/hr)

MINOR ROAD (ARM B)

W b-a	=	2.3	(metres)
W b-c	=	2.3	(metres)
Vl b-a	=	80	(metres)
Vr b-a	=	35.8	(metres)
Vr b-c	=	35.8	(metres)
q b-a	=	28	(pcu/hr)
q b-c	=	391	(pcu/hr)

GEOMETRIC FACTORS :

D	=	0.773
E	=	0.807
F	=	0.959
Y	=	0.517
F for (Qb-ac)	=	0.933

THE CAPACITY OF MOVEMENT :

Q b-a	=	352	(pcu/hr)
Q b-c	=	510	(pcu/hr)
Q c-b	=	602	(pcu/hr)
Q b-ac	=	495	(pcu/hr)
TOTAL FLOW	=	1957	(pcu/hr)

COMPARISION OF DESIGN FLOW TO CAPACITY:

DFC b-a	=	0.0795
DFC b-c	=	0.7667
DFC c-b	=	0.3721
DFC b-ac (Share Lane)	=	0.8462

CRITICAL DFC = 0.85

毅勤發展顧問有限公司
Tel 電話：[redacted]
Fax 傳真：
Email 電郵：
Web 網址：

Date : 14th October, 2025
Our Ref. : ADCL/PLG-10315/L004

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

By Email

Dear Sir/Madam,

Re: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(Planning Application No. A/NE-FTA/264)

We refer to the departmental comments received from the Drainage Services Department and Environmental Protection Department regarding the subject application and would like to provide a *Responses-to-Comments Table and Revised Drainage Proposal with Drainage Impact Assessment* to address the abovementioned departmental comments and facilitate considerations by the Board.

Thank you for your kind attention and should you have any queries, please do not hesitate to contact our Mr. Thomas LUK at [redacted].

Yours faithfully,
For and on behalf of
Aikon Development Consultancy Limited

Thomas LUK

Encl.
c.c. Client

Address 地址：
[redacted]

Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Department	Date	Comments	Responses to Departmental Comments
Environmental Protection Department	15.8.2025	1. It is noted from the plans that septic tanks are located within the site. Please clarify whether toilets will be provided within the site and provide information on the associated sewage treatment facility.	It is clarified that stormwater storage tanks are reserved for drainage purposes. During operation of the proposed use, the major source of wastewater will be sewage from toilet generated by staff. Portable toilets would be provided within the application site and licensed collectors will be employed by the applicant to collect and dispose of sewage regularly.

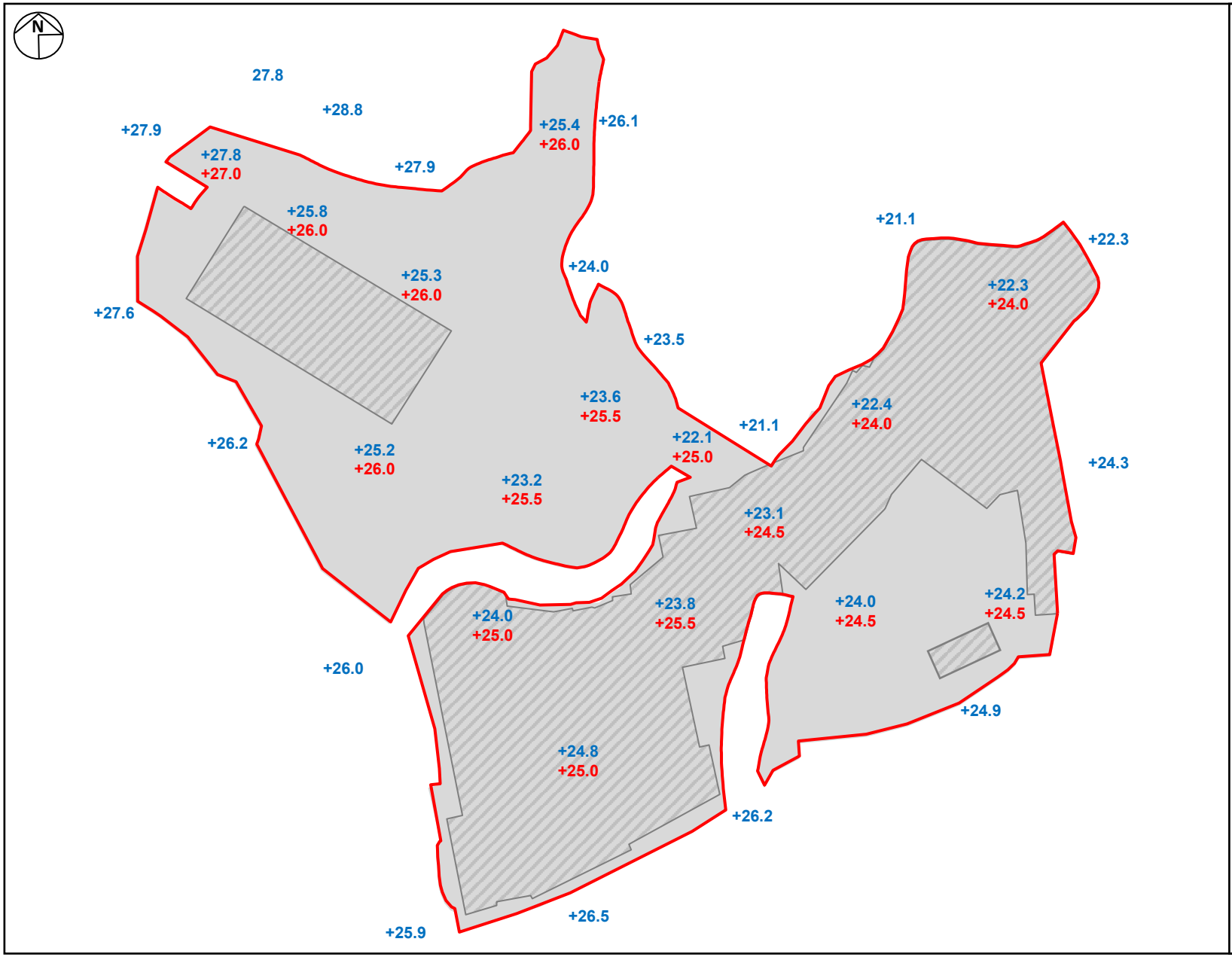
Department	Date	Comments	Responses to Departmental Comments
Drainage Services Department	15.8.2025	a) The application site is large scale in terms of site area, the proposal involves substantial filling works and the existing watercourse within the application site. With consideration of the above-mentioned, the application site is considered as a complicated site and the applicant should submit a Drainage Impact Assessment (DIA) referring to DSD Advice Note No.1 rather than drainage proposal.	Noted. A Drainage Impact Assessment (DIA) has been conducted and attached in the drainage proposal (Appendix E refers).
		b) The DIA shall demonstrate that there would be adequate resources of the applicant to ensure capacity of streamcourse/drainage facilities and flooding susceptibility of the adjoining areas would not be adversely affected by the proposed development and to avoid the site from being eroded and flooded. The applicant is required to assess whether the downstream for drainage connection would have sufficient capacity to receive stormwater runoff. Flood mitigation measures proposed in the DIA and other storm-water drainage facilities should be provided and maintained by the applicant to the satisfaction of this Division.	The downstream capacity is assessed in the DIA. The result showed the downstream has sufficient capacity to receive the natural stormwater runoff and the discharge from the proposed development.
		c) As the existing stream course traversing the application site is crucial to the drainage condition of the region, it should be maintained at all time. The applicant shall be required to place all the proposed works including landfilling works at least 3m away from the top of the banks of existing streamcourse, and all the proposed works in the vicinity of existing streamcourse should not	Noted. Min. 3m away from the top of the banks of existing stream course are reserved for all proposed works. Construction waste will be properly handled to ensure waste materials or sediment enters the watercourse, thereby preventing any adverse drainage impacts during or after construction.

Department	Date	Comments	Responses to Departmental Comments
		create any adverse drainage impacts, both during and after construction.	
		d) Planning Statement Paragraph 4.1.4 and Illustration refer. The existing streamcourse should be aligned by the filling materials, rectification and improvement works should be planned to resume the hydraulic performance of the streamcourse.	The existing streamcourse has a cross-sectional flow area of 0.581m^2. The proposed improvement works provide a box culvert of with 10.5m^2 cross section flow area. This will significantly enhance the hydraulic capacity, improve flow efficiency, and reduce flood risk, thereby resuming and substantially upgrading the hydraulic performance of the drainage system.
		e) Filling plan of the Subject Site under the Drainage Proposal refers. Please advise whether substantial landfilling degrades or analyses the implication to the existing streamcourse and adjoining catchment areas. No land filling on site shall be allowed until the flood mitigation measures have been implemented to the satisfaction of DSD.	It is clarified that no substantial landfilling is involved in the current application. While it is stated that the depth of landfilling will not exceed 3m, it should be noted that the site level of the application site is significantly lower than the adjoining road. The proposed landfilling aims to align the site with road level to prevent flooding (**Illustration 2** refers). In generally, site levels within the application are proposed to be raised by about 1 to 1.5 m to create a flat surface for the proposed use. The proposed levels will maintain a gradual decrease from the southwest to the northeast, and it is anticipated that rainwater will continue to flow from this direction to the river without significant changes. Please refer to **Figure 4** of the Planning Statement. The drainage impact assessment also evaluates the drainage impact at proposed filling level and shows no adverse drainage impact.

Department	Date	Comments	Responses to Departmental Comments
		f) Effective catchment area under the drainage proposal refers. Please advise to delineate the catchment areas. The ground level of area to the west and south of the existing streamcourse is generally higher; therefore, the application site should be studied when assessment to the existing streamcourse traversing the application site is made. Please review the calculations accordingly.	The catchment is delineated according to the geological condition around the site. And further segmented according to different drainage branches. The calculation and the drainage alignment is reviewed and revised.
		g) In view of the scale of development, please evaluate and devise temporary drainage measures to mitigate potential drainage impacts to the adjoining areas during the construction process.	A temporary stormwater drainage system will be installed for the duration of the construction works. Additionally, water pumps will be deployed as needed to enhance drainage capacity and manage surface runoff effectively across the site.
		h) Photos should be submitted clearly showing the current conditions of the area around the site, the existing drainage/flowpaths around the site, the proposed drainage from the site to the downstream drainage watercourses and the existing watercourse at about 20m intervals. The locations of the camera and the direction of each photo should also be indicated on a plan.	Additional photos are supplemented in the proposal. (please refer to Appendix A)
		i) The applicant shall take all precautionary measures to prevent any disturbance, damage, and pollution from the development to any parts of the existing drainage facilities and existing watercourses within the development area. In the event of any damage to the existing drainage facilities and watercourse, the applicant shall be held responsible for the cost of any	Noted.

Department	Date	Comments	Responses to Departmental Comments
		necessary repair works, compensation, and any other consequences arising from this.	
		j) The applicant should be reminded to minimize the possible adverse environmental impacts on the existing watercourse in his design and during construction. DEP and DAFC should be consulted on possible environmental and/or ecological impacts of the development.	Noted.
		k) The proposed drainage works, whether within or outside the site boundary, should be constructed and maintained properly by the applicant and rectify the system if it is found to be inadequate or ineffective during operation at his/her own expense.	Noted.
		l) For works to be undertaken outside the lot boundary, the applicant should obtain prior consent and agreement from DLO/N and/or relevant private lot owners.	Noted.
		m) The applicant shall allow all time free access for the Government and its agent to conduct site inspection on his completed drainage works.	Noted.
		n) The applicant and the successive lot owners shall allow connections from the adjacent lots to the completed drainage works on Government Land when so required.	Noted.
		o) The site is in an area where no public sewerage connection is available. EPD should be consulted	Noted.

Department	Date	Comments	Responses to Departmental Comments
		regarding the sewage treatment/disposal facilities for the proposed development.	



LEGEND:

- Application Site
- Filling of Land (Depth: not more than 3m) (about 16,604m²)
- Existing Paved Area (about 7,448m²)
- +22.3 Existing Level (about)
- +24.0 Proposed Level (about)

(For Identification Only)

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Proposed Land Filling

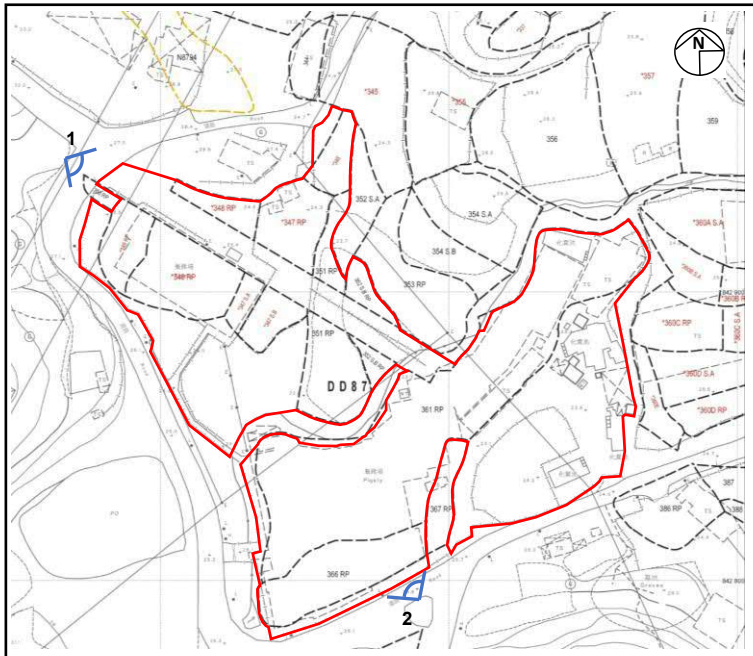
Ref.: ADCL/PLG-10315-R001/F004

Figure:
4

Scale:
Not to Scale

Date:
Jun 2025

AIKON DEVELOPMENT CONSULTANCY LTD.



LEGEND:

The Application Site

Viewpoint

(For Identification Only)

1



Site level of adjoining road: +27.9mPD
Existing Level at the Application Site: +25.8mPD
Proposed Level at the Application Site: +26.0mPD

2



Site level of adjoining road: +26.5mPD
Existing Level at the Application Site: +24.8mPD
Proposed Level at the Application Site: +25.0mPD

Project:
Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities and Associated Filling of Land for a Period of 3 Years at Various Lots in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Title:
Existing Condition of the Application Site

Ref.: ADCL/PLG-10315-R001/I002

Illustration:
2

Scale:
N.A.

Date:
Oct 2025

AIKON DEVELOPMENT CONSULTANCY LTD.

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Submission of Stormwater Drainage Proposal

	Comment from DSD	Responses
a)	Figures/Tables in the text should be labeled for ease of reference.	Noted. Tables and figures in the proposal are revised.
b)	For Section 2.5, please advise if the existing ponds form part of the proposed drainage networks.	The pond does not for part of the proposed drainage network. The water flow received from the lot will only be discharged to the existing stream as labelled in the proposal.
c)	Please elaborate on the purpose of discussing Tai Po Kau water level.	The water level is irrelevant to the drainage calculation and the proposal. The text is revised and the table for water level is removed.
d)	Existing streams are not legible in the figure.	The figure is revised.
e)	The concrete pipe linking the existing stream is not found in the drawings.	The drawings are revised to show the concrete chamber.
f)	For drawing WNG/25086/C/DRA/003 1. Please indicate how the CP1, CP2, CP3, CP9 are connected to the downstream system. 2. Please also show the drainage features inside and outside the subject site. 3. Please advise why branches 9 and 10 are discharging to a septic tank.	1. The detailed section of the connection is added in WNG/25086/C/DRA/001 2. All drainage features are showed in the drawing (drainage branches, septic tank and existing stream. 3. Since there are no drainage features nearby, and connecting solely to branch 8 will result to a significant increase of surface channel depth. It is proposed to connect to nearby septic tank as stormwater storage tank, an overflow pipe is installed to discharge the stored water gradually for attenuating the peak flow through the downstream stormwater drainage systems during heavy rainstorms.
g)	Appendix C -Design calculation of u-channel 1. Please advise if the % of utility has included the 10% allowance. 2. Please review the manning's n coefficient by making reference to the latest SDM.	1. The 10% allowance is considered in the calculation, it is shown in the “allowance (reduction %)” column. 2. The coefficient is clarified in the calculation. (n =0.016 assume bad condition)

	3. Please clarify how "avg depth" is calculated.	3. Avg. depth is the difference in level of upstream ground level and downstream invert level.
h)	Appendix C - Downstream Capacity Checking - Please indicate outlet (section AA) in drawing DRA/003. - Please indicate concrete pipe in drawing DRA/003. - Please show the upstream catchments of the outlet, and how does that compared to the effective catchments shown in DRA/002. - Please justify the use of water level obtained from Ginfo for a capacity assessment under a design scenario of 50 yrs return period.	Downstream capacity is checked by Infowork. The original hand calculation is removed from the proposal.

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

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Drainage Proposal

2nd Submission

Prepared by: Matthew Poon
Date: 13/10/2025

Wings & Associates Consulting Engineers Ltd.
22/F, Elite Centre,
22 Hung To Road,
Kwun Tong, Kowloon
Hong Kong

CONTENTS

1. INTRODUCTION
2. SITE DESCRIPTION
3 DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE
4. CONCLUSION

APPENDICE

Appendix A Photo Record
Appendix B Topography Survey Record
Appendix C Drainage Design Calculation
Appendix D Design Drawings
Appendix E Drainage Impact Assessment

1. INTRODUCTION

The drainage proposal is under the application of Section 16 Planning Application. The proposed uses of the subject lots are temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities for a period of 3 years at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories.

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

2. SITE DESCRIPTION

2.1 The general views of the application area can be referred to in the figures below. The combined parts of the lot cover an area of about 16,604m^2.

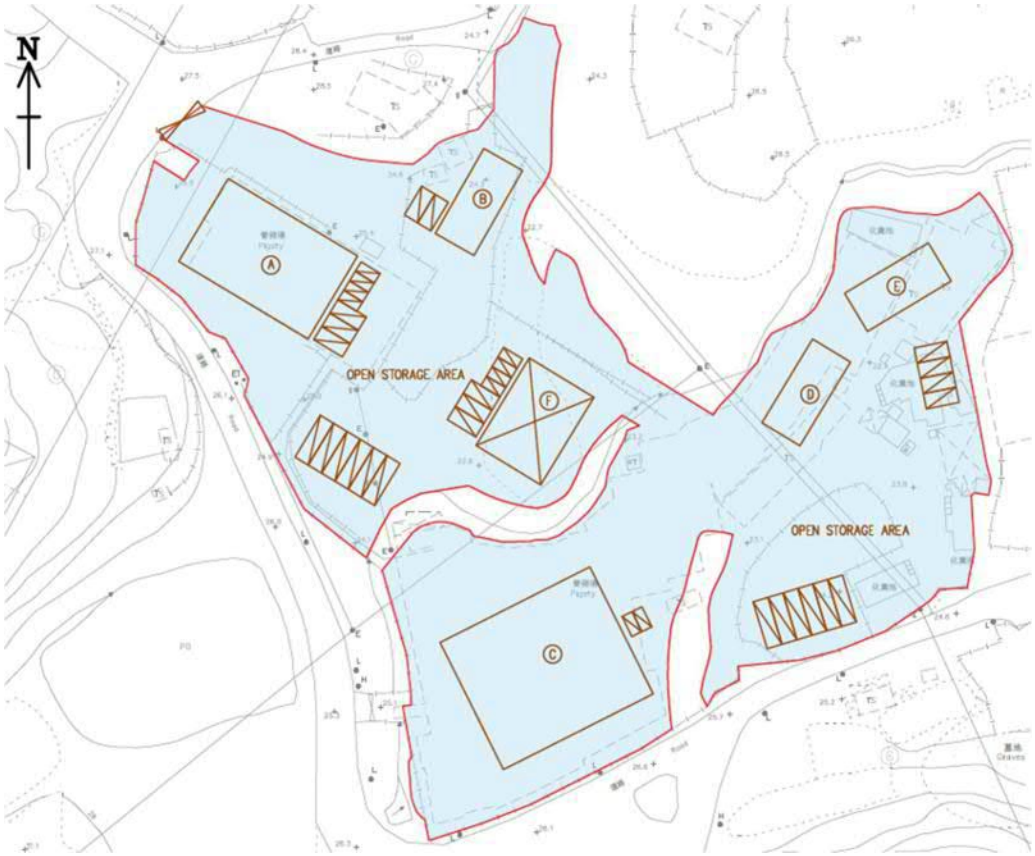


Figure-1 Lot information of the Subject Site

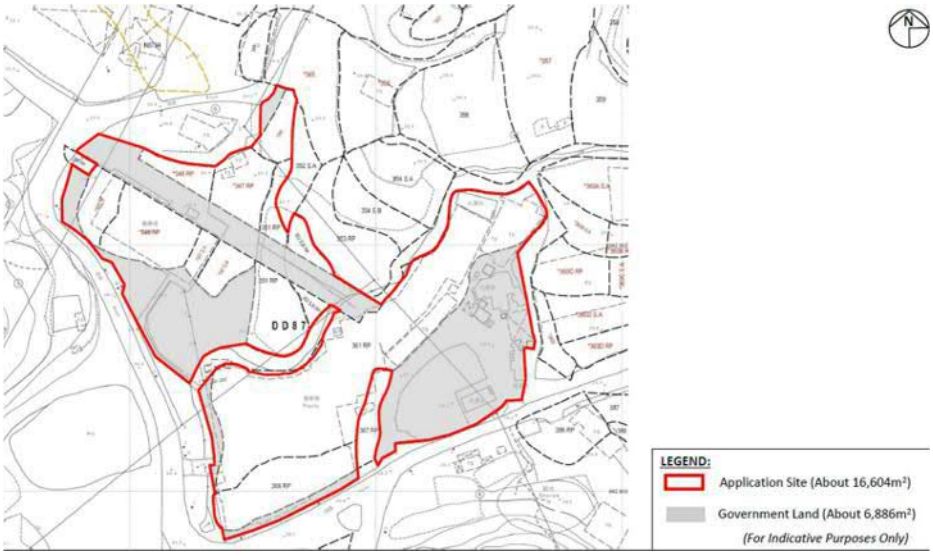


Figure-2 Boundary of the Subject Site surrounded by fencing

2.3 The figure below shows the proposed layout of the structures and parking provision within the boundary of the fencing. The subject site consists of six single-storey temporary structures, including 5 nos. of enclosed structures and 1 open-sided structure. No permanent structures and buildings will be placed within the subject site, the flow direction will not be affected by any blockage. All proposed structures will be placed 3m away from the existing stream course.

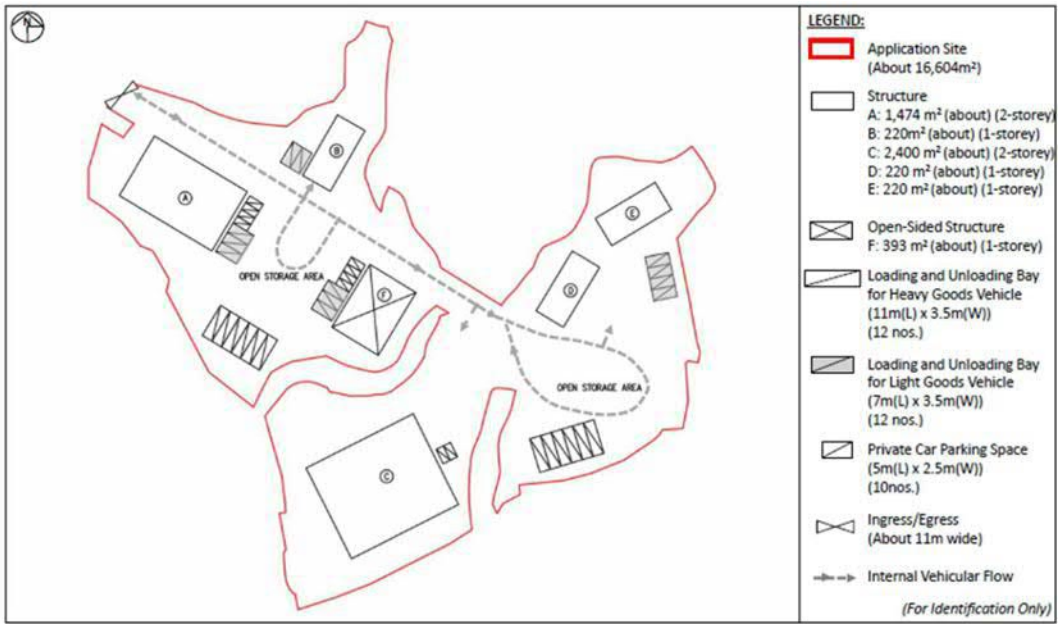


Figure-3 Location of the structures and parking areas inside the Subject Site

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

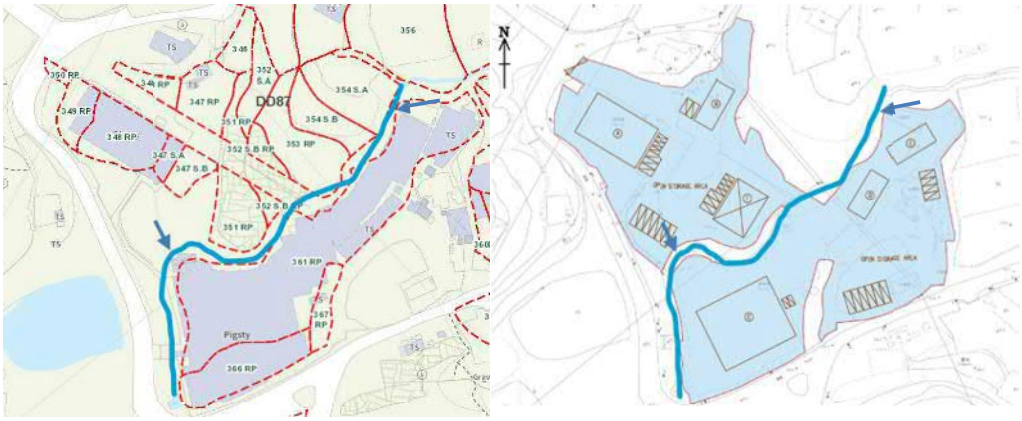


Figure-4 Existing drainage features inside the Subject Site

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

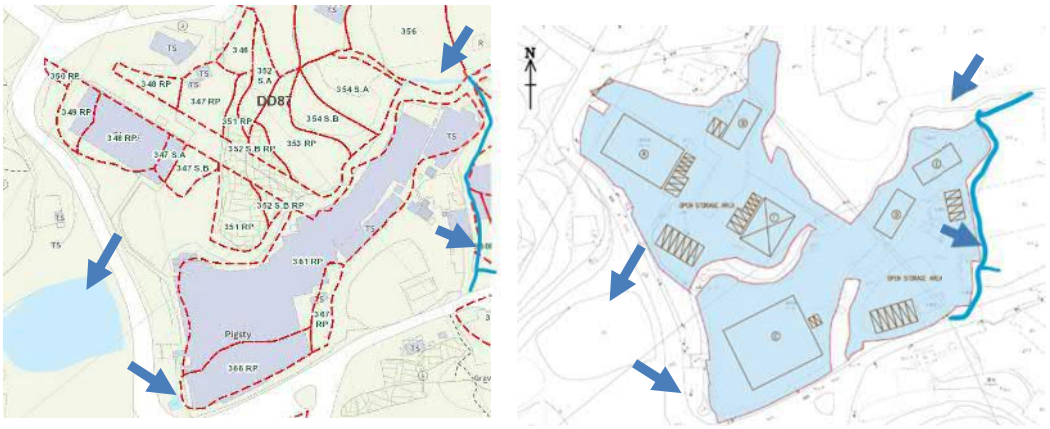


Figure-5 Existing drainage features outside the Subject Site

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

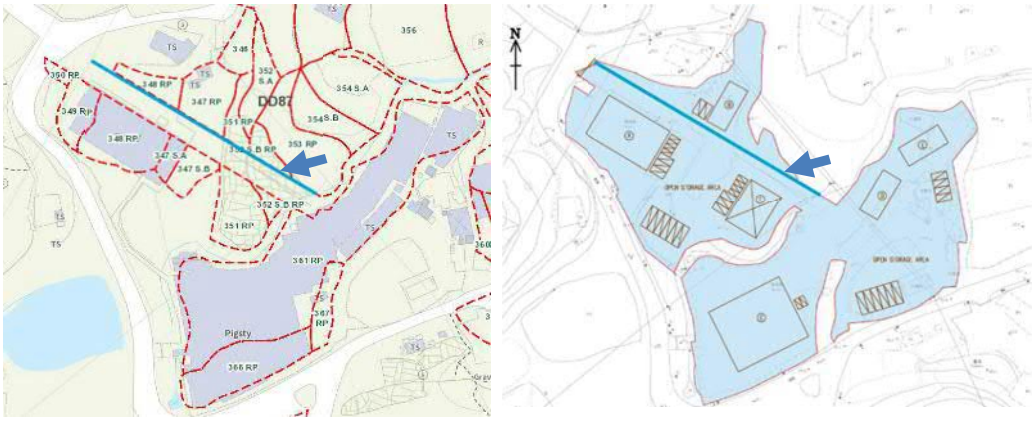


Figure-6 Existing U-Channels inside the Subject Site

3. DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE

3.1 General Planning

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

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

3.2 Identification of the Effective Catchment Area

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

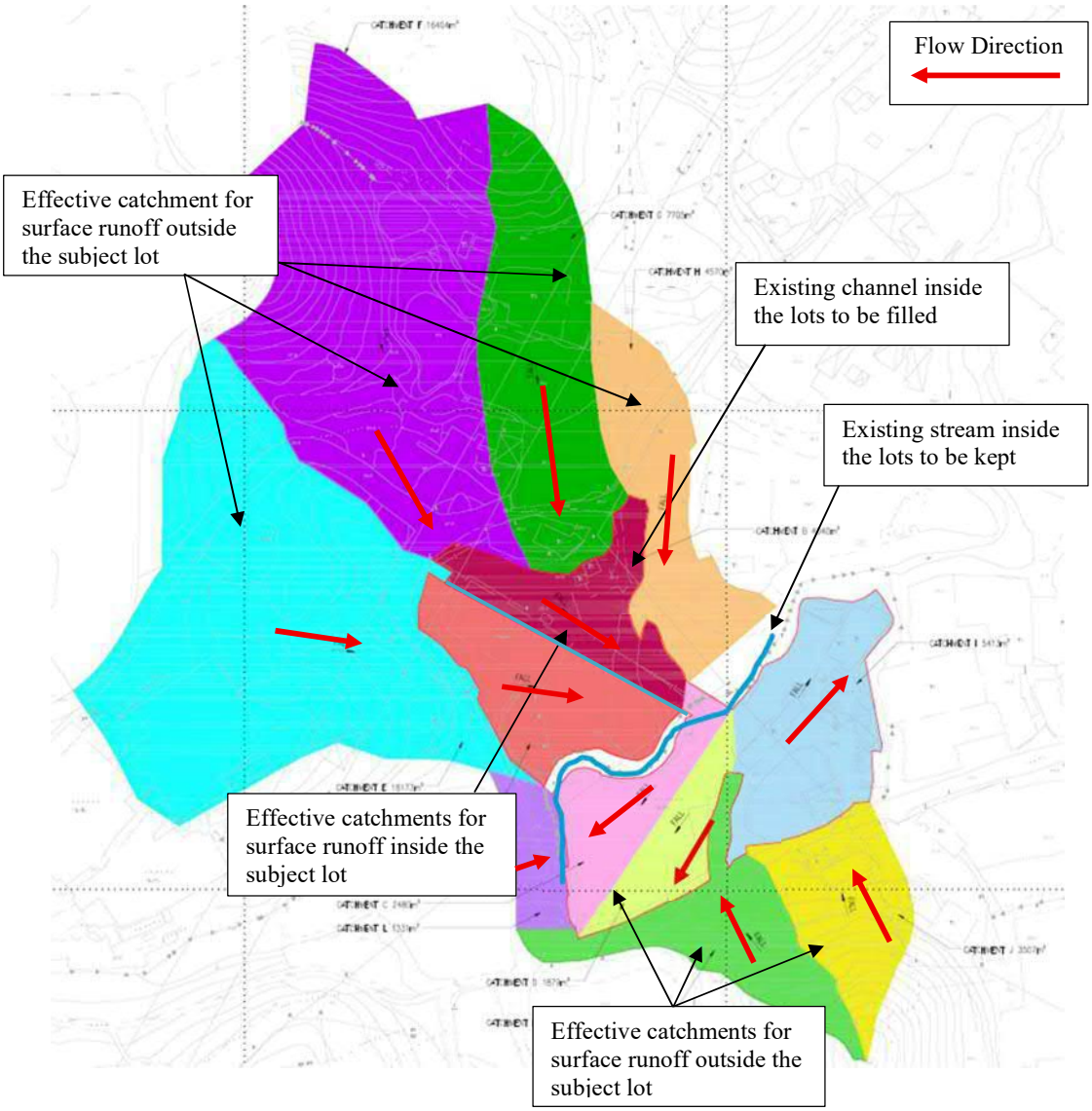


Figure-7 Flow Direction of the Effective Catchment Area inside the Subject Site

3.3 Studying on the Existing Drainage System

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

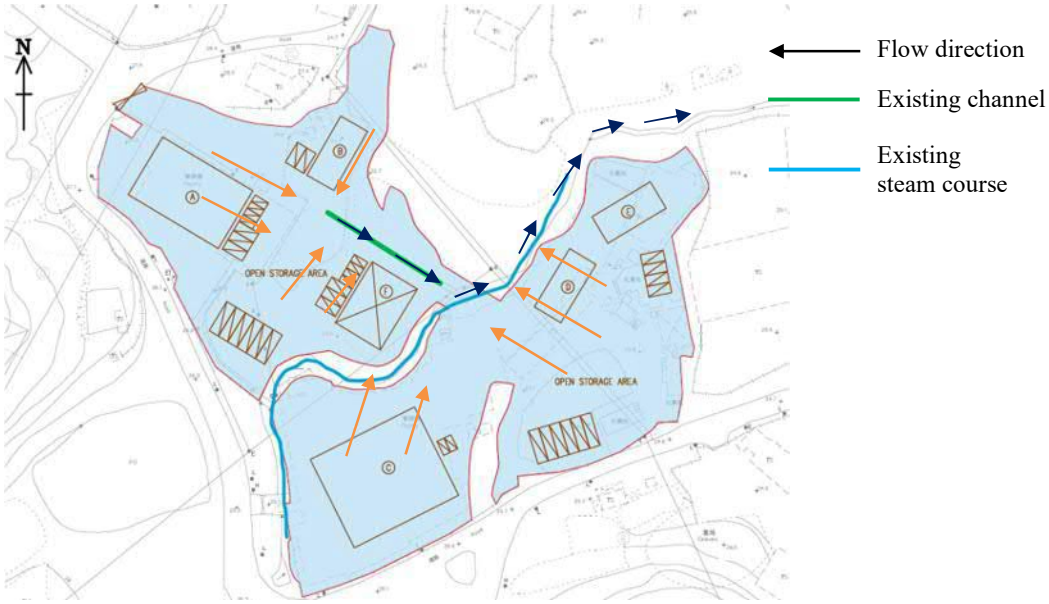


Figure-8 Original drainage network inside the Subject Site

3.4 Filling the subject site to rearrange cover level

The area inside the lots will be completely filled up to create a flat surface with slight gradient to provide falls to drainage features and match the existing road surface outside the lot boundary. The existing channel inside the lot boundary will be removed.

The existing concrete pipe at the connection point between the northwest and southeast sections of the lot are proposed to be replaced with a new 3m(W) x 3.5m(H) concrete box culvert. Connecting the upstream and downstream sections. The design checking for the concrete pipe can be found in **Appendix C**.

The ground level is proposed to be raised to a level between +24.0mPD and +27.0mPD for feasible traffic flow and heavy vehicle access. The cover level at the boundary will be between +24.0mPD and +27.0mPD. The details of the cover levels and the flow direction of the surface runoff can be referred to the drawings and the figure below.

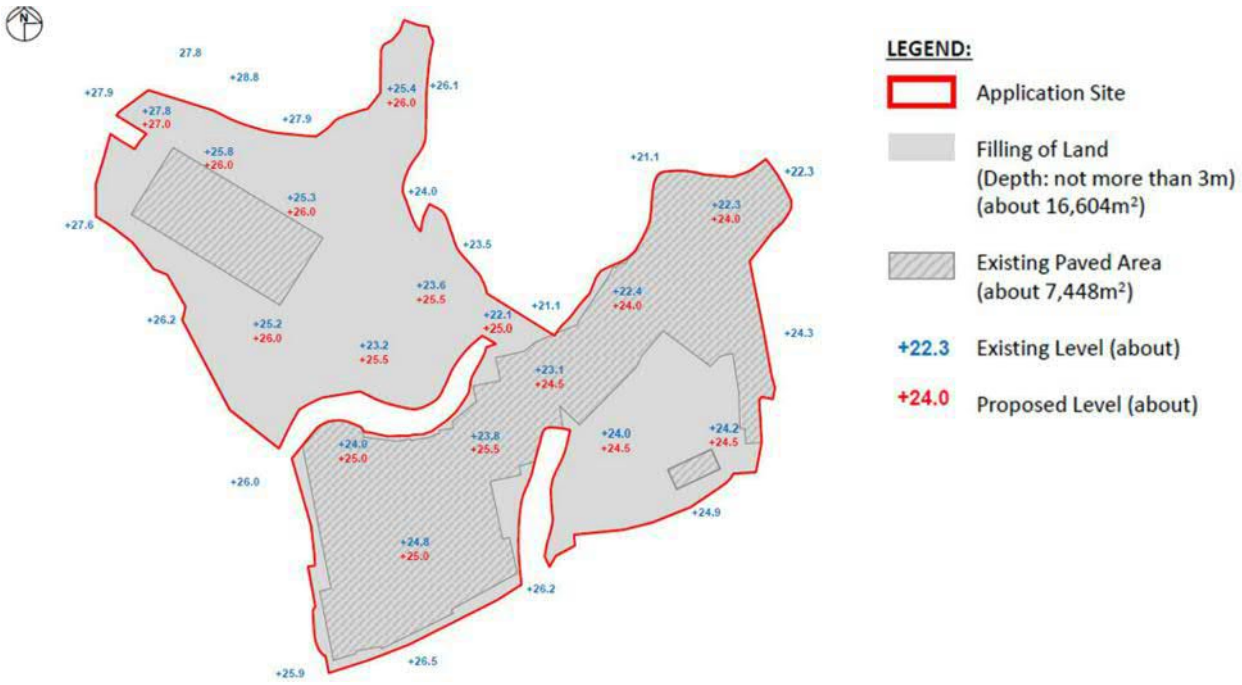


Figure-9 Filling plan of the Subject Site

3.5 Proposed Flow Direction and Drainage System

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

3.6 Design of Channels and Catchpits

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

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

3.7 Discharge Point

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

3.8 DIA from InfoWorks model

The subject lot is modeled using InfoWorks for the detail analysis of Drainage Impact Assessment (DIA). The details of the model can be found in Appendic E. The model simulates stormwater flow under various rainfall scenarios to verify that the proposed drainage system is adequate and that the development does not exacerbate flood risk for the subject site or the surrounding downstream areas.

Rainfall Data: The model utilized the Hong Kong Rainfall and Runoff (HKRR) data, specifically the 50-year return period storm events, as stipulated in the Stormwater Drainage Manual. The temporal patterns of these design storms were applied to simulate peak rainfall intensity and duration.

Proposed Drainage System: The layout, dimensions, slopes, and materials of all proposed drainage elements—including all catchpits and septic tank (for water storage purpose)—were input into the model to accurately represent their hydraulic capacity.

The analysis of the model outputs for the 50-year storm events yielded the following conclusive results:

- **No Adverse Hydraulic Impact:** The model confirms that the proposed development, in conjunction with the new drainage infrastructure, **does not create any adverse hydraulic impact** on the downstream drainage system or the existing stream.
- **System Capacity:** The proposed network of surface channels demonstrated **sufficient hydraulic capacity** to convey the stormwater runoff generated from the developed site and the contributing upland catchment during a 50-year storm event. Water levels within all proposed channels remained within their freeboard limits.
- **Peak Discharge Management:** The model demonstrated that the peak discharge rate from the site under the post-development scenario for the 50-year storm is **controlled and does not exceed** the pre-development peak discharge rate for the same storm event. This is achieved through the efficient conveyance of the proposed system and the maintenance of natural flow paths.
- **Flood Risk Assessment:** The model results show **no occurrence of flooding or surcharge** within the subject site or the adjacent public areas during the 50-year storm.

4. CONCLUSIONS

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

4.2 The stormwater and surface runoff in the effective catchment area will be discharged to the existing drainage system outside the subject lot area (existing river, culverts, and surface channels). The discharge has been incorporated into the checking of drainage capacity of the existing drainage system (design calculation refers to **Appendix C**)

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

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

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

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

4.7 The development will not have any adverse impact on the drainage in the surrounding area. The construction and development within the subject lot will not alter the flow direction of surface runoff. There will be no increased risk of flooding, and the capacity of existing drainage utilities will not be exceeded.

4.8 The DIA showed the drainage system for the proposed development will not increase the risk of flooding in the nearby areas and the existing river has sufficient downstream capacity to receive the runoff and discharge from our proposed development.

END OF TEXT

APPENDIX A

Photo Record

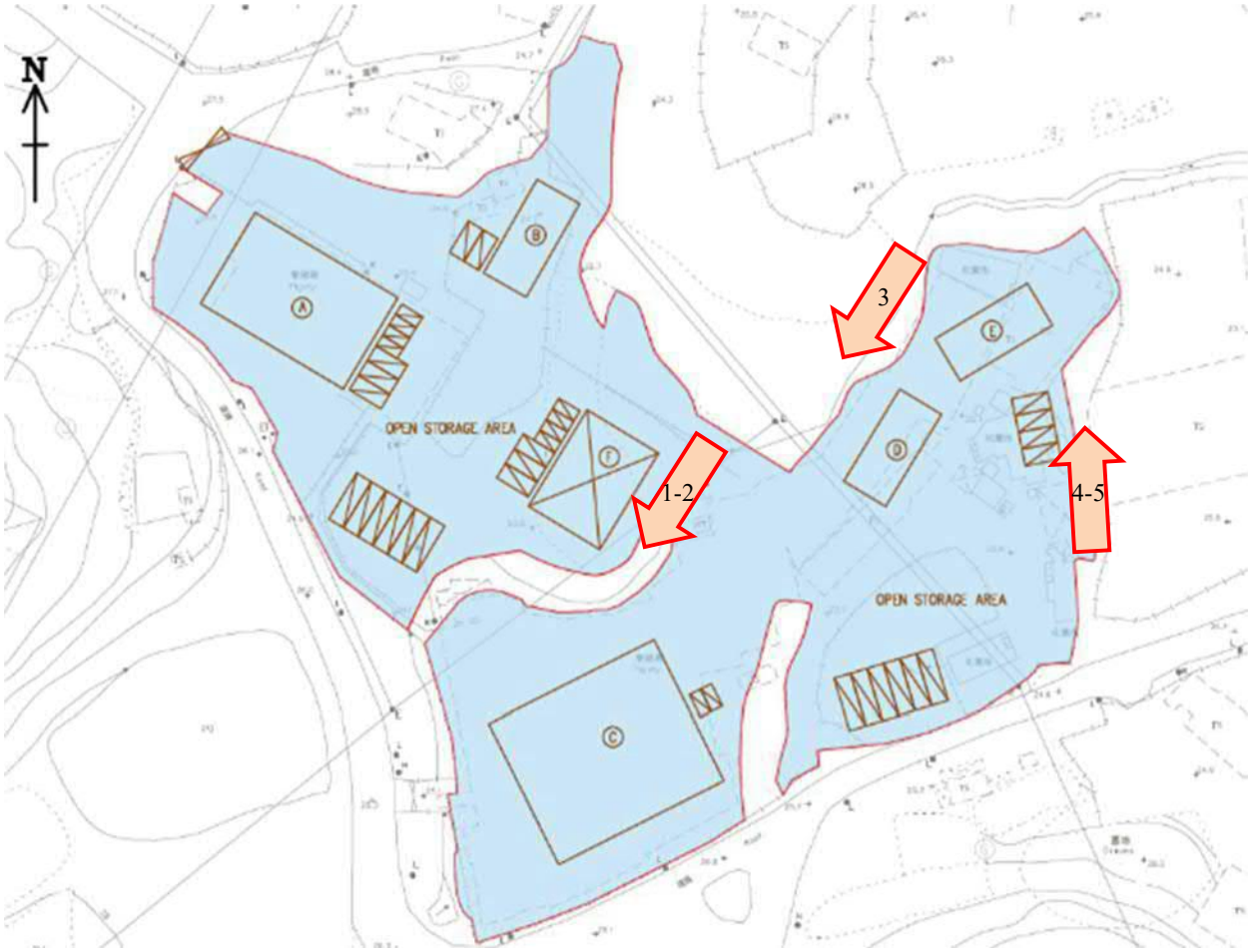


Photo No. 1



Photo No. 2



Photo No. 3



Photo No. 4



Photo No. 5



Additional photos





Photo Ref.: 1



Photo Ref.:2

KONG NGA PO ROAD



Photo Ref.: 3



Photo Ref.:4



Photo Ref.: 5



Photo Ref.:6



Photo Ref.: 7



Photo Ref.:8



Photo Ref.: 9



Photo Ref.:10



Photo Ref.: 11



Photo Ref.:12



Photo Ref.: 13



Photo Ref.:14



Photo Ref.: 15



Photo Ref.:16



Photo Ref.: 17



Photo Ref.:18



Photo Ref.: 19



Photo Ref.:20



Photo Ref.: 21



Photo Ref.:22



Photo Ref.: 23



Photo Ref.:24



Photo Ref.: 25



Photo Ref.:26



Photo Ref.: 27



Photo Ref.:28



Photo Ref.: 29



Photo Ref.:30



Photo Ref.: 31



Photo Ref.:32



Photo Ref.: 33



Photo Ref.:34



Photo Ref.: 35



Photo Ref.:36



Photo Ref.: 37



Photo Ref.:38



Photo Ref.: 39



Photo Ref.:40



Photo Ref.: 41



Photo Ref.:42



Photo Ref.: 43



Photo Ref.:44



Photo Ref.: 45



Photo Ref.:46



Photo Ref.: 47



Photo Ref.:48



Photo Ref.: 49



Photo Ref.:50



Photo Ref.: 51



Photo Ref.: 52



Photo Ref.: 53



Photo Ref.: 54



Photo Ref.: 55



Photo Ref.: 56



Photo Ref.: 57



Photo Ref.: 58



Photo Ref.: 59



Photo Ref.: 60



Photo Ref.: 61



Photo Ref.: 62



Photo Ref.: 63



Photo Ref.: 64



Photo Ref.: 65



Photo Ref.: 66



Photo Ref.: 67



Photo Ref.: 68



Photo Ref.: 69



Photo Ref.: 70



Photo Ref.: 71



Photo Ref.: 72



Photo Ref.: 73



Photo Ref.: 74



Photo Ref.: 75



Photo Ref.: 76



Photo Ref.: 77



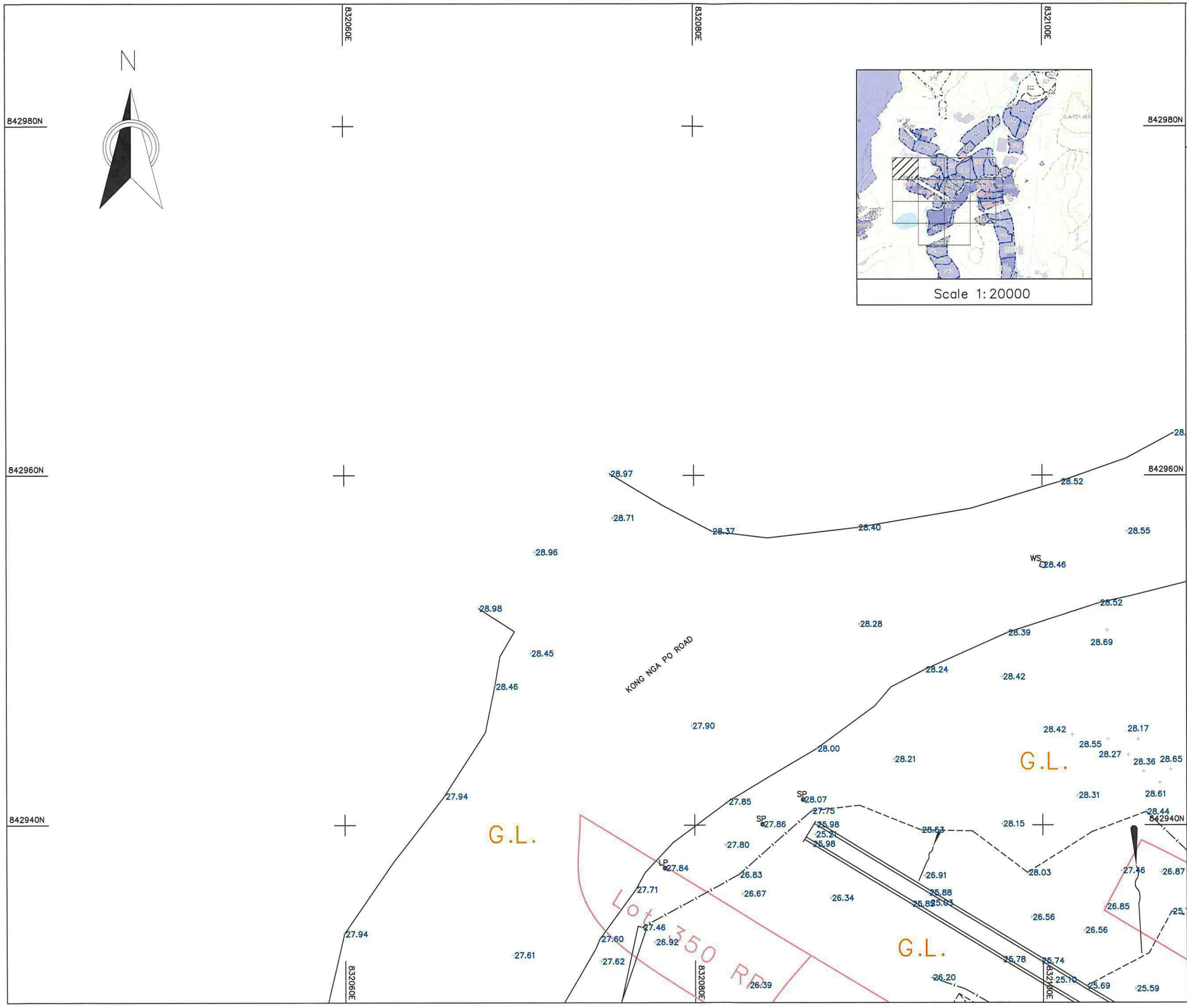
Photo Ref.: 78



Photo Ref.: 79

APPENDIX B

Topography Survey Record



Notes :

1. All levels are in meters referenced to Hong Kong principal datum (HKPD).
2. All levels are in meters referenced to Hong Kong metric grid (HK1980).
3. All spot levels position are indicated by the decimal point or a cross.
4. Lot boundary is showed approximalty for reference only.

Legend :

- SUBJECT LOT BOUNDARY LINE
- ADJACENT LOT BOUNDARY LINE
- FENCE,RAILING
- PIPE
- ARTIFICIAL SLOPE
- UC CONCRETE DRAIN & CATCHPIT
- COL COLUMN
- CUL CULVERT
- TS TEMPORARY STRUCTURE
- OS OPEN-SIDED STRUCTURE
- VERTICAL MASONRY (RETAINING WALL)
- PARAPET OR WALL
- STEPS
- GULLY
- GATE
- TC HONG KONG TELECOM
- MH MANHOLE FOUL WATER
- WS WATER SERVICE
- IC INSPECTION COVER
- LP LAMP POLE
- SP SIDE POLE
- TP TELEPHONE POLE
- EP ELECTRIC POLE
- 1.23 SPOT LEVEL
- 20 CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 1 OF 14)

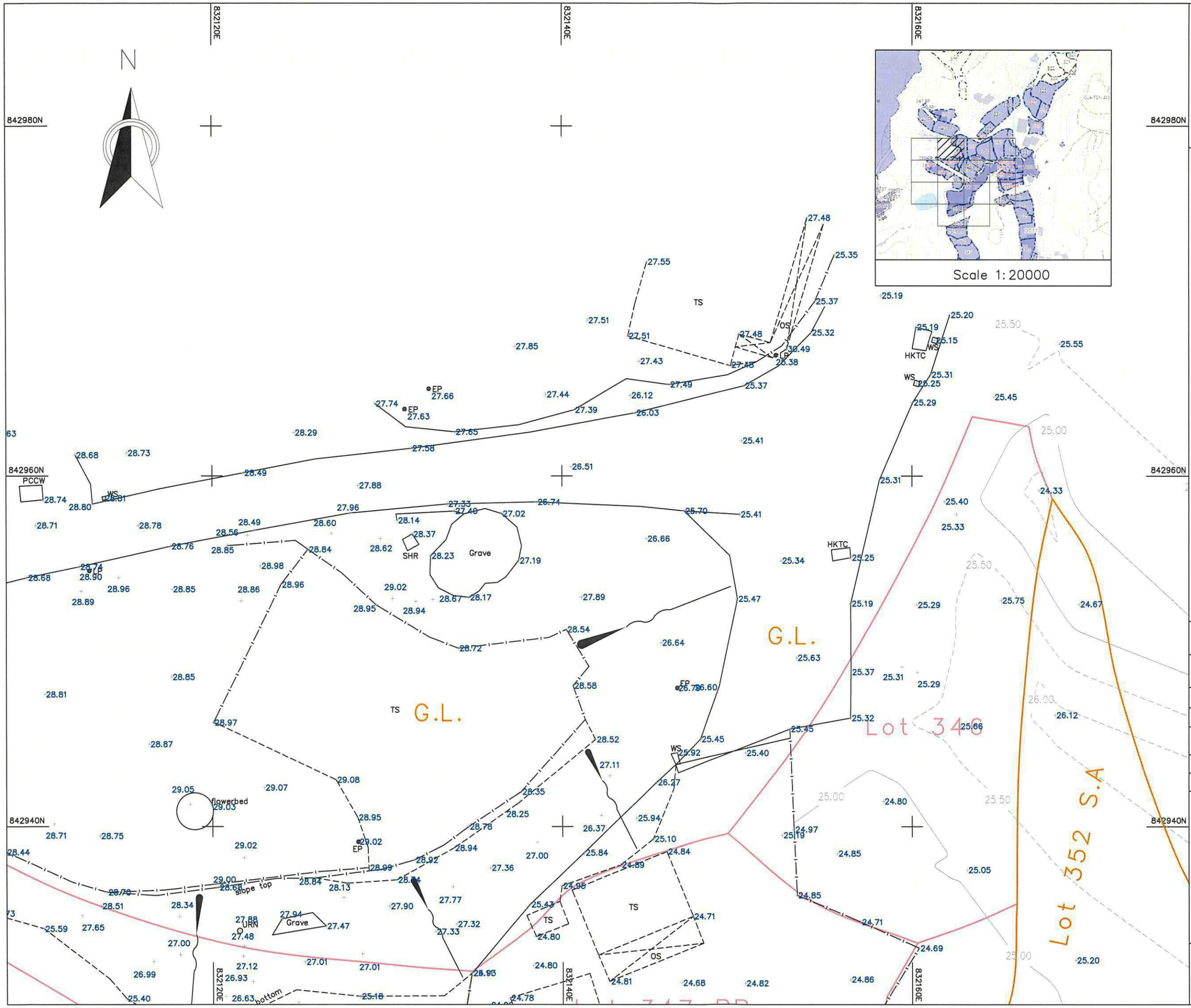
Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
Registered Professional Surveyor
(Land Surveying Division)

Tang & Au Land Surveyors Limited
Room 502, 5/F, Keader Centre,
Nos.129-149, On Lok Road,Yuen Long, N.T.
Tel.: 2652 2351 Fax: 2652 2322



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Legend :

- SUBJECT LOT BOUNDARY LINE
- ADJACENT LOT BOUNDARY LINE
- FENCE,RAILING
- PIPE
- ARTIFICIAL SLOPE
- UC CONCRETE DRAIN & CATCHPIT
- COL COLUMN
- CUL CULVERT
- TS TEMPORARY STRUCTURE
- OS OPEN-SIDED STRUCTURE
- VERTICAL MASONRY (RETAINING WALL)
- PARAPET OR WALL
- STEPS
- GULLY
- GATE
- TC HONG KONG TELECOM
- MH MANHOLE FOUL WATER
- WS WATER SERVICE
- IC INSPECTION COVER
- LP LAMP POLE
- SP SIDE POLE
- TP TELEPHONE POLE
- EP ELECTRIC POLE
- 1.23 SPOT LEVEL
- 20 CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 2 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
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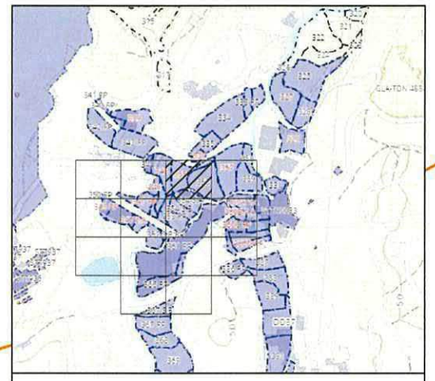
Tel.: 2652 2351 Fax: 2652 2322

832180E 832200E 832220E 832240E

842980N 842960N 842940N

N



Scale 1: 20000

Lot 356

25.00 25.50 26.00 26.50

26.75 26.07 23.80 26.10 25.90 23.06

Notes :

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 3 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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832260E

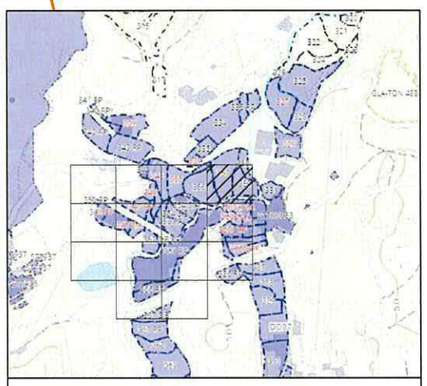
832280E

832300E

842980N

842960N

842940N



Scale 1: 20000

Lot 357

Lot 358

Lot 359

G.L.

N

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 4 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

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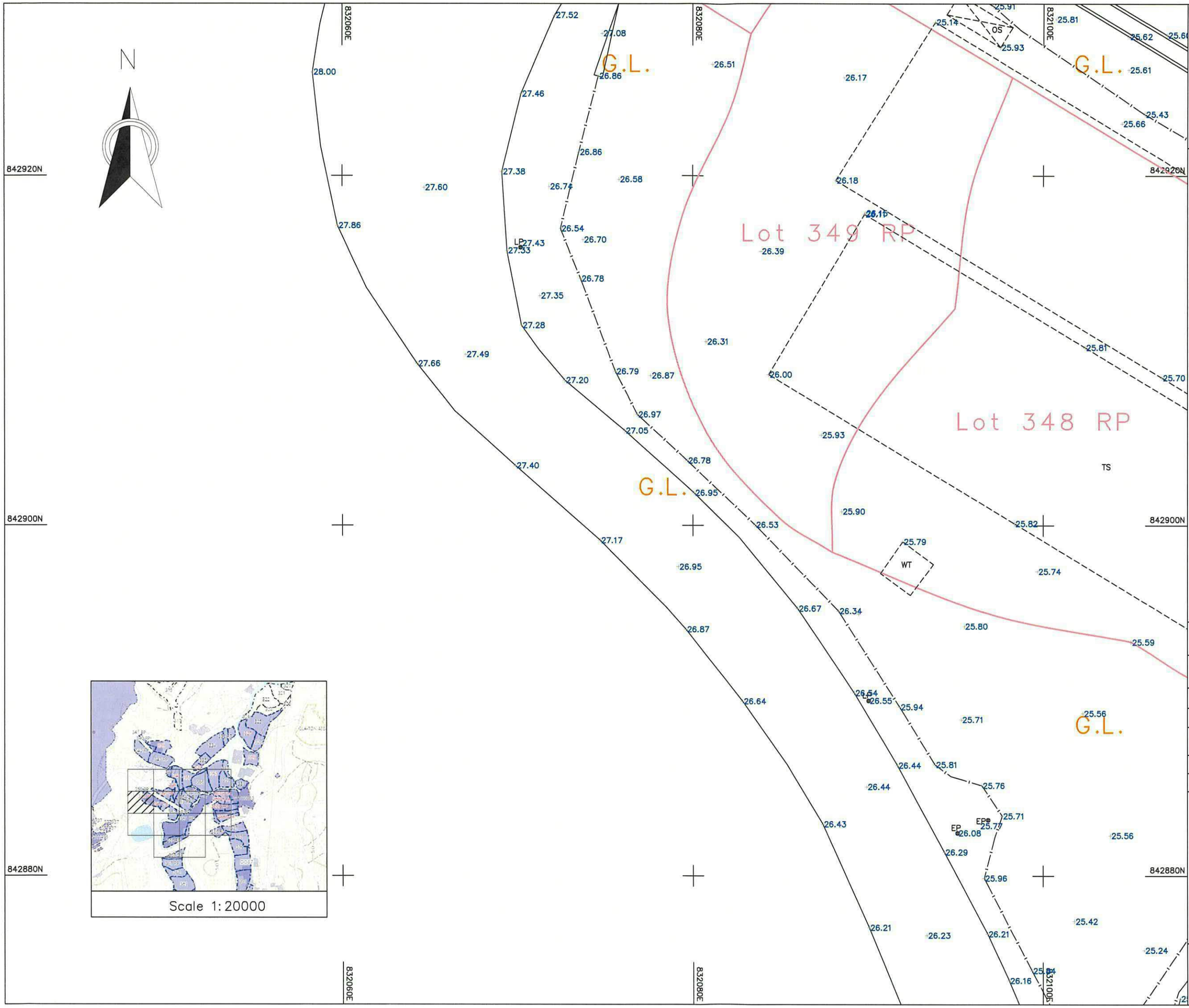

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 5 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

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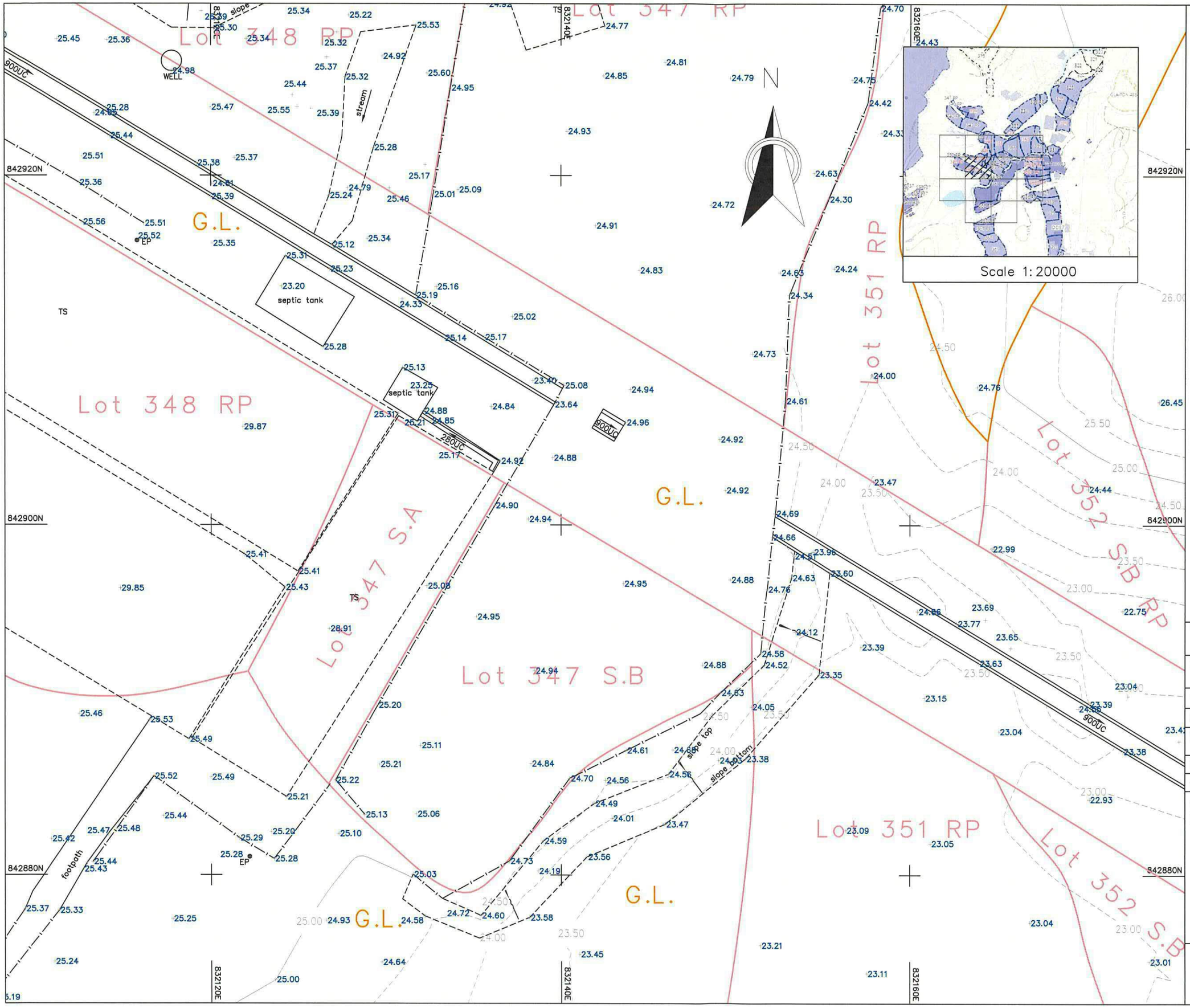

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 6 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
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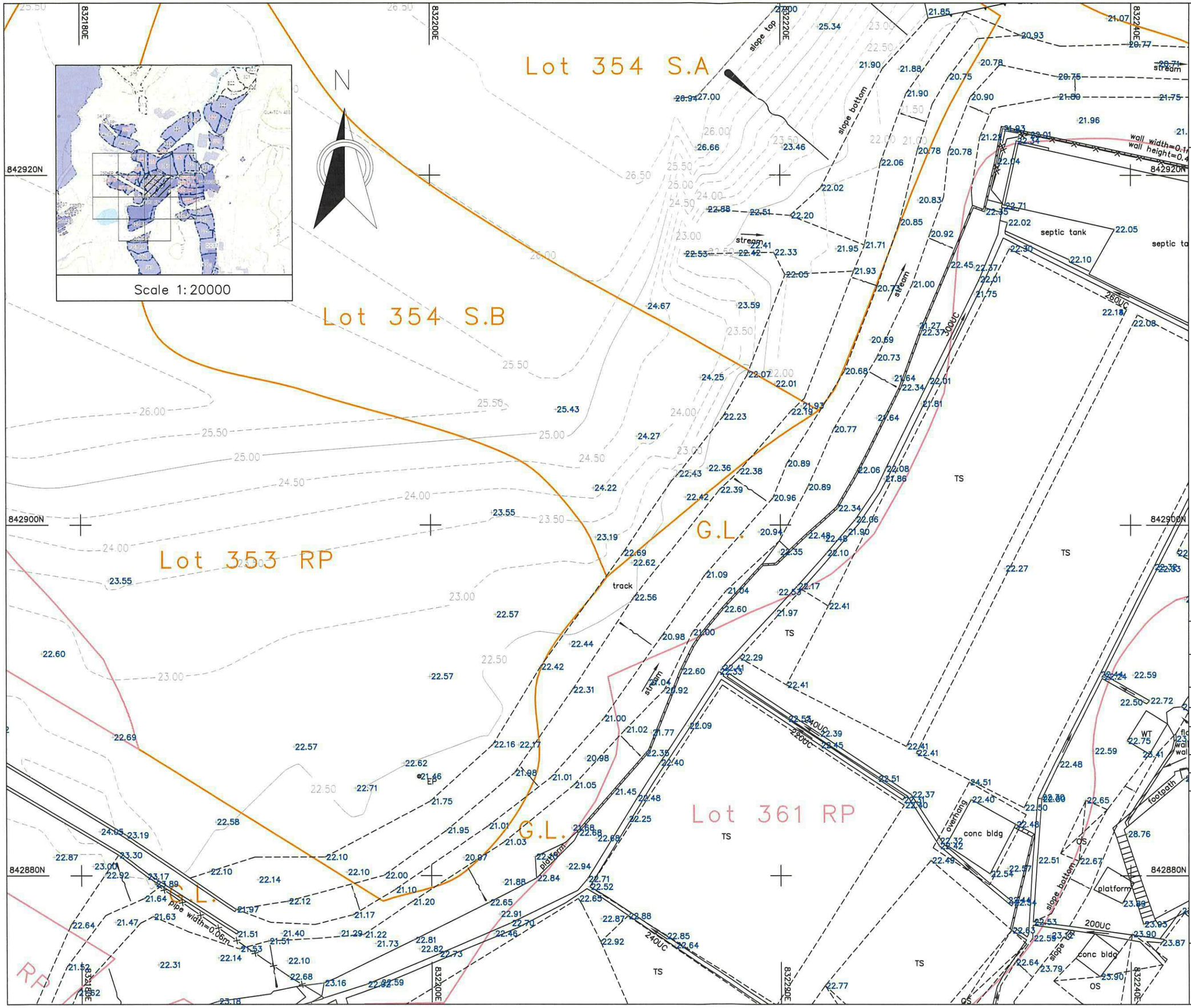

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 7 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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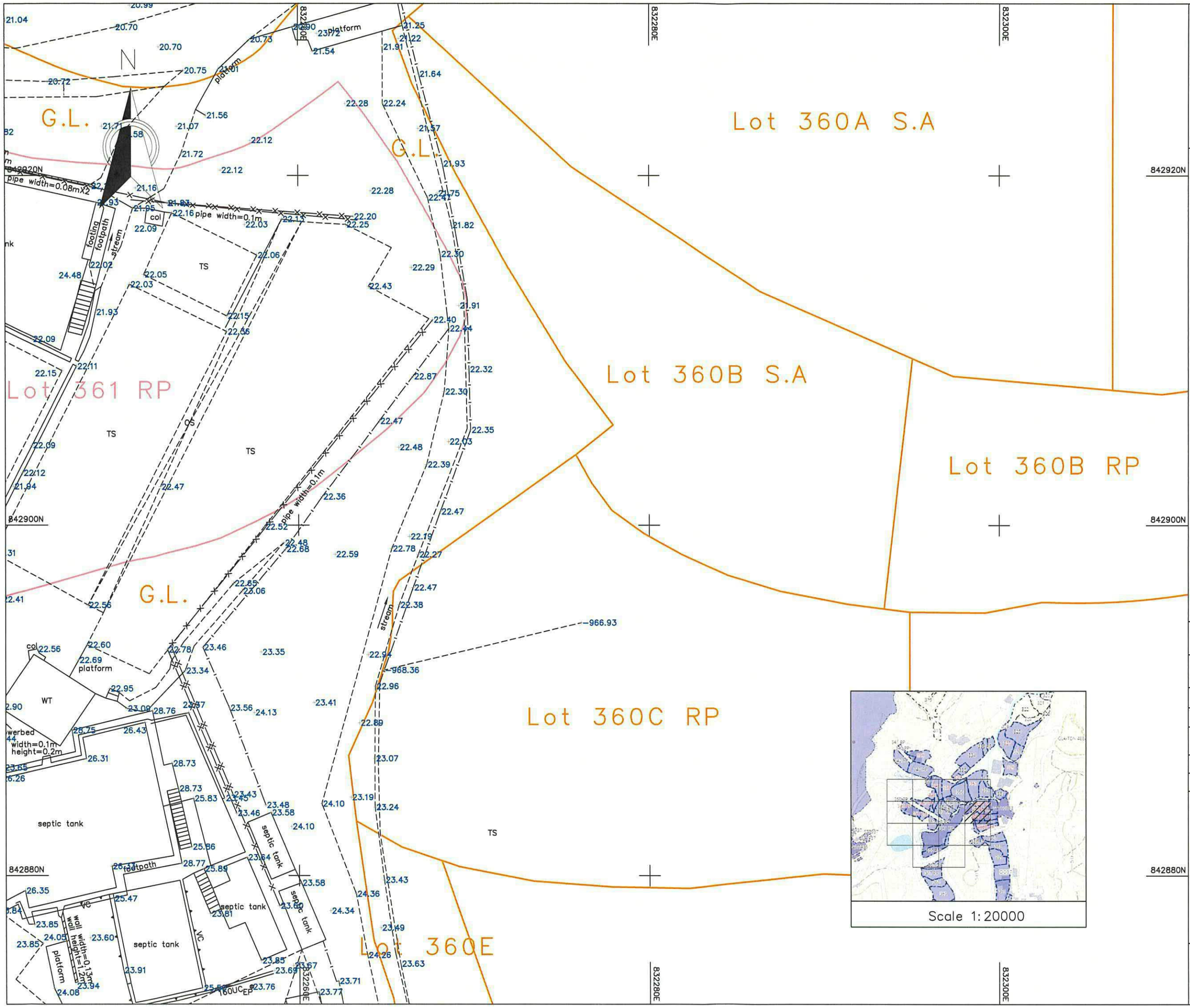

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 8 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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Tel.: 2652 2351 Fax: 2652 2322

N

832060E

832080E

832100E

842860N

842840N

842820N

25.19 25.19 25.00

26.03

26.10

25.64 25.08 24.99

25.02

25.73

25.76

26.03

25.99

26.07

25.73

25.49

26.04

26.07

25.79

25.99

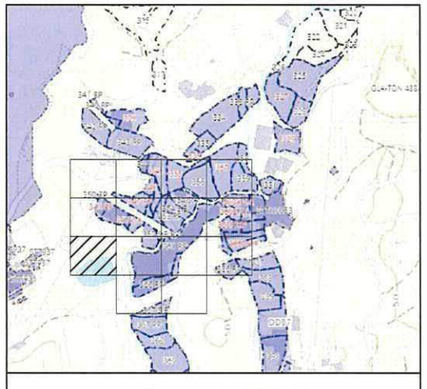
26.02

25.98

26.05

25.34

25.40



Scale 1: 20000

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- 20 — CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 9 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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Scale 1: 20000

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 10 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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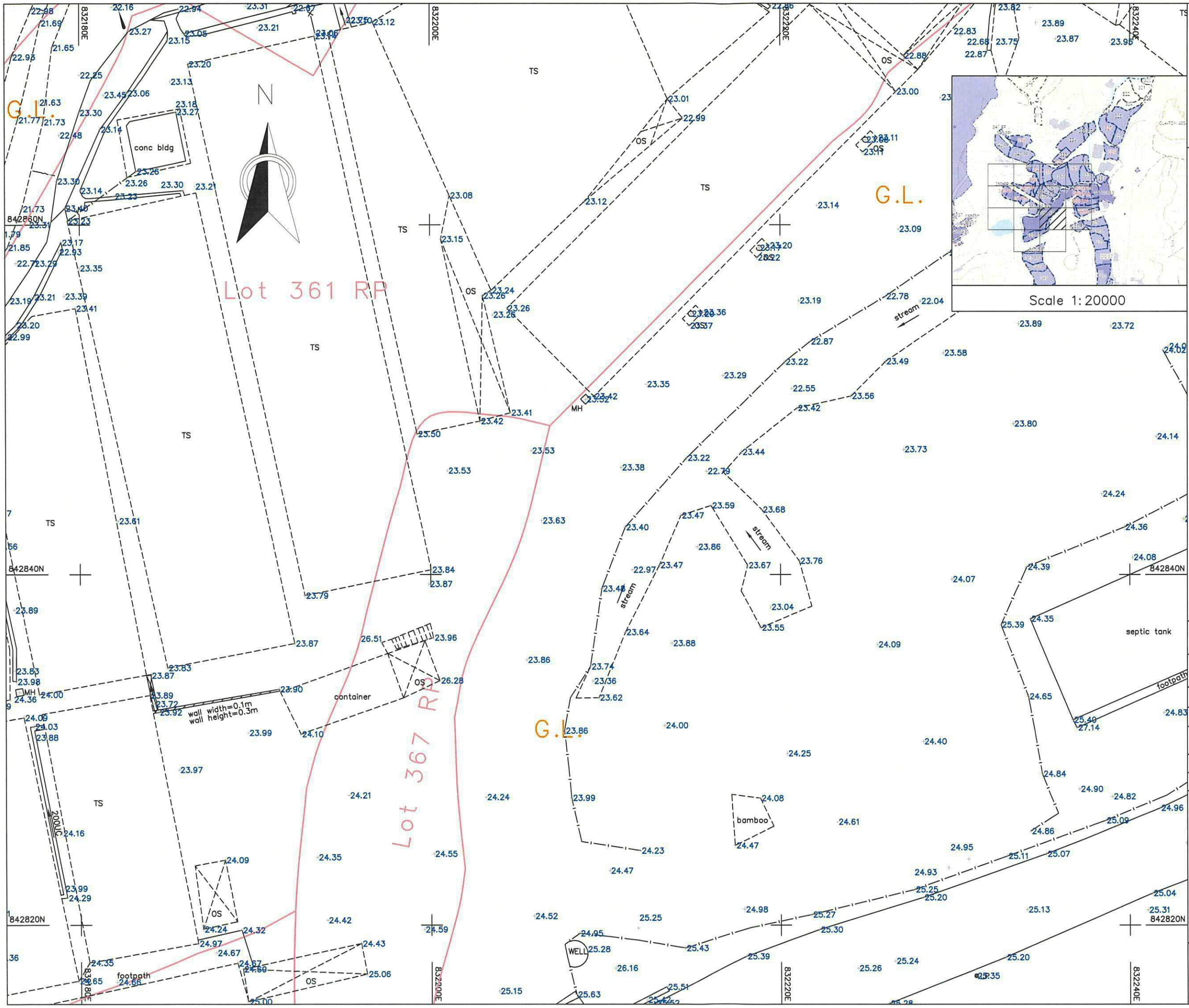

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 11 OF 14)

Scale: 1:200 (A3)

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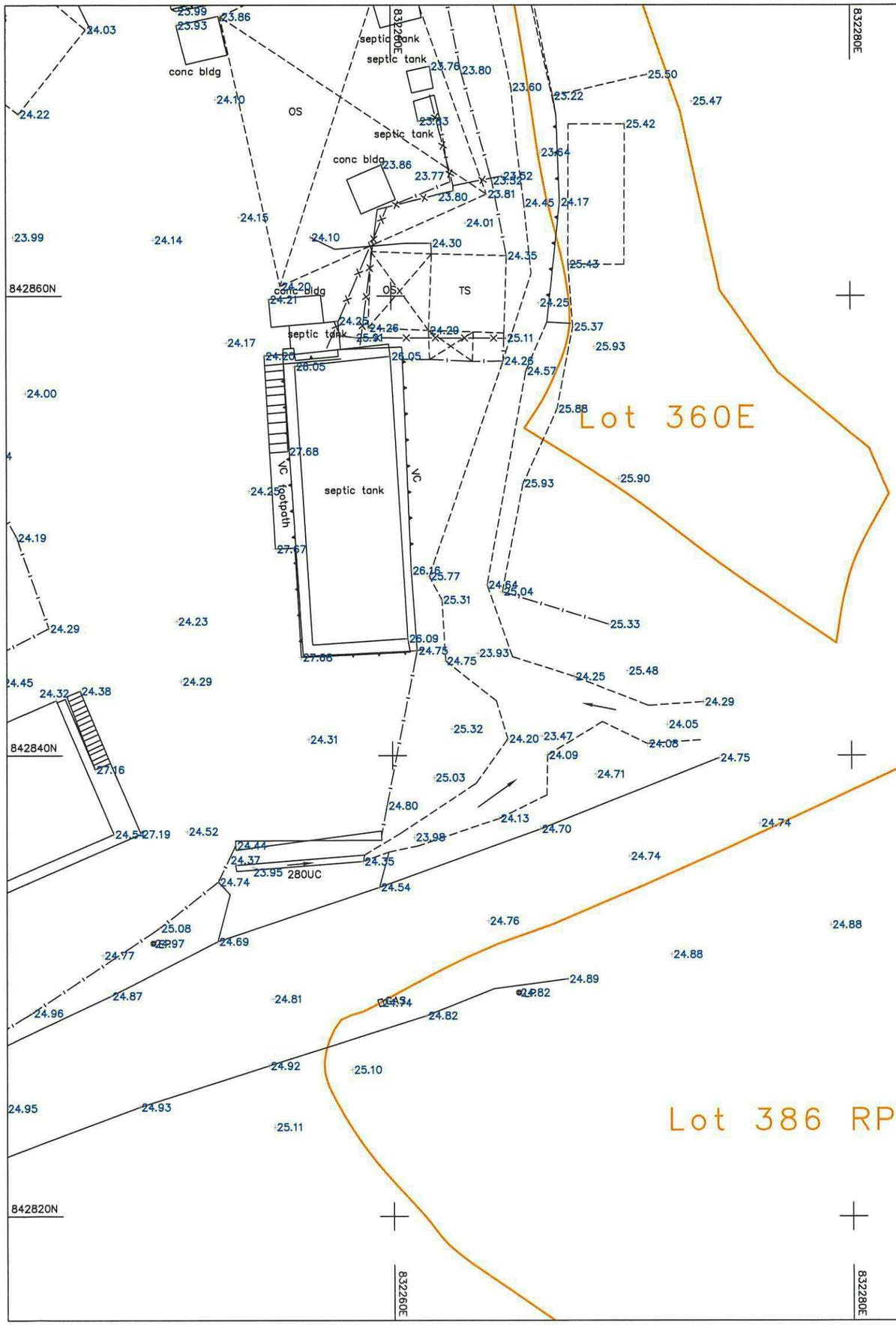

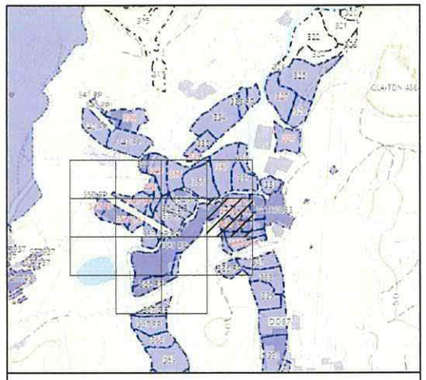

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 12 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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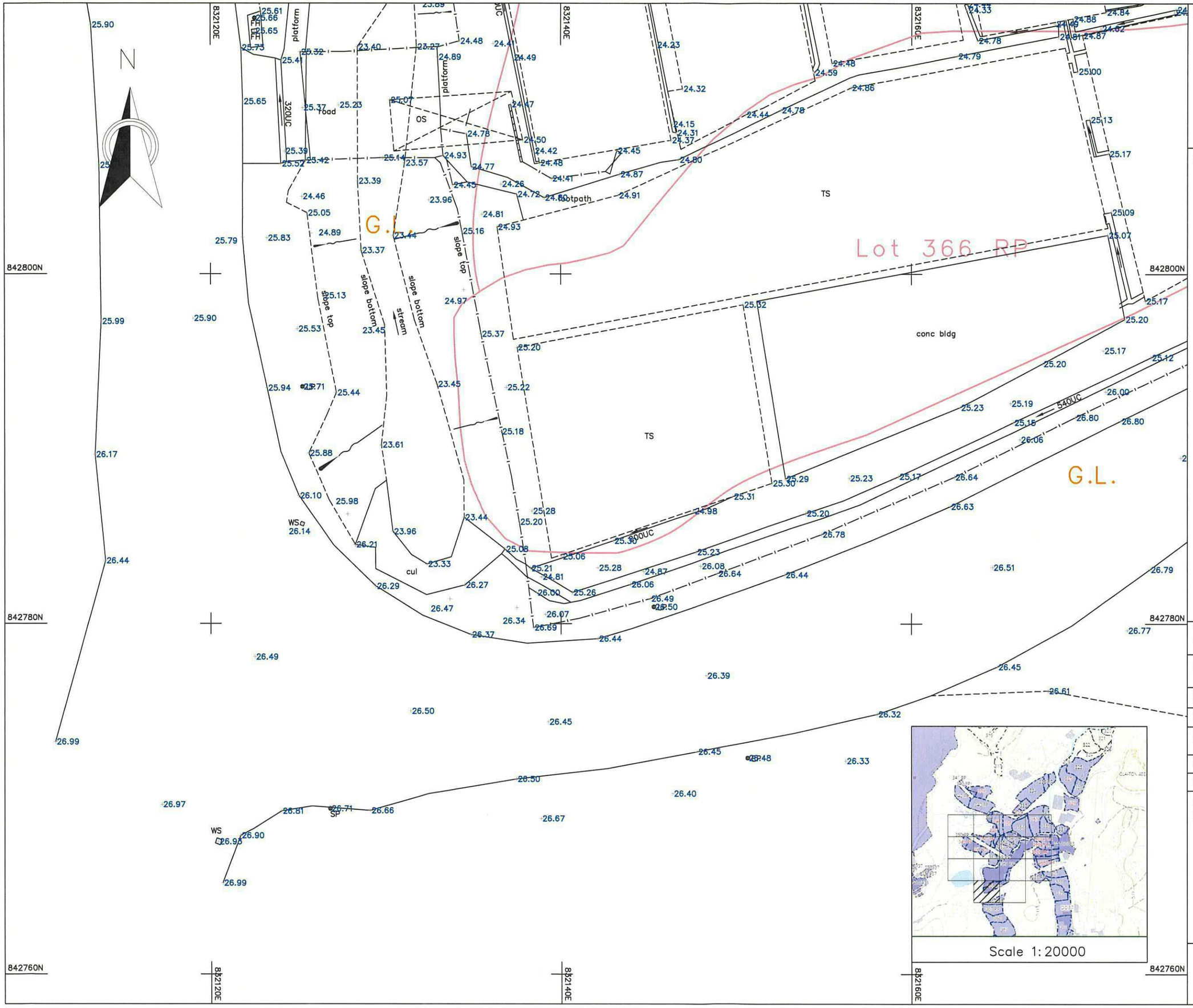

Scale 1:20000

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 13 OF 14)

Scale: 1:200 (A3)

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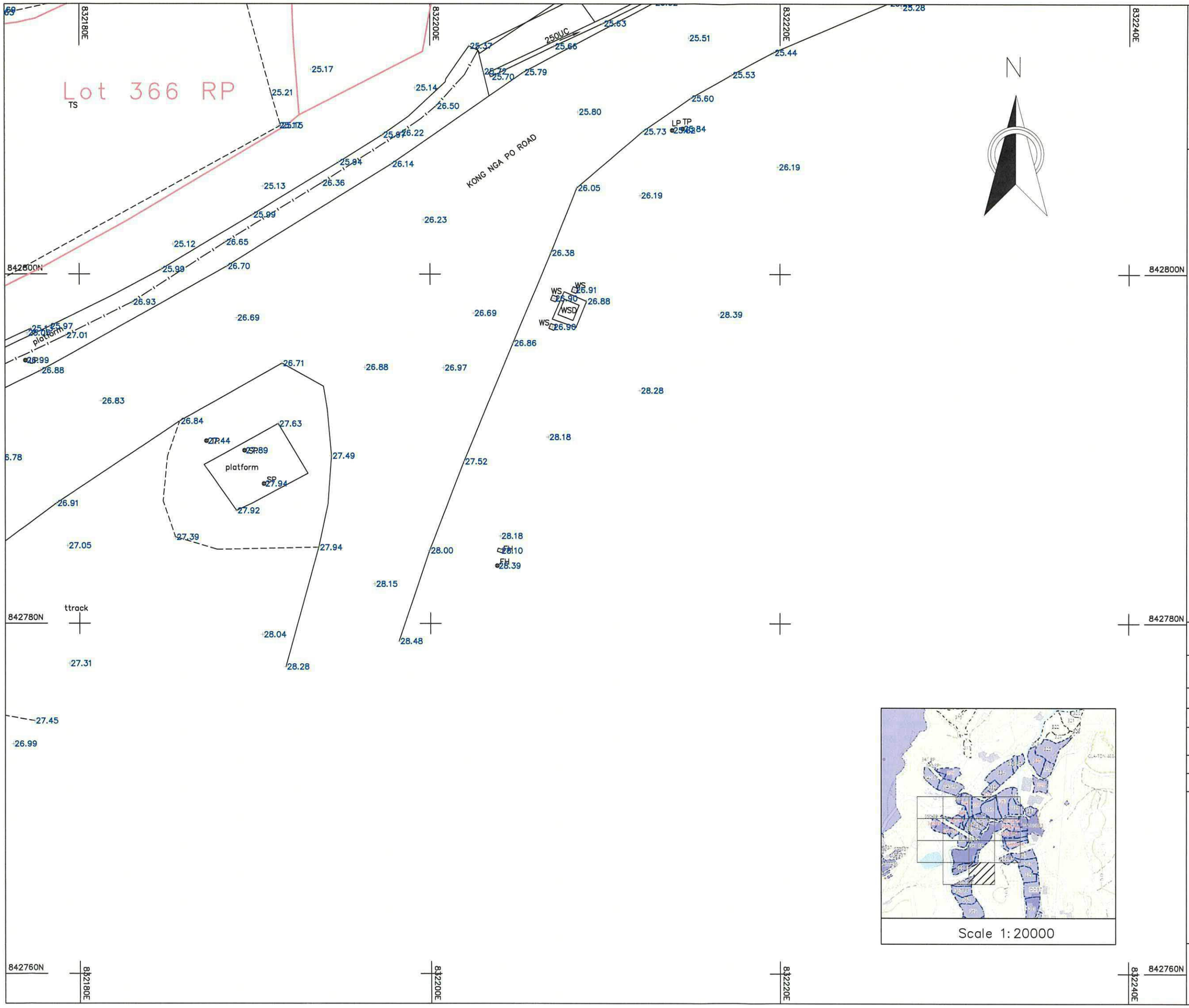


Scale 1:20000

Notes :

1. All levels are in meters referenced to Hong Kong principal datum (HKPD).
2. All levels are in meters referenced to Hong Kong metric grid (HK1980).
3. All spot levels position are indicated by the decimal point or a cross.
4. Lot boundary is showed approximalty for reference only.

Legend :

- SUBJECT LOT BOUNDARY LINE
- ADJACENT LOT BOUNDARY LINE
- FENCE,RAILING
- PIPE
- ARTIFICIAL SLOPE
- UC CONCRETE DRAIN & CATCHPIT
- COL COLUMN
- CUL CULVERT
- TS TEMPORARY STRUCTURE
- OS OPEN-SIDED STRUCTURE
- VERTICAL MASONRY (RETAINING WALL)
- PARAPET OR WALL
- STEPS
- GULLY
- GATE
- TC HONG KONG TELECOM
- MH MANHOLE FOUL WATER
- WS WATER SERVICE
- IC INSPECTION COVER
- LP LAMP POLE
- SP SIDE POLE
- TP TELEPHONE POLE
- EP ELECTRIC POLE
- 1.23 SPOT LEVEL
- 20 CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 14 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
Registered Professional Surveyor
(Land Surveying Division)

Tang & Au Land Surveyors Limited
Room 502, 5/F, Keader Centre,
Nos.129-149, On Lok Road,Yuen Long, N.T.
Tel.: 2652 2351 Fax: 2652 2322

APPENDIX C

Drainage Design Calculation

Design Calculation of U-Channel

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

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

Assumption:

Runoff Coefficient for grass	0.2	(Steep and sandy grassland)			
Runoff Coefficient for concrete	1.0				
Catchment A	3250	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	229.4 mm/hr
Catchment B	4040	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	228.8 mm/hr
Catchment C	2480	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	206.2 mm/hr
Catchment D	1879.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	210.8 mm/hr
Catchment E	18173.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	224.7 mm/hr
Catchment F	16464.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	212.6 mm/hr
Catchment G	7705.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	221.2 mm/hr
Catchment H	4570.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	215.3 mm/hr
Catchment I	5413.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	206.0 mm/hr
Catchment J	3507.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	267.7 mm/hr
Catchment K	4257.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	252.1 mm/hr
Catchment L	1497.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	231.8 mm/hr
Allowance	10.0	% reduction in flow area due to permissible degradation between desilting cycles			
Roughness of concrete	0.016				

Abbreviation and Terms:

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

Cathcment		USGL mPD	DSGL mPD	USIL mPD	DSIL mPD	AVG. DEPTH m	INVERT DIFF. m	LENGTH m	GRADIENT 1 in	RAINFALL INTENSITY mm/hr	RUNOFF COEF.	CATCH MENT m^2	Affected Area (catchment	EFF. AREA m^2	DESIGN FLOW m^3/s	CUM. DESIGN FLOW m^3/s	SIZE mm	TYPE	VEL m/s	ALLOWANCE (REDUCTION %)	FLOW CAP. m^3/s	SPARE CAP. m^3/s	UTILISATION %	RESULT	A (m^2)	P (m)	R (m)
E	Branch 1	27.00	26.00	26.50	24.90	1.10	1.60	110.0	69	224.7	0.2	18173	E	3634.6	0.22702	0.22702	400	UC	2.2	10	0.834	0.607	27	OK	0.381	2.428	0.157
Resultant & Discharge															0.22702	0.22702	400	UC	2.2	10	0.834	0.607	27	OK	0.381	2.428	0.157
A	Branch 2	26.00	25.00	25.30	24.55	0.45	0.75	74.0	99	229.4	1	3250	A	3250	0.20725	0.20725	400	UC	1.6	10	0.236	0.029	88	OK	0.147	1.128	0.130
Resultant & Discharge															0.20725	0.20725	400	UC	1.6	10	0.236	0.029	88	OK	0.147	1.128	0.130
C	Branch 3	25.00	24.50	24.50	23.25	1.25	1.25	124.0	100	206.2	1	2480	C	2480	0.14214	0.14214	400	UC	1.8	10	0.797	0.655	18	OK	0.433	2.720	0.159
L		25.00	25.00	24.50	23.25	1.75	1.25	124.0	100	231.8	0.2	1497	L	299.4	0.01929	0.01929	400	UC	1.9	10	1.154	1.135	2	OK	0.613	3.720	0.165
Resultant & Discharge															0.16143	0.16143	400	UC	1.8	10	0.797	0.635	20	OK	0.433	2.720	0.159
D	Branch 4	25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	210.8	1	1879	D	1879	0.11013	0.11013	400	UC	1.8	10	0.521	0.411	21	OK	0.294	1.948	0.151
K		25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	252.1	0.2	4257	K	851.4	0.05966	0.05966	400	UC	1.8	10	0.521	0.462	11	OK	0.294	1.948	0.151
Resultant & Discharge															0.16979	0.16979	400	UC	1.8	10	0.521	0.351	33	OK	0.294	1.948	0.151
I	Branch 5	24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	206.0	1	5413	I	5413	0.31001	0.31001	400	UC	1.9	10	0.986	0.676	31	OK	0.532	3.268	0.163
J		24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	267.7	0.2	3507	J	701.4	0.05220	0.05220	400	UC	1.9	10	0.986	0.934	5	OK	0.532	3.268	0.163
Resultant & Discharge															0.36221	0.36221	400	UC	1.9	10	0.986	0.624	37	OK	0.532	3.268	0.163
I	Branch 6	24.50	24.00	24.10	23.24	0.76	0.86	85.0	99	206.0	1	5413	I	5413	0.31001	0.31001	400	UC	1.8	10	0.453	0.143	68	OK	0.258	1.748	0.148
Resultant & Discharge															0.31001	0.31001	400	UC	1.8	10	0.453	0.143	68	OK	0.258	1.748	0.148

I	Branch 7	24.50	24.00	24.10	23.27	0.73	0.83	83.1	100	206.0	1	5413	I	5413	0.31001	0.31001	400	UC	1.7	10	0.429	0.119	72	OK	0.247	1.688	0.147
Resultant & Discharge															0.31001	0.31001	400	UC	1.7	10	0.429	0.119	72	OK	0.247	1.688	0.147

B	Branch 8	27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	228.8	1	4040	B	4040	0.25694	0.25694	500	UC	1.9	10	0.684	0.427	38	OK	0.358	1.985	0.180
H		27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	215.3	0.2	4570	H	914	0.05471	0.05471	500	UC	1.9	10	0.684	0.629	8	OK	0.358	1.985	0.180
G		27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	206.0	0.2	7705	G	1541	0.08826	0.08826	500	UC	1.9	10	0.684	0.596	13	OK	0.358	1.985	0.180
Resultant & Discharge															0.39990	0.39990	500	UC	1.9	10	0.684	0.284	58	OK	0.358	1.985	0.180

F	Branch 9	27.00	26.00	26.00	25.50	0.50	0.50	37.0	74	212.6	0.2	16464	F	3292.8	0.19464	0.19464	500	UC	2.1	10	0.423	0.229	46	OK	0.201	1.285	0.156
Resultant & Discharge															0.19464	0.19464	500	UC	2.1	10	0.423	0.229	46	OK	0.201	1.285	0.156

Pipe to Septic tank	pipe	27.00	26.00	24.90	22.90	3.10	2.00	60.2	30						0.19464	0.19464	500	UC	2.8	10	0.559	0.365	35	OK	0.196	1.571	0.125
Resultant & Discharge															0.19464	0.19464	500	UC	2.8	10	0.559	0.365	35	OK	0.196	1.571	0.125

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : A

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3250.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.1	m
L =	length which water takes the longest time to reach the design section	=	117.8	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.53 min say 6.53 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

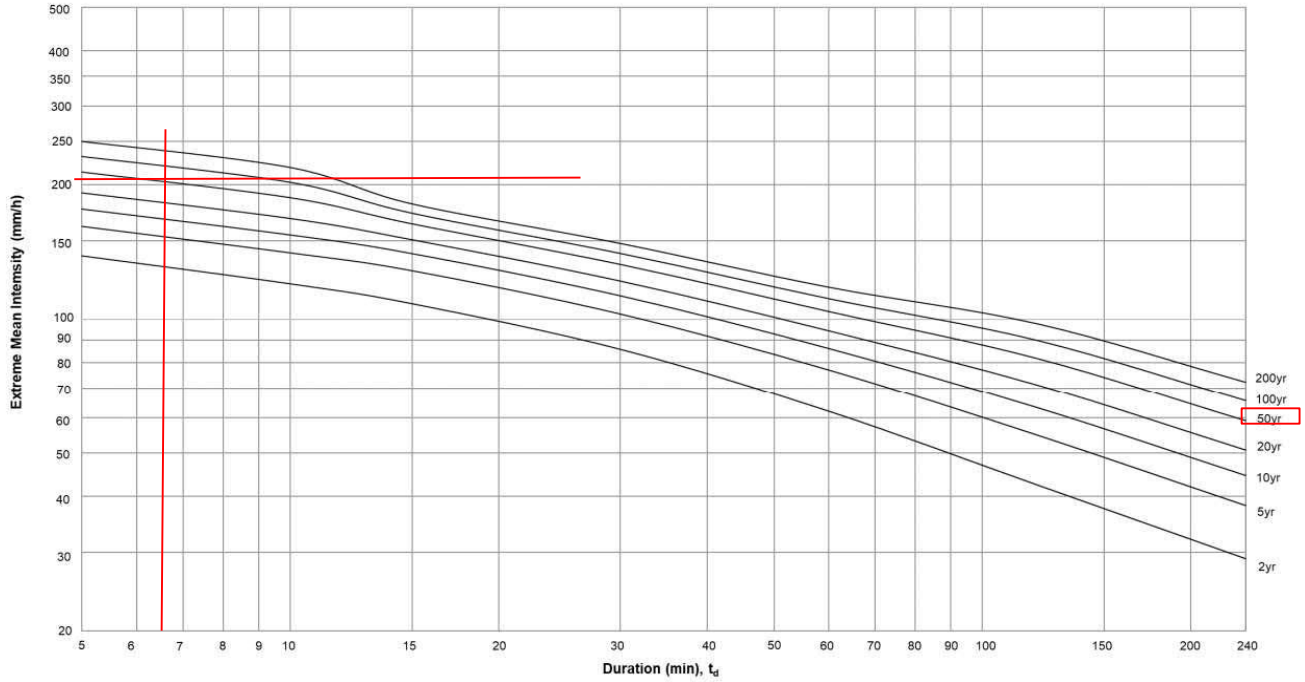


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	206.5	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	229.4	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : B

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4040.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.07	m
L =	length which water takes the longest time to reach the design section	=	121.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.59 min say 6.59 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

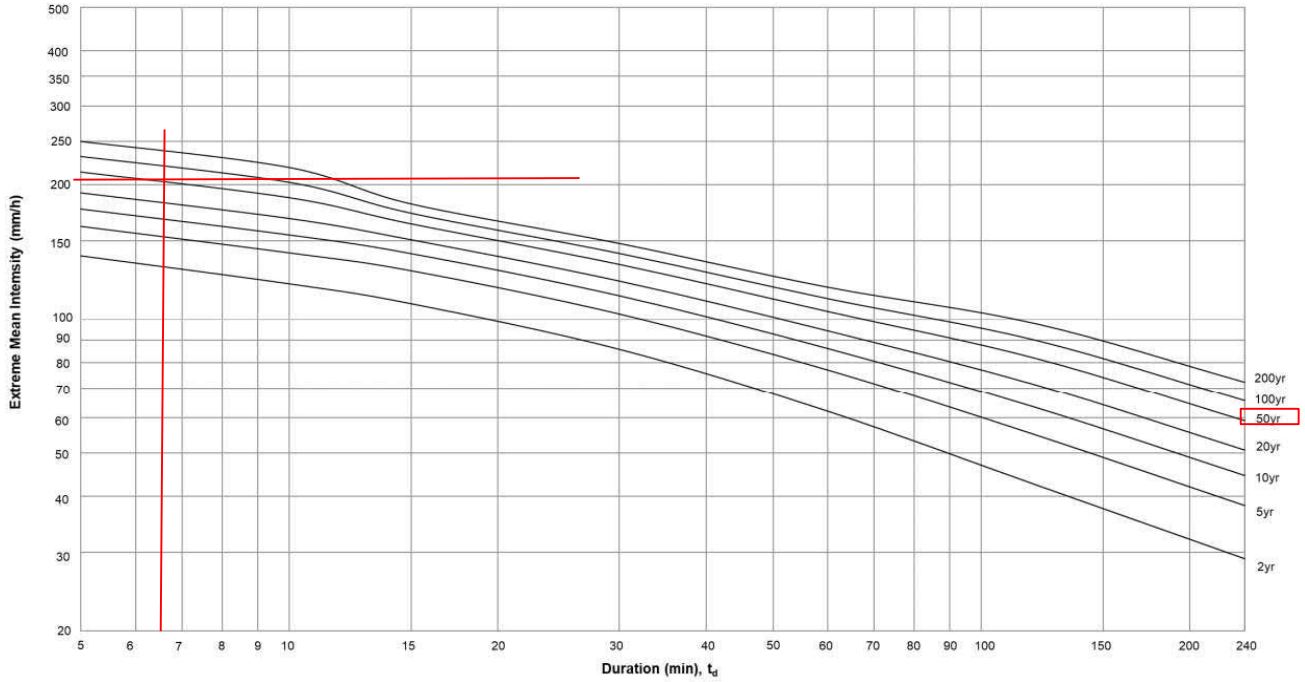


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	205.9	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	228.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : C

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	2480.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.41	m
L =	length which water takes the longest time to reach the design section	=	122.2	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.67 min say 9.67 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

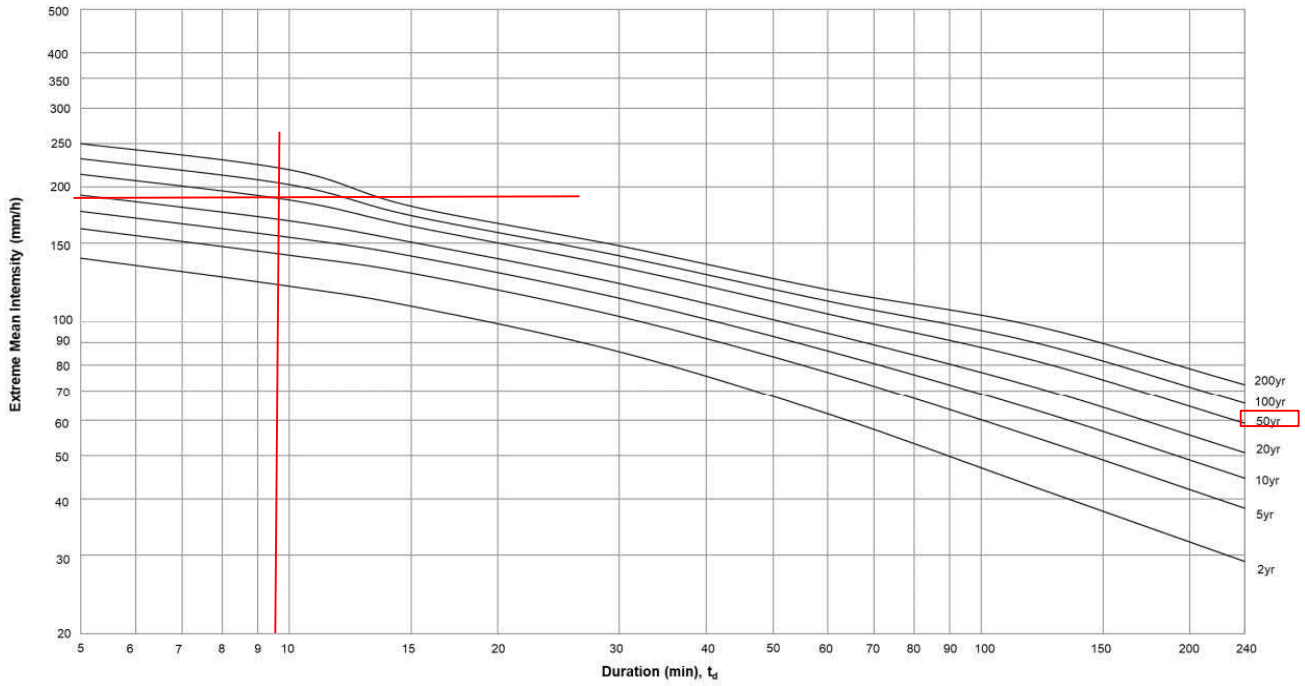


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	185.6	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	206.2	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : D

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1879.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.45	m
L =	length which water takes the longest time to reach the design section	=	111.8	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.93 min say 8.93 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

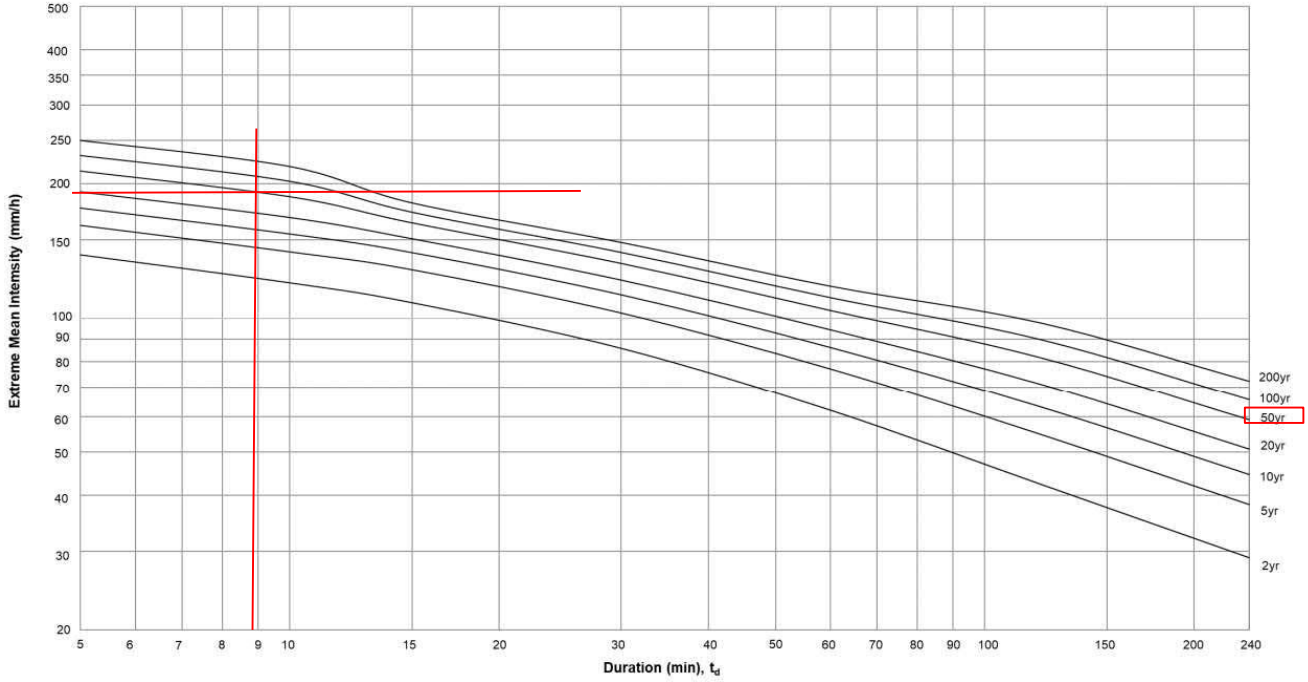


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	189.8	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	210.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : E

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	18173.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	8.50	m
L =	length which water takes the longest time to reach the design section	=	200.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.07 min say 7.07 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

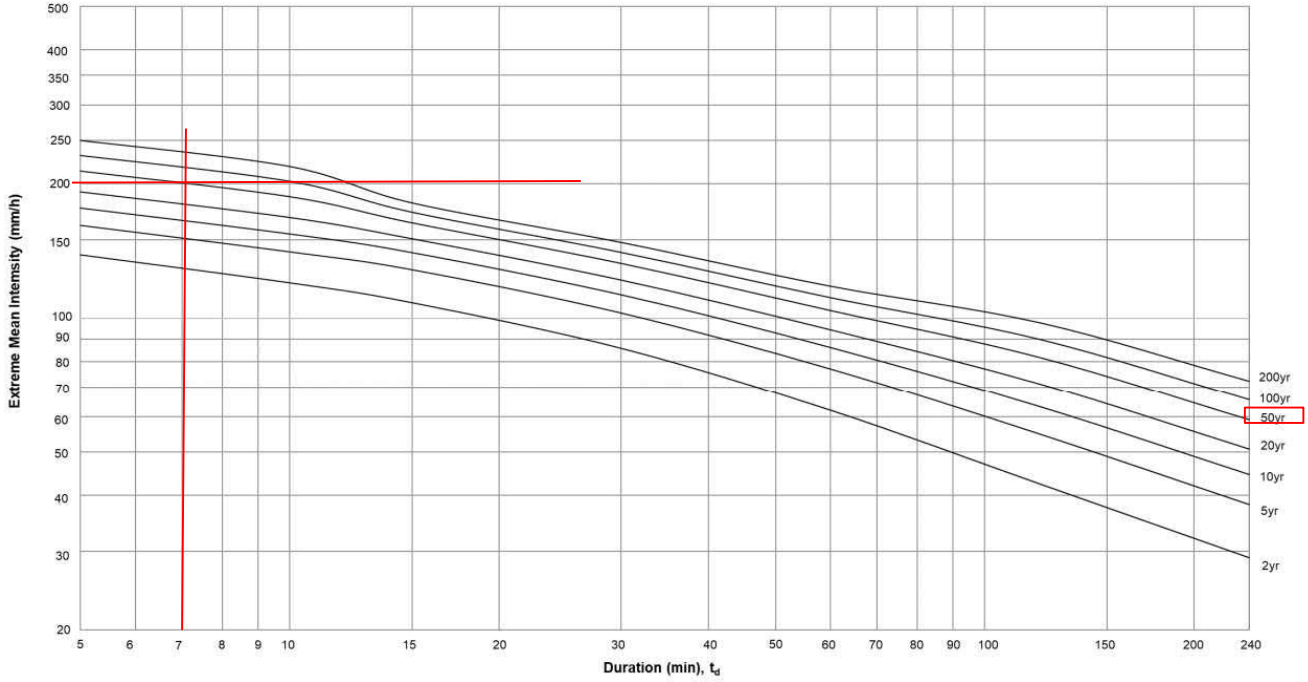


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	202.2	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	224.7	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : F

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	16464.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	7.37	m
L =	length which water takes the longest time to reach the design section	=	236.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.67 min say 8.67 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

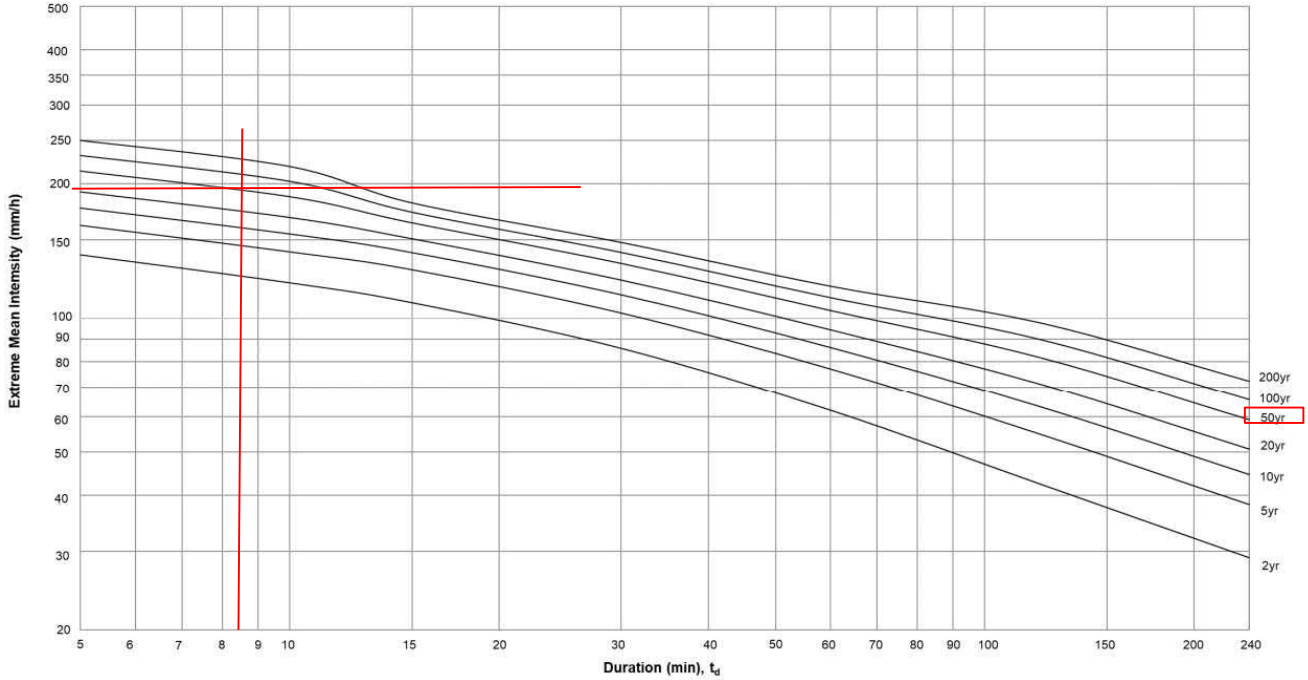


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	191.4	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	212.6	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : G

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	7705.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	9.50	m
L =	length which water takes the longest time to reach the design section	=	199.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.49 min say 7.49 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

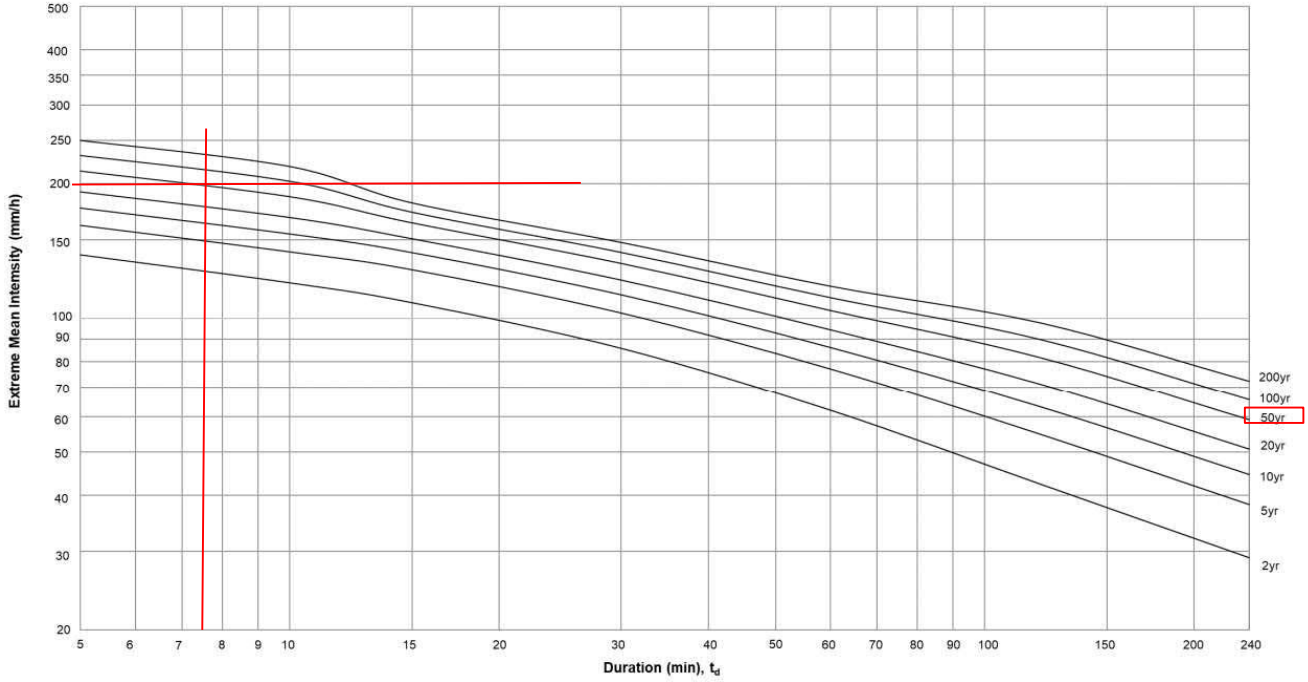


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	199.1	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	221.2	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : H

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4570.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.76	m
L =	length which water takes the longest time to reach the design section	=	163.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.28 min say 8.28 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

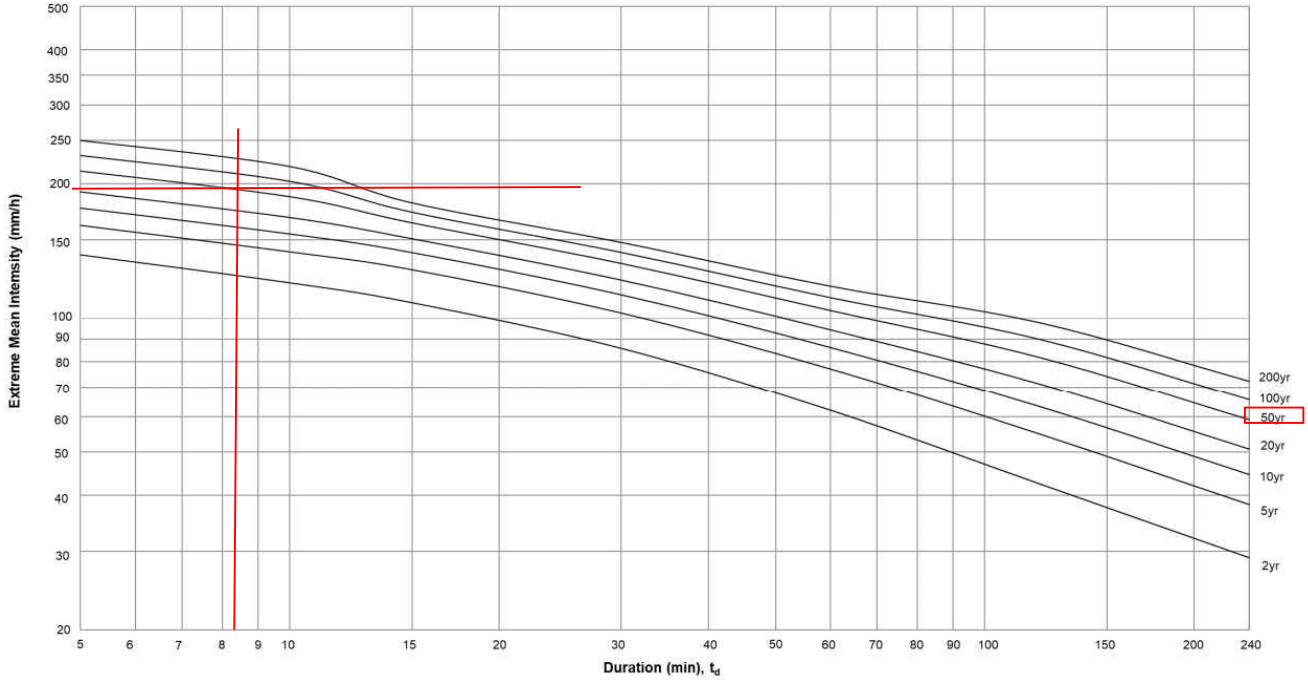


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	193.8	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	215.3	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : I

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	5413.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.38	m
L =	length which water takes the longest time to reach the design section	=	130.7	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.69 min say 9.69 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

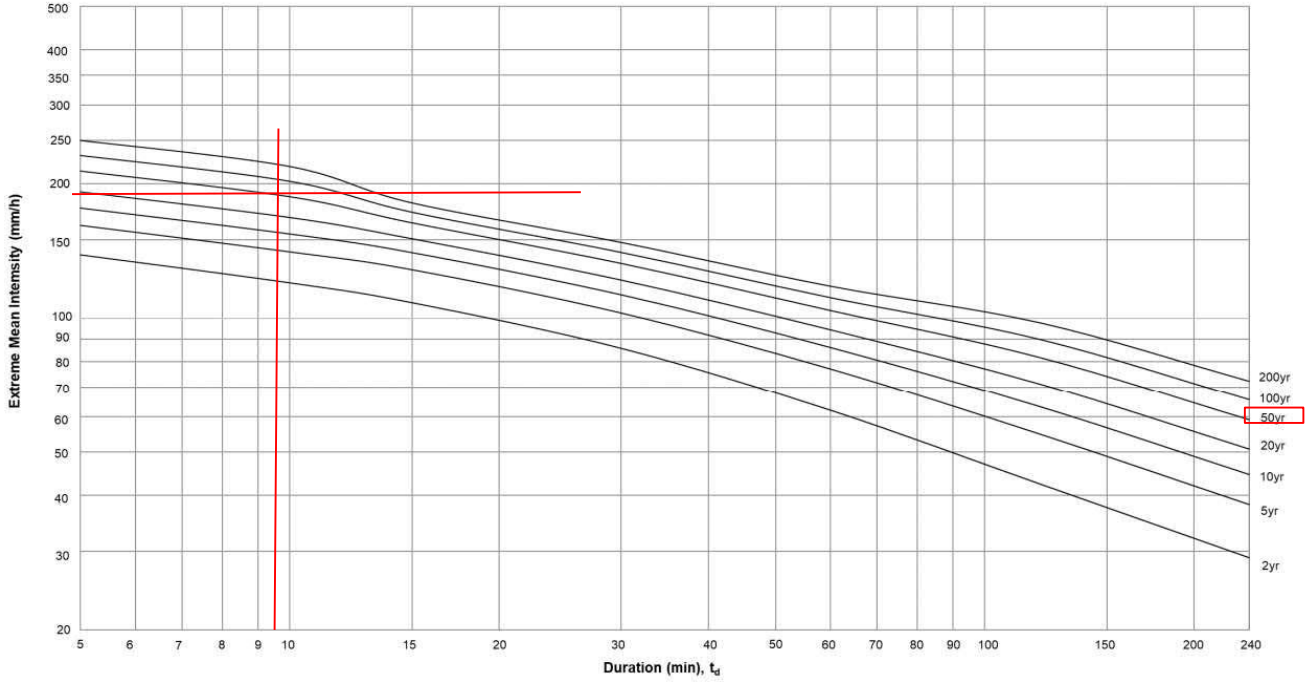


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	185.4	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	206.0	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : J

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3507.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	31.10	m
L =	length which water takes the longest time to reach the design section	=	103.2	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 3.32 min say 3.32 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

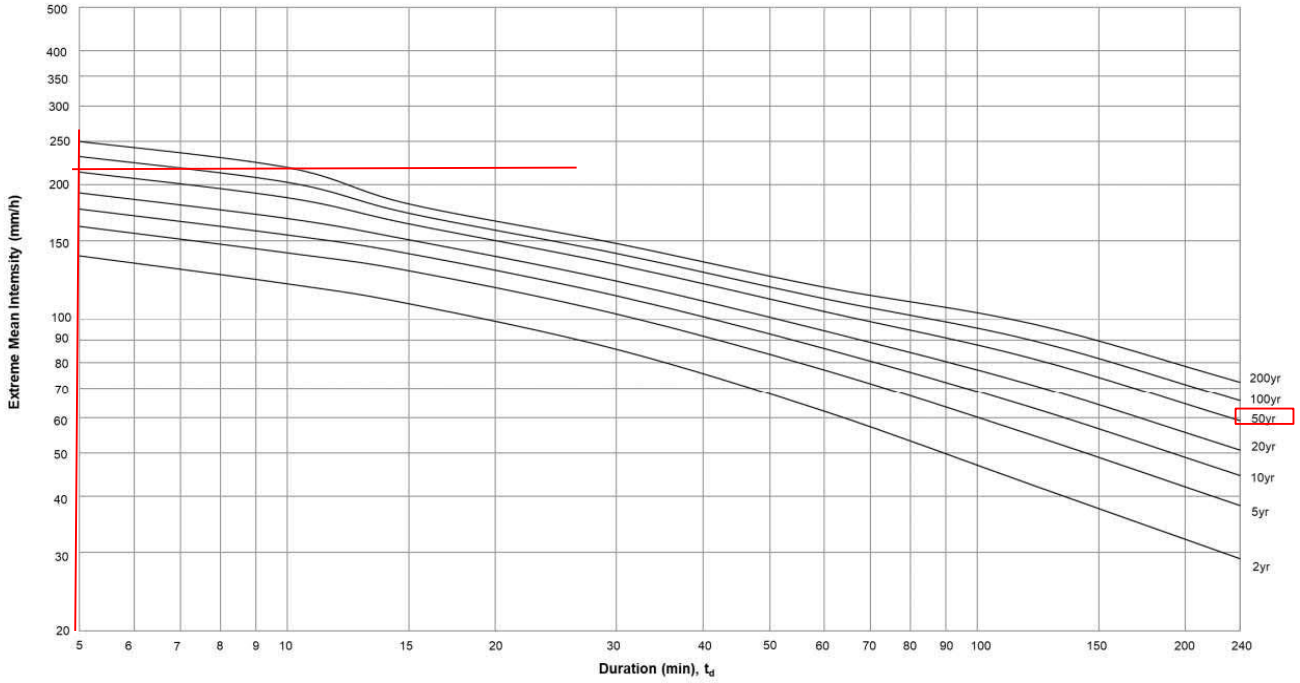


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	240.9	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	267.7	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : K

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4257.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	23.51	m
L =	length which water takes the longest time to reach the design section	=	132.3	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 4.41 min say 4.41 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

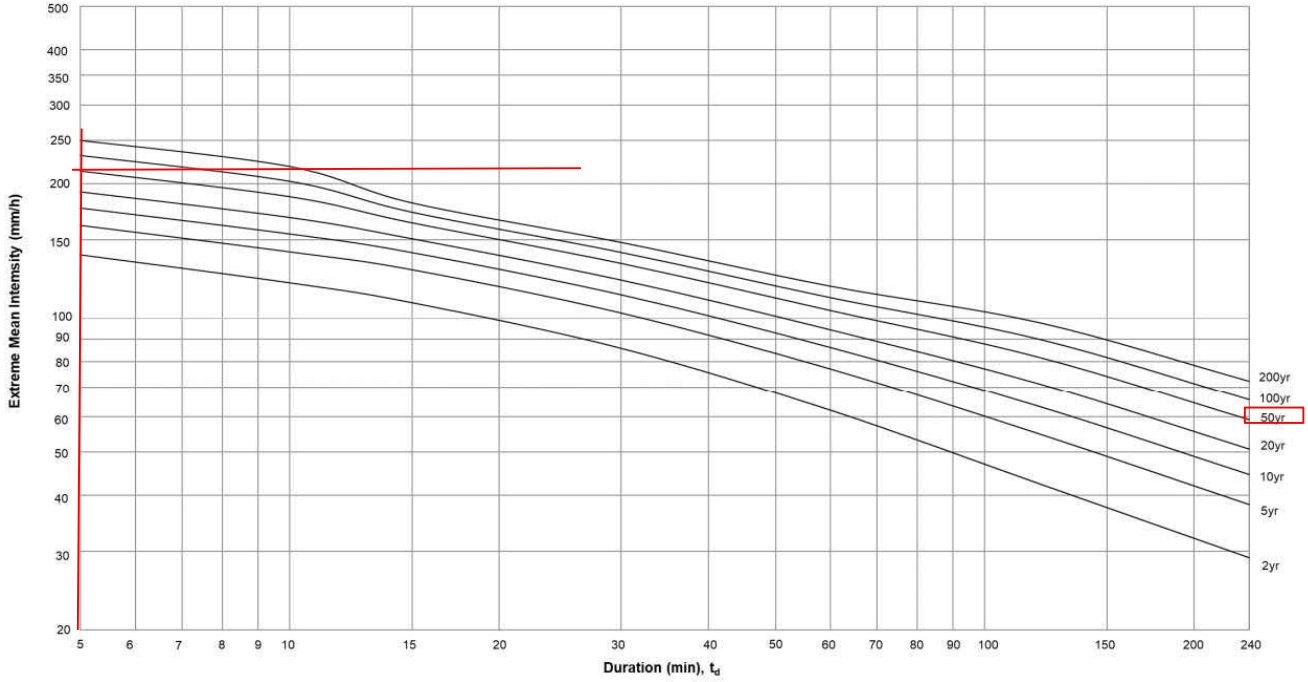


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	226.9	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	252.1	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : L

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1497.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.40	m
L =	length which water takes the longest time to reach the design section	=	75.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.27 min say 6.27 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

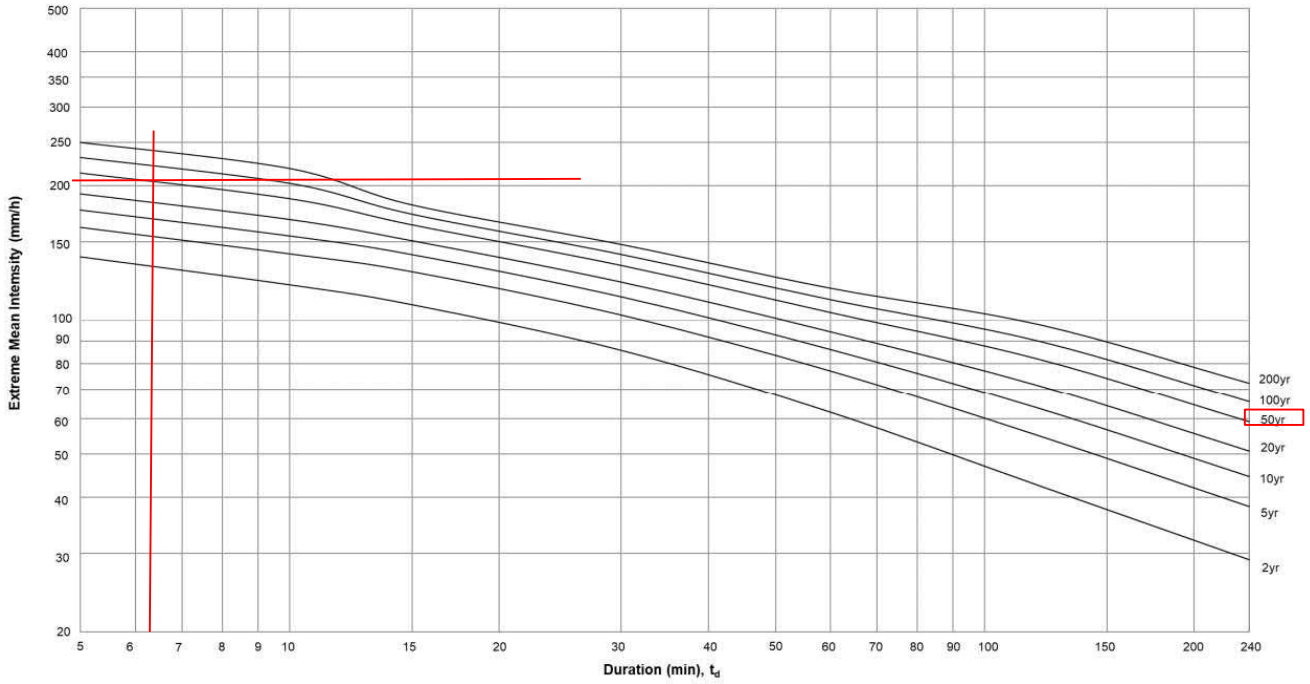


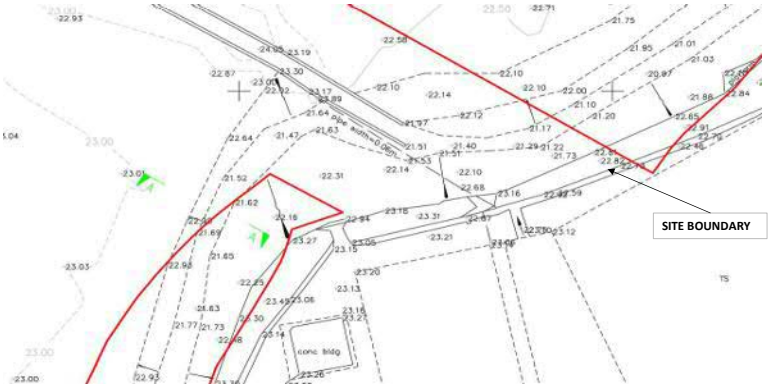
Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	208.6	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	231.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Checking for the Box Culvert

Concrete Pipe Capacity Check

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87**

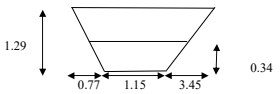


Plan view of Section A



Water level reference from Geotechnical Information Infrastructure (Ginfo)

Water level (from Ginfo)	=	22.03	mPD
Top level of West bank	=	22.98	mPD
Top level of East bank	=	23.27	mPD
Bottom level of stream course	=	21.69	mPD



Calculation of Flow of Existing Stream Course at Section A-A

	Water level (from Ginfo)	=	22.03	mPD
b =	stream bottom width	=	1.150	m
t =	stream top width	=	5.370	m
z =	stream side slope gradient	=	1.68	m
y =	water depth	=	0.34	m
				Reference from Geotechnical Information Infrastructure (Ginfo) and topographic survey
P =	stream wetted perimeter	=	1.94	m
A =	cross sectional flow area	=	0.581	m^2
R =	hydraulic radius (A/P)	=	0.299	m
S =	stream gradient	=	0.027	
n =	Manning coefficient of roughness	=	0.03	
V =	mean velocity = $R^{(2/3)}S^{(1/2)}/n$	=	2.46	m/s
Q =	Flow of Existing Stream (VA)	=	1.43	m^3/s

Discharge form Channels

	Branch 1	=	0.22702 m^3/s
	Branch 2	=	0.20725 m^3/s
	Branch 3	=	0.16143 m^3/s
	Branch 4	=	0.16979 m^3/s
	Branch 5	=	0.36221 m^3/s
	Branch 9	=	0.19464 m^3/s
			1.32234 m^3/s

Total Upstream Flow	=	2.75208	m^3/s	

Calculation of Capacity of Concrete box culvurt

H =	Height of box culvurt	=	3.5	m
W =	Width of box culvurt	=	3	m
P =	Wetted perimeter	=	13.00	m
A =	Cross sectional flow area	=	10.50	m^2
R =	Hydraulic radius (A/P)	=	0.808	m
S =	gradient	=	0.027	
n =	Manning coefficient of roughness	=	0.016	
V =	mean velocity = $R^{(2/3)}S^{(1/2)}/n$	=	8.94	m/s
Q =	capacity of concrete pipe (VA)	=	281.47	m^3/s
		>	**2.75208**	OK
			0.98	%

Structural checking for the box culvert

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Stability)**	Project No.:	P25086

Ref. Output

1.0 Design Codes and Standards

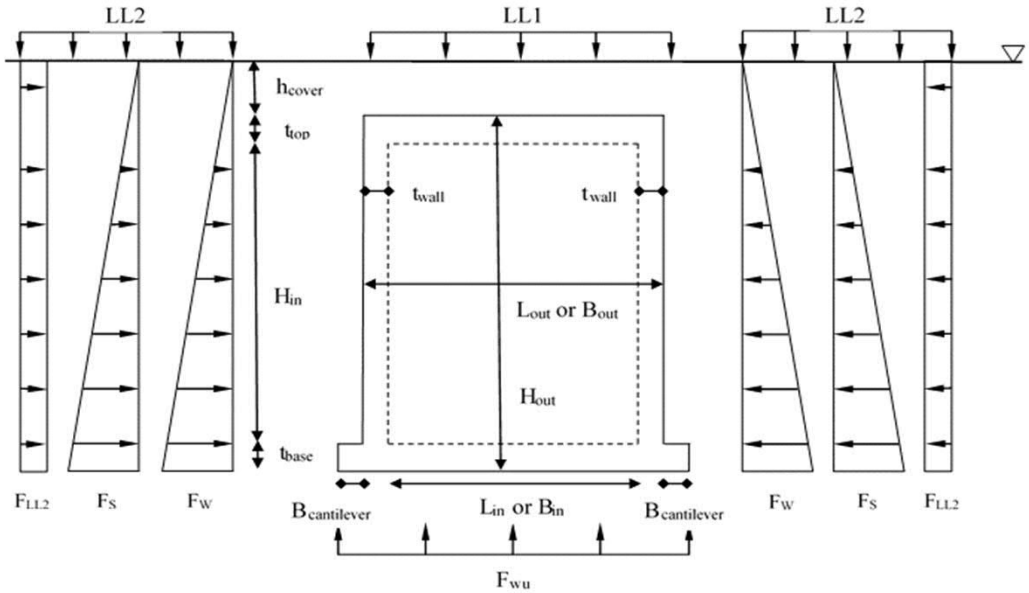
CoP DL & IL	Code of Practice for Dead and Imposed Loads 2011
Geoguide 1	Geoguide 1 "Guide to Retaining Wall Design (2017 Version)"
CoP Fdn. 2017	Code of Practice for Foundations 2017
CoP Conc. 2013	Code of Practice for Structural Use of Concrete 2013

2.0 Geotechnical Parameters and Assumptions

Density of Concrete	γ_{conc}	=	24.5	kN/m^3	(for reinforced concrete)
Density of Soil (Unsaturated)	γ_{soil}	=	19	kN/m^3	
Density of Soil (Saturated)	$\gamma_{soil, sat}$	=	20	kN/m^3	
Friction Angle of Soil	ϕ_{soil}	=	30	°	
Friction Angle of Backfill	$\phi_{backfill}$	=	30	°	
Density of Water	γ_{water}	=	10	kN/m^3	
Active coefficient	K_a	=	0.33		
Inactive coefficient	K_o	=	0.50		
Passive coefficient	K_p	=	3.00		

3.0 Dimension of Chamber

Cover of backfill	h_{cover}	=	0	mm	
Internal length	L_{in}	=	1000	mm	per m run
Internal width	B_{in}	=	3000	mm	
Internal height	H_{in}	=	2900	mm	= C.L. - D.T.I.L. of Manhole
Thickness of top slab	t_{top}	=	300	mm	
Thickness of base slab	t_{base}	=	300	mm	
Thickness of wall	t_{wall}	=	300	mm	
Outer length	L_{out}	=	1000	mm	per m run
Outer width	B_{out}	=	3600	mm	= Bin + 2 × twall + 2 × Bcantilever
Outer height	H_{out}	=	3500	mm	= Hin + 75 + trap + ttop + tbase
Maximum depth of manhole	H_{max}	=	3500	mm	= Hout + hcover
Depth of soil above W.L.	$D_{aboveWT}$	=	2143.33	mm	=C.L. - W.L.
Submerged soil depth	h_{water}	=	1356.67	m	=H_{max} - $D_{aboveWT}$



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Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Stability)**	Project No.:	P25086

Ref.								Output
	4.0 Loading on Chamber							
	4.1 **Self weight of chamber, G**	**= 26.5 + 26.5 + 21.3**	=	**74.3**	**kN**			
	Weight of top slab =	= γconc × Bout × Lout × ttop	=	24.5 × 3.6 × 1 × 0.3	=	26.5	kN	
	Weight of base slab =	= γconc × Bout × Lout × tbase	=	24.5 × 3.6 × 1 × 0.3	=	26.5	kN	
	Weight of side wall =	= γconc × Hin × twall × Lout	=	24.5 × 2.9 × 1 × 0.3	=	21.3	kN	
	4.2 Hydrostatic pressure							
	Water pressure (Inner)	**= γwater × Bin × Lin × 0**	=	**0**	**kN**	Assume the inner space of the chamber does not store water		
	Water pressure (Outer)	**= γwater × Bout × Lout × Hout**	=	**126**	**kN**			
	Uplift	**= γwater × Bout × Lout × Hout**	=	**36**	**kN**	Uplifting force for the whole manhole = Fwu		
	4.3 Earth pressure							
	Soil weight on top slab	**= γsat × Bout × Lout × Cover**	=	**0**	**kN**	(Assume the soil is saturated)		
	Soil weight inside the chamber		=	**0**	**kN**	(Assume no soil inside the chamber)		
CoP DL & IL	4.4 Live loading on cover of top slab	q_{LL1}	=	20	kPa	(Consider the manhole located at public road)		
c.l. 3.9	**Q_{LL1}**	**qLL1 × Hout x Bout**	=	**72**	**kN**			
		q_{LL2}	=	20	kPa	(Assume Crtical Case)		
CoP Fdn. 2017	**5.0 Resistance to Sliding, Uplift and Overturning**							
C.l. 2.5.4 (3)	For design based on highest possible groundwater table							
	Self weight of chamber		=	74.3	kN	Weight of structural element		
	Soil weight on top slab		=	0	kN	Weight of backfill above the top slab		
	Soil weight inside the chamber		=	0	kN	No backfill inside the manhole		
	Minimum dead load	**G_{Total}**	=	**74.3**	**kN**			
	5.1 Checking for resistance to sliding and overturning							
	Since the sliding forces and the overturning moments acting on the manholes are balanced on each sides, checking on these 2 criteria are not required.							
C.l. 2.5.4 (3)	5.2 Checking for resistance to uplift force							
	Downward force due to the minimum deadload		=	74.3	kN	= G_Total		
	Downward force due to any permitted anchorage resistance		=	0	kN			
C.l. 2.5.4 (4)	**Resistance to uplift force**		=	**74.3**	**kN**	= Summation of the above 2 elements		
	Uplifting force due to groundwater	**F_{WU}**	=	**36**	kN	= Water pressure (Outer)		
	(3)(b) 1.1 times the uplift force due to groundwater		=	39.6	kN	= 1.1 × F_wu		
	(3)(b) 1.5 times the uplift force due to other loads		=	0	kN			
	(3)(b) Required resistance to uplift force		=	39.6	kN	= Summation of the above 2 elements		
				< Resistance to uplift force = 74.3 kN				**OK !**
Geoguide 1	**6.0 Bearing Capacity Checking**							
	Total gravity load on chamber		=	74.3	kN			
	Check base on Geoguide 1 "Guide to Retaining Wall Design"							
	Saturated Unit Weight of soil		=	20	kN/m^3	= $\gamma_{soil,\,sat}$		
	Effective Unit Weight of soil, γ'		=	10	kN/m^3			
	Factored Shearing Angle, ϕ'_f		=	30	degree	= ϕ_{soil}		
	Effective Cohesion, c'		=	0	kPa			
	Width of Foundation Base, B		=	3.6	m			
	Length of Foundation Base, L		=	1	m			
	Eccentricity of Resultant Load in B Direction, eB		=	0	m			
	Eccentricity of Resultant Load in L Direction, el		=	0	m			
	Effective Width, B'		=	3.6	m	= B – 2eB		
	Effective Length, L'		=	1	m	= L – 2eL		
	Depth of Embedment, d		=	3.5	m	= H_{max} (Assumed)		
	Total overburden pressure at maximum depth	q_t	=	70	kPa	= γsoil,sat × Hmax	= FS	
	Effective surcharge, q'		=	35	kPa	= γ' d cosβ		
	Vertival Load, V		=	74.3	kN			
	Horizontal Load, H		=	0	kN			
	The inclination of the foundation to the horizontal, α (<=45)		=	0	degree			
	Angle of Slope in front of Foundation, β		=	0	degree			
CoP Fdn. 2017	Maximum Bearing Pressure, q_{max}		=	20.6	kPa			
Table 2.1				**< presumed values for allowable bearing pressure = 50 kPa**				**OK !**

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Wall)**	Project No.:	P25086

Ref. Output

1.0 Design Codes and Standards

CoP DL & IL	Code of Practice for Dead and Imposed Loads 2011
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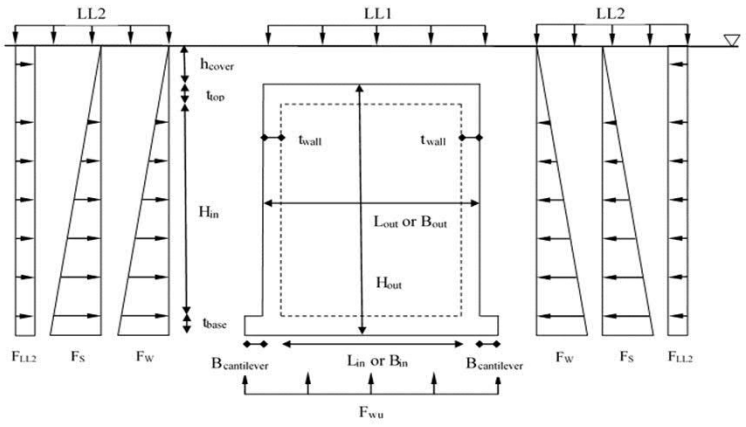
2.0 Geotechnical Parameters and Assumptions

Density of Concrete	γ_{conc}	=	24.5	kN/m^3	
Density of Soil (Unsaturated)	γ_{soil}	=	19	kN/m^3	
Density of Soil (Saturated)	$\gamma_{soil, sat}$	=	20	kN/m^3	
Angle of Soil	ϕ_{soil}	=	30	°	
Angle of Backfill	$\phi_{backfill}$	=	30	°	
Density of Water	γ_{water}	=	10	kN/m^3	
Active lateral earth coefficient	K_a	=	0.33	=	(1-sinϕ) / (1+sinϕ)
At rest lateral earth coefficient	K_o	=	0.50	=	(1-sinϕ)
Passive lateral earth coefficient	K_p	=	3.00	=	1 / K_a

3.0 Dimension of Chamber

Ground level		=	+25.00	mPD	
Box culvert bottom level		=	+21.50	mPD	
Groundwater level		=	+22.86	mPD	(Assume 1/3 water level)
Height of Wall	H	=	3.50	m	(G.L. - Box Top)
Dry soil depth	h_1	=	2.14	m	(G.L. - G.W.T.)
Submerged soil depth	h_2	=	1.36	m	(G.W.T. - Box Top)
Thickness of wall	t_{wall}	=	300	mm	



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Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Wall)**	Project No.:	P25086

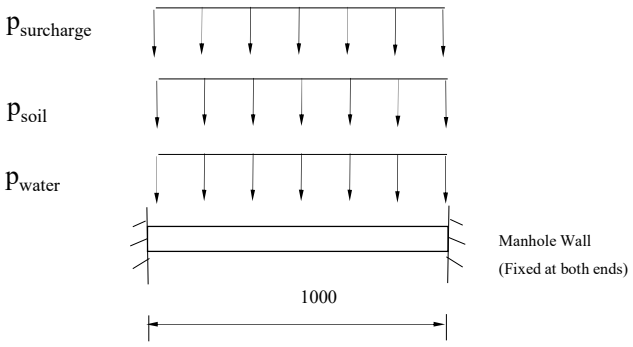
Ref. Output

4.0 Dimension of Wall

For each side wall of the manhole, we consider

Width	=	1000	mm	(per m run)
Height	=	3500	mm	
Thickness	=	300	mm	

5.0 Loading on Side Wall



Consider the side wall as a beam with both ends fixed per m width for analysis, we have

5.1 **Earth pressure:**

Consider at-rest lateral earth pressure,

$p_{s'} = K_0 \times \gamma_{soil} \times h_1 + K_0 \times (\gamma_{soil,sat} - \gamma_{water}) \times h_2$

$= 0.5 \times 19 \times 2.14333333333333 + 0.5 \times (20 - 10) \times 1.3566666666$ = 27.145 kN/m per m run Pressure due to soil

5.2 **Water pressure:**

$p_w = \gamma_{water} \times h_{water} =$ 10×3.5 = 35 kN/m per m run Pressure due to water

5.3 **Surcharge:**

q_{LL2} = 20 kN/m per m run

$p_{surcharge} = K_0 \times q_{LL2} =$ = 10 kN/m per m run CoP DL & IL Table 3.17

6.0 Forces on Side Wall

Load case	Unfactored UDL	Load factor	Factored UDL
Soil	27.145	1.4	38.003
Water	35	1.4	49
Surcharge	10	1.6	16
Total =	72.145		103.003

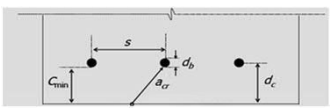
	SLS	ULS	
Max. Shear Force on side wall = wL/2	36.07	51.50	kN
Max. Bending Moment on side wall = $wL^2/12$	6.01	8.58	kNm

Prepared by:
Check by:

Project: Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che — Date: 13/10/2025

Subject: Structural Design for Box Culvert **(Checking of Wall)** — Project No.: P25086

Ref.									Output
CoP Conc. 2013	**7.0 RC Design against Bending Moment and Shear Force**								
	For the dimension of wall with,					V_{ULS} =	51.5	kN per m run	
	Width =	1000	mm	WITH		M_{ULS} =	8.6	kNm per m run	
	Height =	3500	mm			V_{SLS} =	36.1	kN per m run	
	Thickness =	300	mm			M_{SLS} =	6.0	kNm per m run	
	Consider the RC design in a width of 1m, we have								
	7.1 **Reinforcement for moment:**								
	With M_ULS,wall = 8.6 kNm per m run								
	Width			b	=	1000	mm		
	Effective depth			d	=	245	mm		
	Yield strength of steel			f_y	=	500	N/mm^2	(Table 15 of sewerage manual for XA Exposure Condition)	
	Concrete strength			f_{cu}	=	30	N/mm^2	(Table 15 of sewerage manual for XA Exposure Condition)	
	Span			L	=	1000	mm		
	Wall thickness			t_{wall}	=	300	mm		
Table 4.2	Concrete cover				=	50	mm	(Table 15 of sewerage manual for XA Exposure Condition)	
c.l. 6.1	7.1.1 Checking for compression steel								
eq 6.8	K' (for fcu ≦ 45N/mm^2)				=	0.156			
eq 6.7	$K = M / (f_{cu} \times b \times d^2)$				=	0.005	< K' = 0.156	**Compression reinforcement IS NOT required**	
	7.1.2 Checking for tensile steel								
eq 6.10	$z = d [0.5 + \sqrt{(0.25 - K/0.9)}]$				=	0.995d	**> 0.95d, and thus use 0.95d**	= 233	mm
eq 6.11	Required steel reinforcement	$A_{s,req} = M / (0.87 \times f_y \times z)$			=	85	mm^2		
	Provided steel reinforcement =	T	10		@	200	mm spacing		
		$A_{s,prov}$			=	393	mm^2	> Required steel reinforcement	**OK !**
	Percentage of reinforcement	$p_s = A_{s,prov} / bd$			=	0.16	%		
c.l. 9.3.1					>	minimum percentage of steel =	0.13	%	**OK !**
c.l. 9.2.1.3					<	maximum percentage of steel =	4.00	%	**OK !**
	7.1.3 Checking for shear reinforcement								
	Design shear stress	$v = V / (b_v \times d)$			=	0.210	MPa		
c.l. 6.1.2.5	Design concrete shear stress			v_c	=	$0.79/\gamma_m \times p_s^{1/3} \times (400/d)^{1/4} \times (\max(40, f_{cu})/25)^{1/3}$			
					=	0.454	MPa	> v	**Shear reinforcement IS NOT required**
c.l. 7.3.4	7.1.4 Checking for deflection								
Table 7.4	$M_{SLS} / (b \times d^2)$				=	0.100			
Table 7.4	Design service stress in tension reinforcement			f_s	=	72	N/mm^2	$= 2/3 \times f_y \times A_{st,req} / A_{st,prov} \times 1/\beta_b$	$< 0.8 \times f_y$
Table 7.4	Modification factor = $0.55 + (477 - f_s) / (120 [0.9 + M/bd^2])$				=	4.3	> 2.0	Take 2.0	
Table 7.3	Basic span / effecive depth ratio				=	7	(for cantilever)		
c.l. 7.3.4.4	Modified span / effecive depth ratios (for tensile reinforcement)				=	14	= Basic span / d × Modification factor (Tensile)		
	Actual span / effecive depth ratio				=	4	< 14		**OK !**
	7.1.5 Checking for crack width								
c.l. 7.2.1	Allowable surface crack width			w	=	0.2	mm		
c.l. 7.2.3	Thickness of element			h	=	300	mm	$= t_{wall}$	
	Width of element to be considered			b	=	1000	mm	1m width	
	Effective depth			d	=	245	mm		
	Diameter of steel bars			d_b	=	10	mm		
	Spacing of steel bars			s	=	200	mm		
	Concrete Cover			$c = c_{min}$	=	50	mm		
	Concrete strength			f_{cu}	=	30	N/mm^2		
	Strength of steel			f_s	=	72	N/mm^2		
	Young's Modulus of steel			E_s	=	200	kN/mm^2		
	Applied moment			M_{SLS}	=	6.0	kNm		
	Area of reinforcement			$A_{s,prov}$	=	393	mm^2		
	Depth of the neutral axis			x	=	122.5	mm	≦ 0.5d	
c.l. 7.2.3	Strain in the tension reinforcement			ε_s	=	0.0004	= fs / Es		
appendix	a = 300 = h								
appendix	ε_1 = 0.0005 = ε_s (a-x) / (d-x)								
	For limiting design surface crack width of 0.2mm								
	(BS8007) ε_2 = $[b_t(h-x)(a'-x)]/[3E_sA_s(d-x)]$ (from CoP Conc. 2013)							= 0.0011	
	ε_m = $\varepsilon_1 - \varepsilon_2$ = -0.0006								
	Effective cover = $d_c = c + d_b / 2$ = 55.0 mm								
	a_{cr} = $[(s/2)^2 + d_c^2]^{0.5} - d_b / 2$				=	109.1	mm		
	Design surface crack width			ω	=	$3a_{cr}\varepsilon_m / [1+2(a_{cr}-c_{min}) / (h-x)]$			
					=	-0.11	mm		
					<	Allowable surface crack width = 0.2 mm			**OK !**



Prepared by:
Check by:

Project: Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che — Date: 13/10/2025

Subject: Structural Design for Box Culvert **(Checking of Base Slab)** — Project No.: P25086

Ref. — Output

1.0 Dimension of Base Slab

For the base slab of the manhole, we consider

Width = 3600 mm
Length = 1000 mm
Thickness = 300 mm

2.0 Loading on base slab

Consider the loading of base slab more conservatively as the loading on wall, we have

Shear Force on side wall (ULS)	$V_{ULS,wall}$ =	=	51.5	kN per m run
Bending Moment on side wall (ULS)	$M_{ULS,wall}$ =	=	8.6	kNm per m run
Shear Force on side wall (SLS)	$V_{SLS,wall}$ =	=	36.1	kN per m run
Bending Moment on side wall (SLS)	$M_{SLS,wall}$ =	=	6.0	kNm per m run

CoP Conc. 2013

3.0 RC Design against Bending Moment and Shear Force

For the dimension of base slab with,

Width = 3600 mm
Length = 1000 mm
Thickness = 300 mm

WITH

V_{ULS} = 51.5 kN per m run
M_{ULS} = 8.6 kNm per m run
V_{SLS} = 36.1 kN per m run
M_{SLS} = 6.0 kNm per m run

Consider the RC design in a width of 1m, we have

3.1 Reinforcement for moment:

With M_ULS,slab = 8.6 kNm per m run

Width	b	=	1000	mm	
Effective depth	d	=	265	mm	
Yield strength of steel	f_y	=	500	N/mm^2	
Concrete strength	f_{cu}	=	30	N/mm^2	
Span	L	=	3600	mm	
Base slab thickness	t_{base}	=	300	mm	
Table 4.2 Concrete cover		=	30	mm	

c.l. 6.1 3.1.1 Checking for compression steel

eq 6.8 K' (for fcu ≦ 45N/mm^2) = 0.156

eq 6.7 $K = M / (f_{cu} \times b \times d^2)$ = 0.004 < K' = 0.156 **Compression reinforcement IS NOT required**

3.1.2 Checking for tensile steel

eq 6.10 $z = d [0.5 + \sqrt{} (0.25 - K/0.9)]$ = 1d **> 0.95d, and thus use 0.95d** = 252 mm

eq 6.11 Required steel reinforcement $A_{s,req} = M / (0.87 \times f_y \times z)$ = 78 mm^2

Provided steel reinforcement T 10 @ 200 mm spacing $A_{s,prov}$ = 393 mm^2

Percentage of reinforcement $p_s = A_{s,prov} / bd$ = 0.15 %

c.l. 9.3.1 > minimum percentage of steel = 0.13 % **OK !**

c.l. 9.2.1.3 < maximum percentage of steel = 4.00 % **OK !**

3.1.3 Checking for shear reinforcement

Design shear stress $v = V / (b_v \times d)$ = 0.194 MPa

c.l. 6.1.2.5 Design concrete shear stress v_c = $0.79/\gamma_m \times p_s^{1/3} \times (400/d)^{1/4} \times (\max(40, f_{cu})/25)^{1/3}$

= 0.434 MPa > v **Shear reinforcement is NOT required**

c.l. 7.3.4 3.1.4 Checking for deflection

Table 7.4 $M_{SLS} / (b \times d^2)$ = 0.086

Table 7.4 Design service stress in tension reinforcement f_s = 66 N/mm^2 $= 2/3 \times f_y \times A_{st,req} / A_{st,prov} \times$ < $0.8 \times f_y$ $\beta_b = 1$

Table 7.4 Modification factor = $0.55 + (477 - f_s) / (120 [0.9 + M/bd^2])$ = 4.4 > 2.0 Take 2.0

Table 7.3 Basic span / effecive depth ratio = 7 (for cantilever)

c.l. 7.3.4.4 Modified span / effecive depth ratios (for tensile reinforcement) = 14 = Basic span / d × Modification factor (Tensile)

Actual span / effecive depth ratio = 14 < 14 **OK !**

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Base Slab)**	Project No.:	P25086

Ref. Output

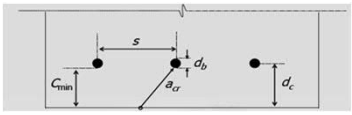
3.1.5 Checking for crack width

c.l. 7.2.1	Allowable surface crack width	w	=	0.2	mm		
c.l. 7.2.3	Thickness of element	h	=	300	mm	= t_{base}	
	Width of element to be considered	b	=	1000	mm	1m width	
	Effective depth	d	=	265	mm		
	Diameter of steel bars	d_b	=	10	mm		
	Spacing of steel bars	s	=	200	mm		
	Concrete Cover	$c = c_{min}$	=	30	mm		
	Concrete strength	f_{cu}	=	30	N/mm^2		
	Strength of steel	f_s	=	66	N/mm^2		
	Young's Modulus of steel	E_s	=	200	kN/mm^2		
	Applied moment	M_{SLS}	=	6.0	kNm		
	Area of reinforcement	$A_{s,prov}$	=	393	mm^2		
	Depth of the neutral axis	x	=	132.5	mm	≦ 0.5d	
c.l. 7.2.3	Strain in the tension reinforcement	ε_s	=	0.0003	= fs / Es		

appendix	a	=	300	= h
appendix	ε_1	=	0.0004	= ε_s (a-x) / (d-x)

For limiting design surface crack width of 0.2mm

(BS8007)	ε_2	=	$[b_t(h-x)(a'-x)]/[3E_sA_s(d-x)]$	(from CoP Conc. 2013)		=	0.0009
	ε_m	=	$\varepsilon_1 - \varepsilon_2$	=	-0.0005		
Effective cover		=	$d_c = c + d_b / 2$	=	35.0	mm	
	a_{cr}	=	$[(s/2)^2 + d_c^2]^{0.5} - d_b / 2$		=	100.9	mm
Design surface crack width				ω	=	$3a_{cr}\varepsilon_m / [1+2(a_{cr}-c_{min}) / (h-x)]$	
					=	-0.08	mm
					<	Allowable surface crack width = 0.2 mm	**OK !**



APPENDIX D

Design Drawings

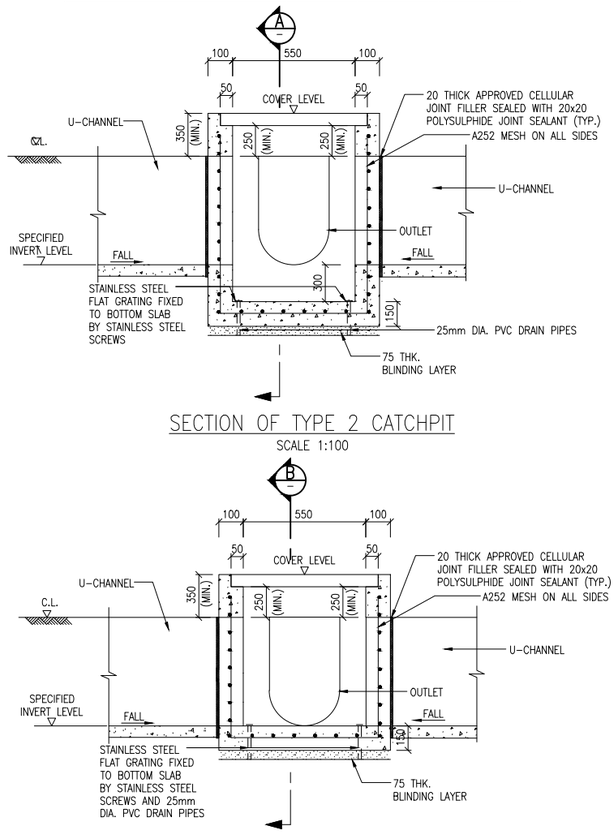
ISO A1 594mm x 841mm

GENERAL NOTES:

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

SCHEDULE OF CATCHPIT WITH SAND TRAP

CATCHPIT NO.	CATCHPIT TYPE	COVER LEVEL (mPD)	BTM. LEVEL (mPD)	INLET LEVEL (mPD)	OUTLET LEVEL (mPD)
CP1	2	+26.00	+25.35	+25.51	+25.50
CP2	2	+25.00	+24.34	A: +24.55 B: +24.50	+24.49
CP3	2	+24.50	+22.82	A: +22.98 B: +23.25	+22.97
CP4	2	+25.00	+23.73	+23.89	A: +23.88 B: +23.88
CP5	1	+25.00	+23.98	+24.14	+24.13
CP6	1	+25.00	+24.51	+24.67	+24.66
CP7	1	+24.50	+23.12	+23.28	+23.27
CP8	1	+24.50	+23.40	+23.56	+23.55
CP9	2	+24.00	+23.08	A: +23.24 B: +23.27	+23.23
CP10	1	+24.00	+23.38	+23.54	+23.53
CP11	2	+25.00	+23.99	+24.15	+24.14
CP12	1	+26.00	+25.21	+25.37	+25.36
CP13	1	+26.00	+25.28	+25.44	+25.43
CP14	1	+26.00	+25.33	A: +25.49 B: +25.50 C: +25.49	+24.48

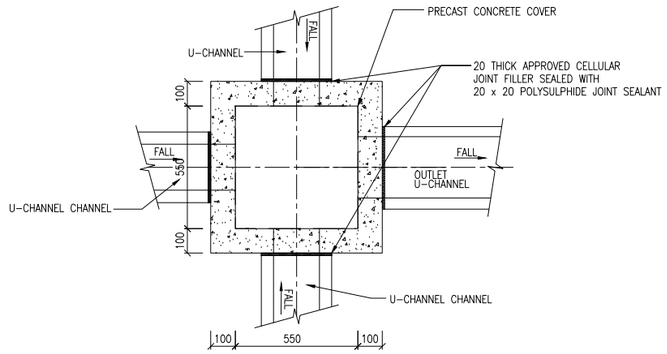


SECTION OF TYPE 2 CATCHPIT

SCALE 1:100

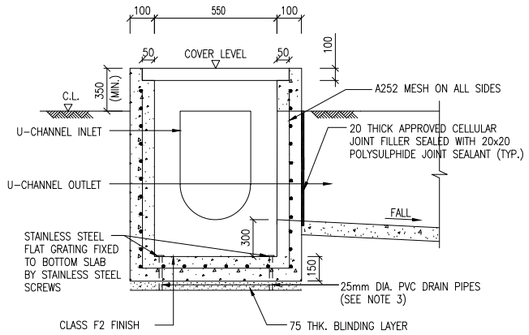
SECTION OF TYPE 1 CATCHPIT

SCALE 1:100



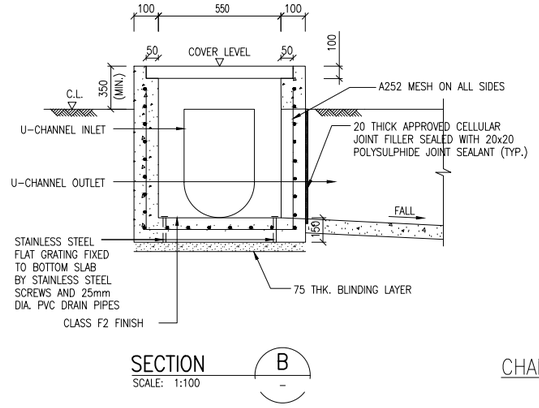
PLAN OF CATCHPIT (TYPE 1&2)

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



SECTION

SCALE: 1:100



SECTION

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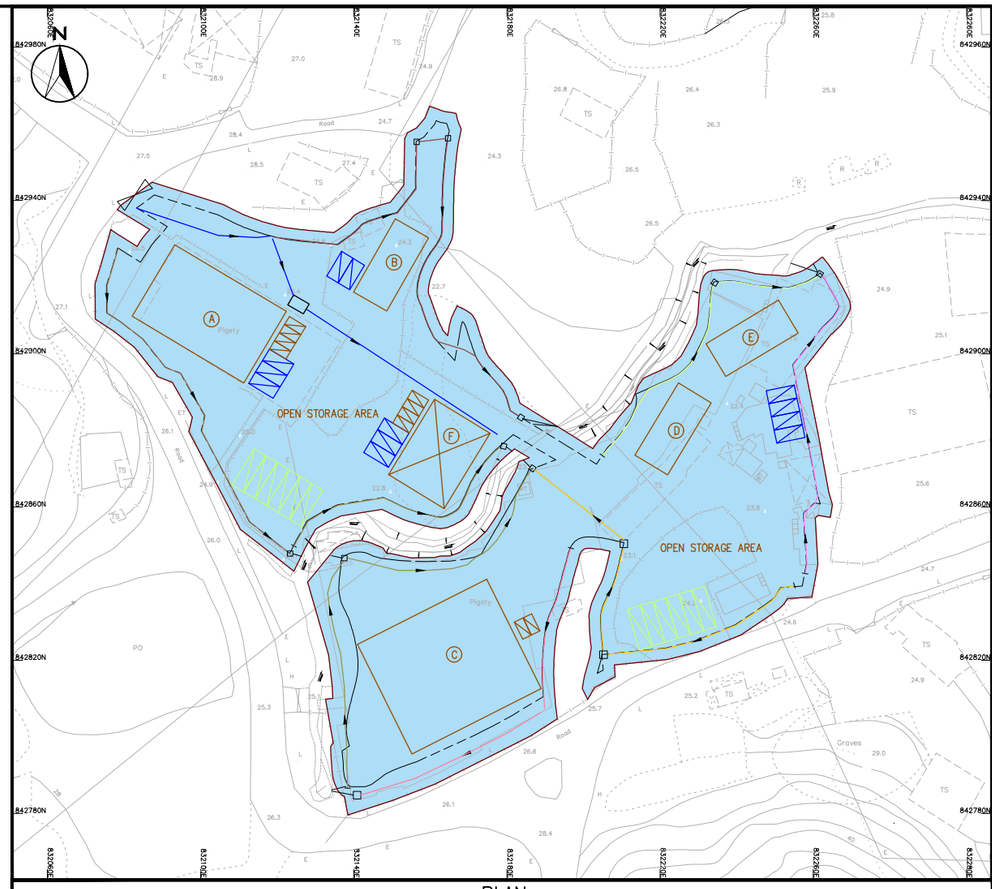


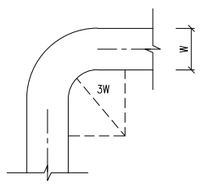
PLAN

SCALE 1:600

LEGEND:

- PROPOSED APPLICATION SITE
- STRUCTURE
  - A: 737 sq.m (about)
  - B: 220 sq.m (about)
  - C: 1200 sq.m (about)
  - D: 220 sq.m (about)
  - E: 220 sq.m (about)
- OPEN-SIDED STRUCTURE
  - F: 393 sq.m (about)
- PRIVATE CARPARKING SPACE 5m(L) X 2.5m(W) (10 nos.)
- L/UL BAY FOR LGVS 7m(L) X 3.5m(W) (12 nos.)
- L/UL BAY FOR HGVS 11m(L) X 3.5m(W) (12 nos.)
- PROPOSED 11m WIDE VEHICULAR ACCESS

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



CHANNEL CHANGING DIRECTION THROUGH BENDS

(REFERENCE : PAGE 100 GEOTECHNICAL MANUAL FOR SLOPES)
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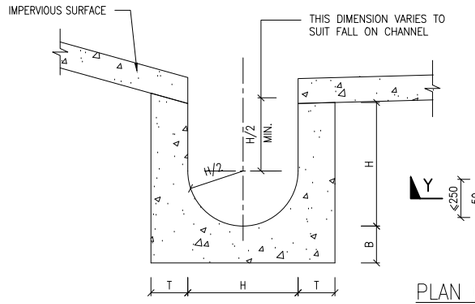

DETAILS OF U-CHANNEL

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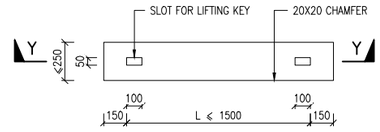

PLAN OF PRECAST CONCRETE COVERS

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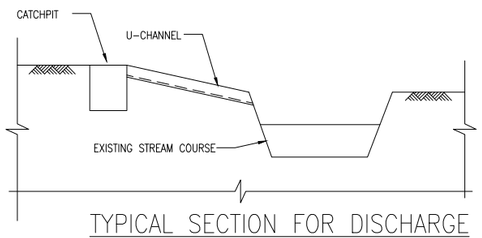
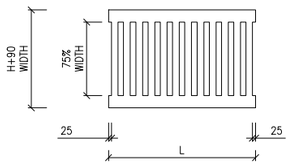
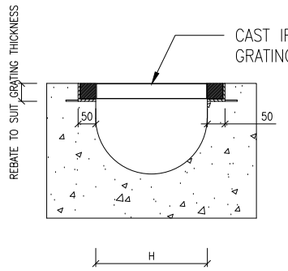


TYPICAL SECTION FOR DISCHARGE CONNECTION

N.T.S.



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



CAST IRON GRATING FOR U-CHANNELS

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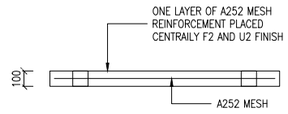

SECTION Y–Y PRECAST CONCRETE COVERS FOR SAND TRAP AND CATCHPIT

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

B.D. REF.

F.S.D. REF.

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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DESIGNED BY:	MP		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	AS SHOWN (A3)		
CAD FILE:	WNG_25086_C_DRA_001		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:
GENERAL NOTES AND LAYOUT PLAN

DRAWING NO:	REV:
WNG/25086/C/DRA/001	A

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.
榮翔顧問工程師有限公司

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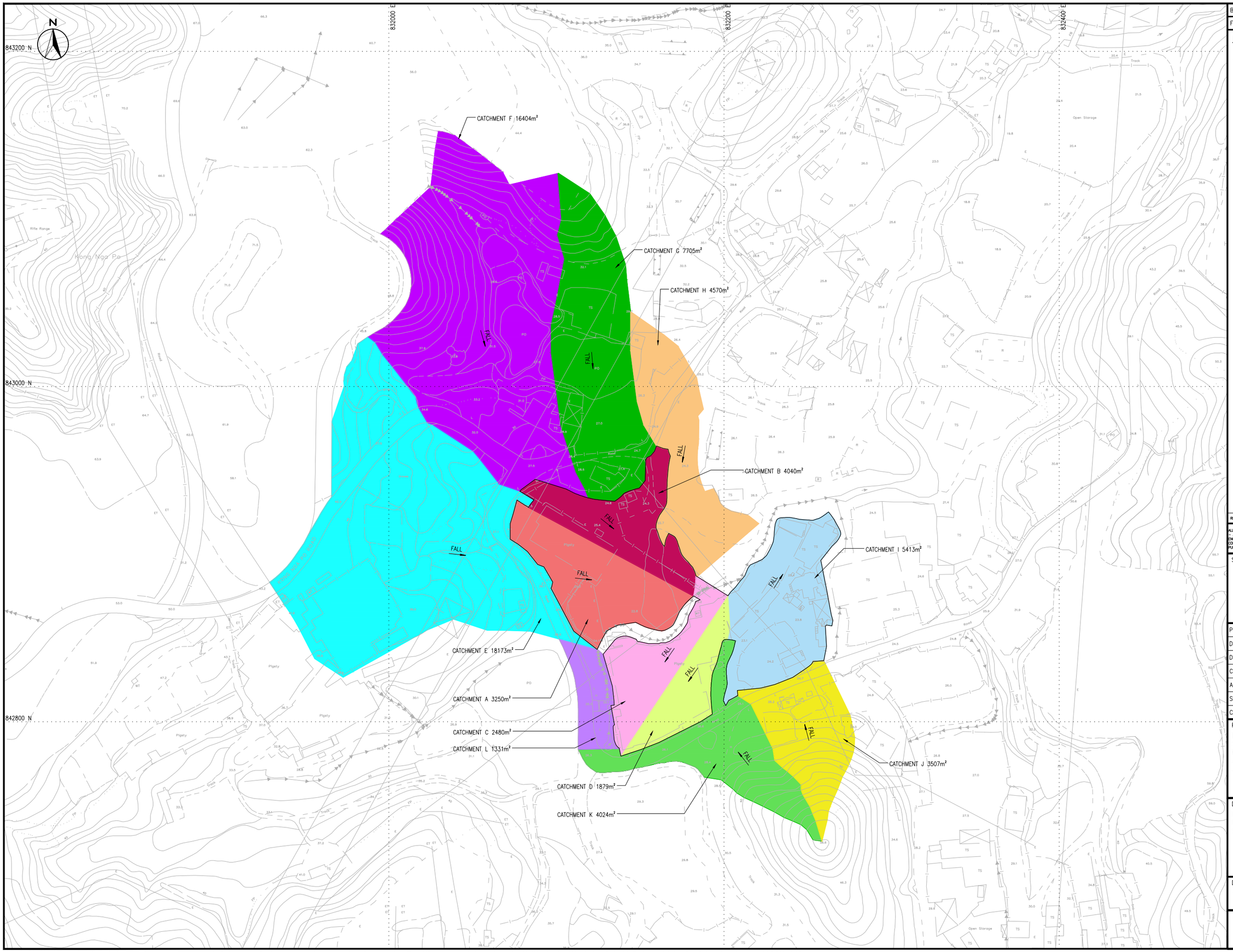

B.D. REF.	
F.S.D. REF.	

LEGEND:

FLOW DIRECTION

BOUNDARY OF LOTS FOR THIS APPLICATION

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
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PROJECT:

DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:

PROPOSED EFFECTVE CATCHMENT AREA FOR SURFACE RUNOFF AFFECTING SUBJECT LOTS

DRAWING NO:	REV:
WNG/25086/C/DRA/002	–

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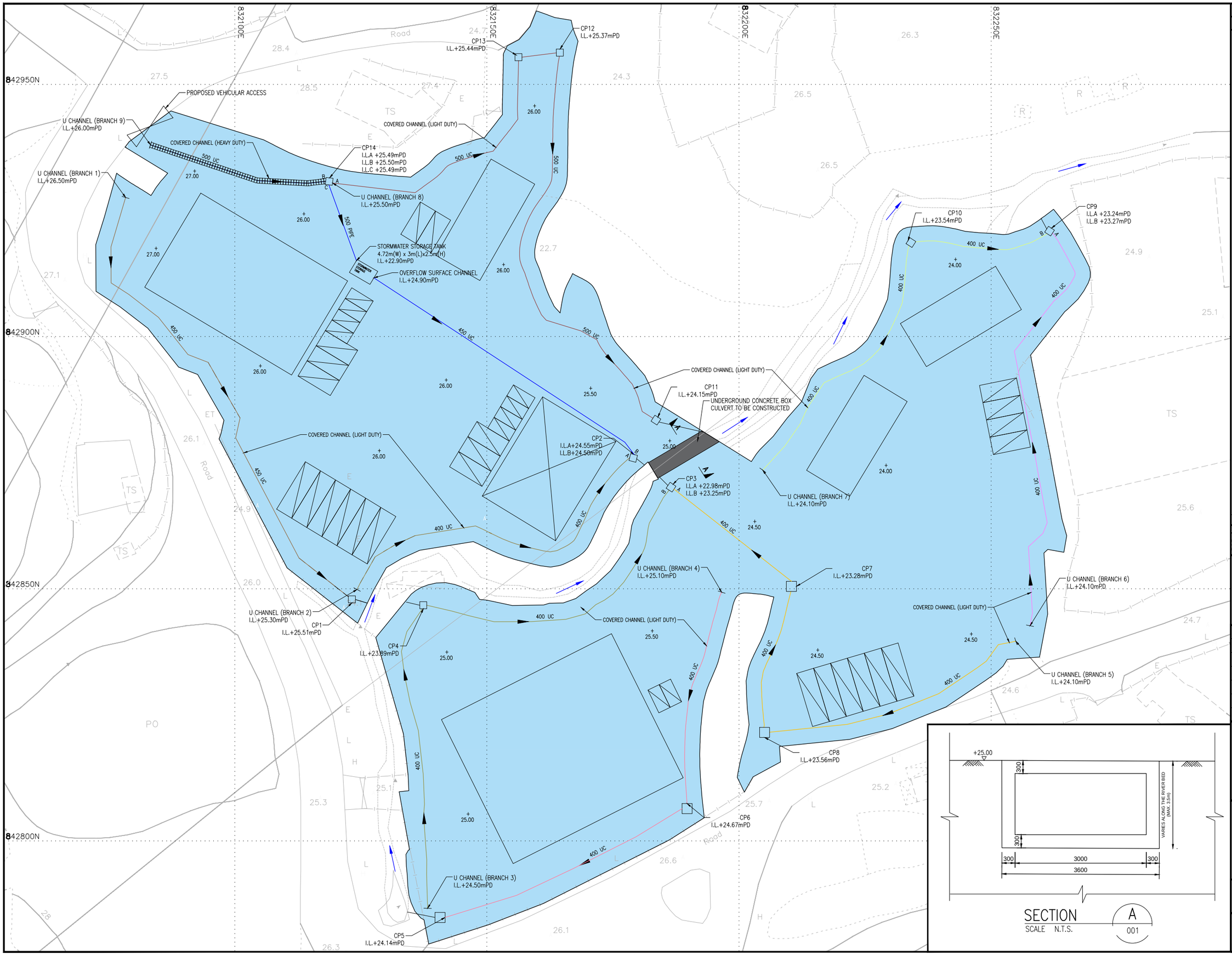

B.D. REF.

F.S.D. REF.

LEGEND:

- FLOW DIRECTION OF STREAM
- BOUNDARY OF LOTS FOR THIS APPLICATION
- PROPOSED 11m WIDE VEHICULAR ACCESS

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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PROJECT:

DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:

PROPOSED DRAINAGE SYSTEM

DRAWING NO:	REV:
WNG/25086/C/DRA/003	A

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WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.

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APPENDIX E

Drainage Impact Assessment

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

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Drainage Impact Assessment

Prepared by: Matthew Poon

Date: 13/10/2025

Wings & Associates Consulting Engineers Ltd.
22/F, Elite Centre,
22 Hung To Road,
Kwun Tong, Kowloon
Hong Kong

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Appendix B	Proposed Drainage Network
Appendix C	Model results
Appendix D	Model results for the river portions

1. INTRODUCTION

1.1 Background

The drainage proposal is under the application of Section 16 Planning Application. The proposed uses of the subject lots are temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities for a period of 3 years at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories.

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

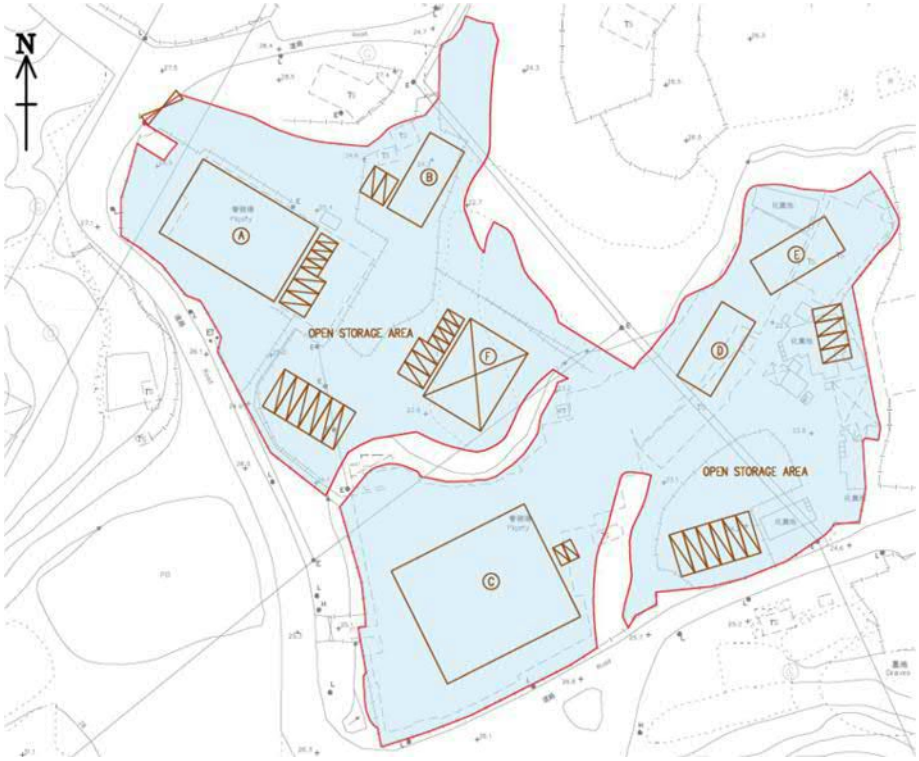


Figure 1-1 Site boundary of the Lot

1.2 Scope and Objectives

The objective of this Drainage Impact Assessment Report (DIA) is to assess the drainage impact of the proposed drainage system and existing drainage facilities in the area, ensure the downstream have sufficient capacity for the proposed development. Assessing the drainage impact and suggest mitigation measures required for the existing drainage network, if necessary.

2. HYDRAULIC MODELLING AND DRAINAGE IMPACT ASSESSMENT METHODOLOGY

2.1 Introduction

2.1.1 This section presents the hydraulic modelling and drainage impact assessment methodology adopted for this Study. The DIA has followed:

a) Drainage Services Department (DSD) Stormwater Drainage Manual (SDM) fifth edition (2018);
b) DSD SDM Corrigendum Nos. 1/2022, No. 1/2024 and No. 2/2024;
c) Relevant DSD Standard Drawings, Technical Circulars and Practice Notes wherever applicable.

2.2 Hydraulic Model Established

2.2.1 InfoWorks ICM (version 2025.5) is the modelling software used for the analysis of this 2D model.

2.3 Design Parameters Adopted

2.3.1 Rainfall: 50-year design return period rainfall from HKO region, climate change (Table 28), Rainfall design allowance (Table 31) from Corrigendum 1-2022 of SDM and the storm constants from Corrigendum 1-2024 of SDM are calculated and used for the simulation.

2.3.2 Inflow: Specific inflow has been added at specific nodes to account for the flow coming into the catchment at that location.

2.3.3 Siltation allowance has been considered in the stormwater channel and pipe. According to the SDM (2018) Section 9.3, such flow area reduction factor is estimated in 5% reduction in flow area for gradients greater than 1 in 25 and 10% reduction in flow area for other cases.

2.4 Rainfall Profile used in the Model

2.4.1 Rainfall profiles have been obtained by considering the symmetrically distributed rainfall profile as suggested in SDM (2018) Section 4.3.5:

$$F(t) = \begin{cases} \dfrac{a[b + 2(1-c)t]}{(2t+b)^{c+1}} & 0 \le t \le \frac{td}{2} \\ F(-t) & -\frac{\tau_d}{2} \le t \le 0 \end{cases}$$

Where:

F(t) = rate of rainfall or instantaneous intensity in mm/hr at time t (in minutes);

td = rainstorm duration (in minutes) (td ≤ 240)

a, b, c = parameters for the selected return period in HKO Headquarters Rainfall zone as defined in the SDM Corrigendum No. 1/2024

3.4.1.2 The adopted design rainfall parameters are consistent with the SDM Corrigendum No. 1/2024 table 3d. The reference rainfall zone is HKO Headquarters. Adopted parameters are summarised in Table 3-1.

Table 2-1 Storm Event Constant for North District Area– HKO Headquarters

Return Period T(years)	**50**
a	474.6
b	2.90
c	0.371

2.4.2 A 4-hour rainstorm is adopted in the hydraulic analysis.

2.5 Roughness used in the Model

2.5.1 The established model consists of open channels and river reaches. The equation adopted for open channels and river reaches is Mannings equation.

2.5.2 Sediment depth is considered for pipes, culverts, open channels and river reaches, which is section 9.3 of SDM (10% allowance).

2.5.3 The proposed drainage network roughness coefficients for pipes and culverts have been adopted in consistent with the Table 13 & Table 14 of SDM (2018) and summarized in Table 3-2.

Table 2-2 Adopted Roughness Coefficients

Description	**Roughness Value [mm]**
Rectangular Concrete Channels	n = 0.016 (Fair)
Concrete Pipe	ks = 0.60

2.6 Climate Change

2.6.1 Table 2-3 presents a summary of the design rainfall used for the mid-21st century and end-21st century storm events. The simulation events included in Table 2-3 are taken from Corrigendum 1-2022 of SDM.

Table 2-3 Rainfall Increase due to Climate Change

	Rainfall Increase
Mid 21st Century	11.1%
End of 21st Century	16.0%

2.7 Freeboard

2.7.1 For rivers, a minimum freeboard of 300 mm is adopted and an additional 200mm allowance will be provided at river bends to cover super-elevations at bends and wave run-ups.

3. POTENTIAL DRAINAGE IMPACT AND MITIGATION MEASURES

3.1 Hydraulic Model Results

The following presents the hydraulic model test results at the proposed lot:

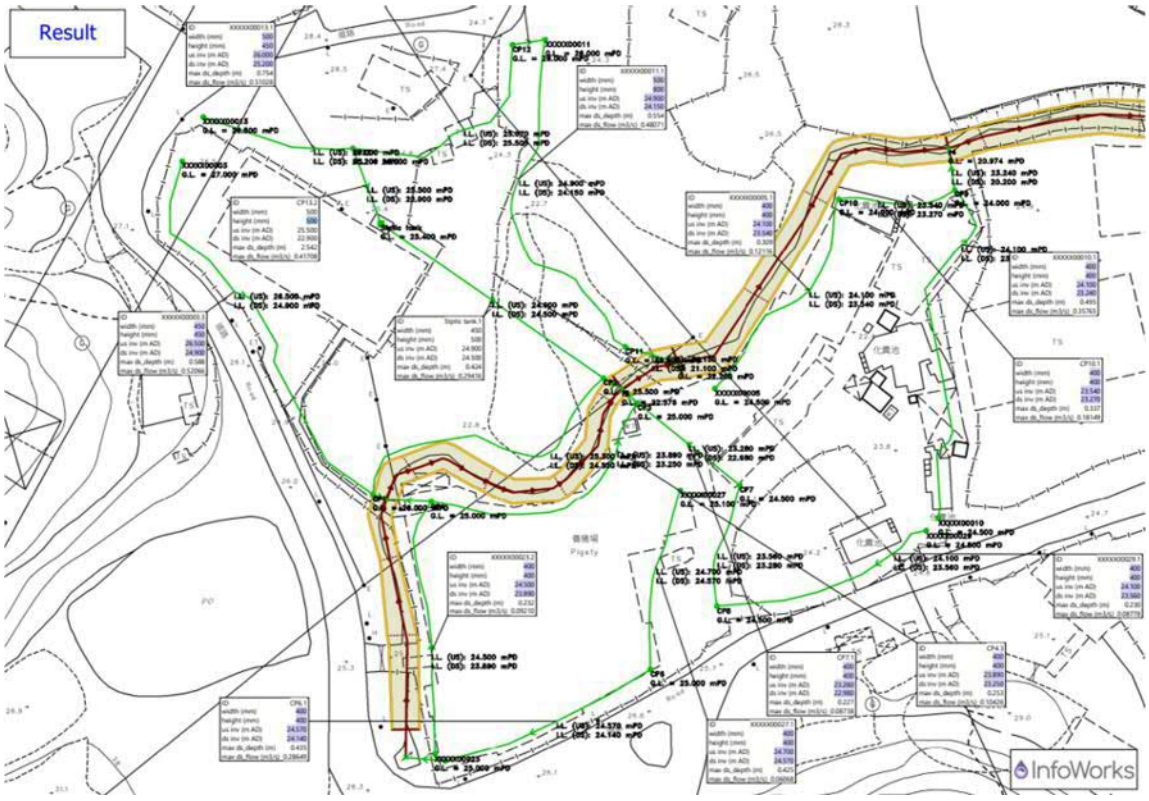


Figure 3-1 Results of drainage system in model

3.1.1 The following presents the hydraulic model test results at the downstream river nearby the proposed lot:

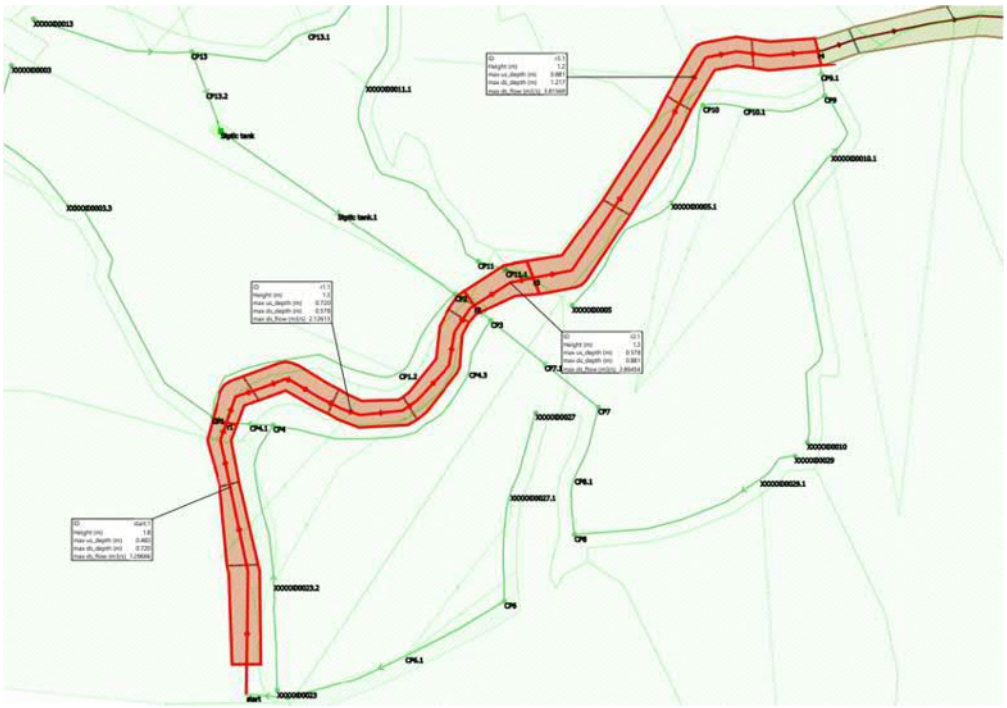


Figure 3-2a Results of downstream river in model

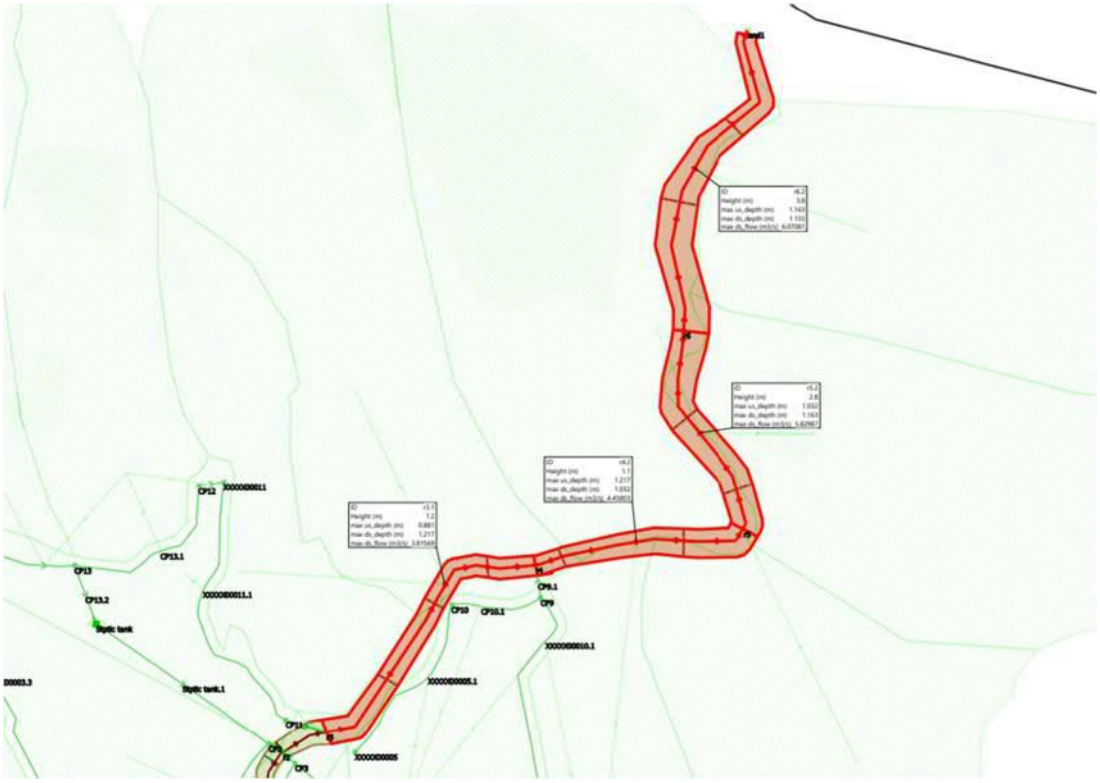


Figure 3-2b Results of downstream river in model

3.2 Mitigation Measures

3.2.1 The proposed will increase the percentage of paved surfaces within the existing catchments. Associated stormwater drainage network is proposed along the alignment. The stormwater will be collected from the newly proposed alignment and subsequently discharged to the nearest natural stream, and existing branch/trunk drainage networks.

3.2.2 When there are existing structures/utilities located in close proximity of/adjacent to the works. Proper design and implementation of temporary works shall be undertaken, and extreme care is taken when carrying out deep excavation for the works adjacent to the existing structures/utilities.

3.2.3 It is proposed that the temporary works for the existing drainage diversion are carried out in the dry season where possible in order to avoid heavy rainfall and excessive sediment wash down that may affect the hydraulic capacity of both the existing channel and any temporary diversion channels. Stockpiling material should be kept away from the streams and drainage system.

3.2.4 The runoff coefficient of the construction site will be approximately the same as the planned condition. Improvement / upgrading works if any should be conducted in advance of the change of land use to avoid adverse hydraulic impact to during construction. It is considered that there will be upgrading works required for the proposed development.

4. CONCLUSION

4.1.1 The hydraulic model established for this project has provided an assessment of the susceptibility of the Assessment area to flooding for the mid-century and end-century extreme storm events with consideration to the effects of climate change.

4.1.2 This Drainage Impact Assessment concludes that the proposed development will not result in any flooding or overflow on the site, in adjacent areas, or downstream. The designed drainage system is effective and will safely convey runoff without causing any adverse impacts to the existing river.

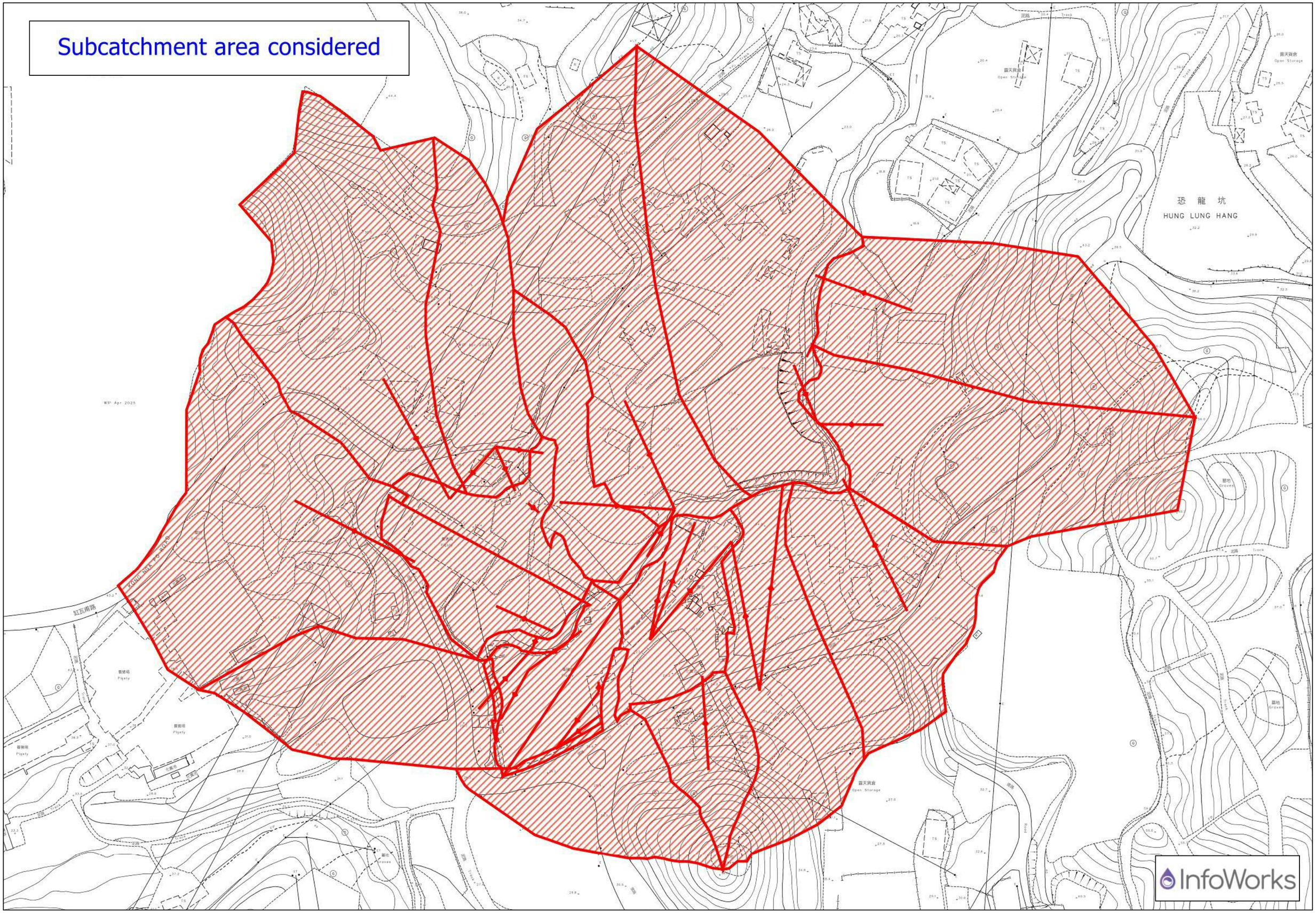
4.1.3 The changes in land use, overland flow paths, surface runoff characteristics, changes on flood extent that will be created by the proposed developments have been represented in the hydraulic model established for the Project.

THE END

Appendix A

Proposed Catchment

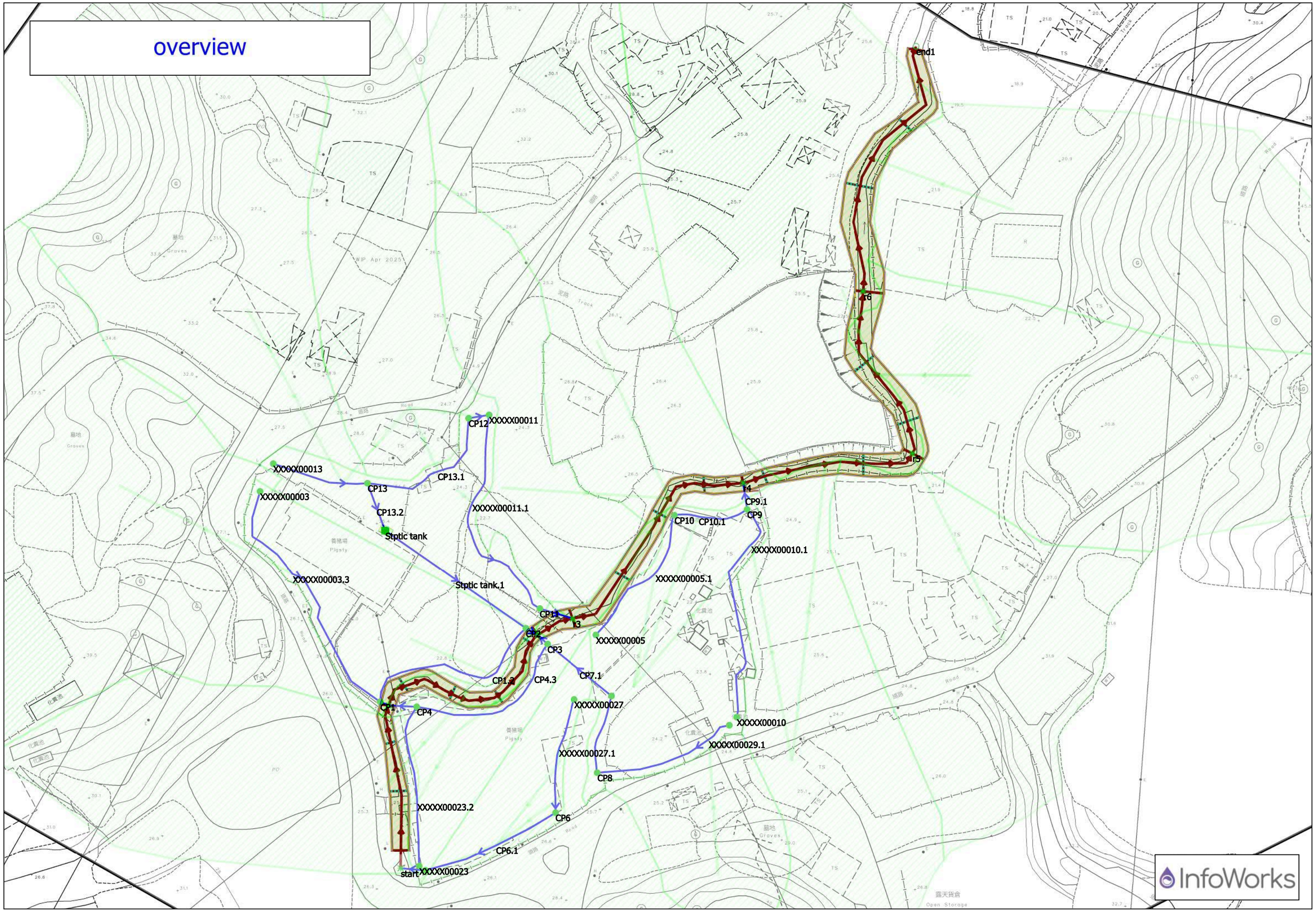
Subcatchment area considered



Appendix B

Proposed Drainage Network

overview


end1
r6
r5
r4
r3
CP12
XXXXX00011
XXXXX00013
CP13
CP13.1
XXXXX00003
CP13.2
Stptic tank
XXXXX00011.1
XXXXX00003.3
Stptic tank.1
CP11
CP2
CP3
CP1.2
CP4.3
CP7.1
CP1
CP4
XXXXX00027
XXXXX00027.1
CP8
XXXXX00023.2
CP6
CP6.1
start
XXXXX00023
XXXXX00005
XXXXX00005.1
CP10
CP10.1
CP9.1
CP9
XXXXX00010.1
XXXXX00010
XXXXX00029.1
WIP Apr 2025
InfoWorks

Appendix C

Model results

Result

ID	XXXXX00013.1
width (mm)	500
height (mm)	450
us inv (m AD)	26.000
ds inv (m AD)	25.200
max ds_depth (m)	0.754
max ds_flow (m3/s)	0.51028

XXXXX00013
G.L. = 26.500 mPD

XXXXX00003
G.L. = 27.000 mPD

I.L. (US): 26.000 mPD
I.L. (DS): 25.200 mPD

ID	CP13.2
width (mm)	500
height (mm)	500
us inv (m AD)	25.500
ds inv (m AD)	22.900
max ds_depth (m)	2.542
max ds_flow (m3/s)	0.41708

I.L. (US): 25.500 mPD
I.L. (DS): 22.900 mPD

Static tank
G.L. = 25.400 mPD

ID	XXXXX00003.3
width (mm)	450
height (mm)	450
us inv (m AD)	26.500
ds inv (m AD)	24.900
max ds_depth (m)	0.588
max ds_flow (m3/s)	0.52066

I.L. (US): 26.500 mPD
I.L. (DS): 24.900 mPD

ID	Stptic tank.1
width (mm)	450
height (mm)	500
us inv (m AD)	24.900
ds inv (m AD)	24.500
max ds_depth (m)	0.424
max ds_flow (m3/s)	0.29416

I.L. (US): 24.900 mPD
I.L. (DS): 24.500 mPD

CP12
XXXXX00011
G.L. = 26.000 mPD

ID	XXXXX00011.1
width (mm)	500
height (mm)	800
us inv (m AD)	24.900
ds inv (m AD)	24.150
max ds_depth (m)	0.554
max ds_flow (m3/s)	0.48071

I.L. (US): 25.970 mPD
I.L. (DS): 25.500 mPD

I.L. (US): 24.900 mPD
I.L. (DS): 24.150 mPD

ID	XXXXX00005.1
width (mm)	400
height (mm)	400
us inv (m AD)	24.100
ds inv (m AD)	23.540
max ds_depth (m)	0.309
max ds_flow (m3/s)	0.12116

CP10
G.L. = 24.000 mPD
I.L. (US): 23.540 mPD
I.L. (DS): 23.270 mPD

CP9
G.L. = 20.974 mPD
I.L. (US): 23.240 mPD
I.L. (DS): 20.200 mPD

I.L. (US): 24.100 mPD
I.L. (DS): 23.540 mPD

I.L. (US): 24.100 mPD
I.L. (DS): 23

ID	XXXXX00010.1
width (mm)	400
height (mm)	400
us inv (m AD)	24.100
ds inv (m AD)	23.240
max ds_depth (m)	0.495
max ds_flow (m3/s)	0.35765

ID	CP10.1
width (mm)	400
height (mm)	400
us inv (m AD)	23.540
ds inv (m AD)	23.270
max ds_depth (m)	0.337
max ds_flow (m3/s)	0.18149

CP11
G.L. = 25.000 mPD
I.L. (US): 21.150 mPD
I.L. (DS): 21.100 mPD

CP2
G.L. = 25.500 mPD

CP3
G.L. = 25.000 mPD

XXXXX00005
G.L. = 24.500 mPD

G.L. = 22.205 mPD
G.L. = 22.576 mPD

I.L. (US): 25.300 mPD
I.L. (DS): 24.550 mPD

I.L. (US): 23.890 mPD
I.L. (DS): 23.250 mPD

I.L. (US): 23.280 mPD
I.L. (DS): 22.980 mPD

XXXXX00027
G.L. = 25.100 mPD

CP7
G.L. = 24.500 mPD

CP4
G.L. = 26.000 mPD

CP5
G.L. = 25.000 mPD

XXXXX00010
G.L. = 24.500 mPD
XXXXX00029
G.L. = 24.500 mPD

I.L. (US): 23.560 mPD
I.L. (DS): 23.280 mPD

I.L. (US): 24.700 mPD
I.L. (DS): 24.570 mPD

CP8
G.L. = 24.500 mPD

I.L. (US): 24.100 mPD
I.L. (DS): 23.560 mPD

ID	XXXXX00029.1
width (mm)	400
height (mm)	400
us inv (m AD)	24.100
ds inv (m AD)	23.560
max ds_depth (m)	0.230
max ds_flow (m3/s)	0.08778

ID	XXXXX00023.2
width (mm)	400
height (mm)	400
us inv (m AD)	24.500
ds inv (m AD)	23.890
max ds_depth (m)	0.232
max ds_flow (m3/s)	0.09210

I.L. (US): 24.500 mPD
I.L. (DS): 23.890 mPD

CP6
G.L. = 25.000 mPD

ID	CP7.1
width (mm)	400
height (mm)	400
us inv (m AD)	23.280
ds inv (m AD)	22.980
max ds_depth (m)	0.227
max ds_flow (m3/s)	0.08738

ID	CP4.3
width (mm)	400
height (mm)	400
us inv (m AD)	23.890
ds inv (m AD)	23.250
max ds_depth (m)	0.253
max ds_flow (m3/s)	0.10426

ID	CP6.1
width (mm)	400
height (mm)	400
us inv (m AD)	24.570
ds inv (m AD)	24.140
max ds_depth (m)	0.435
max ds_flow (m3/s)	0.28649

I.L. (US): 24.570 mPD
I.L. (DS): 24.140 mPD

XXXXX00023
G.L. = 25.000 mPD

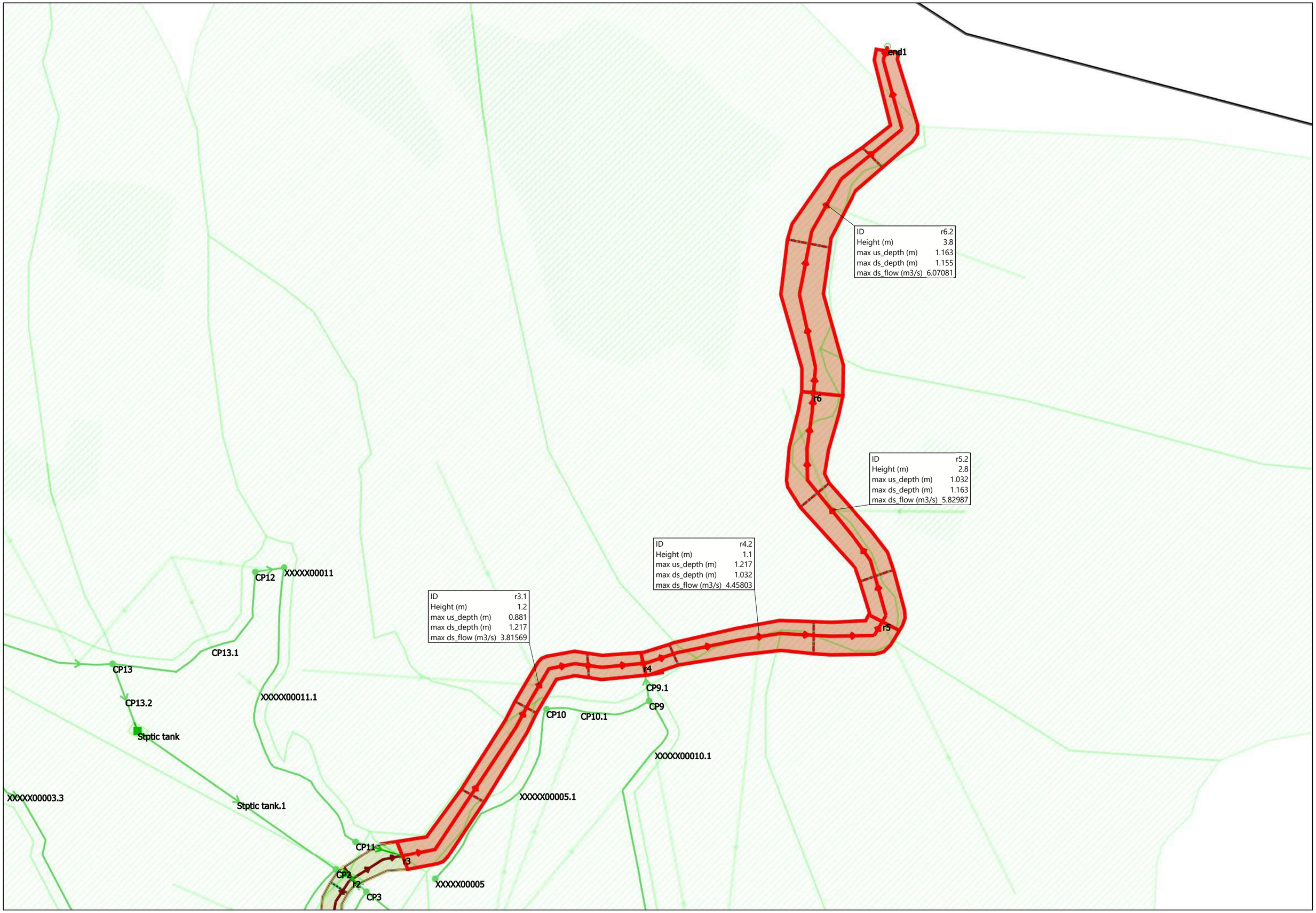
ID	XXXXX00027.1
width (mm)	400
height (mm)	400
us inv (m AD)	24.700
ds inv (m AD)	24.570
max ds_depth (m)	0.425
max ds_flow (m3/s)	0.06068

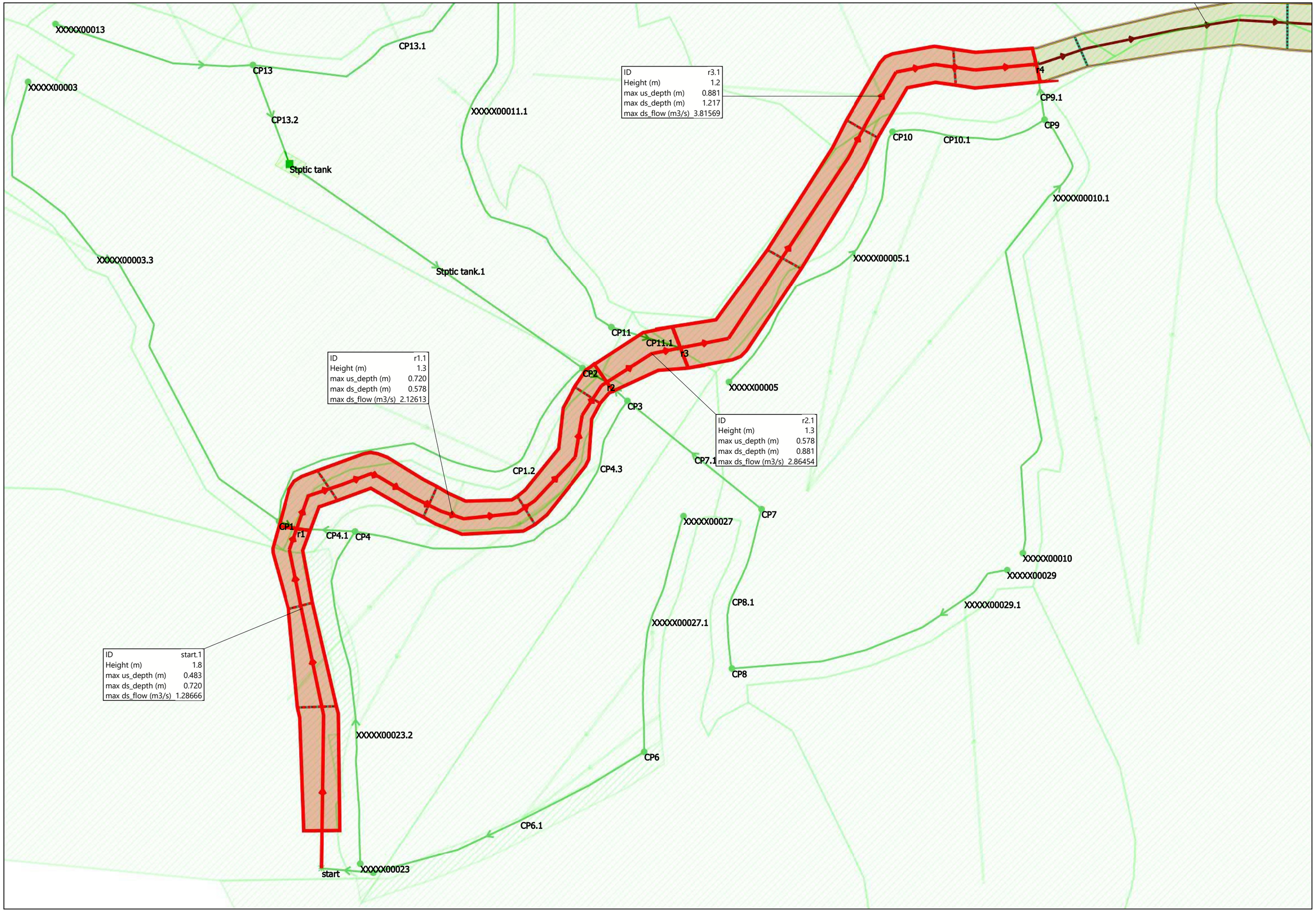
道路 Road 養豬場 Pigsty 化糞池 PO TS

InfoWorks

Appendix D

Model results for the river portions


end1
ID r6.2
Height (m) 3.8
max us_depth (m) 1.163
max ds_depth (m) 1.155
max ds_flow (m3/s) 6.07081
r6
ID r5.2
Height (m) 2.8
max us_depth (m) 1.032
max ds_depth (m) 1.163
max ds_flow (m3/s) 5.82987
ID r4.2
Height (m) 1.1
max us_depth (m) 1.217
max ds_depth (m) 1.032
max ds_flow (m3/s) 4.45803
r5
ID r3.1
Height (m) 1.2
max us_depth (m) 0.881
max ds_depth (m) 1.217
max ds_flow (m3/s) 3.81569
r4
CP9.1
CP9
CP10
CP10.1
XXXXX00010.1
XXXXX00005.1
CP12
XXXXX00011
CP13.1
CP13
CP13.2
XXXXX00011.1
Stptic tank
Stptic tank.1
XXXXX00003.3
CP11
r3
CP2
r2
CP3
XXXXX00005


XXXXX00013
CP13.1
CP13
XXXXX00003
CP13.2
Stptic tank
XXXXX00011.1
XXXXX00003.3
Stptic tank.1
CP11
CP11.1
r3
CP2
r2
CP3
XXXXX00005
CP1.2
CP4.3
CP7.1
CP1
r1
CP4.1
CP4
XXXXX00027
CP7
XXXXX00027.1
CP8.1
CP8
XXXXX00023.2
CP6
CP6.1
XXXXX00023
start
r4
CP9.1
CP9
CP10
CP10.1
XXXXX00010.1
XXXXX00005.1
XXXXX00010
XXXXX00029
XXXXX00029.1
ID r3.1
Height (m) 1.2
max us_depth (m) 0.881
max ds_depth (m) 1.217
max ds_flow (m3/s) 3.81569
ID r1.1
Height (m) 1.3
max us_depth (m) 0.720
max ds_depth (m) 0.578
max ds_flow (m3/s) 2.12613
ID r2.1
Height (m) 1.3
max us_depth (m) 0.578
max ds_depth (m) 0.881
max ds_flow (m3/s) 2.86454
ID start.1
Height (m) 1.8
max us_depth (m) 0.483
max ds_depth (m) 0.720
max ds_flow (m3/s) 1.28666

毅勤發展顧問有限公司
Tel 電話：[redacted]
Fax 傳真：
Email 電郵：
Web 網址：

Date : 17th December, 2025
Our Ref. : ADCL/PLG-10315/L007

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

By Email

Dear Sir/Madam,

Re: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(Planning Application No. A/NE-FTA/264)

We refer to the departmental comments received from the Drainage Services Department regarding the subject application and would like to provide a *Responses-to-Comments Table and Revised Drainage Impact Assessment* to address the abovementioned departmental comments and facilitate considerations by the DSD and the Town Planning Board.

Thank you for your kind attention and should you have any queries, please do not hesitate to contact our Mr. Thomas LUK at [redacted].

Yours faithfully,
For and on behalf of
Aikon Development Consultancy Limited

Thomas LUK

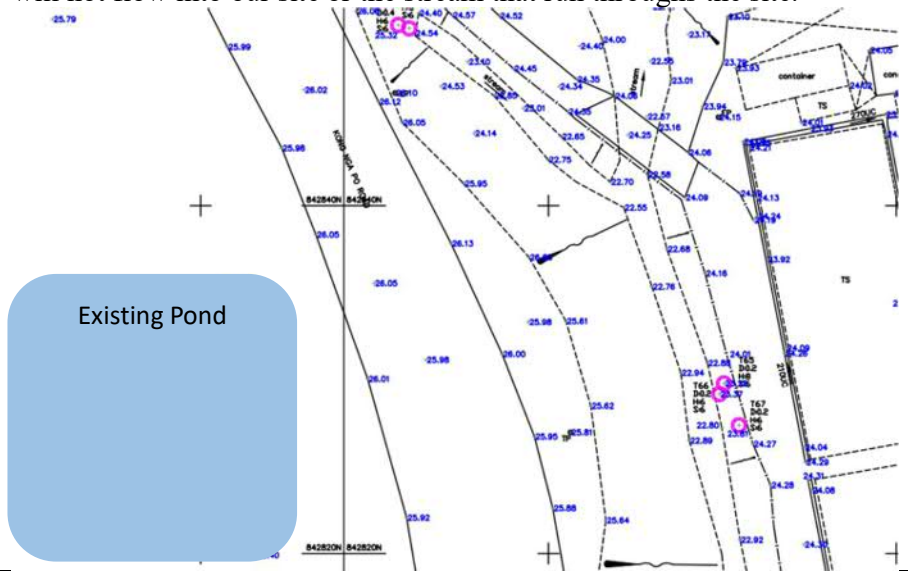
Encl.
c.c. Client

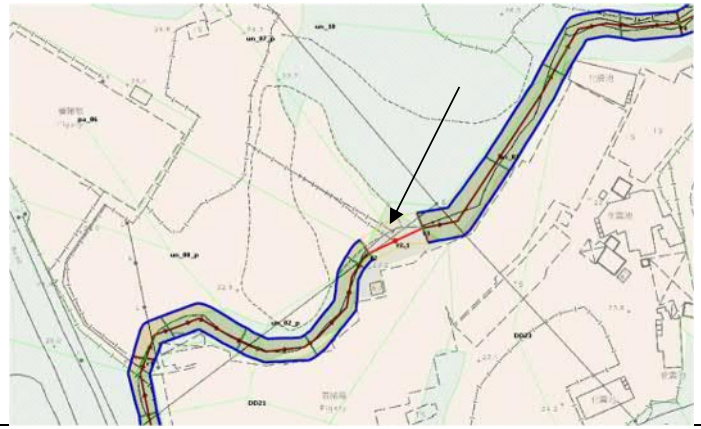
Address 地址：
[redacted]

A/NE-FTA/264, Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Submission of Drainage Impact Assessmet

	Comment from DSD	Responses
1	Previous comment 1 was not resolved. Please provide single Drainage Impact Assessment document covering study results rather than two separate documents.	Noted, the report will be DIA covering all study results.
2	Section 2.4.1 refers. Storm constants of North District Area instead of HKO headquarter should be adopted. Please revise the text.	The text has been revised. Please refer to the report
3	Section 2 refers. Please advise the source of the cross-section area of existing streamcourse adopted in the hydraulic modelling, and whether it reflects the on-site condition.	The cross-section area adopted in the hydraulic modelling is adopted from the LiDAR data (2020) from CSDI
4.1	Please elaborate in text the modeling results, particularly the hydraulic impacts/potential risks associated with the "proposed development" scenario, and how it is compared to the "existing condition".	The text has been revised. Please refer to the report section 5.
4.2	Figure 3-2 and Figure 3-4: Both figures show the same modeling result. Please clearly label the scenario for each of the figure.	The report has been revised. Please refer to the report section 5.
4.3	Section 3.2.1: "The stormwater will be collected from the newly proposed alignment...". Please elaborate what "newly proposed alignment" refers to.	The "newly proposed alignment" refers to proposed drainage alignment of the lot, which is checked to have sufficient drainage capacity to collect and discharge the stormwater to downstream river. (This section is revised to section 5.2 in the report.)
4.4	Section 3.2.3: "It is proposed that the temp works for the existing drainage diversion are carried out....". Please clarify which section of the drainage system will be diverted and what is the diversion scheme.	There will not be any temporary works to be conduct in the lot so temporary diversion is not required. This section is removed from the report. (This section is revised to section 5.2 in the report.)

4.5	Section 3.2.4: “It is considered that there will be upgrading works required ...”. It is unclear what "upgrading works" are referring to. Please clarify.	The works are mainly desilting and dredging the nearby river and vegetation removal for the lot.
4.6	Please advise if there will be any change of surface runoff due the proposed use. It is observed that water levels in “proposed development” scenario is lower than the “existing condition”. An example is shown below for a selected cross section. Please review and clarify.	The model is revised
5	Section 4.1.1: “flooding for the mid-century and end-century extreme storm events ...” Mid-century scenario was not found. Please clarify.	The report is revised.
6	Please include some site photos of the existing drainage system.	Noted, photo will be updated in the report.
7	There is an existing pond adjacent to the application site (the Site). Please advise if the pond and its upstream channel are discharging to the stream which runs through the Site. If yes, catchment area should be reviewed and revised. 	The pond is assumed to receive stormwater from the surrounding. Also, based on the topographic survey map. The level of the road is higher than the pond. Therefore, even if there are excessive stormwater discharge, it will not flow into our site or the stream that run throughs the site. 

8.1	Please advise the source/reference from which the river cross section data and 2D zone elevation were obtained.	Both river cross-section data and 2D zone elevation are adopted from the LiDAR data (2020) from CSDI
8.2	The model only includes the stream. Please advise if there will be any proposed drainage within the Site.	The model will be used to check the stream condition under case 50A and 50B, while the proposed drainage network will be checked through hand-calculation.
9	Appendix A refers. Please indicate the site boundary for reference.	Noted, will update in the report.
10	Appendix B refers. The figures shown in Appendix B is the model network instead of model result. Please review.	Noted, will be updated
11	Appendix C refers. Please clearly label what scenario each figure refers to.	Noted, will be updated
12.1	The proposed box culvert was not found in the model. Please clarify.	The model is revised. 
12.2	The stormwater storage tank was not found in the model. Please clarify.	the proposed drainage network and the proposed storage tank will be checked through hand-calculation.
13	Please advise if there will be any filling of land or boundary fence/wall. If yes, please assess whether the change of surface elevation or the erection of boundary wall/fence will obstruction the existing overland flow from/to adjacent catchments.	The only filling of land is to level the proposed lot, and the proposed drainage facilitates has sufficient capacity to collect and discharge to downstream. No additional fill or boundary wall will obstruct the overland flow.

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

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Drainage Impact Assessment (Rev.2)

Prepared by: Matthew Poon
Date: 15/12/2025

Wings & Associates Consulting Engineers Ltd.
22/F, Elite Centre,
22 Hung To Road,
Kwun Tong, Kowloon
Hong Kong

MAK KA YEUNG
MHKIE RPE (CVL.)

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1. INTRODUCTION
2. SITE DESCRIPTION
3 DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE
4. HYDRAULIC MODELLING AND DRAINAGE IMPACT ASSESSMENT METHODOLOGY
5. POTENTIAL DRAINAGE IMPACT AND MITIGATION MEASURES
6. CONCLUSION

APPENDICE

Appendix A	Photo Record
Appendix B	Topography Survey Record
Appendix C	Drainage Design Calculation
Appendix D	Design Drawings
Appendix E	InfoWorks result: Drainage Condition – Existing
Appendix F	InfoWorks result: Drainage Condition – Proposed Drainage System
Appendix G	InfoWorks result: Drainage Condition – Proposed Drainage System (With improvement measure)

1. INTRODUCTION

1.1 Background

The drainage proposal is under the application of Section 16 Planning Application. The proposed uses of the subject lots are temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities for a period of 3 years at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories.

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

1.2 Scope and Objectives

The objective of this Drainage Impact Assessment Report (DIA) is to assess the drainage impact of the proposed drainage system to existing drainage facilities in the area, ensuring the downstream have sufficient capacity for the proposed development. Assessing the drainage impact and suggest mitigation measures required for the existing drainage network, if necessary. The proposed drainage system within the lot will be checked in the calculation. The surrounding catchments and overall impact to downstream river will be checked by Infowork model.

2. SITE DESCRIPTION

2.1 The general views of the application area can be referred to in the figures below. The combined parts of the lot cover an area of about 16,604m^2.

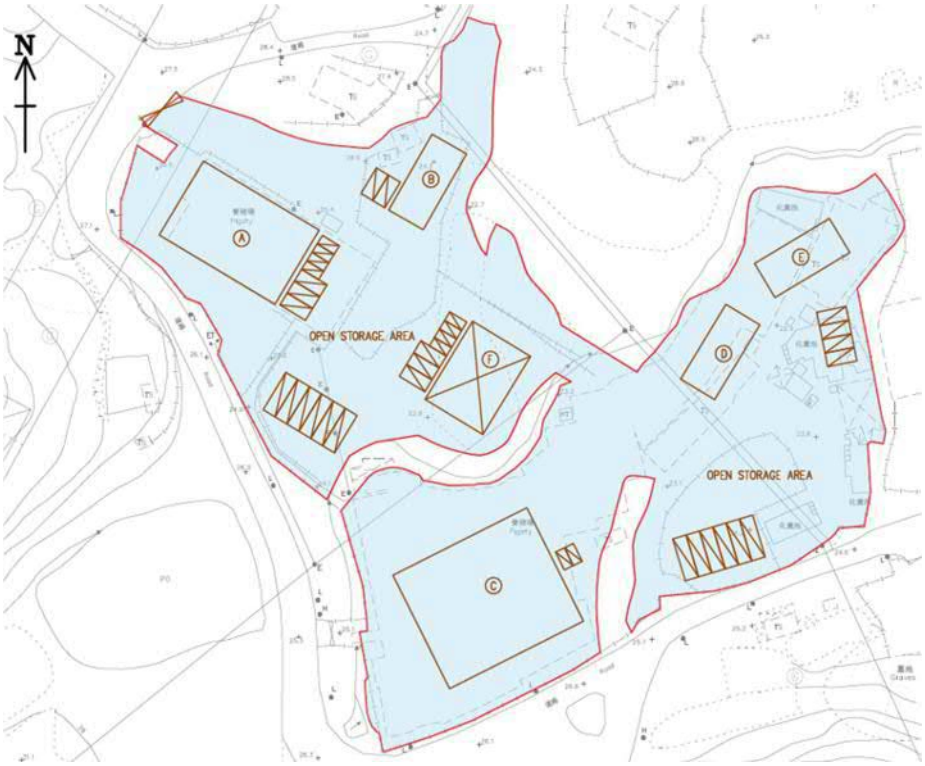


Figure-2.1 Lot information of the Subject Site

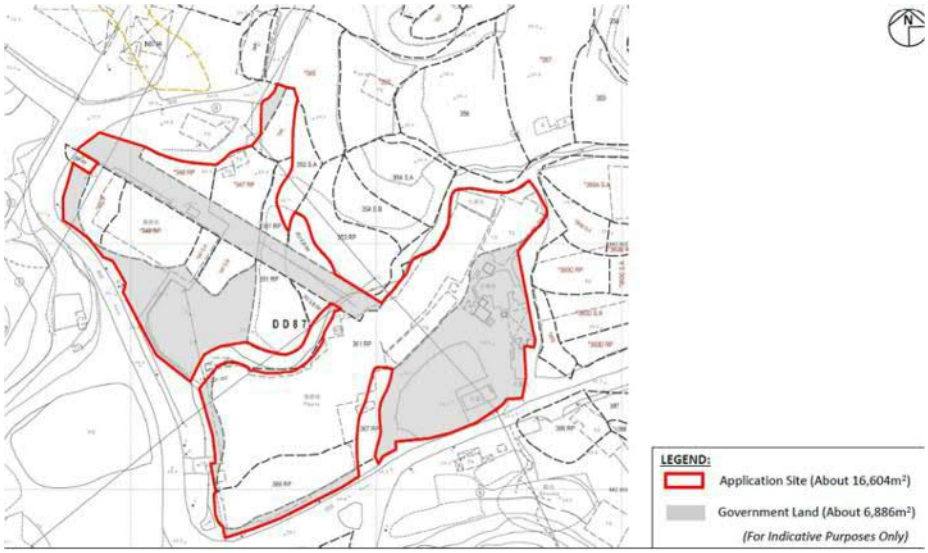


Figure-2.2 Boundary of the Subject Site surrounded by fencing

2.3 The figure below shows the proposed layout of the structures and parking provision within the boundary of the fencing. The subject site consists of six single-storey temporary structures, including 5 nos. of enclosed structures and 1 open-sided structure. No permanent structures and buildings will be placed within the subject site, the flow direction will not be affected by any blockage. All proposed structures will be placed 3m away from the existing stream course.

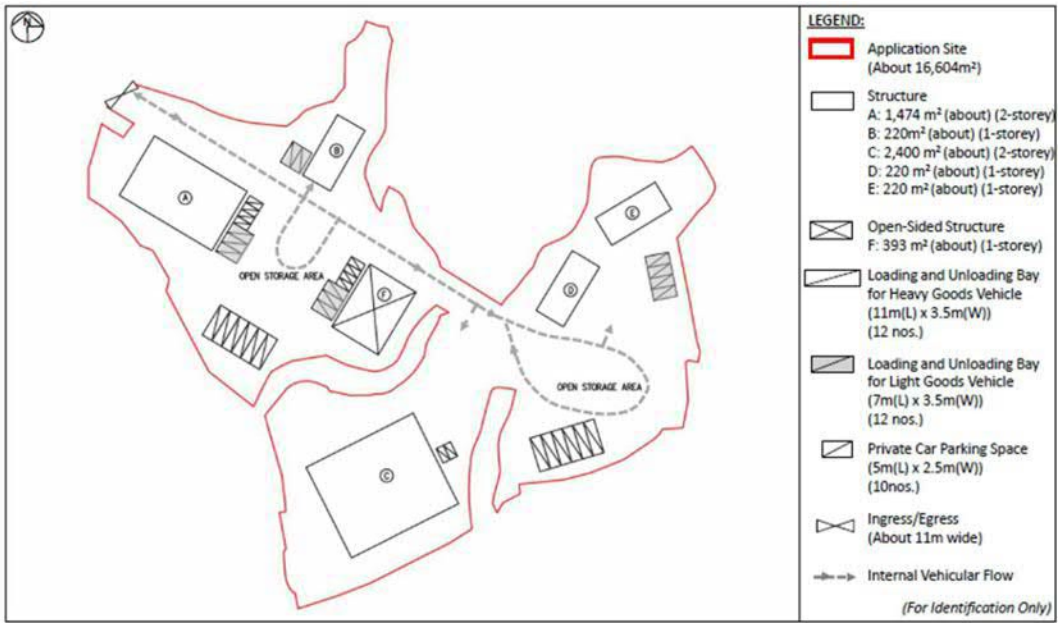


Figure-2.3 Location of the structures and parking areas inside the Subject Site

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

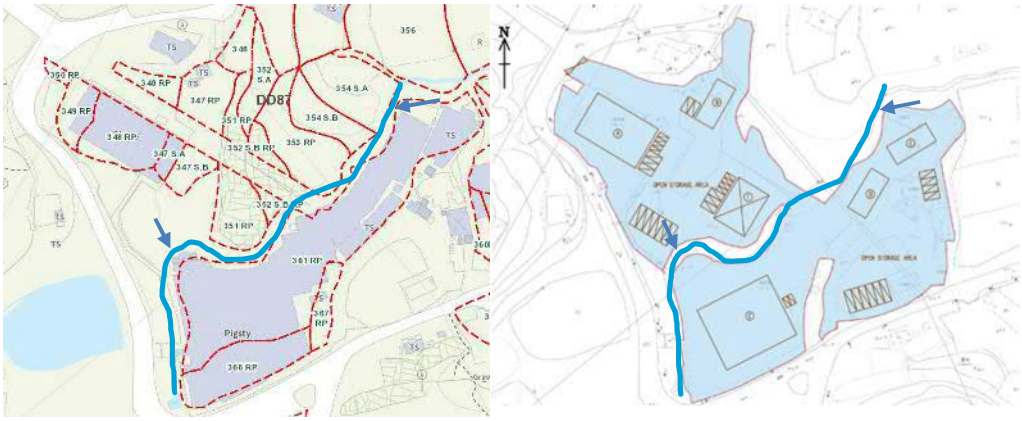


Figure-2.4 Existing drainage features inside the Subject Site

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

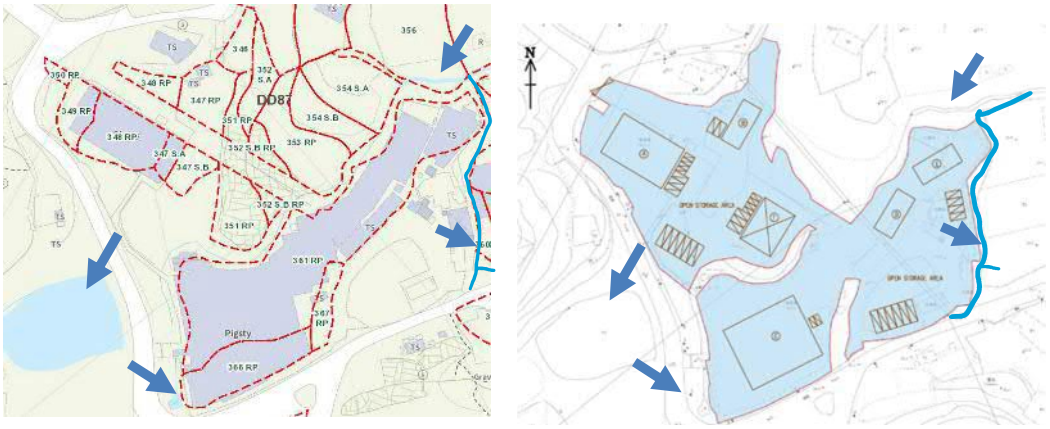


Figure-2.5 Existing drainage features outside the Subject Site

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

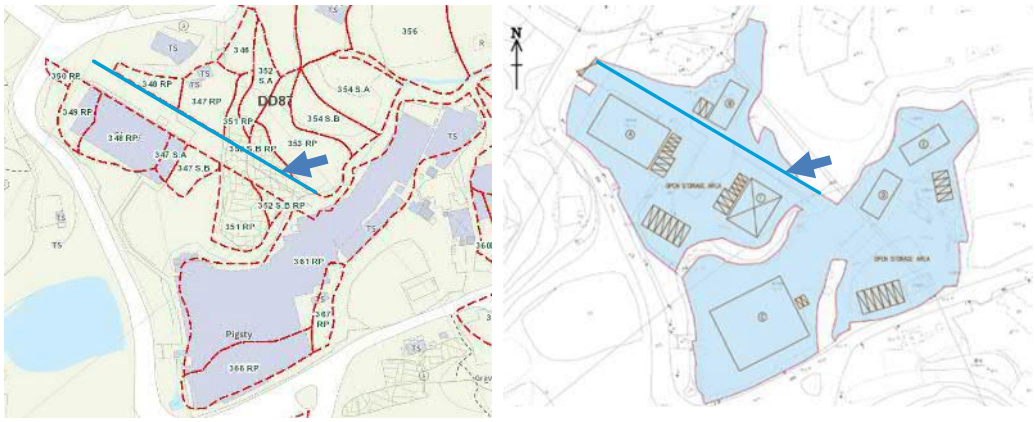


Figure-2.6 Existing U-Channels inside the Subject Site

3. DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE

3.1 General Planning

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

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

3.2 Identification of the Effective Catchment Area

Referring to the location plan and the existing ground level, the considered effective catchment area of surface runoff includes: the area of the subject lots and the adjacent area with higher cover level (including uphill and carriageway).

The other adjacent area will be determined as the anticipated catchment areas of runoff which are not affecting the subject site, in case, those areas separate with the subject lots by existing drainage utilities (culvert and channels), carriageway, fencing, and level difference.

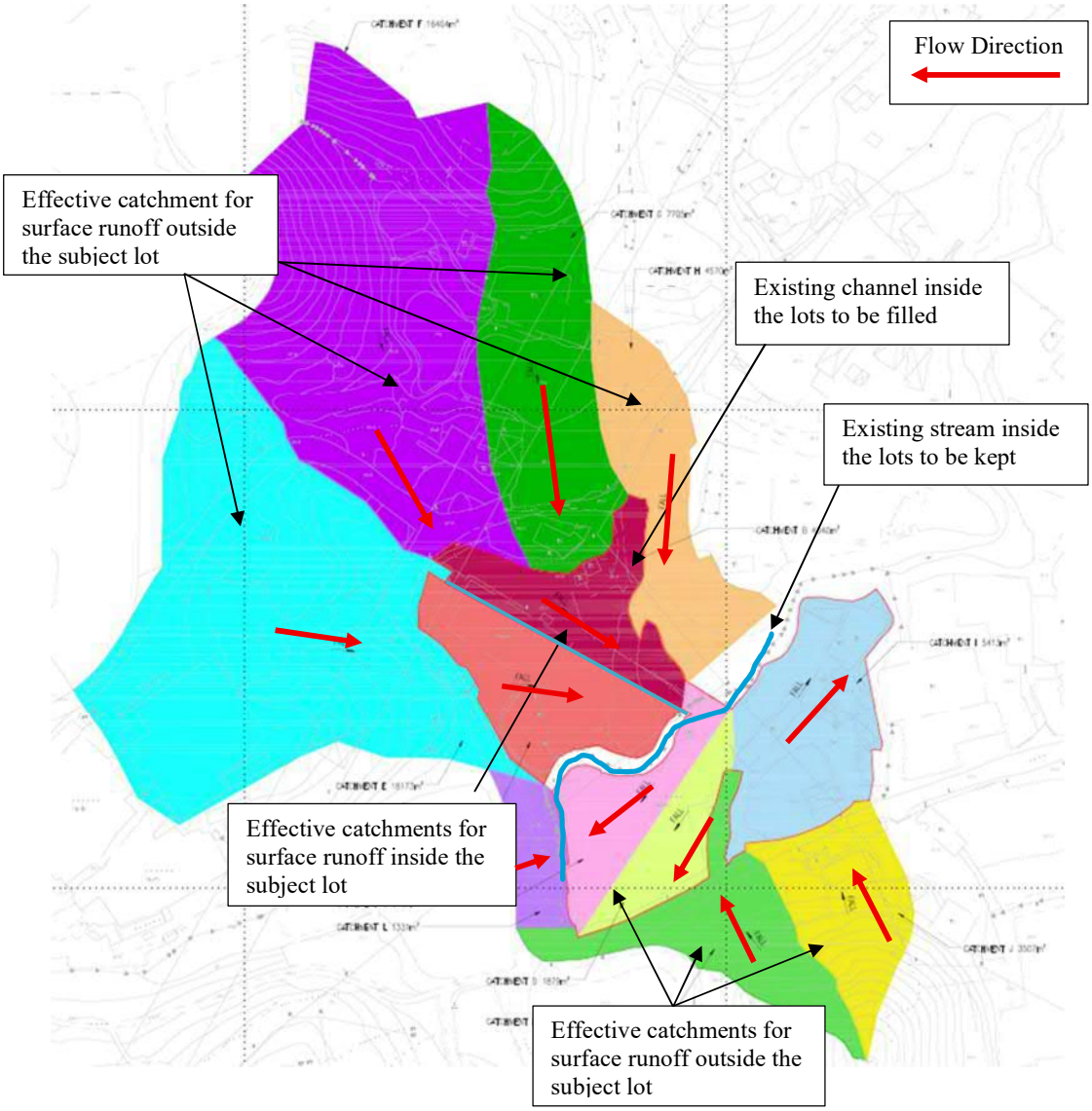


Figure-3.1 Flow Direction of the Effective Catchment Area inside the Subject Site

3.3 Studying on the Existing Drainage System

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

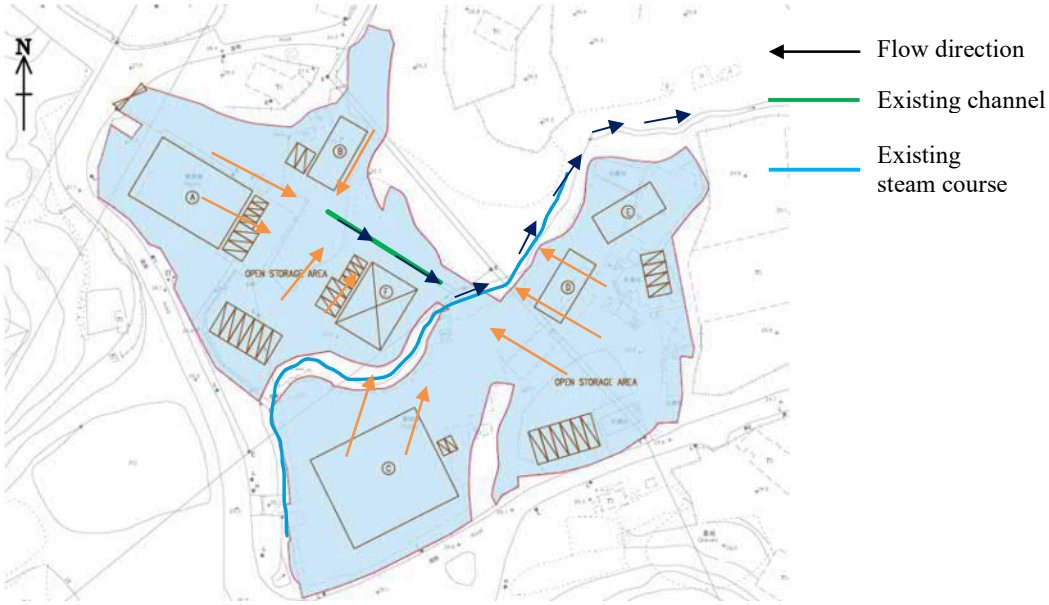


Figure-3.2 Original drainage network inside the Subject Site

3.4 Filling the subject site to rearrange cover level

The area inside the lots will be completely filled up to create a flat surface with slight gradient to provide falls to drainage features and match the existing road surface outside the lot boundary. The existing channel inside the lot boundary will be removed.

The existing concrete pipe at the connection point between the northwest and southeast sections of the lot are proposed to be replaced with a new 3m(W) x 3.5m(H) concrete box culvert. Connecting the upstream and downstream sections. The design checking for the concrete pipe can be found in **Appendix C**.

The ground level is proposed to be raised to a level between +24.0mPD and +27.0mPD for feasible traffic flow and heavy vehicle access. The cover level at the boundary will be between +24.0mPD and +27.0mPD. The details of the cover levels and the flow direction of the surface runoff can be referred to the drawings and the figure below.

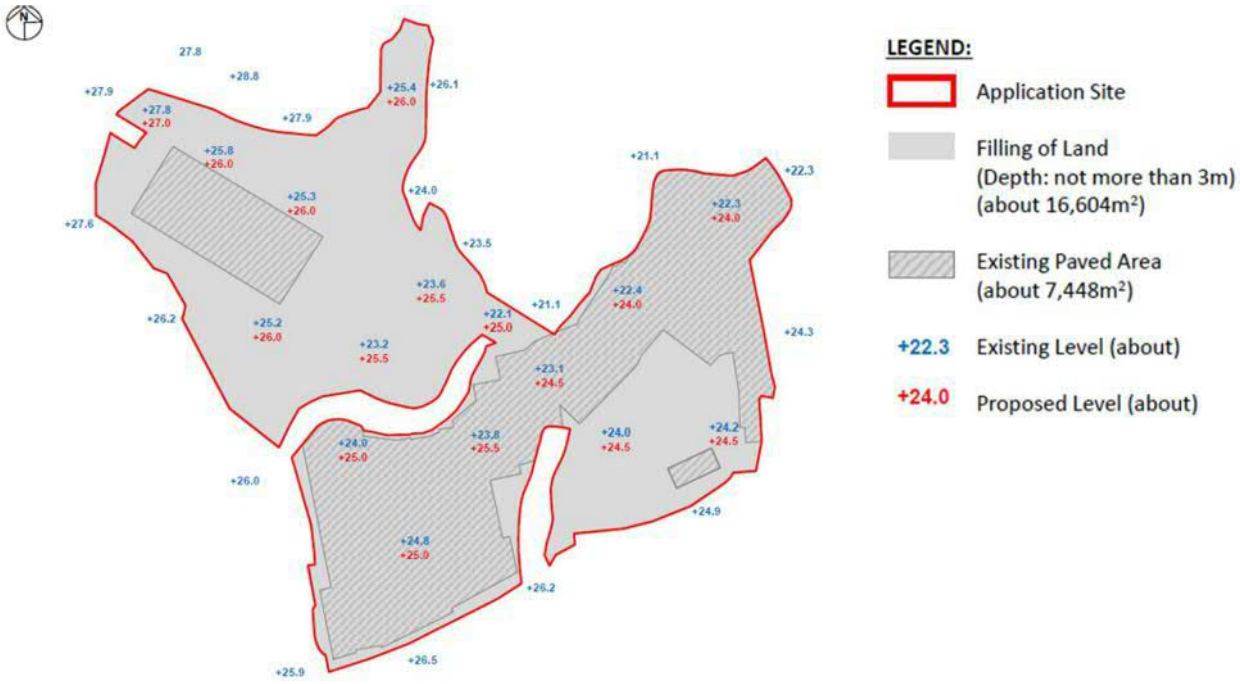


Figure-3.3 Filling plan of the Subject Site

3.5 Proposed Flow Direction and Drainage System

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

3.6 Design of Channels and Catchpits

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

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

3.7 Discharge Point

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

4. HYDRAULIC MODELLING AND DRAINAGE IMPACT ASSESSMENT METHODOLOGY

4.1 Scope of DIA

The surrounding catchments and downstream river is modeled using InfoWorks for the detail analysis of Drainage Impact Assessment (DIA). The details of the model can be found in **Appendic E**. The model simulates stormwater flow under various rainfall scenarios to verify that the proposed drainage system is adequate and that the development does not exacerbate flood risk for the subject site or the surrounding downstream areas.

4.2 Hydraulic Model Established

InfoWorks ICM (version 2025.5) is the modelling software used for the analysis of this 2D model.

The following code are used in the model:

a) Drainage Services Department (DSD) Stormwater Drainage Manual (SDM) fifth edition (2018);
b) DSD SDM Corrigendum Nos. 1/2022, No. 1/2024 and No. 2/2024;
c) Relevant DSD Standard Drawings, Technical Circulars and Practice Notes wherever applicable.

4.3 Design Parameter Adopted

Rainfall Data: 50-year design return period rainfall from HKO region, climate change (Table 28), Rainfall design allowance (Table 31) from Corrigendum 1-2022 of SDM and the storm constants from Corrigendum 1-2024 of SDM are calculated and used for the simulation.

Inflow: Specific inflow has been added at specific nodes to account for the flow coming into the catchment at that location.

Siltation allowance has been considered in the stormwater channel and pipe. According to the SDM (2018) Section 9.3, such flow area reduction factor is estimated in 5% reduction in flow area for gradients greater than 1 in 25 and 10% reduction in flow area for other cases.

4.4 Rainfall Profile used in the Model

Rainfall profiles have been obtained by considering the symmetrically distributed rainfall profile as suggested in SDM (2018) Section 4.3.5:

$$F(t) = \begin{cases} \dfrac{a[b + 2(1-c)t]}{(2t+b)^{c+1}} & 0 \le t \le \frac{td}{2} \\ F(-t) & -\frac{td}{2} \le t \le 0 \end{cases}$$

Where:

F(t) = rate of rainfall or instantaneous intensity in mm/hr at time t (in minutes);

td = rainstorm duration (in minutes) (td ≤ 240)
a, b, c = parameters for the selected return period in HKO Headquarters Rainfall zone as defined in the SDM Corrigendum No. 1/2024

The adopted design rainfall parameters are consistent with the SDM Corrigendum No. 1/2024 table 3d. The adopted parameters are summarised in table 2-1.

Table 4.1 Storm Constants for Different Return Periods of North District Area

Return Period T(years)	**50**
a	474.6
b	2.90
c	0.371

A 4-hour rainstorm is adopted in the hydraulic analysis

4.5 Roughness used in the Model

The established model consists of open channels and river reaches. The equation adopted for open channels and river reaches is Mannings equation.

Sediment depth is considered for pipes, culverts, open channels and river reaches, which is section 9.3 of SDM (10% allowance).

The proposed drainage network roughness coefficients for pipes and culverts have been adopted in consistent with the Table 13 & Table 14 of SDM (2018) and summarized in Table 4-2.

Table 4-1 Adopted Roughness Coefficients

Description	Roughness Value [mm]
Rectangular Concrete Channels	n = 0.016 (Fair)
Concrete Pipe	ks = 0.60

4.6 Climate Change

Table 2-3 presents a summary of the design rainfall used for the end-21st century storm events. The simulation events included in Table 2-3 are taken from Corrigendum 1-2022 of SDM.

Table 4-3 Rainfall Increase due to Climate Change

	Rainfall Increase
End of 21st Century	16.0%

4.7 Freeboard

For rivers, a minimum freeboard of 300 mm is adopted and an additional 200mm allowance will be provided at river bends to cover super-elevations at bends and wave run-ups.

5. POTENTIAL DRAINAGE IMPACT AND MITIGATION MEASURES

5.1 Hydraulic Model

Setting of the hydraulic model

- The hydraulic condition of the proposed construction site will be assessed through two scenarios: *existing condition* and *proposed development*.

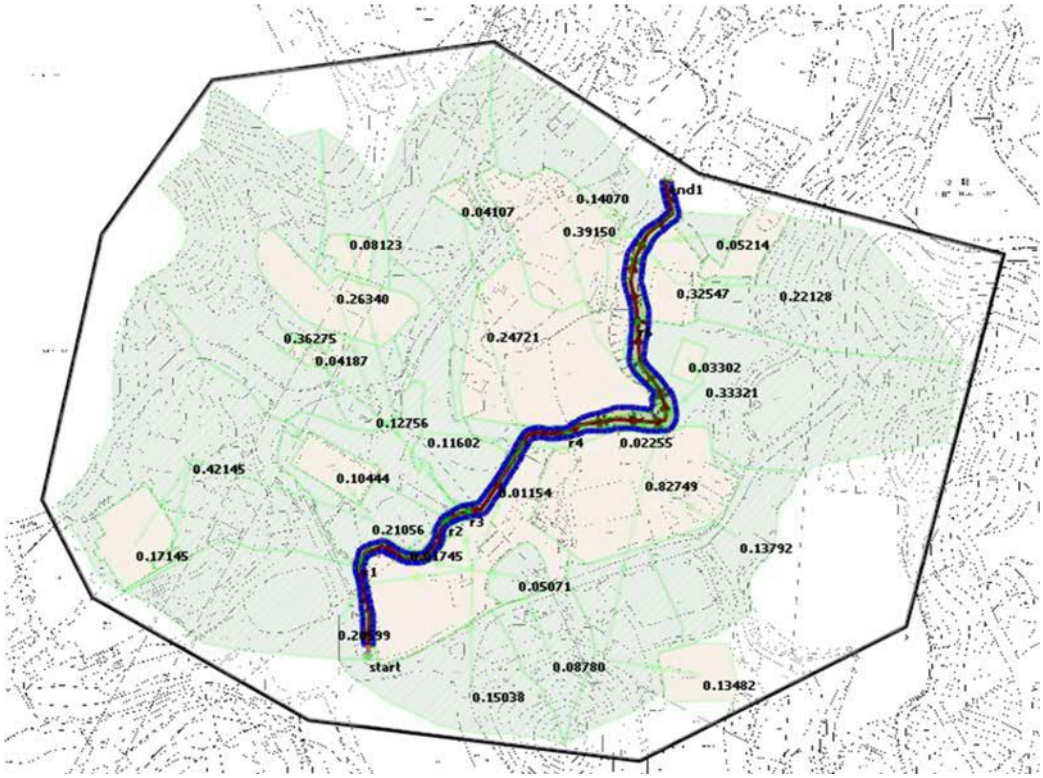


Figure 4.1: Plan view of the existing condition

In the scenario of existing condition, paved areas will be shown in pink, while unpaved areas will be shown in green. The runoff coefficient is set to 0.9 for paved areas and 0.3 for unpaved areas.

Runoff surface ID	Surface type	Initial loss value (m)	Routing model	Fixed runoff coefficient
1	Impervious	0.00007100	Wallingfrd	0.90000
2	Pervious	0.00028000	Wallingfrd	0.30000

Figure 4.2: setting of runoff surface for both scenarios

Land use ID	Runoff surface 1	Default area 1 (%)	Runoff surface 2	Default area 2 (%)
paved	1	100.000		
unpaved	2	100.000	1	100.000

Figure 4.3 setting of land use for both scenarios

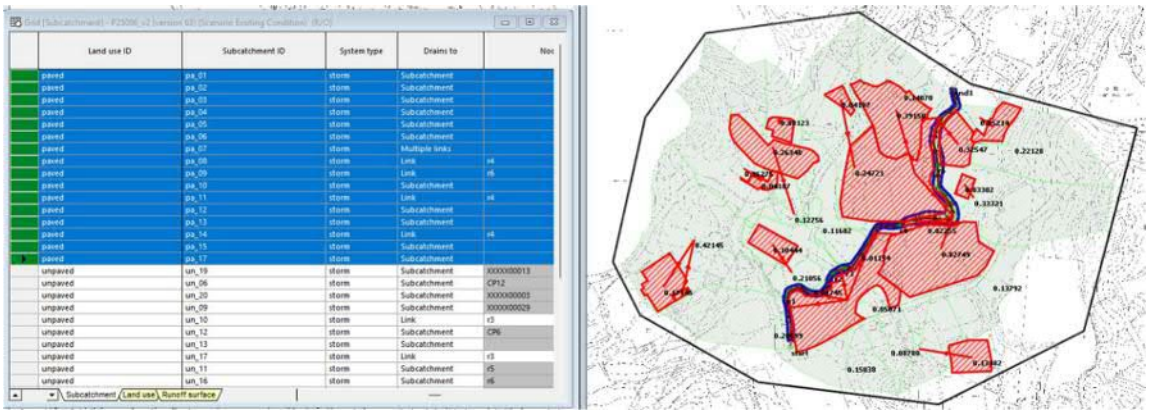
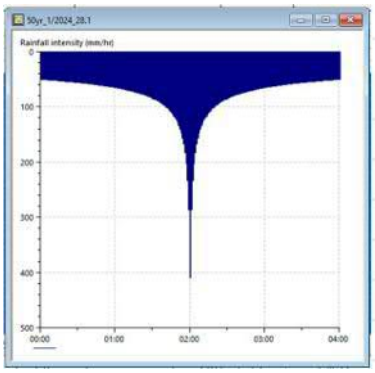


Figure 4.4 selection of paved areas in existing condition scenario



Figure 4.5 selection of unpaved areas in existing condition scenario

Rainfall profile



North District Area (Corrigendum 1/2024)	50
a	474.6
b	2.9
c	0.371

Figure 4.6 adopted rainfall profile in both simulation

The rainfall profile will follow the storm water constant suggested by 1/2024 corrigendum (50yr return period), and then multiplied 1.281 to encounter climate change and design allowance for end of century.

Hydraulic element

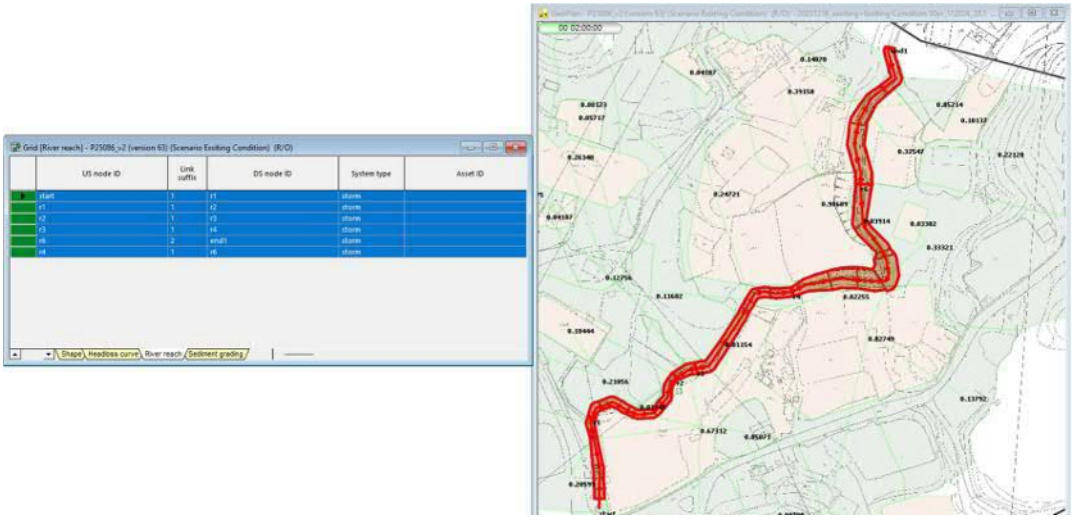


Figure 4.7 selection of river reach in existing scenario

Only river reach is modelled in the existing model. The elevation of cross section of the river reach is adopted from the LiDAR data (2020) of CSDI. The existing condition of the river can refer to photo record in Appendix A.

Flow path

- Rainfall → sub-catchment→ river reach → outfall

Boundary condition of outfall

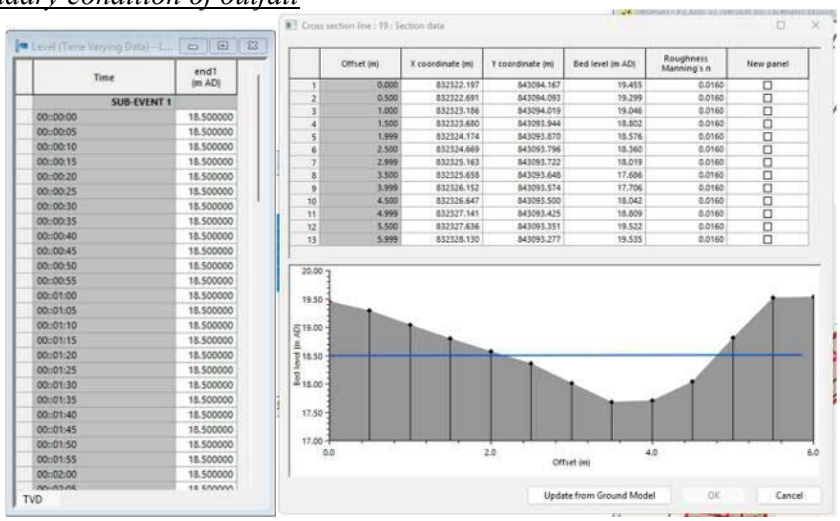


Figure 4.8 boundary setting for both scenarios

The constant water level of 18.5mPD is applied to outfall location to model as boundary condition.

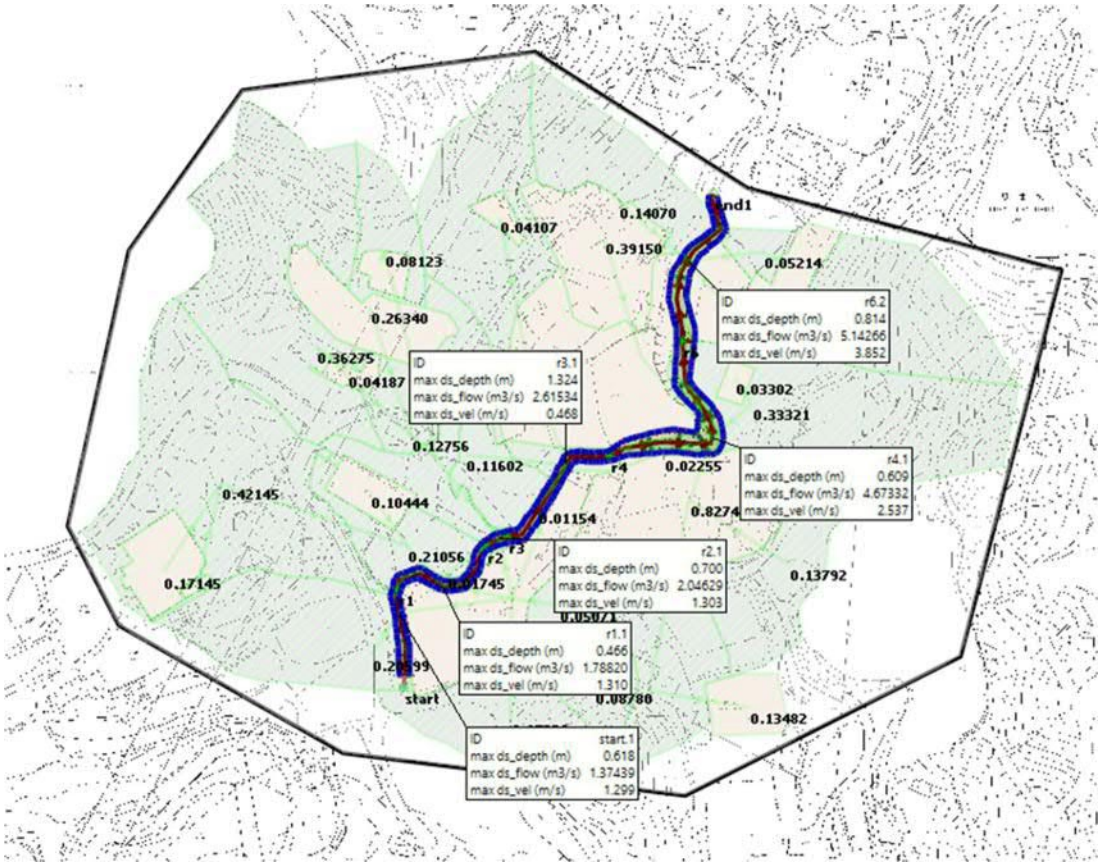


Figure 4.9 stimulation result of existing condition

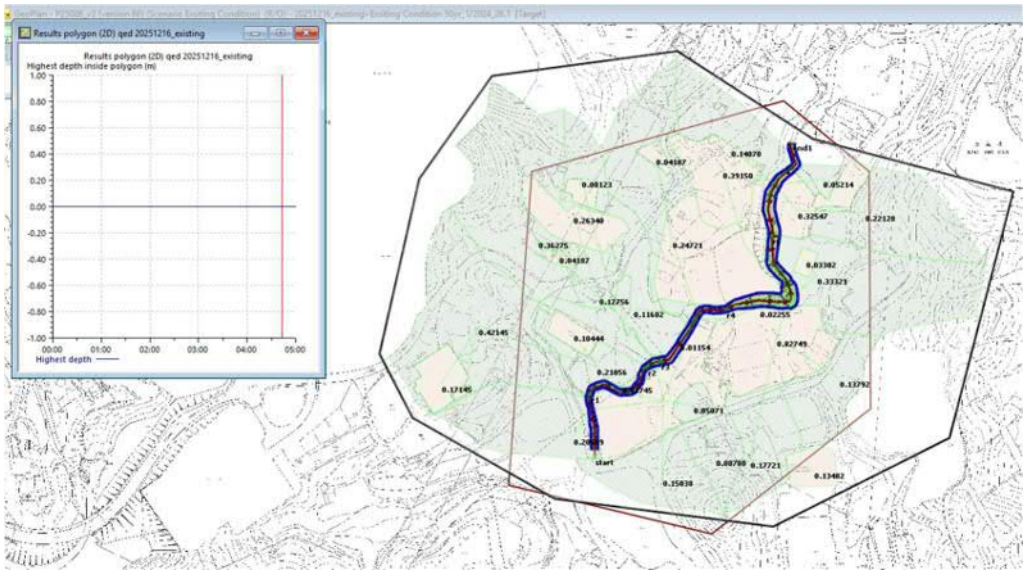


Figure 4.10 stimulation result (2D zone) of existing condition

No flooding observed under existing condition in 50yr return period rainfall scenario.

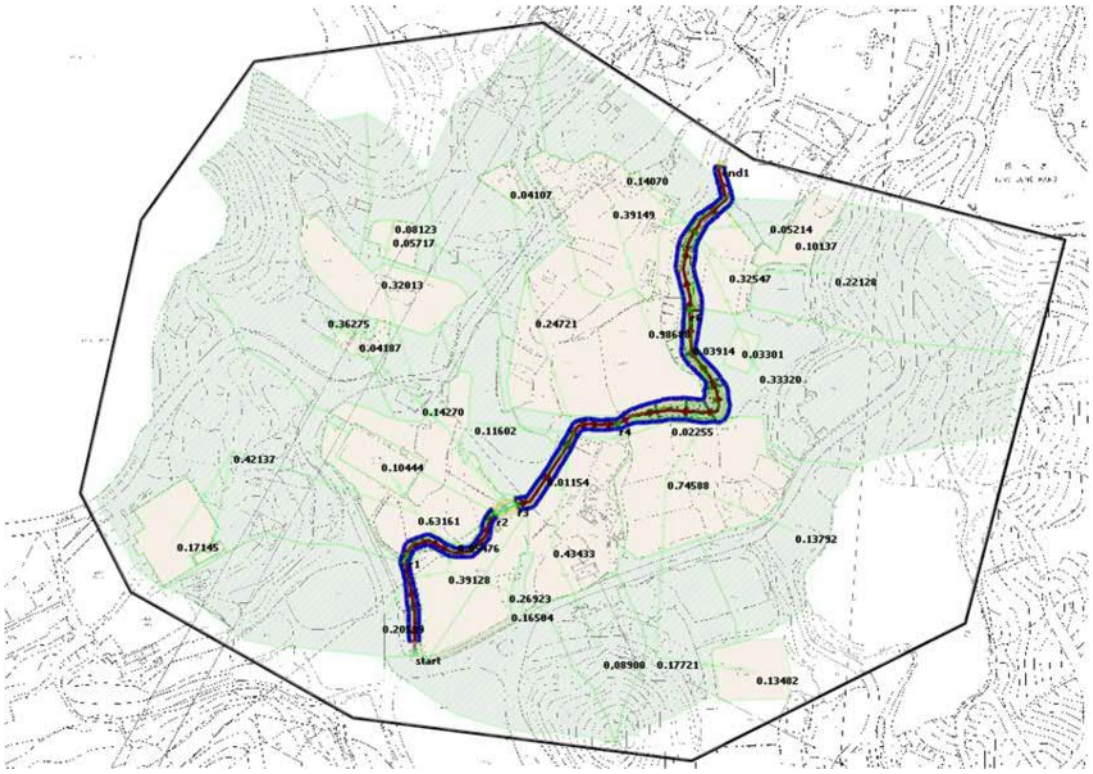


Figure 4.11: Plan view of the proposed development scenario

In the scenario of proposed development, the color setting will be same as scenario of existing condition.

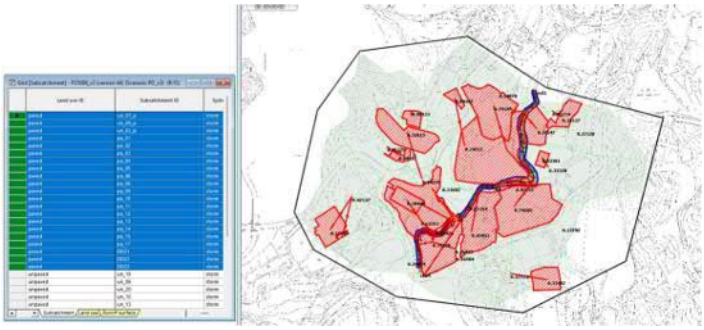


Figure 4.12 selection of paved areas in proposed development scenario

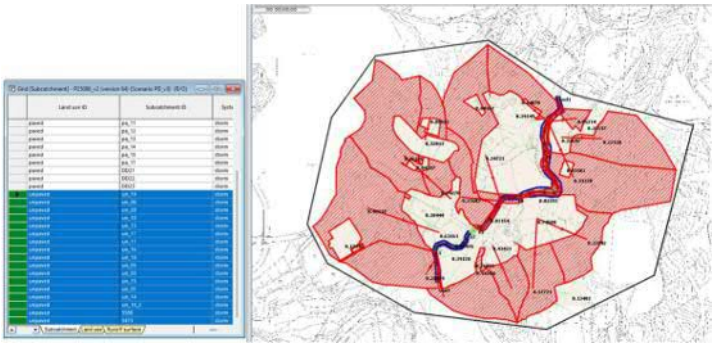


Figure 4.13 selection of unpaved areas in proposed development scenario

Hydraulic element



Figure 4.14 the plan view of the replaced element in the proposed development

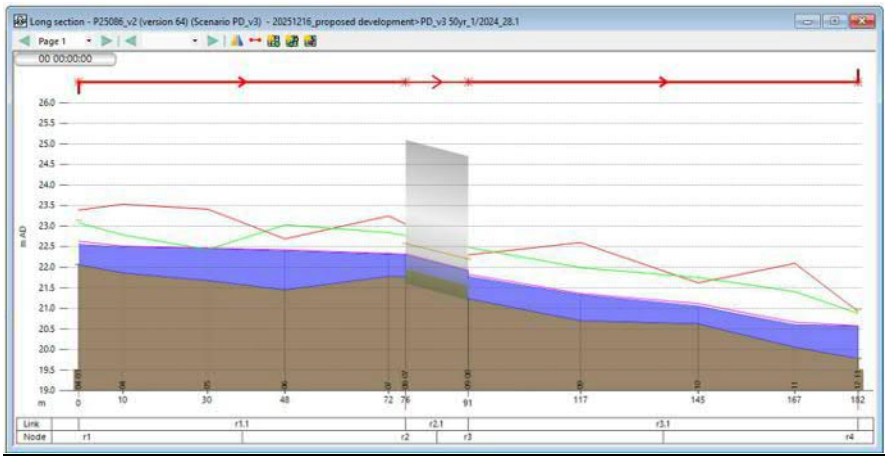


Figure 4.15 the longitudinal profile of replaced element in the proposed development

Part of river reach is replaced to 3600mm(W) x 3500mm(H) concrete box culvert, with 10% sentiment depth, which shown in figure 4.15 and 4.15; while the remaining river reach remained the same setting as the scenario of existing condition.

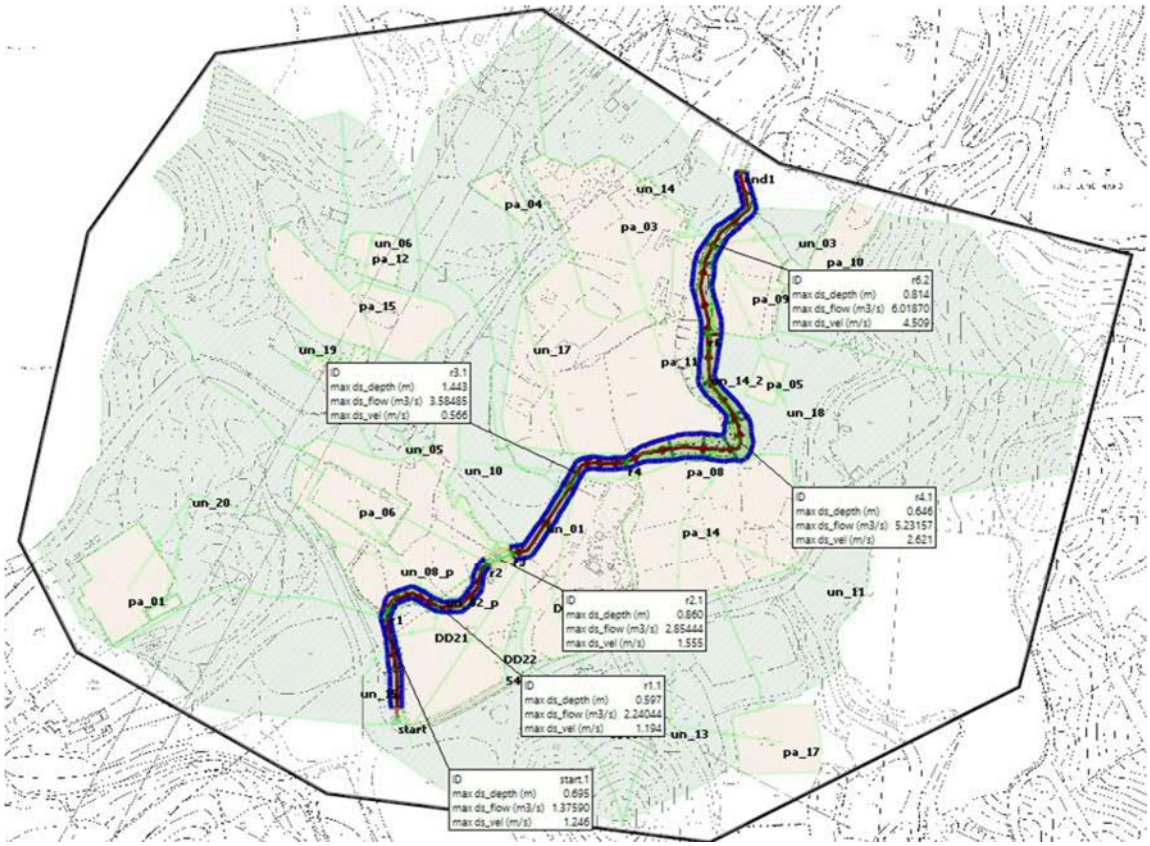


Figure 4.16 stimulation result of proposed development

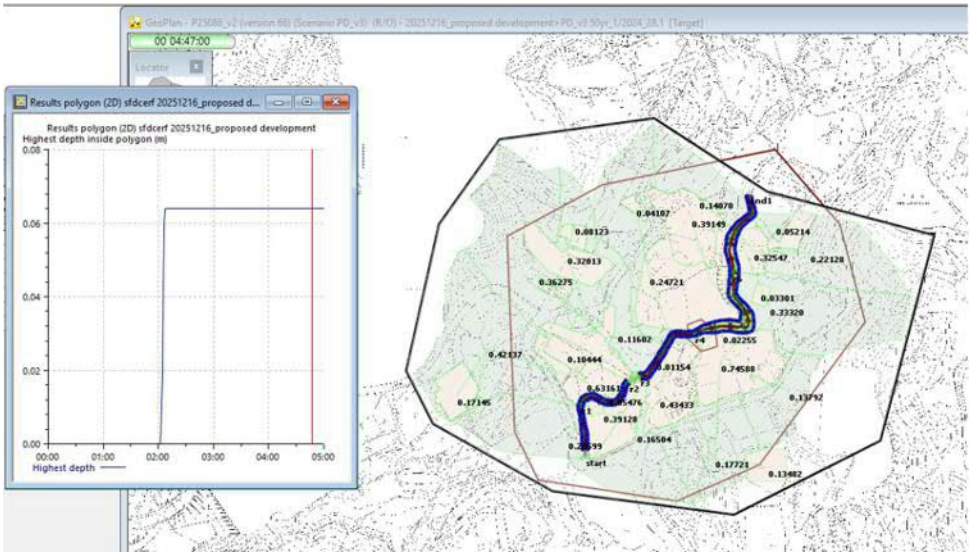


Figure 4.17 stimulation result (2D zone) of proposed development

Slightly flooding observed under proposed in 50yr return period rainfall scenario.

Table 5.1 comparison of water depth before and after development

US node ID	Link suffix	Before Max US depth (m)	Before Max DS depth (m)	After Max US depth (m)	After Max DS depth (m)	difference (%) of Max US depth (m)	difference (%) of Max DS depth (m)
start	1	0.436	0.618	0.436	0.695	0	12.46
r1	1	0.618	0.466	0.695	0.597	12.46	28.11
r2#	1	0.466	0.7	0.773	0.86	65.88	22.86
r3	1	0.7	1.324	0.819	1.443	17	8.99
r6	2	0.609	0.814	0.646	0.814	6.08	0
r4	1	1.324	0.609	1.443	0.646	8.99	6.08

Table 5.2 comparison of velocity before and after development

US node ID	Link suffix	Max US velocity (m/s)	Max DS velocity (m/s)	Max US velocity (m/s)	Max DS velocity (m/s)	differece (%) of Max US velocity (m/s)	differece (%) of Max DS velocity (m/s)
start	1	1.207	1.299	1.207	1.246	0	-4.08
r1	1	1.299	1.31	1.246	1.194	-4.08	-8.85
r2#	1	1.31	1.303	1.471	1.555	12.29	19.34
r3	1	1.303	0.468	1.376	0.566	5.6	20.94
r6	2	2.537	3.852	2.621	4.509	3.31	17.06
r4	1	0.468	2.537	0.566	2.621	20.94	3.31

Table 5.3 comparison of flow before and after development

US node ID	Link suffix	Max US flow (m3/s)	Max DS flow (m3/s)	Max US flow (m3/s)	Max DS flow (m3/s)	differece (%) of Max US flow (m3/s)	differece (%) of Max DS flow (m3/s)
start	1	1.00005	1.37439	1.00005	1.3759	0	0.11
r1	1	1.37428	1.7882	1.37581	2.24044	0.11	25.29
r2#	1	1.7882	2.04629	2.24054	2.85444	25.3	39.49
r3	1	2.04628	2.61534	2.85444	3.58485	39.49	37.07
r6	2	4.67324	5.14266	5.23157	6.0187	11.95	17.03
r4	1	2.61533	4.67332	3.58482	5.23157	37.07	11.95

#this part of river reach is changed to concrete box culvert.

Table 5.4 comparison of water depth at node before and after development

Node ID	Node type	Flood level (m AD)	Max Level (m AD)	Max Level (m AD)	difference (m)	Freeboard (m)_before	Freeboard (m)_after
start	Break	23.87	23.617	23.617	0	0.253	0.253
r1	Break	23.136	22.684	22.761	0.077	0.452	0.375
r2	Break	22.576	22.242	22.373	0.131	0.334	0.203
r3	Break	22.205	21.941	22.06	0.119	0.264	0.145
r4	Break	20.974	21.111	21.23	0.119	-0.137	-0.256
end1	Outfall	19.076	18.5	18.5	0	0.576	0.576
r6	Break	19.947	19.321	19.358	0.037	0.626	0.589

Slightly flooding was observed under 50yr return period rainfall scenario for the proposed development, which will be solved through the proposed mitigation measure.

Additional scenario had been modelled, the roughness Manning's n of downstream river reach is changed from 0.05 to 0.035 under mitigation measure.

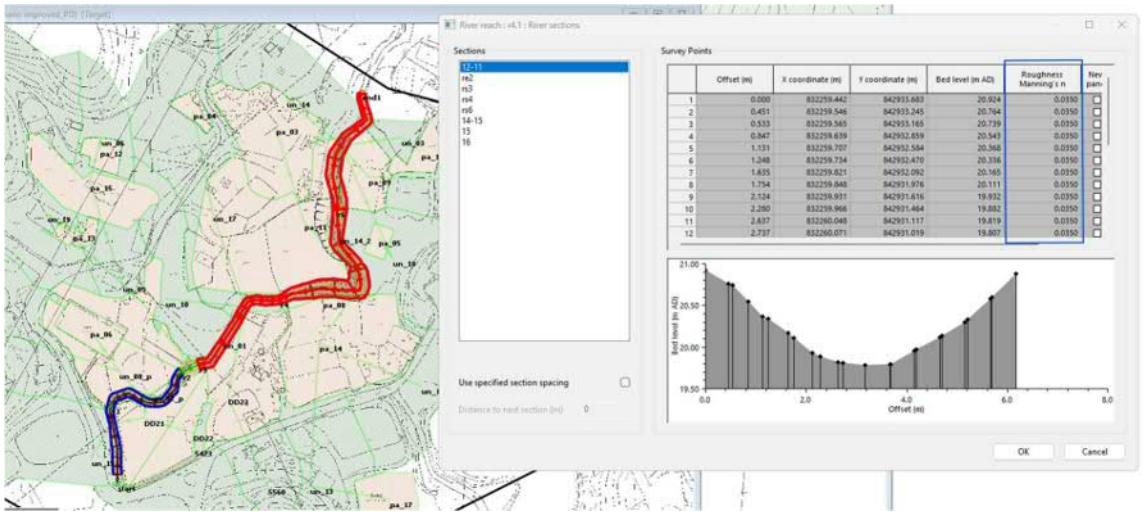


Figure 4.18: improved scenario

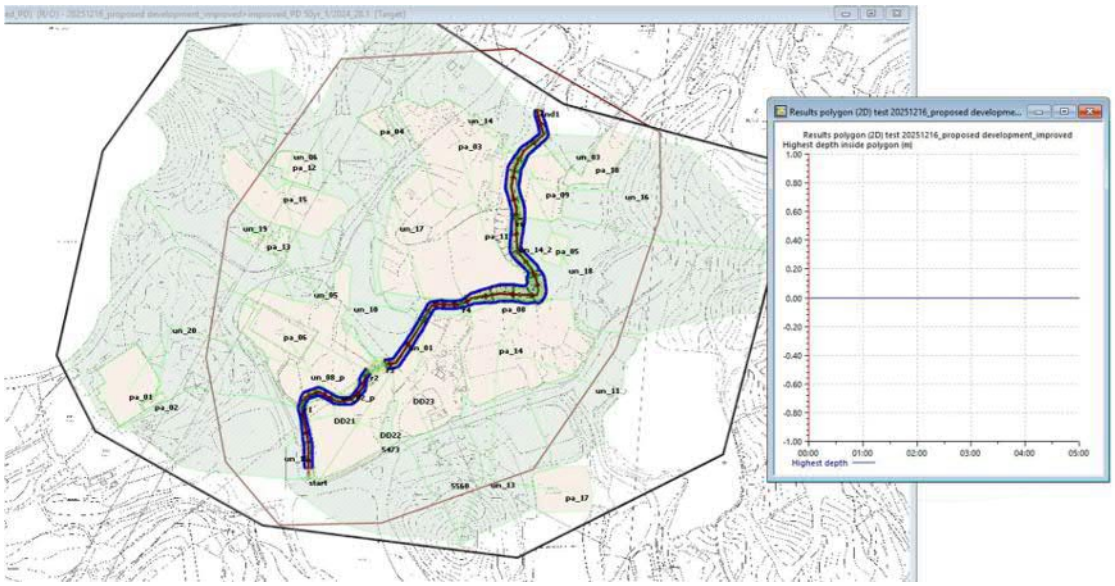


Figure 4.19 stimulation result (2D zone) of improved scenario

No flooding observed under improved conditions in 50yr return period rainfall scenario.

5.2 Mitigation Measures

5.2.1. The proposed development will increase the percentage of paved surfaces within the existing catchments. Associated stormwater drainage network is proposed along the alignment. The stormwater will be collected from this proposed alignment and subsequently discharged to the nearest natural stream, and existing branch/trunk drainage networks.

5.2.2. When there are existing structures/utilities located in close proximity of/adjacent to the works. Proper design and implementation of temporary works shall be undertaken, and extreme care is taken when carrying out deep excavation for the works adjacent to the existing structures/utilities.

5.2.3. The river and downstream will be desilted and conduct vegetation removal regularly and will increase the maintenance frequency to every two months during the rainy season.

6. CONCLUSIONS

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

6.2 The stormwater and surface runoff in the effective catchment area will be discharged to the existing drainage system outside the subject lot area (existing river, culverts, and surface channels). The discharge has been incorporated into the checking of drainage capacity of the existing drainage system (design calculation refers to **Appendix C**)

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

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

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

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

6.7 The development will not have any adverse impact on the drainage in the surrounding area. The construction and development within the subject lot will not alter the flow direction of surface runoff. There will be no increased risk of flooding, and the capacity of existing drainage utilities will not be exceeded.

6.8 The hydraulic model established for this project has provided an assessment of the susceptibility of the Assessment area to flooding for the mid-century and end-century extreme storm events with consideration to the effects of climate change.

6.9 The Drainage Impact Assessment showed the drainage system for the proposed development will not increase the risk of flooding in the nearby areas and the existing river has sufficient downstream capacity to receive the runoff and discharge from our proposed development.

6.10 This Drainage Impact Assessment concludes that the proposed development will not result in any flooding or overflow on the site, in adjacent areas, or downstream. The designed drainage system is effective and will safely convey runoff without causing any adverse impacts to the existing river.

6.11 The changes in land use, overland flow paths, surface runoff characteristics, changes on flood extent that will be created by the proposed developments have been represented in the hydraulic model established for the Project.

END OF TEXT

APPENDIX A

Photo Record


N
OPEN STORAGE AREA
OPEN STORAGE AREA
1-2
3
4-5

Photo No. 1



Photo No. 2



Photo No. 3



Photo No. 4



Photo No. 5



Additional photos





Photo Ref.: 1



Photo Ref.:2

KONG NGA PO ROAD



Photo Ref.: 3



Photo Ref.:4



Photo Ref.: 5



Photo Ref.:6



Photo Ref.: 7



Photo Ref.:8



Photo Ref.: 9



Photo Ref.:10



Photo Ref.: 11



Photo Ref.:12



Photo Ref.: 13



Photo Ref.:14



Photo Ref.: 15



Photo Ref.:16



Photo Ref.: 17



Photo Ref.:18



Photo Ref.: 19



Photo Ref.:20



Photo Ref.: 21



Photo Ref.:22



Photo Ref.: 23



Photo Ref.:24



Photo Ref.: 25



Photo Ref.:26



Photo Ref.: 27



Photo Ref.:28



Photo Ref.: 29



Photo Ref.:30



Photo Ref.: 31



Photo Ref.:32



Photo Ref.: 33



Photo Ref.:34



Photo Ref.: 35



Photo Ref.:36



Photo Ref.: 37



Photo Ref.:38



Photo Ref.: 39



Photo Ref.:40



Photo Ref.: 41



Photo Ref.:42



Photo Ref.: 43



Photo Ref.:44



Photo Ref.: 45



Photo Ref.:46



Photo Ref.: 47



Photo Ref.:48



Photo Ref.: 49



Photo Ref.:50



Photo Ref.: 51



Photo Ref.: 52



Photo Ref.: 53



Photo Ref.: 54



Photo Ref.: 55



Photo Ref.: 56



Photo Ref.: 57



Photo Ref.: 58



Photo Ref.: 59



Photo Ref.: 60



Photo Ref.: 61



Photo Ref.: 62



Photo Ref.: 63



Photo Ref.: 64



Photo Ref.: 65



Photo Ref.: 66



Photo Ref.: 67



Photo Ref.: 68



Photo Ref.: 69



Photo Ref.: 70



Photo Ref.: 71



Photo Ref.: 72



Photo Ref.: 73



Photo Ref.: 74



Photo Ref.: 75



Photo Ref.: 76



Photo Ref.: 77



Photo Ref.: 78



Photo Ref.: 79

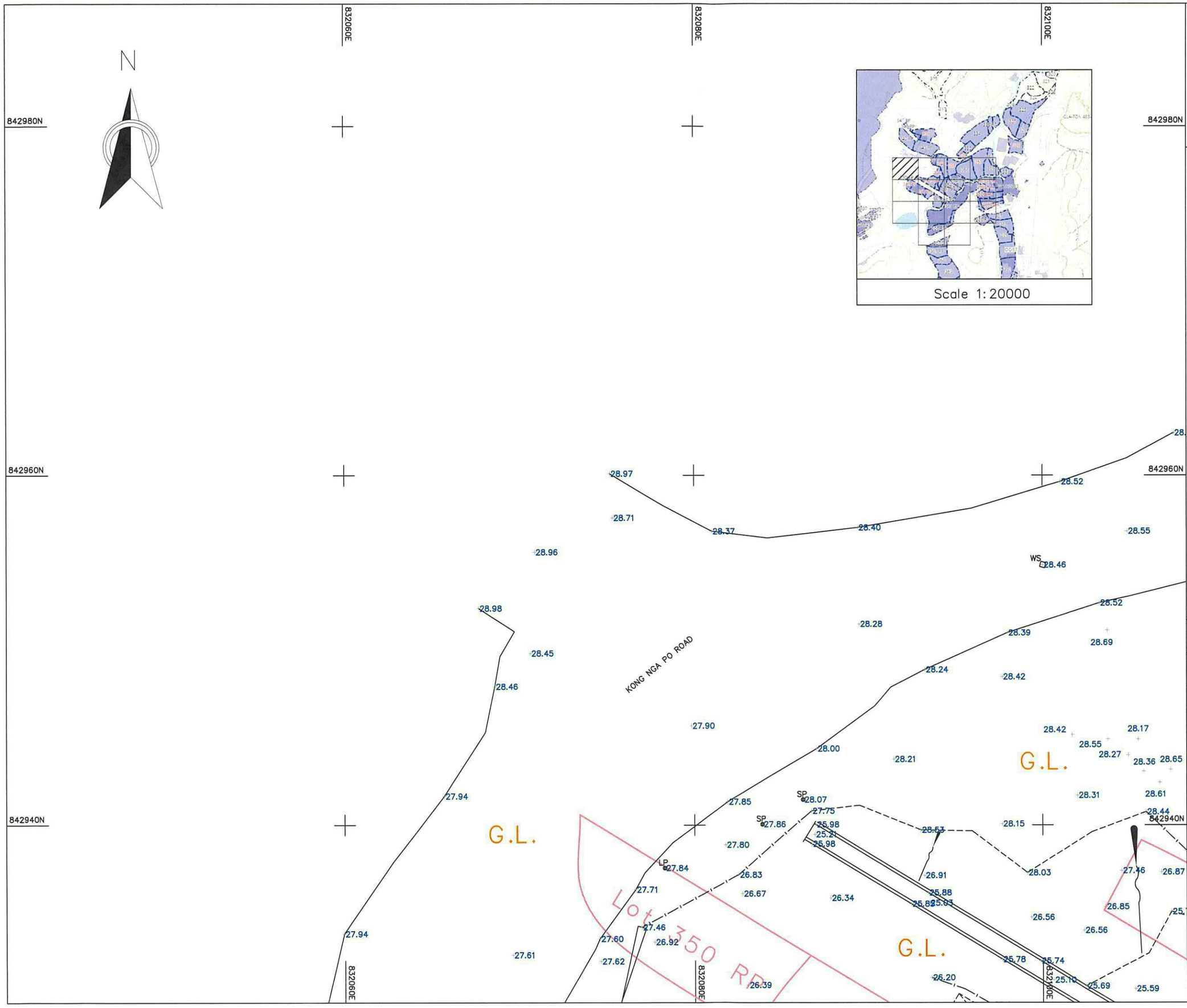
Aerial Photo

taken at late November

CMA CGM

APPENDIX B

Topography Survey Record



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- 20 CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 1 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

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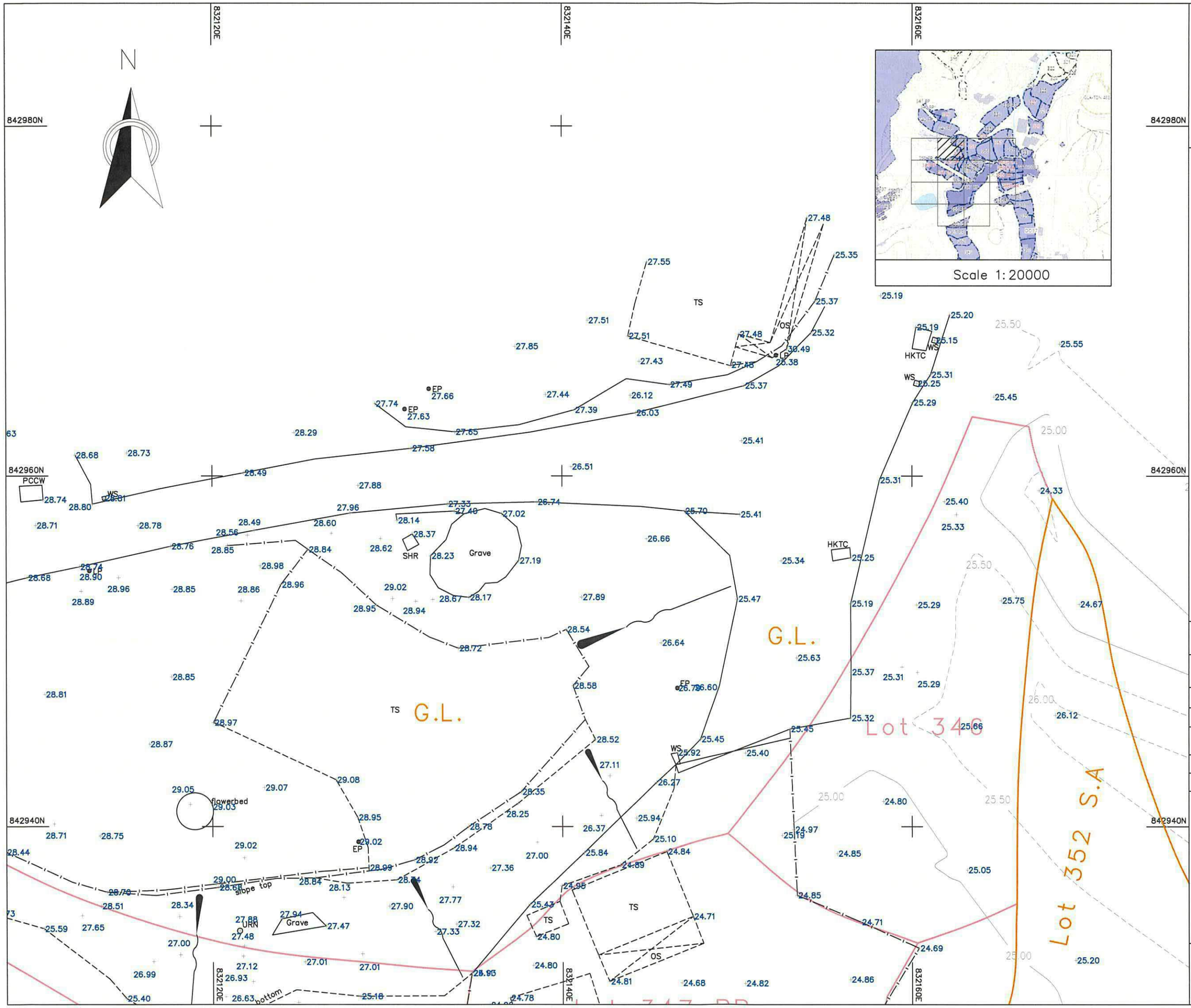

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Plan No: DN/2212/87/351RP-TOPO (SHEET 2 OF 14)

Scale: 1:200 (A3)

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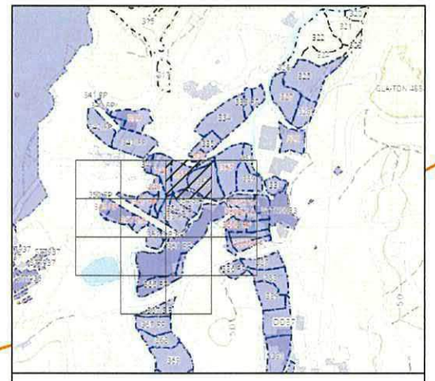

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Lot 356

25.00 25.50 26.00 26.50

26.75 26.07 23.80 26.10 25.90 23.06

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Locality :
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Survey Sheet No : 3-NW-22A/22B

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Plan No: DN/2212/87/351RP-TOPO
(SHEET 3 OF 14)

Scale: 1:200 (A3)

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832300E

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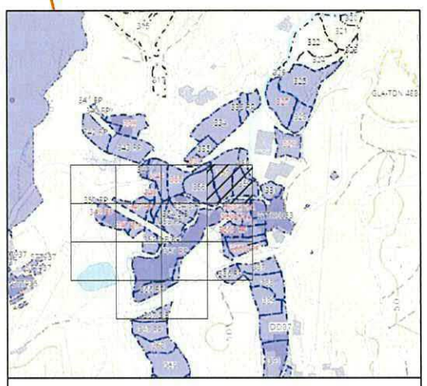
842960N

842940N



Scale 1: 20000

Lot 357

Lot 358

Lot 359

G.L.

N

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Title :
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Locality :
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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 4 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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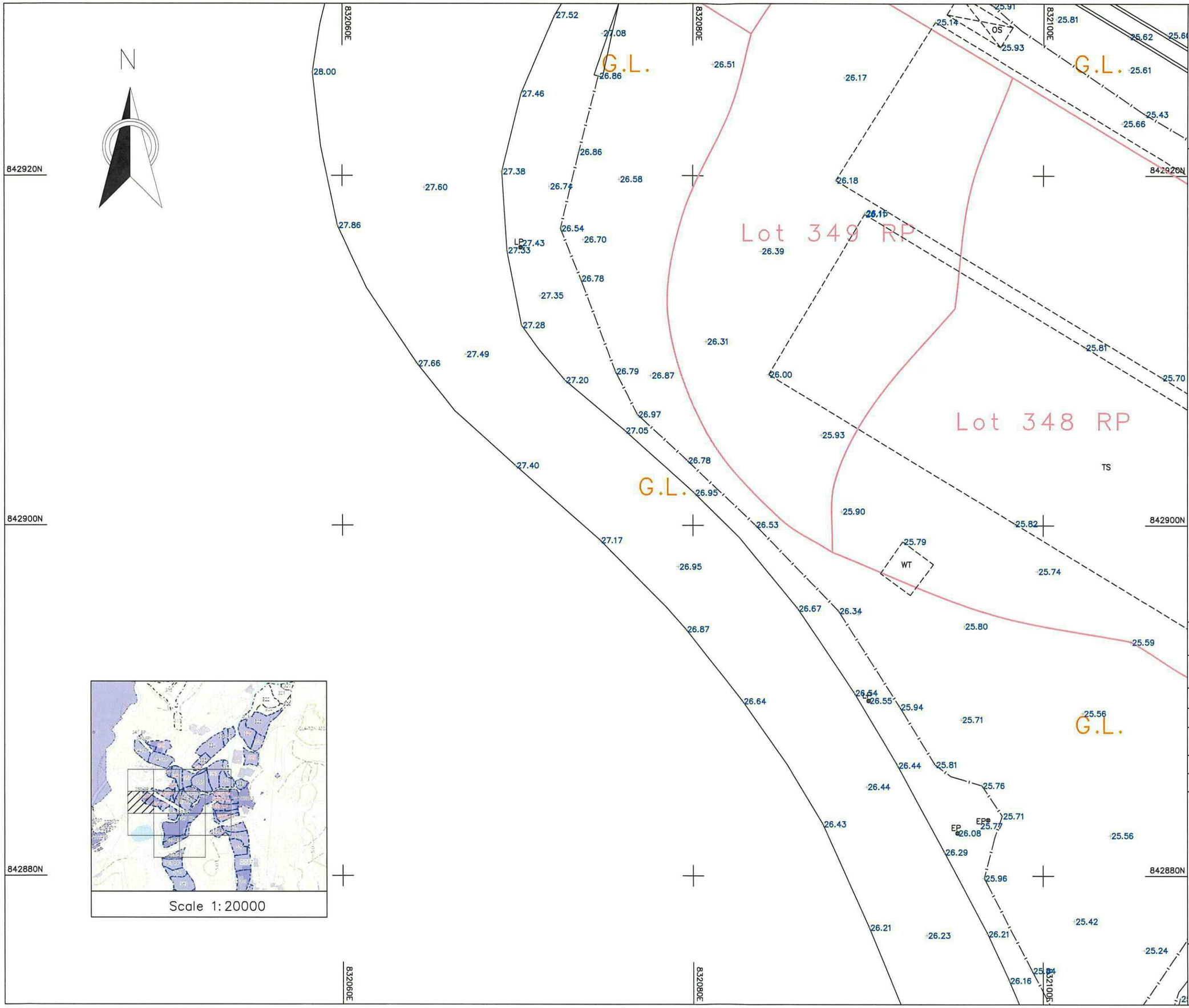

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Locality :
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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 5 OF 14)

Scale: 1:200 (A3)

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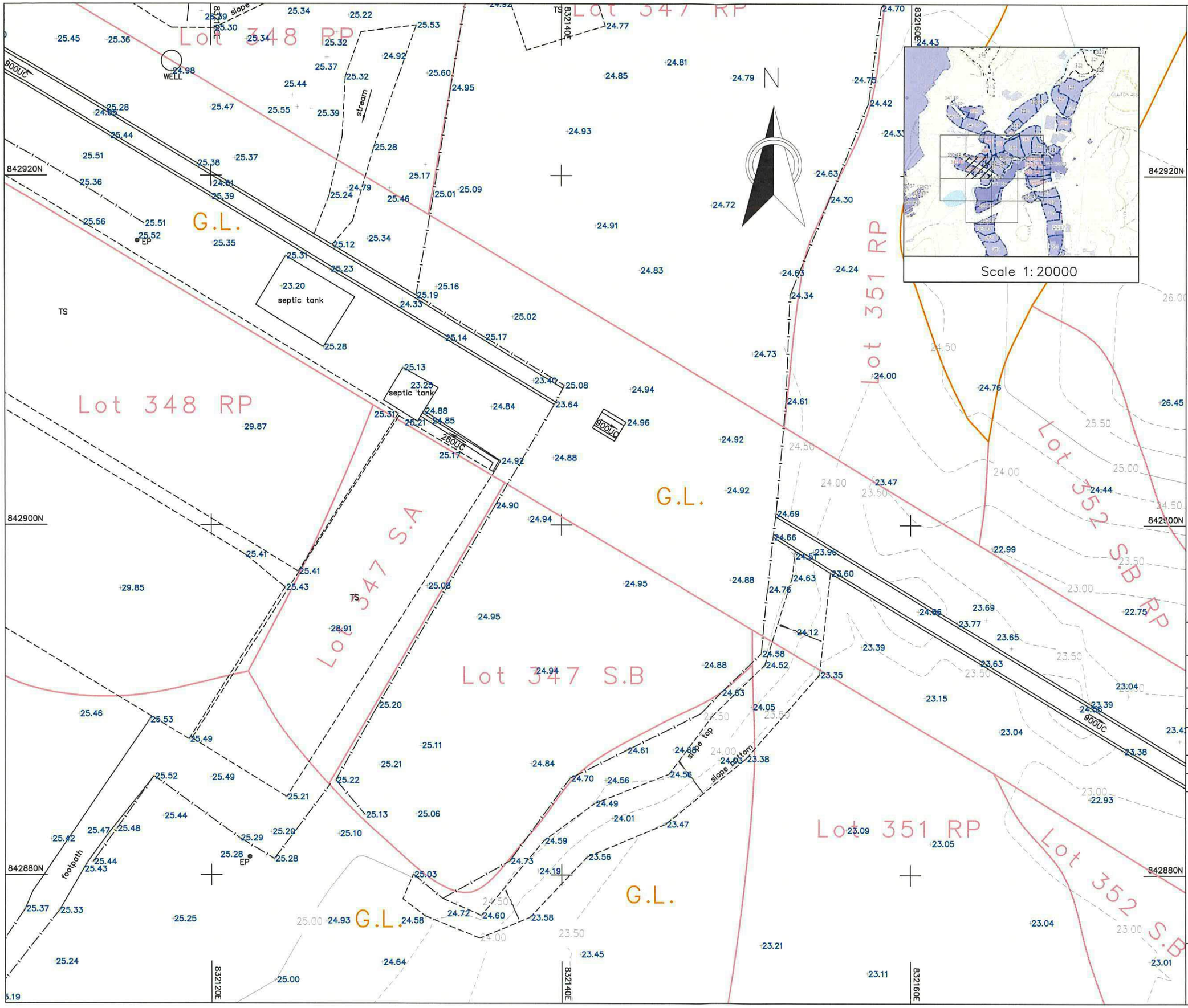

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Locality :
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Survey Sheet No : 3-NW-22A/22B

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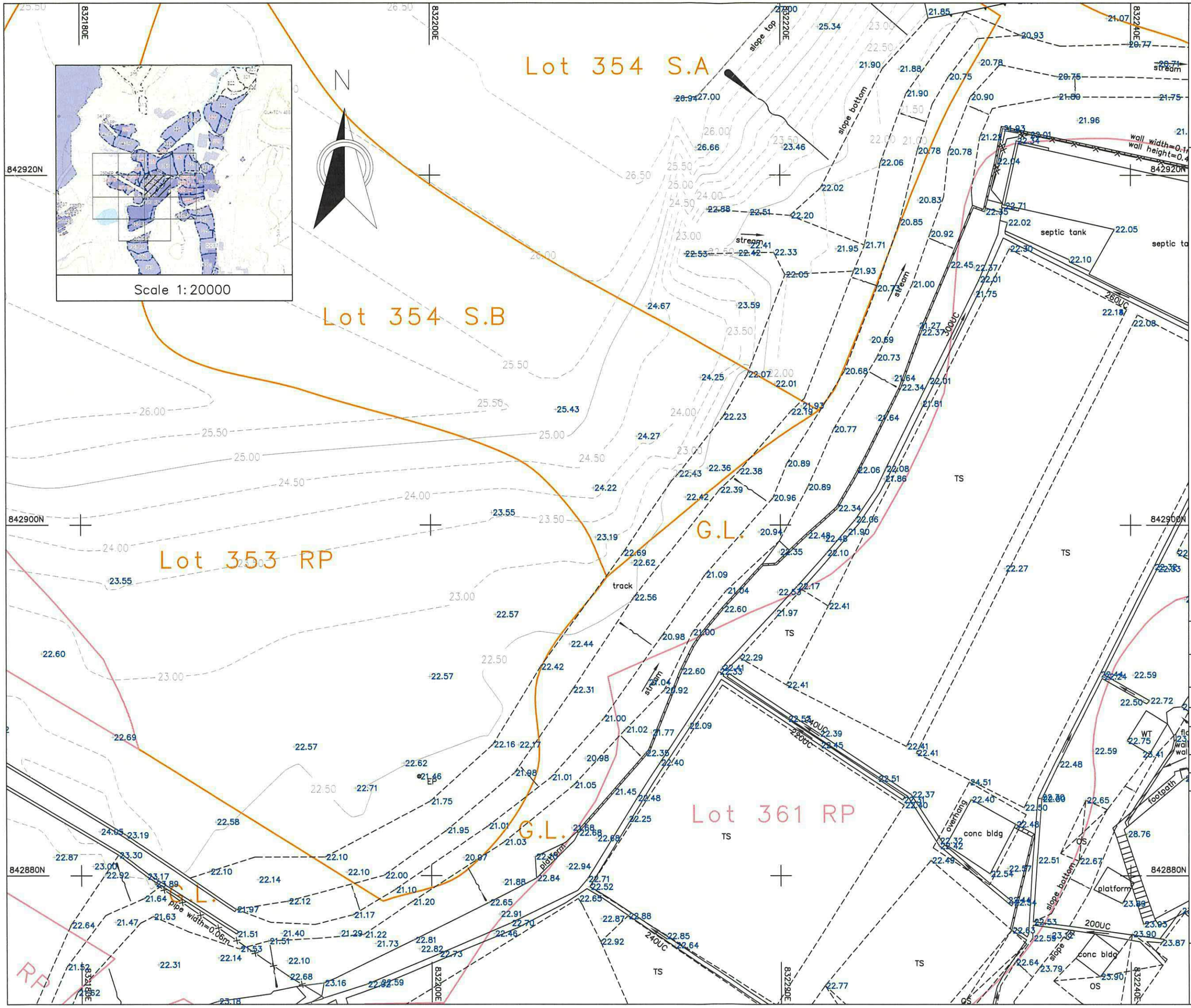

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Locality :
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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 7 OF 14)

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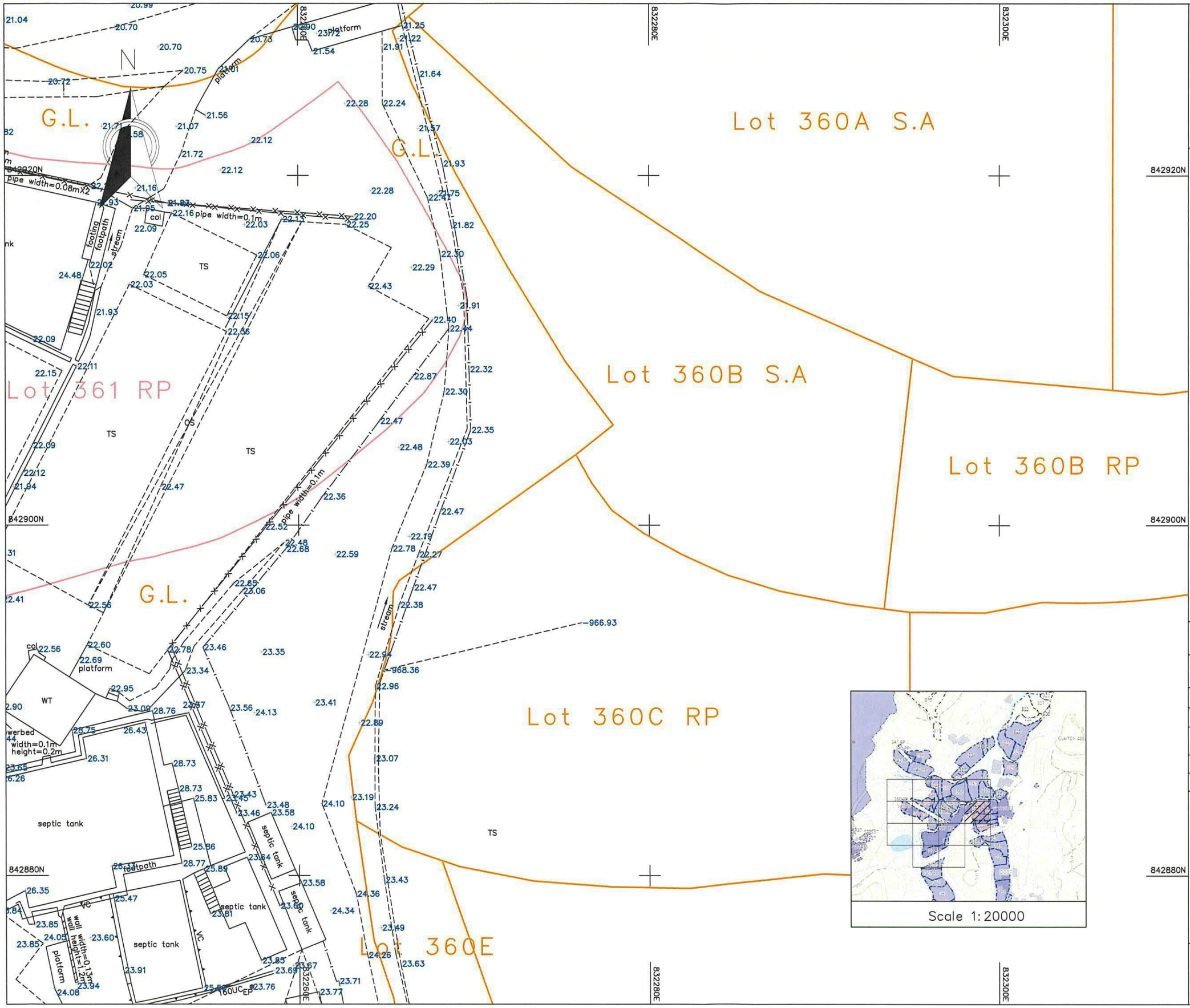

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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 8 OF 14)

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N

832060E

832080E

832100E

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842840N

842820N

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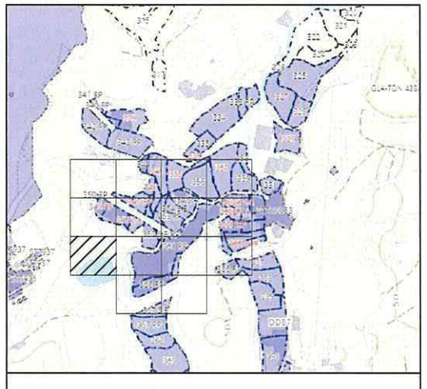

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(SHEET 10 OF 14)

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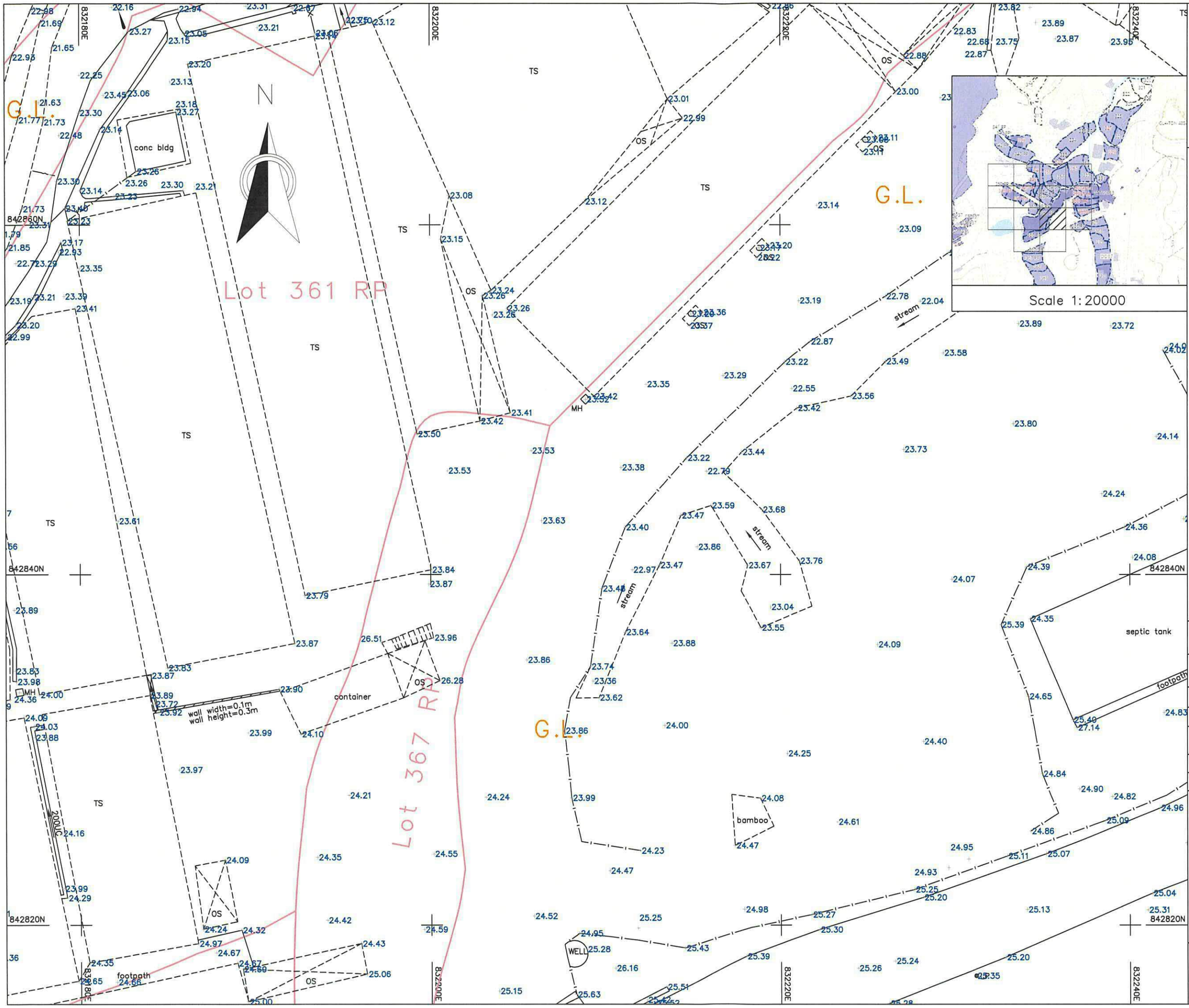

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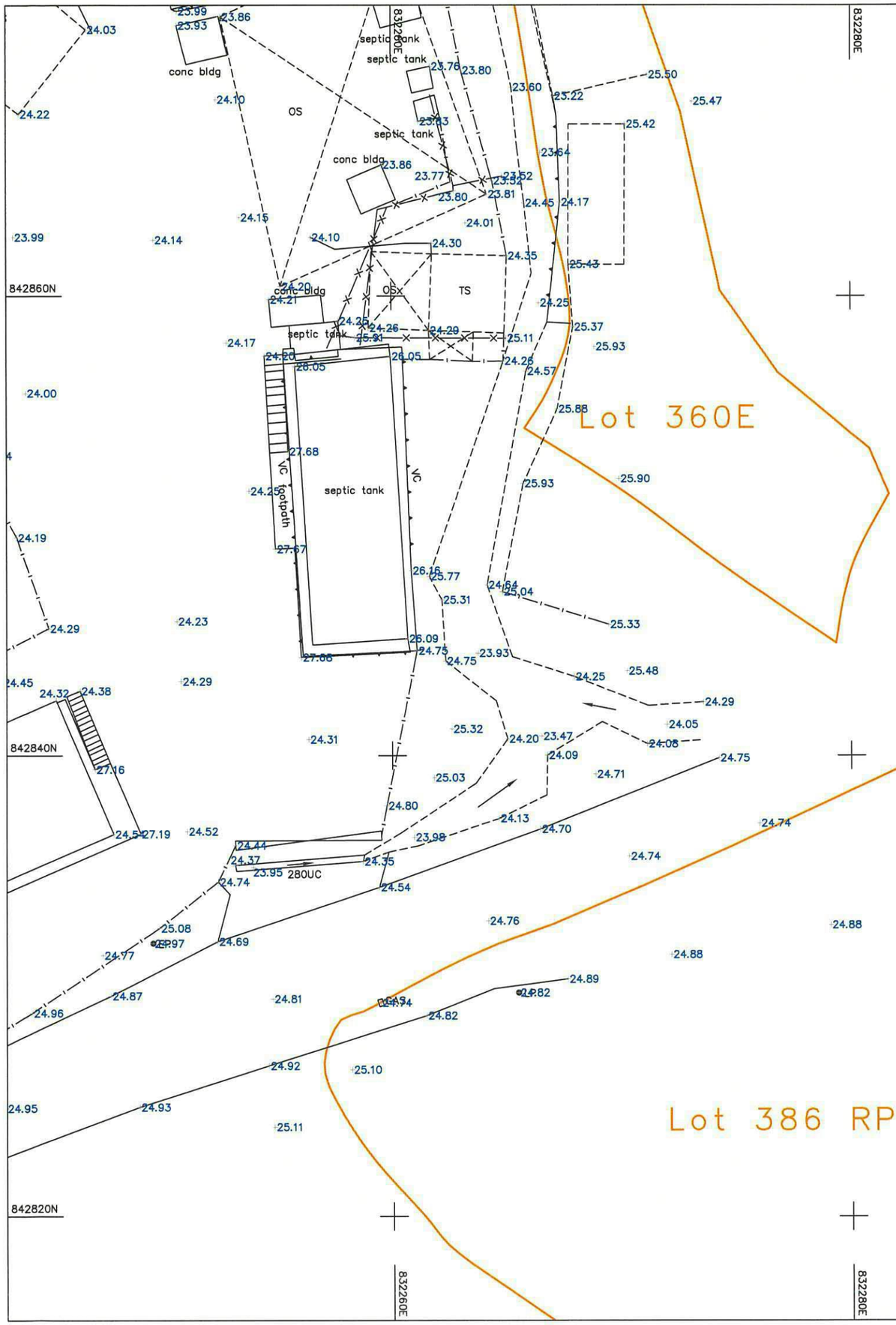
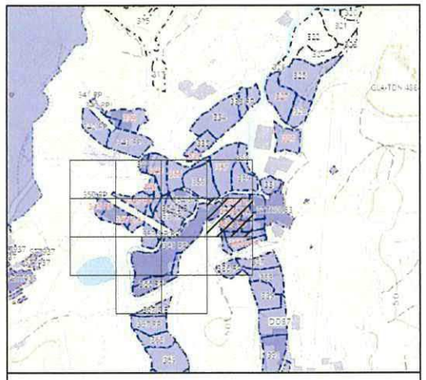




Scale 1: 20000

Notes :

1. All levels are in meters referenced to Hong Kong principal datum (HKPD).
2. All levels are in meters referenced to Hong Kong metric grid (HK1980).
3. All spot levels position are indicated by the decimal point or a cross.
4. Lot boundary is showed approximalty for reference only.

Legend :

- SUBJECT LOT BOUNDARY LINE
- ADJACENT LOT BOUNDARY LINE
- FENCE,RAILING
- PIPE
- ARTIFICIAL SLOPE
- UC — CONCRETE DRAIN & CATCHPIT
- COL — COLUMN
- CUL — CULVERT
- TS — TEMPORARY STRUCTURE
- OS — OPEN-SIDED STRUCTURE
- VERTICAL MASONRY (RETAINING WALL)
- PARAPET OR WALL
- STEPS
- GULLY
- GATE
- TC — HONG KONG TELECOM
- MH — MANHOLE FOUL WATER
- WS — WATER SERVICE
- IC — INSPECTION COVER
- LP — LAMP POLE
- SP — SIDE POLE
- TP — TELEPHONE POLE
- EP — ELECTRIC POLE
- 1.23 — SPOT LEVEL
- 20 — CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 12 OF 14)

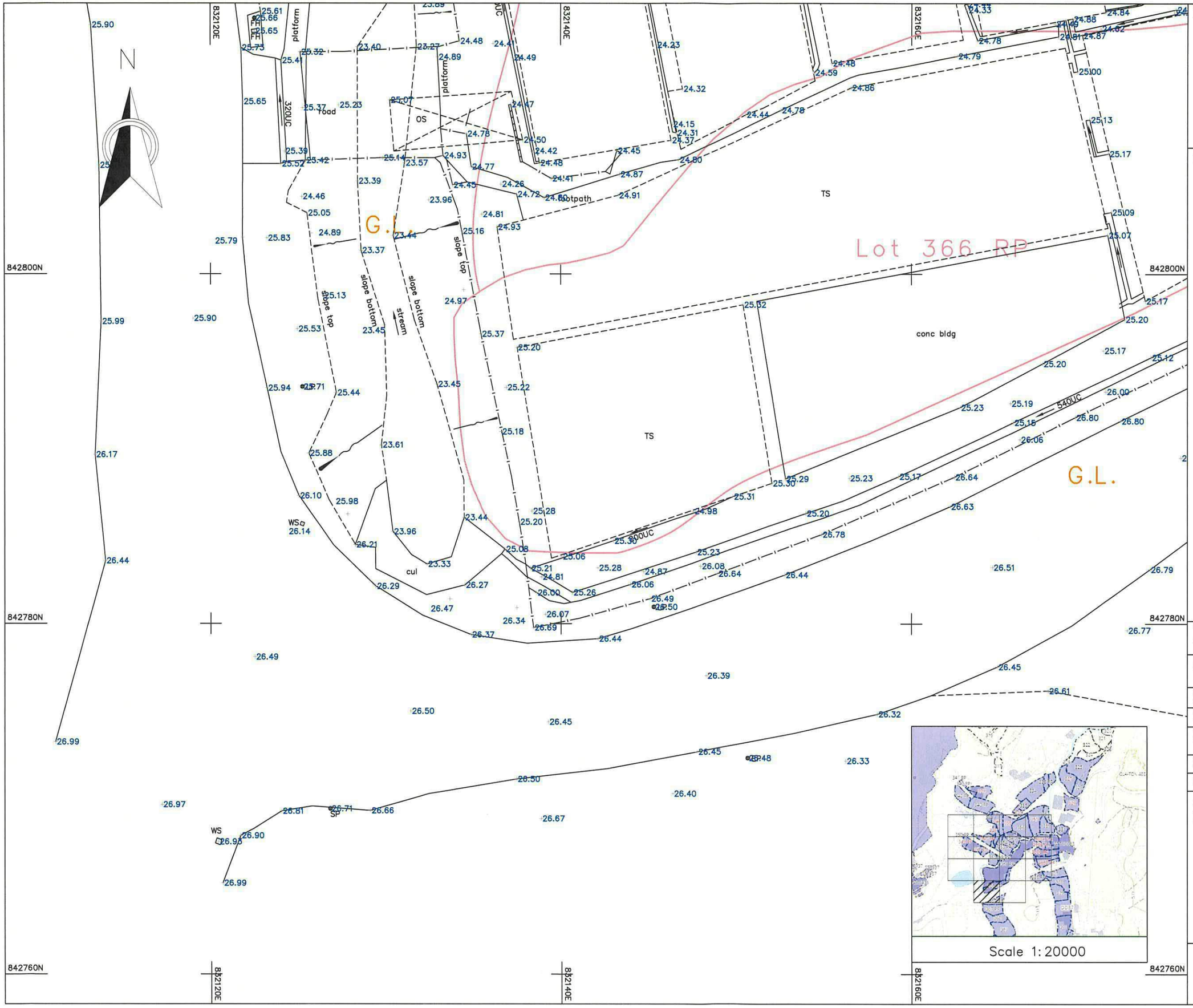
Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
Registered Professional Surveyor
(Land Surveying Division)

Tang & Au Land Surveyors Limited
Room 502, 5/F, Keader Centre,
Nos.129-149, On Lok Road, Yuen Long, N.T.
Tel.: 2652 2351 Fax: 2652 2322



Scale 1:20000

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 13 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
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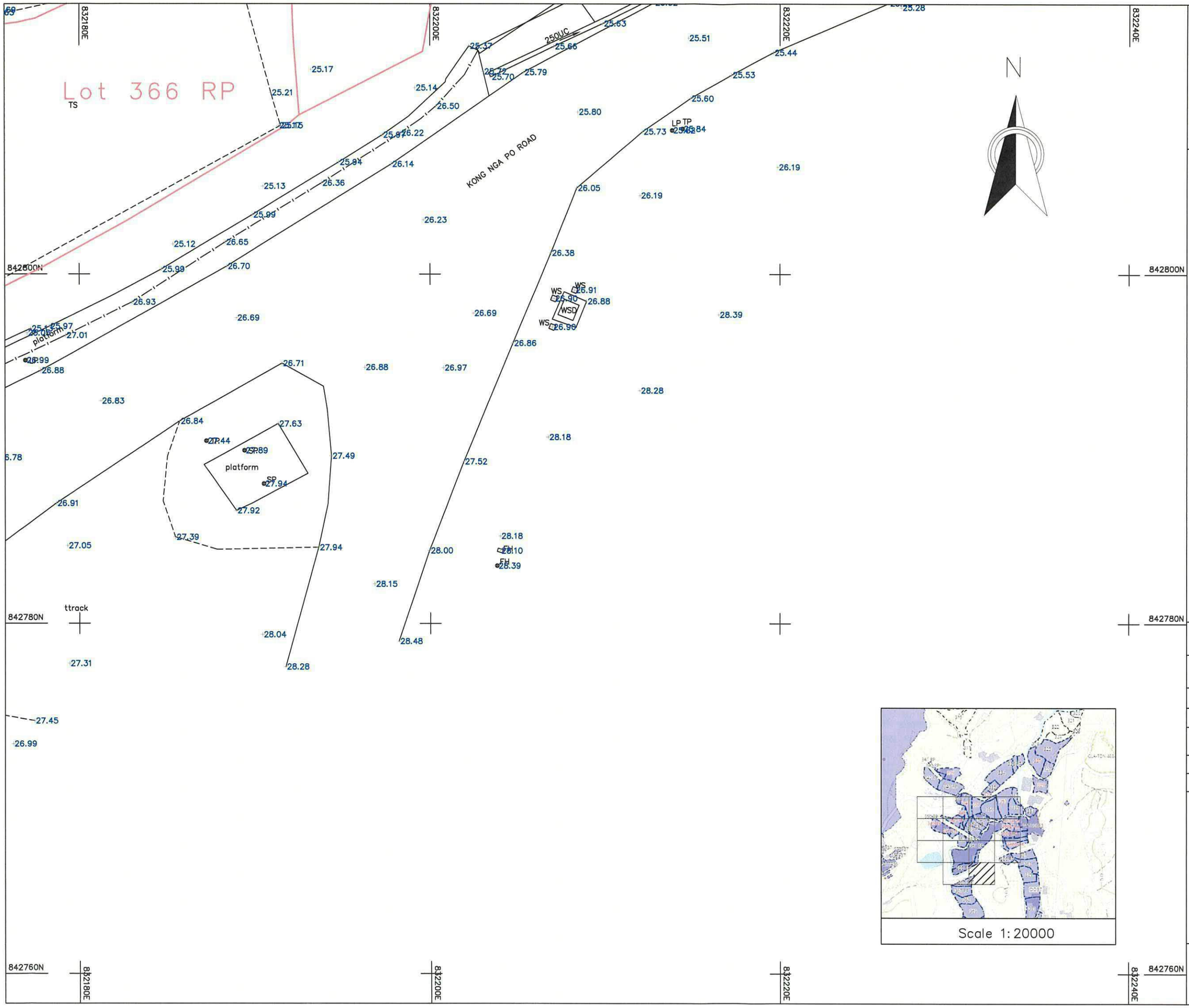

Scale 1:20000

Notes :

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 14 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

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APPENDIX C

Drainage Design Calculation

Design Calculation of U-Channel

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

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

Assumption:

Runoff Coefficient for grass	0.2	(Steep and sandy grassland)			
Runoff Coefficient for concrete	1.0				
Catchment A	3250	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	229.4 mm/hr
Catchment B	4040	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	228.8 mm/hr
Catchment C	2480	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	206.2 mm/hr
Catchment D	1879.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	210.8 mm/hr
Catchment E	18173.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	224.7 mm/hr
Catchment F	16464.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	212.6 mm/hr
Catchment G	7705.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	221.2 mm/hr
Catchment H	4570.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	215.3 mm/hr
Catchment I	5413.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	206.0 mm/hr
Catchment J	3507.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	267.7 mm/hr
Catchment K	4257.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	252.1 mm/hr
Catchment L	1497.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	231.8 mm/hr
Allowance	10.0	% reduction in flow area due to permissible degradation between desilting cycles			
Roughness of concrete	0.016				

Abbreviation and Terms:

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

Cathcment		USGL mPD	DSGL mPD	USIL mPD	DSIL mPD	AVG. DEPTH m	INVERT DIFF. m	LENGTH m	GRADIENT 1 in	RAINFALL INTENSITY mm/hr	RUNOFF COEF.	CATCH MENT m^2	Affected Area (catchment	EFF. AREA m^2	DESIGN FLOW m^3/s	CUM. DESIGN FLOW m^3/s	SIZE mm	TYPE	VEL m/s	ALLOWANCE (REDUCTION %)	FLOW CAP. m^3/s	SPARE CAP. m^3/s	UTILISATION %	RESULT	A (m^2)	P (m)	R (m)
E	Branch 1	27.00	26.00	26.50	24.90	1.10	1.60	110.0	69	224.7	0.2	18173	E	3634.6	0.22702	0.22702	400	UC	2.2	10	0.834	0.607	27	OK	0.381	2.428	0.157
Resultant & Discharge															0.22702	0.22702	400	UC	2.2	10	0.834	0.607	27	OK	0.381	2.428	0.157
A	Branch 2	26.00	25.00	25.30	24.55	0.45	0.75	74.0	99	229.4	1	3250	A	3250	0.20725	0.20725	400	UC	1.6	10	0.236	0.029	88	OK	0.147	1.128	0.130
Resultant & Discharge															0.20725	0.20725	400	UC	1.6	10	0.236	0.029	88	OK	0.147	1.128	0.130
C	Branch 3	25.00	24.50	24.50	23.25	1.25	1.25	124.0	100	206.2	1	2480	C	2480	0.14214	0.14214	400	UC	1.8	10	0.797	0.655	18	OK	0.433	2.720	0.159
L		25.00	25.00	24.50	23.25	1.75	1.25	124.0	100	231.8	0.2	1497	L	299.4	0.01929	0.01929	400	UC	1.9	10	1.154	1.135	2	OK	0.613	3.720	0.165
Resultant & Discharge															0.16143	0.16143	400	UC	1.8	10	0.797	0.635	20	OK	0.433	2.720	0.159
D	Branch 4	25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	210.8	1	1879	D	1879	0.11013	0.11013	400	UC	1.8	10	0.521	0.411	21	OK	0.294	1.948	0.151
K		25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	252.1	0.2	4257	K	851.4	0.05966	0.05966	400	UC	1.8	10	0.521	0.462	11	OK	0.294	1.948	0.151
Resultant & Discharge															0.16979	0.16979	400	UC	1.8	10	0.521	0.351	33	OK	0.294	1.948	0.151
I	Branch 5	24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	206.0	1	5413	I	5413	0.31001	0.31001	400	UC	1.9	10	0.986	0.676	31	OK	0.532	3.268	0.163
J		24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	267.7	0.2	3507	J	701.4	0.05220	0.05220	400	UC	1.9	10	0.986	0.934	5	OK	0.532	3.268	0.163
Resultant & Discharge															0.36221	0.36221	400	UC	1.9	10	0.986	0.624	37	OK	0.532	3.268	0.163
I	Branch 6	24.50	24.00	24.10	23.24	0.76	0.86	85.0	99	206.0	1	5413	I	5413	0.31001	0.31001	400	UC	1.8	10	0.453	0.143	68	OK	0.258	1.748	0.148
Resultant & Discharge															0.31001	0.31001	400	UC	1.8	10	0.453	0.143	68	OK	0.258	1.748	0.148

I	Branch 7	24.50	24.00	24.10	23.27	0.73	0.83	83.1	100	206.0	1	5413	I	5413	0.31001	0.31001	400	UC	1.7	10	0.429	0.119	72	OK	0.247	1.688	0.147
Resultant & Discharge															0.31001	0.31001	400	UC	1.7	10	0.429	0.119	72	OK	0.247	1.688	0.147

B	Branch 8	27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	228.8	1	4040	B	4040	0.25694	0.25694	500	UC	1.9	10	0.684	0.427	38	OK	0.358	1.985	0.180
H		27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	215.3	0.2	4570	H	914	0.05471	0.05471	500	UC	1.9	10	0.684	0.629	8	OK	0.358	1.985	0.180
G		27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	206.0	0.2	7705	G	1541	0.08826	0.08826	500	UC	1.9	10	0.684	0.596	13	OK	0.358	1.985	0.180
Resultant & Discharge															0.39990	0.39990	500	UC	1.9	10	0.684	0.284	58	OK	0.358	1.985	0.180

F	Branch 9	27.00	26.00	26.00	25.50	0.50	0.50	37.0	74	212.6	0.2	16464	F	3292.8	0.19464	0.19464	500	UC	2.1	10	0.423	0.229	46	OK	0.201	1.285	0.156
Resultant & Discharge															0.19464	0.19464	500	UC	2.1	10	0.423	0.229	46	OK	0.201	1.285	0.156

Pipe to Storage tank	pipe	27.00	26.00	24.90	22.90	3.10	2.00	60.2	30						0.19464	0.19464	500	UC	2.8	10	0.559	0.365	35	OK	0.196	1.571	0.125
Resultant & Discharge															0.19464	0.19464	500	UC	2.8	10	0.559	0.365	35	OK	0.196	1.571	0.125

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : A

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3250.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.1	m
L =	length which water takes the longest time to reach the design section	=	117.8	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.53 min say 6.53 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

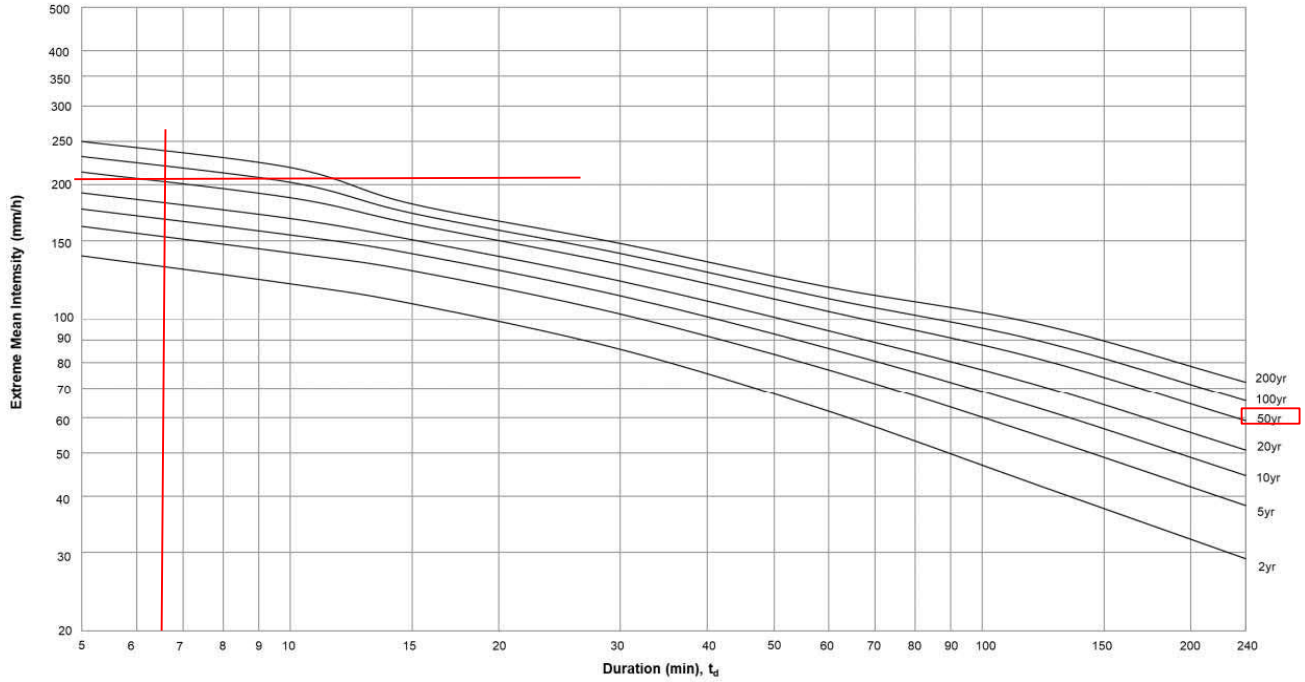


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	206.5	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	229.4	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : B

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4040.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.07	m
L =	length which water takes the longest time to reach the design section	=	121.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.59 min say 6.59 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

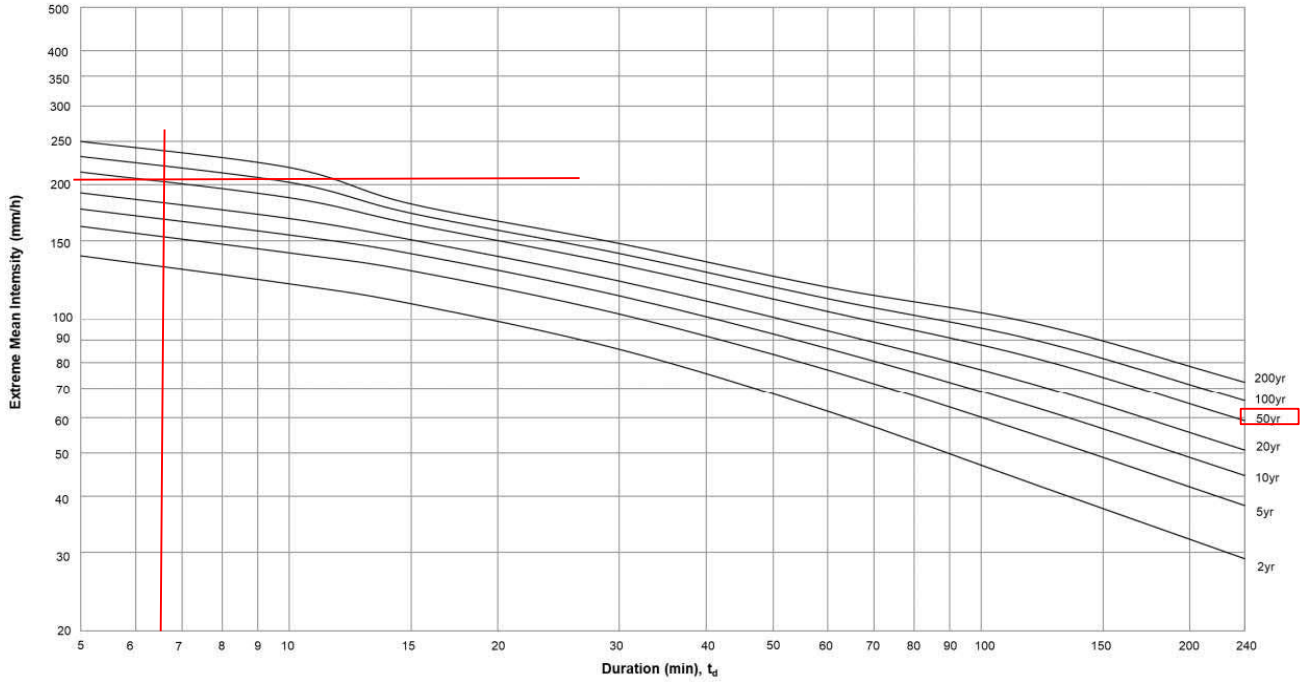


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	205.9	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	228.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : C

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	2480.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.41	m
L =	length which water takes the longest time to reach the design section	=	122.2	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.67 min say 9.67 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

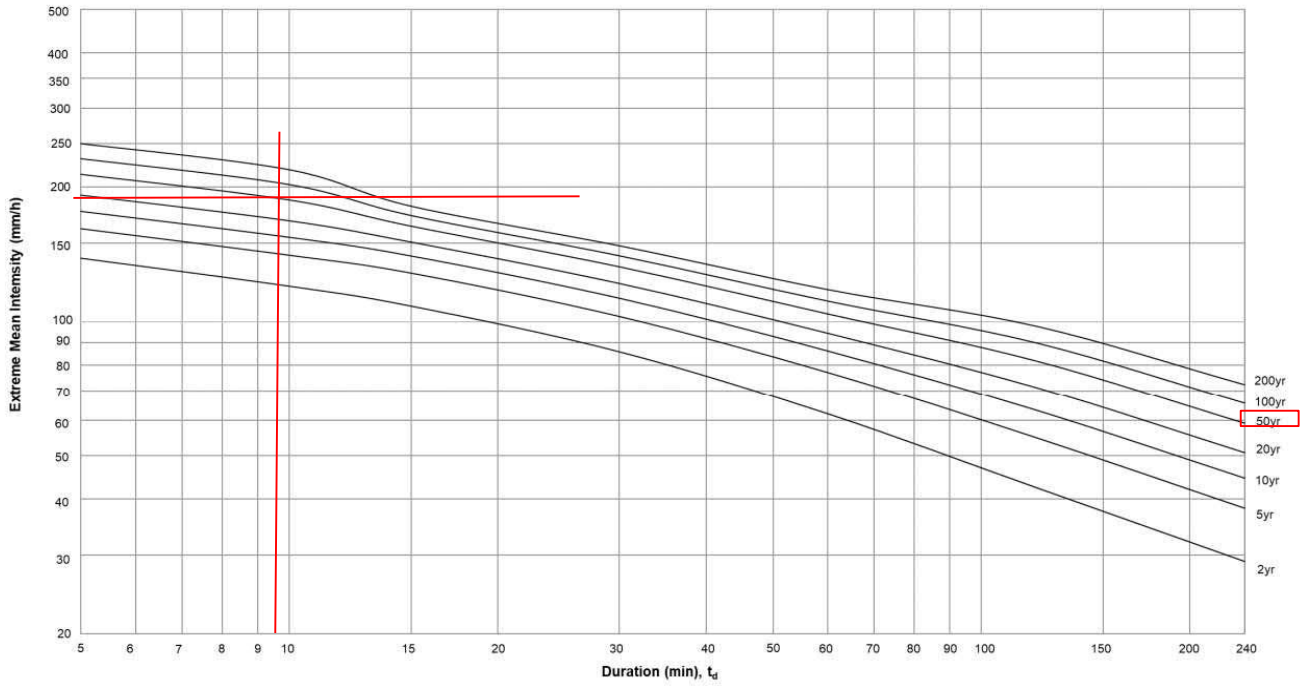


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	185.6	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	206.2	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : D

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1879.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.45	m
L =	length which water takes the longest time to reach the design section	=	111.8	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.93 min say 8.93 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

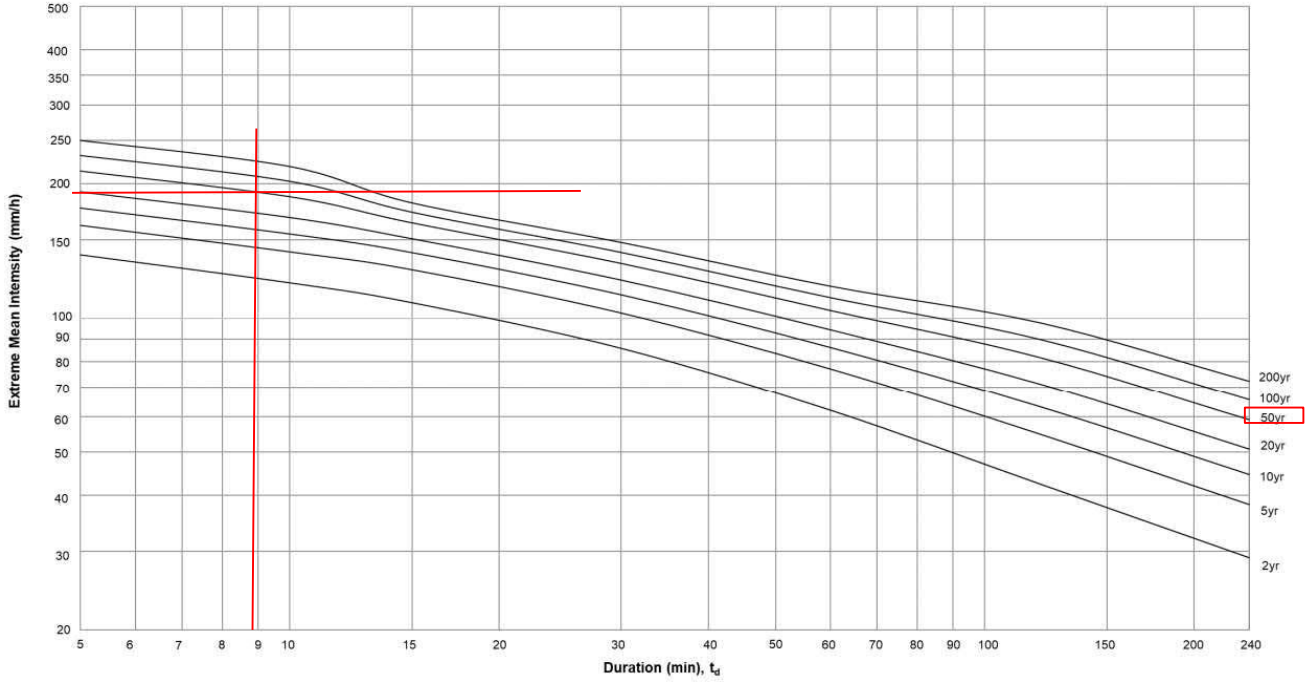


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	189.8	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	210.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : E

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	18173.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	8.50	m
L =	length which water takes the longest time to reach the design section	=	200.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.07 min say 7.07 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

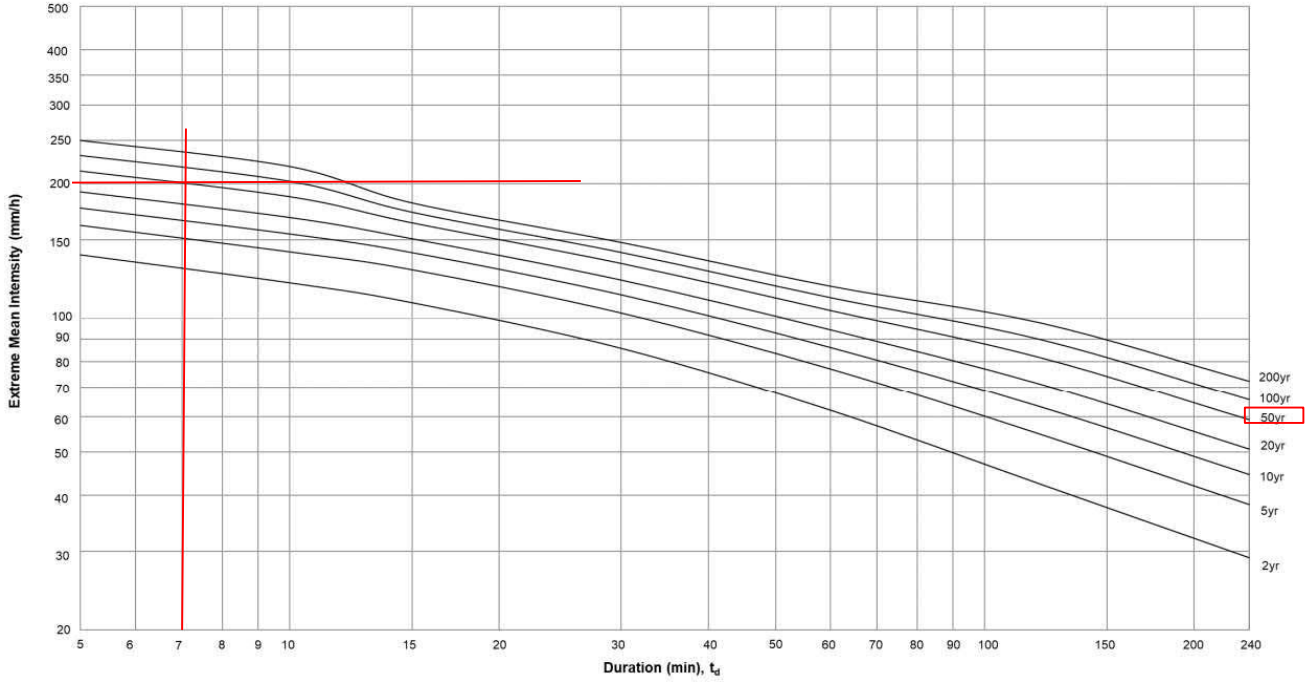


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	202.2	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	224.7	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : F

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	16464.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	7.37	m
L =	length which water takes the longest time to reach the design section	=	236.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.67 min say 8.67 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

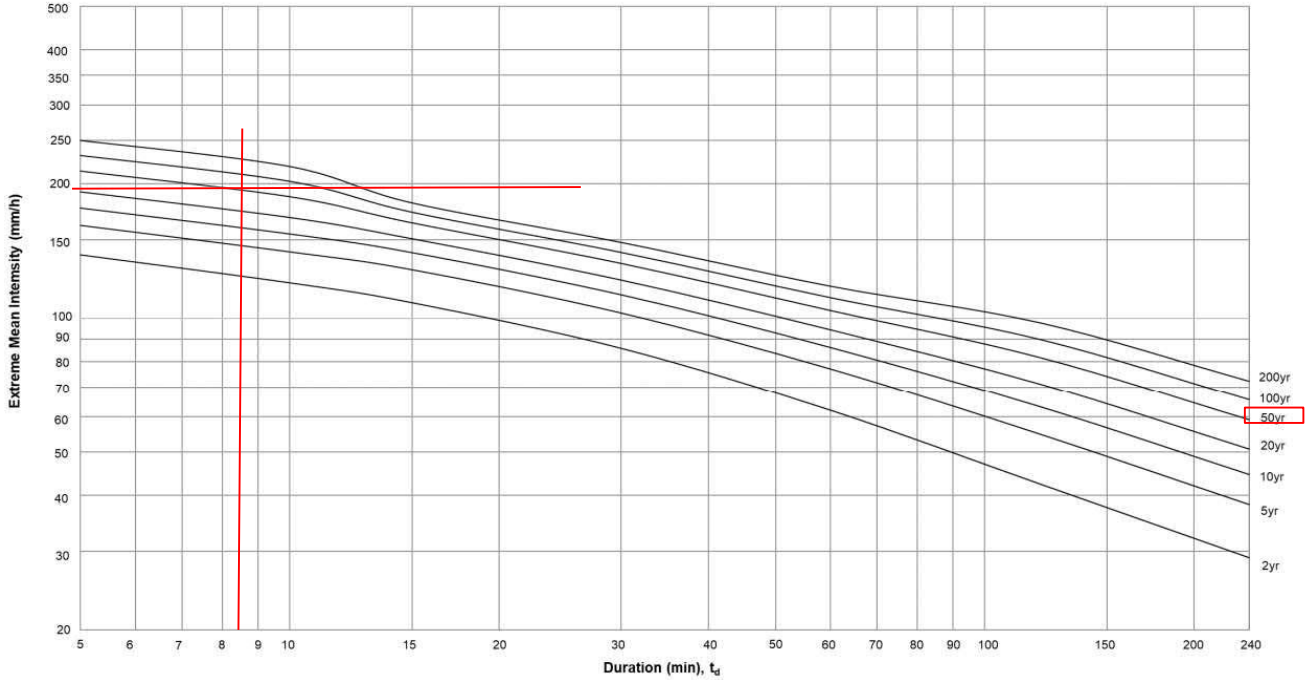


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	191.4	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	212.6	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : G

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	7705.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	9.50	m
L =	length which water takes the longest time to reach the design section	=	199.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.49 min say 7.49 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

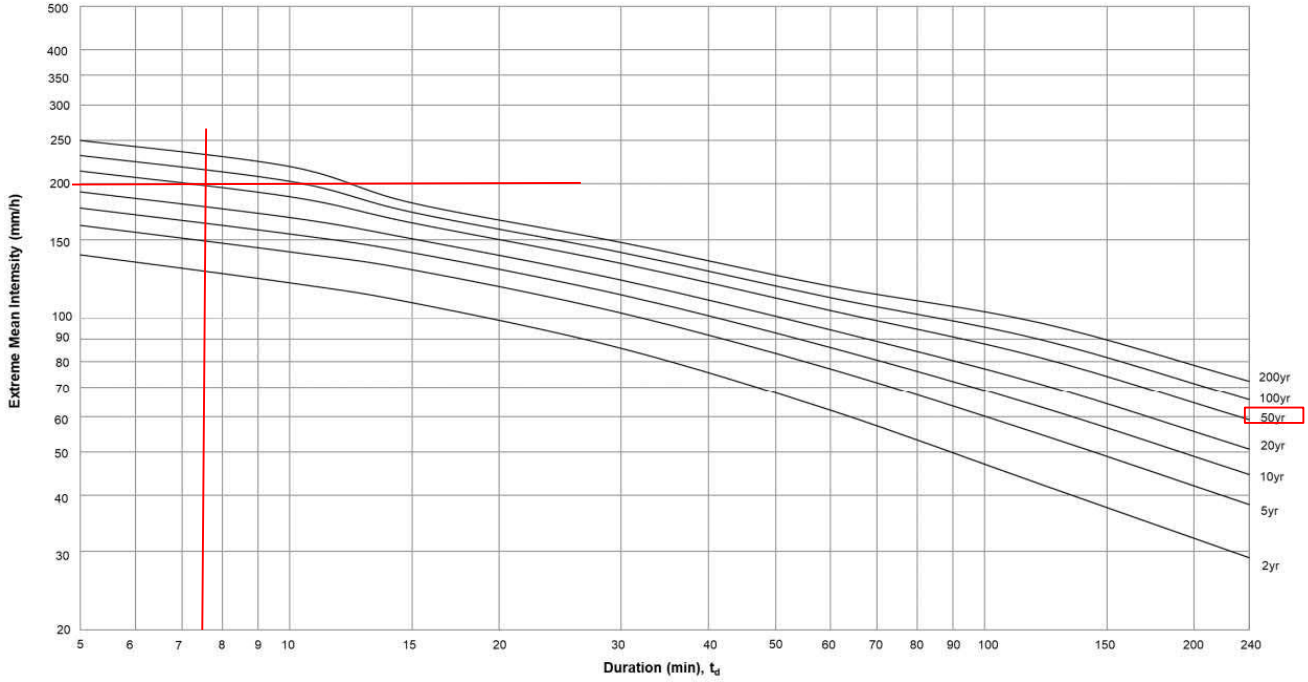


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	199.1	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	221.2	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : H

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4570.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.76	m
L =	length which water takes the longest time to reach the design section	=	163.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.28 min say 8.28 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

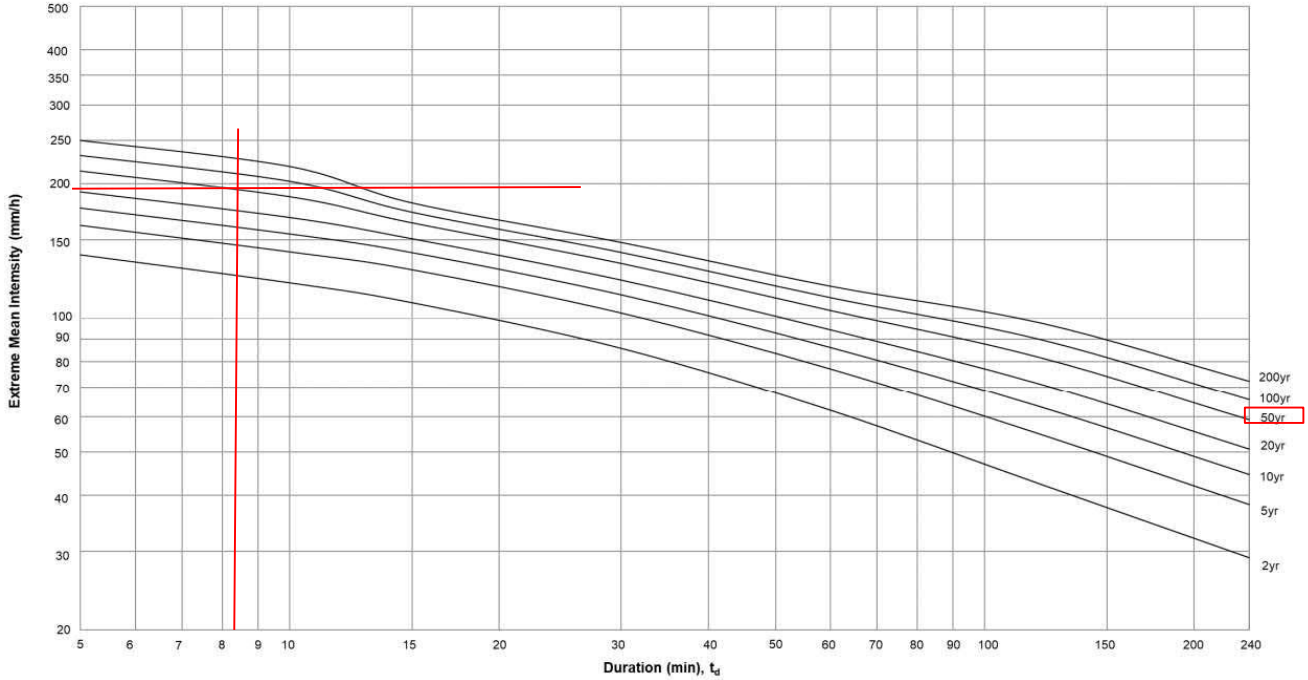


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	193.8	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	215.3	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : I

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	5413.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.38	m
L =	length which water takes the longest time to reach the design section	=	130.7	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.69 min say 9.69 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

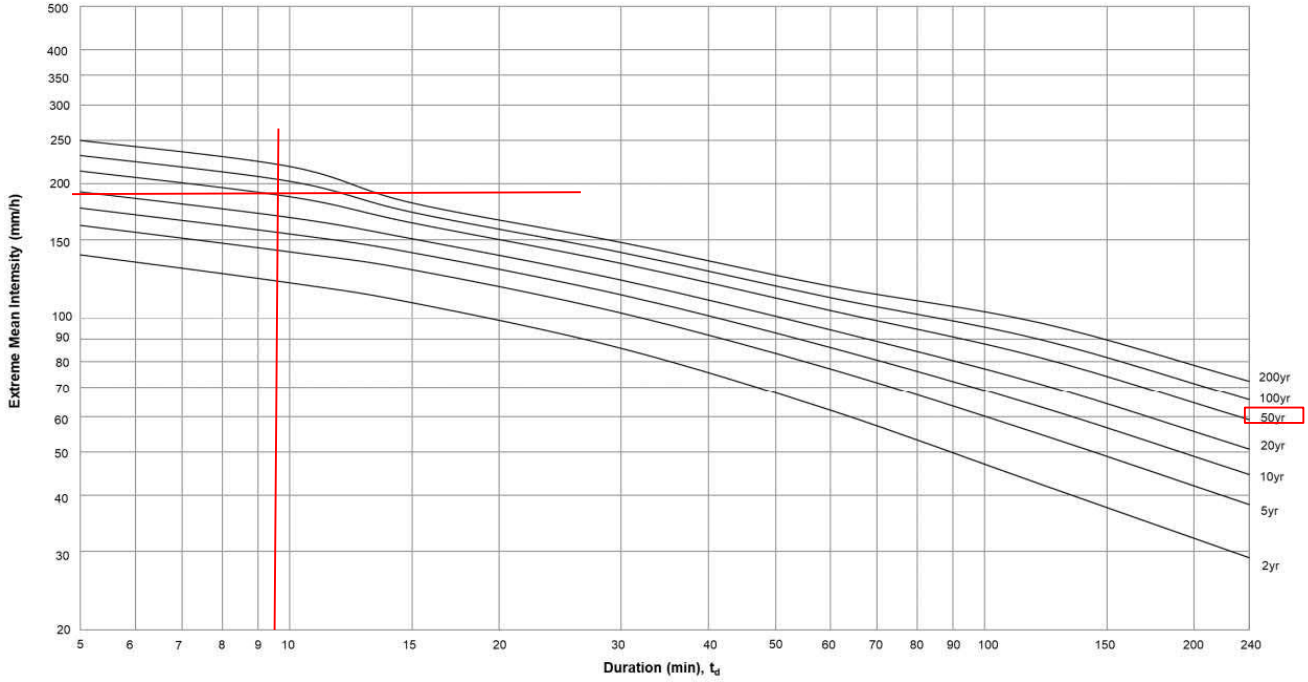


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	185.4	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	206.0	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : J

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3507.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	31.10	m
L =	length which water takes the longest time to reach the design section	=	103.2	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 3.32 min say 3.32 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

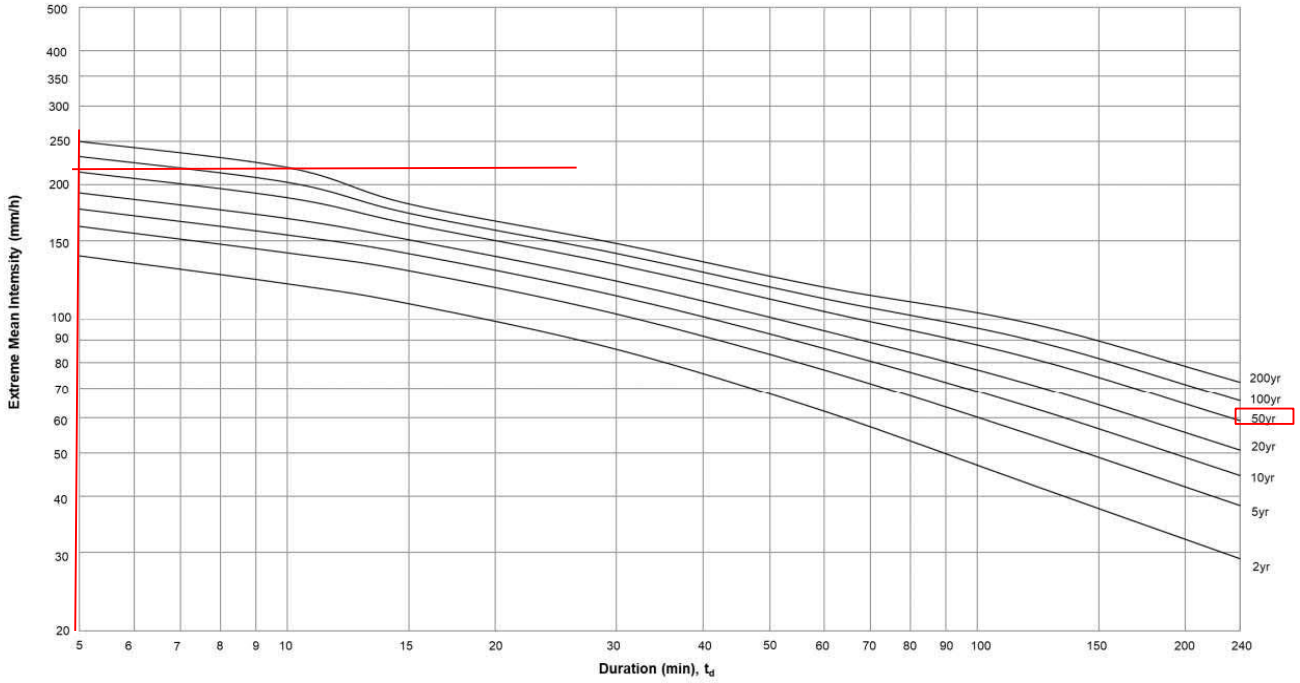


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	240.9	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	267.7	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : K

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4257.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	23.51	m
L =	length which water takes the longest time to reach the design section	=	132.3	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 4.41 min say 4.41 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

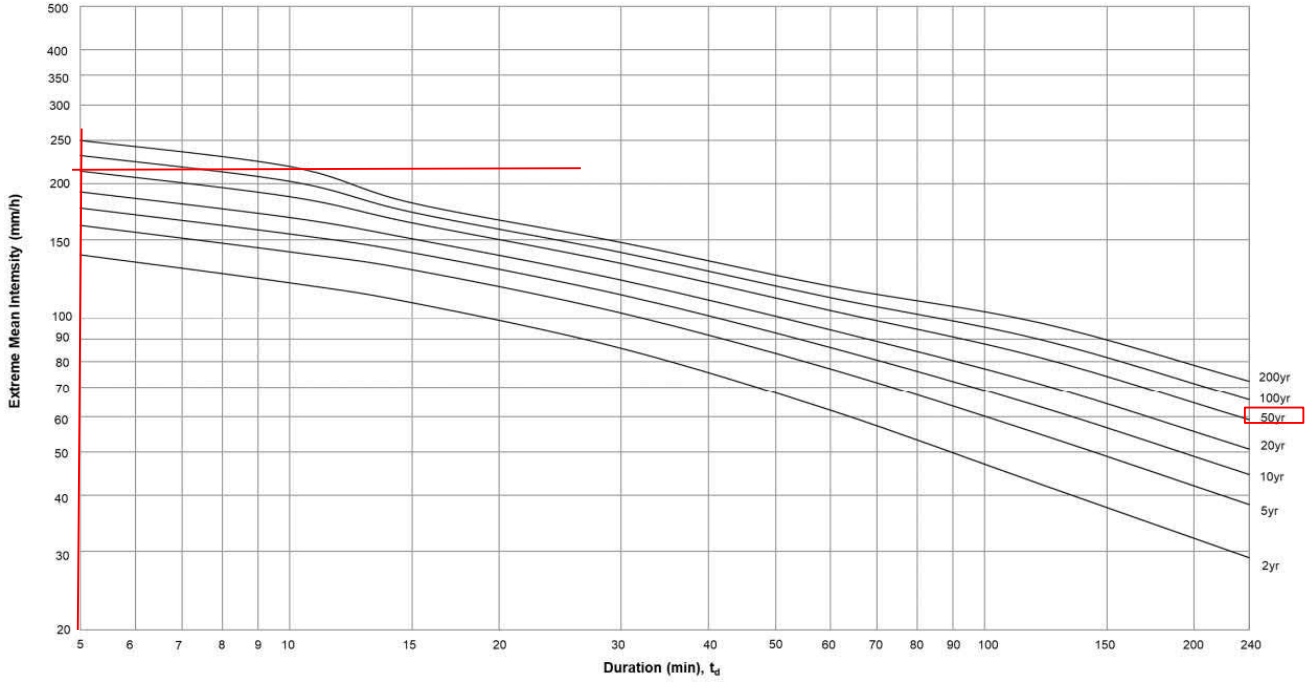


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	226.9	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	252.1	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 I

Catchment Area : L

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1497.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.40	m
L =	length which water takes the longest time to reach the design section	=	75.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.27 min say 6.27 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

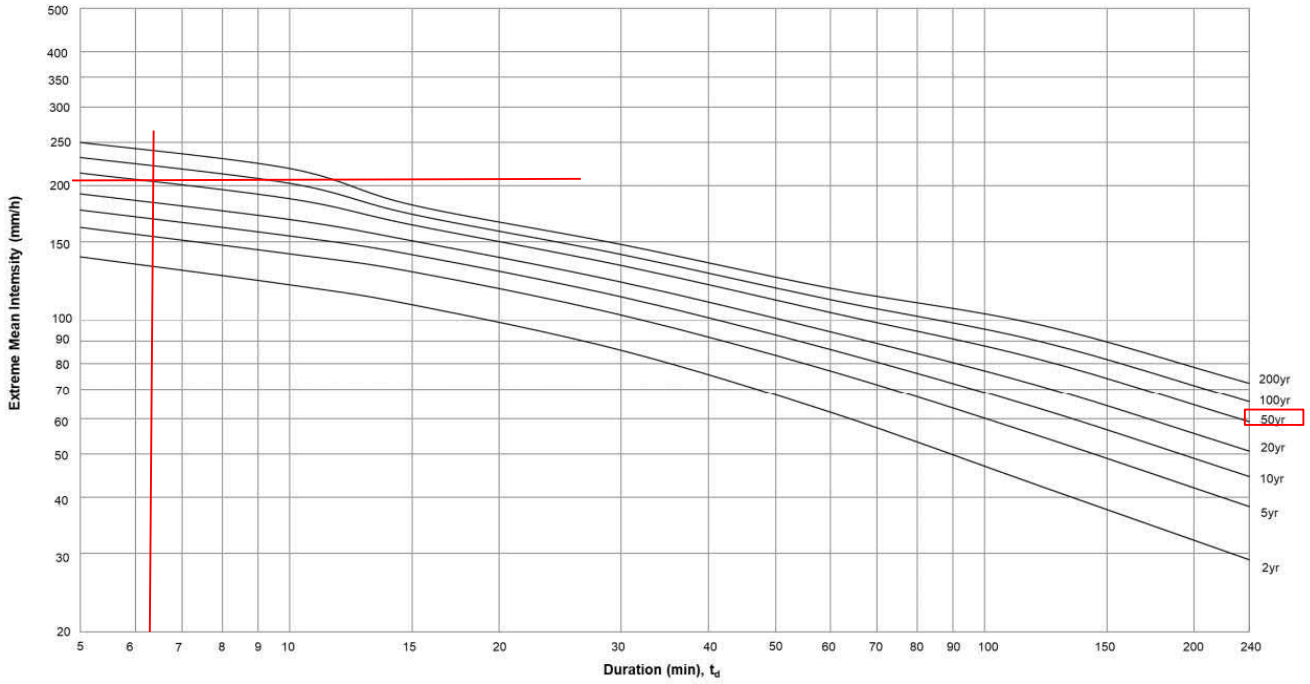
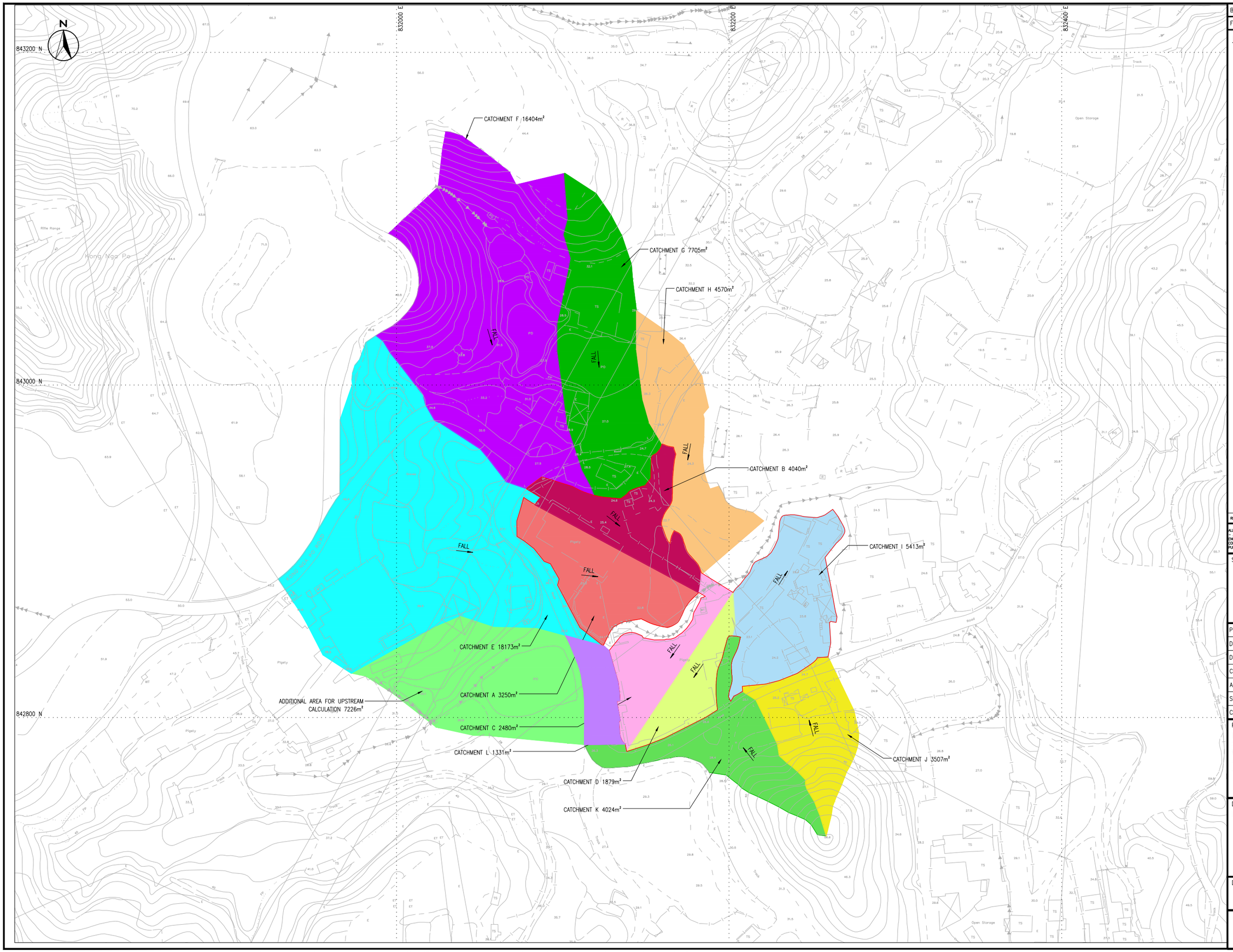


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	208.6	mm/hr
	Rainfall increased due to Climate Change (11.1%)	i x 1.111 =	231.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Checking for the Box Culvert

ISO A3 297mm x 420mm



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

LEGEND:

FLOW DIRECTION

BOUNDARY OF LOTS FOR THIS APPLICATION

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:

DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:

DOWNSTREAM CAPACITY CHECKING

DRAWING NO:	REV:
WNG/25086/C/DRA/004	–

翱翔顧問工程師有限公司
WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.

PATH \\192.168.1.26\eng4-r\2025\P25086 (Drainage Consultancy Services For S.16 Planning Application For Proposed Temporary Open Storage And Ancillary Office At Lot Nos 346 In DD87 At Ping Che)\05-Drawing\20251010\WNG_25086_C_DRA_002-3.dwgPlot File by: USER27 26/11/2025 10:10:01 am

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 8**

Catchment Area : **Additional area**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	7226.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	12.4	m
L =	length which water takes the longest time to reach the design section	=	137.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 4.92 min say 4.92 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

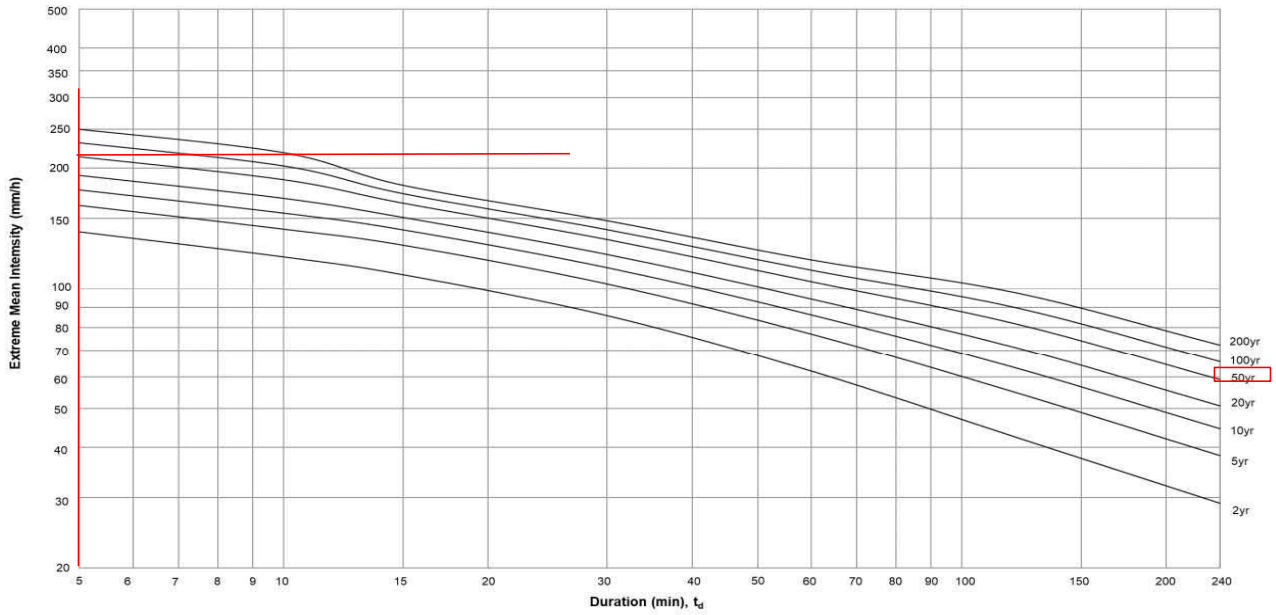
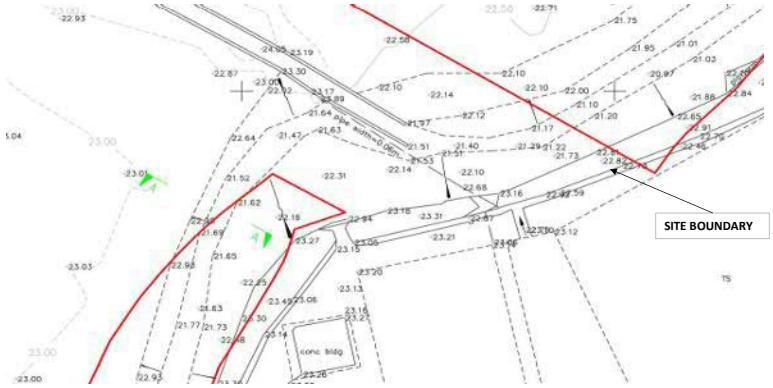


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	221.3	mm/hr
	Rainfall increased due to Climate Change (11.1%) (With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)	i x 1.111 =	245.8	mm/hr
C =	runoff coefficient	=	0.2	
Runoff Q =	0.278CiA	=	0.09876	m^3/s

Concrete Pipe Capacity Check

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP, 366 RP in D.D. 87**

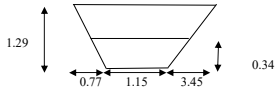


Plan view of Section A



Water level reference from Geotechnical Information Infrastructure (Ginfo)

Water level (from Ginfo)	=	22.03	mPD
Top level of West bank	=	22.98	mPD
Top level of East bank	=	23.27	mPD
Bottom level of stream course	=	21.69	mPD



Calculation of Flow of Existing Stream Course at Section A-A

	Water level (from Ginfo)	=	22.03	mPD
b =	stream bottom width	=	1.150	m
t =	stream top width	=	5.370	m
z =	stream side slope gradient	=	1.68	m
y =	water depth	=	0.34	m
				Reference from Geotechnical Information Infrastructure (Ginfo) and topographic survey
P =	stream wetted perimeter	=	1.94	m
A =	cross sectional flow area	=	0.581	m^2
R =	hydraulic radius (A/P)	=	0.299	m
S =	stream gradient	=	0.027	
n =	Manning coefficient of roughness	=	0.03	
V =	mean velocity = $R^{(2/3)}S^{(1/2)}/n$	=	2.46	m/s
Q =	Flow of Existing Stream (VA)	=	1.43	m^3/s

Discharge form Channels

	Branch 1	=	0.22702 m^3/s
	Branch 2	=	0.20725 m^3/s
	Branch 3	=	0.16143 m^3/s
	Branch 4	=	0.16979 m^3/s
	Branch 5	=	0.36221 m^3/s
	Additional area	=	0.09876 m^3/s
			1.22646 m^3/s

Total Upstrean Flow	=	2.65620	m^3/s	

Calculation of Capacity of Concrete box culvurt

H =	Height of box culvurt	=	3.5	m
W =	Width of box culvurt	=	3	m
P =	Wetted perimeter	=	13.00	m
A =	Cross sectional flow area	=	10.50	m^2
R =	Hydraulic radius (A/P)	=	0.808	m
S =	gradient	=	0.027	
n =	Manning coefficient of roughness	=	0.016	
V =	mean velocity = $R^{(2/3)}S^{(1/2)}/n$	=	8.94	m/s
Q =	capacity of concrete pipe (VA)	=	281.47	m^3/s
		>	**2.65620**	OK
			0.94	%

Structural checking for the box culvert

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Stability)**	Project No.:	P25086

Ref. Output

1.0 Design Codes and Standards

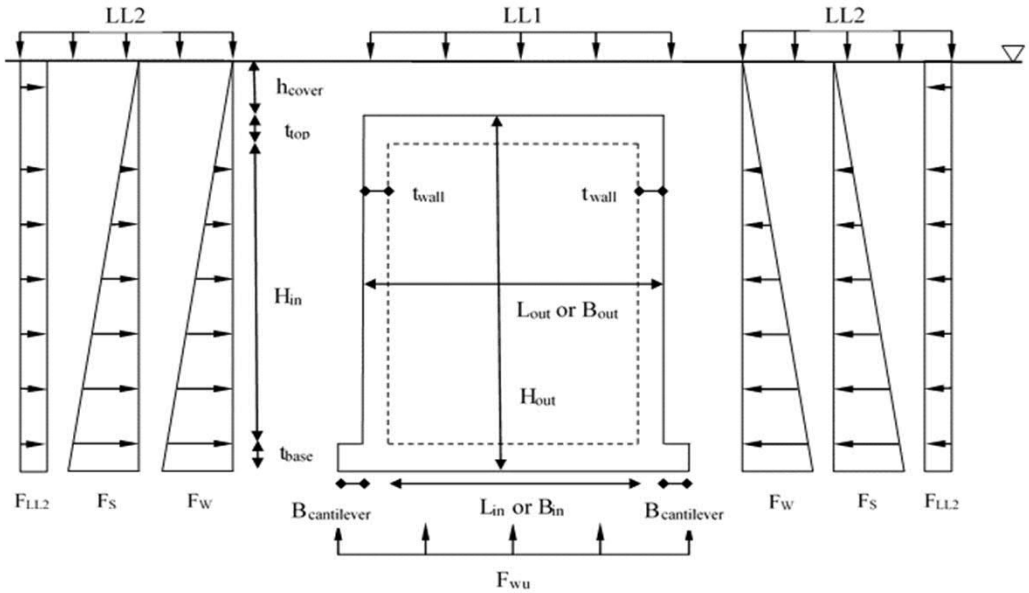
CoP DL & IL	Code of Practice for Dead and Imposed Loads 2011
Geoguide 1	Geoguide 1 "Guide to Retaining Wall Design (2017 Version)"
CoP Fdn. 2017	Code of Practice for Foundations 2017
CoP Conc. 2013	Code of Practice for Structural Use of Concrete 2013

2.0 Geotechnical Parameters and Assumptions

Density of Concrete	γ_{conc}	=	24.5	kN/m^3	(for reinforced concrete)
Density of Soil (Unsaturated)	γ_{soil}	=	19	kN/m^3	
Density of Soil (Saturated)	$\gamma_{soil, sat}$	=	20	kN/m^3	
Friction Angle of Soil	ϕ_{soil}	=	30	°	
Friction Angle of Backfill	$\phi_{backfill}$	=	30	°	
Density of Water	γ_{water}	=	10	kN/m^3	
Active coefficient	K_a	=	0.33		
Inactive coefficient	K_o	=	0.50		
Passive coefficient	K_p	=	3.00		

3.0 Dimension of Chamber

Cover of backfill	h_{cover}	=	0	mm	
Internal length	L_{in}	=	1000	mm	per m run
Internal width	B_{in}	=	3000	mm	
Internal height	H_{in}	=	2900	mm	= C.L. - D.T.I.L. of Manhole
Thickness of top slab	t_{top}	=	300	mm	
Thickness of base slab	t_{base}	=	300	mm	
Thickness of wall	t_{wall}	=	300	mm	
Outer length	L_{out}	=	1000	mm	per m run
Outer width	B_{out}	=	3600	mm	= Bin + 2 × twall + 2 × Bcantilever
Outer height	H_{out}	=	3500	mm	= Hin + 75 + trap + ttop + tbase
Maximum depth of manhole	H_{max}	=	3500	mm	= Hout + hcover
Depth of soil above W.L.	$D_{aboveWT}$	=	2143.33	mm	=C.L. - W.L.
Submerged soil depth	h_{water}	=	1356.67	m	=H_{max} - $D_{aboveWT}$



		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Stability)**	Project No.:	P25086

Ref.								Output
	4.0 Loading on Chamber							
	4.1 **Self weight of chamber, G**	**= 26.5 + 26.5 + 21.3**	=	**74.3**	**kN**			
	Weight of top slab =	= γconc × Bout × Lout × ttop	=	24.5 × 3.6 × 1 × 0.3	=	26.5	kN	
	Weight of base slab =	= γconc × Bout × Lout × tbase	=	24.5 × 3.6 × 1 × 0.3	=	26.5	kN	
	Weight of side wall =	= γconc × Hin × twall × Lout	=	24.5 × 2.9 × 1 × 0.3	=	21.3	kN	
	4.2 Hydrostatic pressure							
	Water pressure (Inner)	**= γwater × Bin × Lin × 0**	=	**0**	**kN**	Assume the inner space of the chamber does not store water		
	Water pressure (Outer)	**= γwater × Bout × Lout × Hout**	=	**126**	**kN**			
	Uplift	**= γwater × Bout × Lout × Hout**	=	**36**	**kN**	Uplifting force for the whole manhole = Fwu		
	4.3 Earth pressure							
	Soil weight on top slab	**= γsat × Bout × Lout × Cover**	=	**0**	**kN**	(Assume the soil is saturated)		
	Soil weight inside the chamber		=	**0**	**kN**	(Assume no soil inside the chamber)		
CoP DL & IL	4.4 Live loading on cover of top slab	q_{LL1}	=	20	kPa	(Consider the manhole located at public road)		
c.l. 3.9	**Q_{LL1}**	**qLL1 × Hout x Bout**	=	**72**	**kN**			
		q_{LL2}	=	20	kPa	(Assume Crtical Case)		
CoP Fdn. 2017	**5.0 Resistance to Sliding, Uplift and Overturning**							
C.l. 2.5.4 (3)	For design based on highest possible groundwater table							
	Self weight of chamber		=	74.3	kN	Weight of structural element		
	Soil weight on top slab		=	0	kN	Weight of backfill above the top slab		
	Soil weight inside the chamber		=	0	kN	No backfill inside the manhole		
	Minimum dead load	**G_{Total}**	=	**74.3**	**kN**			
	5.1 Checking for resistance to sliding and overturning							
	Since the sliding forces and the overturning moments acting on the manholes are balanced on each sides, checking on these 2 criteria are not required.							
C.l. 2.5.4 (3)	5.2 Checking for resistance to uplift force							
	Downward force due to the minimum deadload		=	74.3	kN	= G_Total		
	Downward force due to any permitted anchorage resistance		=	0	kN			
C.l. 2.5.4 (4)	**Resistance to uplift force**		=	**74.3**	**kN**	= Summation of the above 2 elements		
	Uplifting force due to groundwater	**F_{WU}**	=	**36**	kN	= Water pressure (Outer)		
	(3)(b) 1.1 times the uplift force due to groundwater		=	39.6	kN	= 1.1 × F_wu		
	(3)(b) 1.5 times the uplift force due to other loads		=	0	kN			
	(3)(b) Required resistance to uplift force		=	39.6	kN	= Summation of the above 2 elements		
				< Resistance to uplift force = 74.3 kN				**OK !**
Geoguide 1	**6.0 Bearing Capacity Checking**							
	Total gravity load on chamber		=	74.3	kN			
	Check base on Geoguide 1 "Guide to Retaining Wall Design"							
	Saturated Unit Weight of soil		=	20	kN/m^3	= $\gamma_{soil,\,sat}$		
	Effective Unit Weight of soil, γ'		=	10	kN/m^3			
	Factored Shearing Angle, ϕ'_f		=	30	degree	= ϕ_{soil}		
	Effective Cohesion, c'		=	0	kPa			
	Width of Foundation Base, B		=	3.6	m			
	Length of Foundation Base, L		=	1	m			
	Eccentricity of Resultant Load in B Direction, eB		=	0	m			
	Eccentricity of Resultant Load in L Direction, el		=	0	m			
	Effective Width, B'		=	3.6	m	= B – 2eB		
	Effective Length, L'		=	1	m	= L – 2eL		
	Depth of Embedment, d		=	3.5	m	= H_{max} (Assumed)		
	Total overburden pressure at maximum depth	q_t	=	70	kPa	= γsoil,sat × Hmax	= FS	
	Effective surcharge, q'		=	35	kPa	= γ' d cosβ		
	Vertival Load, V		=	74.3	kN			
	Horizontal Load, H		=	0	kN			
	The inclination of the foundation to the horizontal, α (<=45)		=	0	degree			
	Angle of Slope in front of Foundation, β		=	0	degree			
CoP Fdn. 2017	Maximum Bearing Pressure, q_{max}		=	20.6	kPa			
Table 2.1				**< presumed values for allowable bearing pressure = 50 kPa**				**OK !**

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Wall)**	Project No.:	P25086

Ref. Output

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2.0 Geotechnical Parameters and Assumptions

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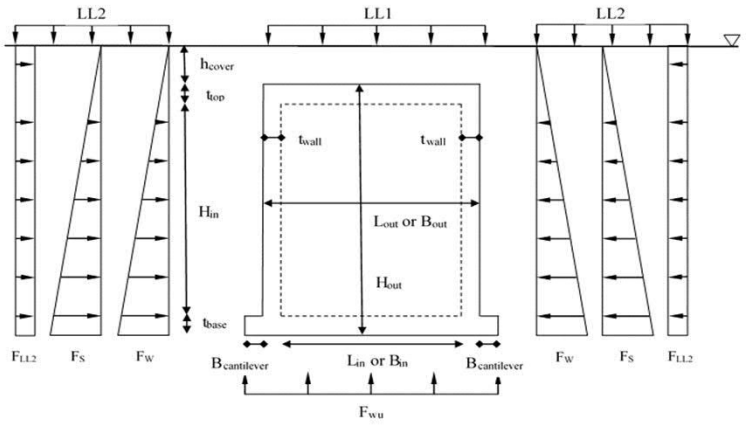
Density of Soil (Unsaturated)	γ_{soil}	=	19	kN/m^3	
Density of Soil (Saturated)	$\gamma_{soil, sat}$	=	20	kN/m^3	
Angle of Soil	ϕ_{soil}	=	30	°	
Angle of Backfill	$\phi_{backfill}$	=	30	°	
Density of Water	γ_{water}	=	10	kN/m^3	
Active lateral earth coefficient	K_a	=	0.33	=	(1-sinϕ) / (1+sinϕ)
At rest lateral earth coefficient	K_o	=	0.50	=	(1-sinϕ)
Passive lateral earth coefficient	K_p	=	3.00	=	1 / K_a

3.0 Dimension of Chamber

Ground level		=	+25.00	mPD	
Box culvert bottom level		=	+21.50	mPD	
Groundwater level		=	+22.86	mPD	(Assume 1/3 water level)
Height of Wall	H	=	3.50	m	(G.L. - Box Top)
Dry soil depth	h_1	=	2.14	m	(G.L. - G.W.T.)
Submerged soil depth	h_2	=	1.36	m	(G.W.T. - Box Top)
Thickness of wall	t_{wall}	=	300	mm	



		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Wall)**	Project No.:	P25086

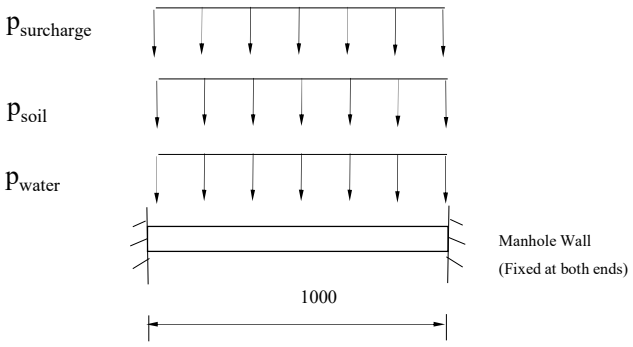
Ref. Output

4.0 Dimension of Wall

For each side wall of the manhole, we consider

Width	=	1000	mm	(per m run)
Height	=	3500	mm	
Thickness	=	300	mm	

5.0 Loading on Side Wall



Consider the side wall as a beam with both ends fixed per m width for analysis, we have

5.1 **Earth pressure:**

Consider at-rest lateral earth pressure,

$p_{s'} = K_0 \times \gamma_{soil} \times h_1 + K_0 \times (\gamma_{soil,sat} - \gamma_{water}) \times h_2$

$= 0.5 \times 19 \times 2.14333333333333 + 0.5 \times (20 - 10) \times 1.3566666666$ = 27.145 kN/m per m run Pressure due to soil

5.2 **Water pressure:**

$p_w = \gamma_{water} \times h_{water} =$ 10×3.5 = 35 kN/m per m run Pressure due to water

5.3 **Surcharge:**

q_{LL2} = 20 kN/m per m run

$p_{surcharge} = K_0 \times q_{LL2} =$ = 10 kN/m per m run CoP DL & IL Table 3.17

6.0 Forces on Side Wall

Load case	Unfactored UDL	Load factor	Factored UDL
Soil	27.145	1.4	38.003
Water	35	1.4	49
Surcharge	10	1.6	16
Total =	72.145		103.003

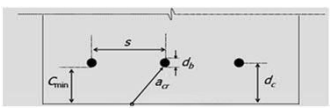
	SLS	ULS	
Max. Shear Force on side wall = wL/2	36.07	51.50	kN
Max. Bending Moment on side wall = $wL^2/12$	6.01	8.58	kNm

Prepared by:
Check by:

Project: Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che — Date: 13/10/2025

Subject: Structural Design for Box Culvert **(Checking of Wall)** — Project No.: P25086

Ref.									Output
CoP Conc. 2013	**7.0 RC Design against Bending Moment and Shear Force**								
	For the dimension of wall with,					V_{ULS} =	51.5	kN per m run	
	Width =	1000	mm	WITH		M_{ULS} =	8.6	kNm per m run	
	Height =	3500	mm			V_{SLS} =	36.1	kN per m run	
	Thickness =	300	mm			M_{SLS} =	6.0	kNm per m run	
	Consider the RC design in a width of 1m, we have								
	7.1 **Reinforcement for moment:**								
	With M_ULS,wall = 8.6 kNm per m run								
	Width			b	=	1000	mm		
	Effective depth			d	=	245	mm		
	Yield strength of steel			f_y	=	500	N/mm^2	(Table 15 of sewerage manual for XA Exposure Condition)	
	Concrete strength			f_{cu}	=	30	N/mm^2	(Table 15 of sewerage manual for XA Exposure Condition)	
	Span			L	=	1000	mm		
	Wall thickness			t_{wall}	=	300	mm		
Table 4.2	Concrete cover				=	50	mm	(Table 15 of sewerage manual for XA Exposure Condition)	
c.l. 6.1	7.1.1 Checking for compression steel								
eq 6.8	K' (for fcu ≦ 45N/mm^2)				=	0.156			
eq 6.7	$K = M / (f_{cu} \times b \times d^2)$				=	0.005	< K' = 0.156	**Compression reinforcement IS NOT required**	
	7.1.2 Checking for tensile steel								
eq 6.10	$z = d [0.5 + \sqrt{(0.25 - K/0.9)}]$				=	0.995d	**> 0.95d, and thus use 0.95d**	= 233	mm
eq 6.11	Required steel reinforcement	$A_{s,req} = M / (0.87 \times f_y \times z)$			=	85	mm^2		
	Provided steel reinforcement =	T	10		@	200	mm spacing		
		$A_{s,prov}$			=	393	mm^2	> Required steel reinforcement	**OK !**
	Percentage of reinforcement	$p_s = A_{s,prov} / bd$			=	0.16	%		
c.l. 9.3.1					>	minimum percentage of steel =	0.13	%	**OK !**
c.l. 9.2.1.3					<	maximum percentage of steel =	4.00	%	**OK !**
	7.1.3 Checking for shear reinforcement								
	Design shear stress	$v = V / (b_v \times d)$			=	0.210	MPa		
c.l. 6.1.2.5	Design concrete shear stress			v_c	=	$0.79/\gamma_m \times p_s^{1/3} \times (400/d)^{1/4} \times (\max(40, f_{cu})/25)^{1/3}$			
					=	0.454	MPa	> v	**Shear reinforcement IS NOT required**
c.l. 7.3.4	7.1.4 Checking for deflection								
Table 7.4	$M_{SLS} / (b \times d^2)$				=	0.100			
Table 7.4	Design service stress in tension reinforcement			f_s	=	72	N/mm^2	$= 2/3 \times f_y \times A_{st,req} / A_{st,prov} \times 1/\beta_b$	$< 0.8 \times f_y$
Table 7.4	Modification factor = $0.55 + (477 - f_s) / (120 [0.9 + M/bd^2])$				=	4.3	> 2.0	Take 2.0	
Table 7.3	Basic span / effecive depth ratio				=	7	(for cantilever)		
c.l. 7.3.4.4	Modified span / effecive depth ratios (for tensile reinforcement)				=	14	= Basic span / d × Modification factor (Tensile)		
	Actual span / effecive depth ratio				=	4	< 14		**OK !**
	7.1.5 Checking for crack width								
c.l. 7.2.1	Allowable surface crack width			w	=	0.2	mm		
c.l. 7.2.3	Thickness of element			h	=	300	mm	$= t_{wall}$	
	Width of element to be considered			b	=	1000	mm	1m width	
	Effective depth			d	=	245	mm		
	Diameter of steel bars			d_b	=	10	mm		
	Spacing of steel bars			s	=	200	mm		
	Concrete Cover			$c = c_{min}$	=	50	mm		
	Concrete strength			f_{cu}	=	30	N/mm^2		
	Strength of steel			f_s	=	72	N/mm^2		
	Young's Modulus of steel			E_s	=	200	kN/mm^2		
	Applied moment			M_{SLS}	=	6.0	kNm		
	Area of reinforcement			$A_{s,prov}$	=	393	mm^2		
	Depth of the neutral axis			x	=	122.5	mm	≦ 0.5d	
c.l. 7.2.3	Strain in the tension reinforcement			ε_s	=	0.0004	= fs / Es		
appendix	a = 300 = h								
appendix	ε_1 = 0.0005 = ε_s (a-x) / (d-x)								
	For limiting design surface crack width of 0.2mm								
	(BS8007) ε_2 = $[b_t(h-x)(a'-x)]/[3E_sA_s(d-x)]$ (from CoP Conc. 2013)							= 0.0011	
	ε_m = $\varepsilon_1 - \varepsilon_2$ = -0.0006								
	Effective cover = $d_c = c + d_b / 2$ = 55.0 mm								
	a_{cr} = $[(s/2)^2 + d_c^2]^{0.5} - d_b / 2$				=	109.1	mm		
	Design surface crack width			ω	=	$3a_{cr}\varepsilon_m / [1+2(a_{cr}-c_{min}) / (h-x)]$			
					=	-0.11	mm		
					<	Allowable surface crack width = 0.2 mm			**OK !**



Prepared by:
Check by:

Project: Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che — Date: 13/10/2025

Subject: Structural Design for Box Culvert **(Checking of Base Slab)** — Project No.: P25086

Ref. — Output

1.0 Dimension of Base Slab

For the base slab of the manhole, we consider

Width = 3600 mm
Length = 1000 mm
Thickness = 300 mm

2.0 Loading on base slab

Consider the loading of base slab more conservatively as the loading on wall, we have

Shear Force on side wall (ULS)	$V_{ULS,wall}$ =	=	51.5	kN per m run
Bending Moment on side wall (ULS)	$M_{ULS,wall}$ =	=	8.6	kNm per m run
Shear Force on side wall (SLS)	$V_{SLS,wall}$ =	=	36.1	kN per m run
Bending Moment on side wall (SLS)	$M_{SLS,wall}$ =	=	6.0	kNm per m run

CoP Conc. 2013

3.0 RC Design against Bending Moment and Shear Force

For the dimension of base slab with,

Width = 3600 mm
Length = 1000 mm
Thickness = 300 mm

WITH

V_{ULS} = 51.5 kN per m run
M_{ULS} = 8.6 kNm per m run
V_{SLS} = 36.1 kN per m run
M_{SLS} = 6.0 kNm per m run

Consider the RC design in a width of 1m, we have

3.1 Reinforcement for moment:

With M_ULS,slab = 8.6 kNm per m run

Width	b	=	1000	mm	
Effective depth	d	=	265	mm	
Yield strength of steel	f_y	=	500	N/mm^2	
Concrete strength	f_{cu}	=	30	N/mm^2	
Span	L	=	3600	mm	
Base slab thickness	t_{base}	=	300	mm	
Table 4.2 Concrete cover		=	30	mm	

c.l. 6.1 3.1.1 Checking for compression steel

eq 6.8 K' (for fcu ≦ 45N/mm^2) = 0.156

eq 6.7 $K = M / (f_{cu} \times b \times d^2)$ = 0.004 < K' = 0.156 **Compression reinforcement IS NOT required**

3.1.2 Checking for tensile steel

eq 6.10 $z = d [0.5 + \sqrt{} (0.25 - K/0.9)]$ = 1d **> 0.95d, and thus use 0.95d** = 252 mm

eq 6.11 Required steel reinforcement $A_{s,req} = M / (0.87 \times f_y \times z)$ = 78 mm^2

Provided steel reinforcement T 10 @ 200 mm spacing $A_{s,prov}$ = 393 mm^2

Percentage of reinforcement $p_s = A_{s,prov} / bd$ = 0.15 %

c.l. 9.3.1 > minimum percentage of steel = 0.13 % **OK !**

c.l. 9.2.1.3 < maximum percentage of steel = 4.00 % **OK !**

3.1.3 Checking for shear reinforcement

Design shear stress $v = V / (b_v \times d)$ = 0.194 MPa

c.l. 6.1.2.5 Design concrete shear stress v_c = $0.79/\gamma_m \times p_s^{1/3} \times (400/d)^{1/4} \times (\max(40, f_{cu})/25)^{1/3}$

= 0.434 MPa > v **Shear reinforcement is NOT required**

c.l. 7.3.4 3.1.4 Checking for deflection

Table 7.4 $M_{SLS} / (b \times d^2)$ = 0.086

Table 7.4 Design service stress in tension reinforcement f_s = 66 N/mm^2 $= 2/3 \times f_y \times A_{st,req} / A_{st,prov} \times$ < $0.8 \times f_y$ $\beta_b = 1$

Table 7.4 Modification factor = $0.55 + (477 - f_s) / (120 [0.9 + M/bd^2])$ = 4.4 > 2.0 Take 2.0

Table 7.3 Basic span / effecive depth ratio = 7 (for cantilever)

c.l. 7.3.4.4 Modified span / effecive depth ratios (for tensile reinforcement) = 14 = Basic span / d × Modification factor (Tensile)

Actual span / effecive depth ratio = 14 < 14 **OK !**

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Base Slab)**	Project No.:	P25086

Ref. Output

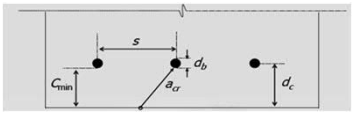
3.1.5 Checking for crack width

c.l. 7.2.1	Allowable surface crack width	w	=	0.2	mm		
c.l. 7.2.3	Thickness of element	h	=	300	mm	= t_{base}	
	Width of element to be considered	b	=	1000	mm	1m width	
	Effective depth	d	=	265	mm		
	Diameter of steel bars	d_b	=	10	mm		
	Spacing of steel bars	s	=	200	mm		
	Concrete Cover	$c = c_{min}$	=	30	mm		
	Concrete strength	f_{cu}	=	30	N/mm^2		
	Strength of steel	f_s	=	66	N/mm^2		
	Young's Modulus of steel	E_s	=	200	kN/mm^2		
	Applied moment	M_{SLS}	=	6.0	kNm		
	Area of reinforcement	$A_{s,prov}$	=	393	mm^2		
	Depth of the neutral axis	x	=	132.5	mm	≦ 0.5d	
c.l. 7.2.3	Strain in the tension reinforcement	ε_s	=	0.0003	= fs / Es		

appendix	a	=	300	= h
appendix	ε_1	=	0.0004	= ε_s (a-x) / (d-x)

For limiting design surface crack width of 0.2mm

(BS8007)	ε_2	=	$[b_t(h-x)(a'-x)]/[3E_sA_s(d-x)]$	(from CoP Conc. 2013)		=	0.0009
	ε_m	=	$\varepsilon_1 - \varepsilon_2$	=	-0.0005		
Effective cover		=	$d_c = c + d_b / 2$	=	35.0	mm	
	a_{cr}	=	$[(s/2)^2 + d_c^2]^{0.5} - d_b / 2$		=	100.9	mm
Design surface crack width				ω	=	$3a_{cr}\varepsilon_m / [1+2(a_{cr}-c_{min}) / (h-x)]$	
					=	-0.08	mm
					<	Allowable surface crack width = 0.2 mm	**OK !**



APPENDIX D

Design Drawings

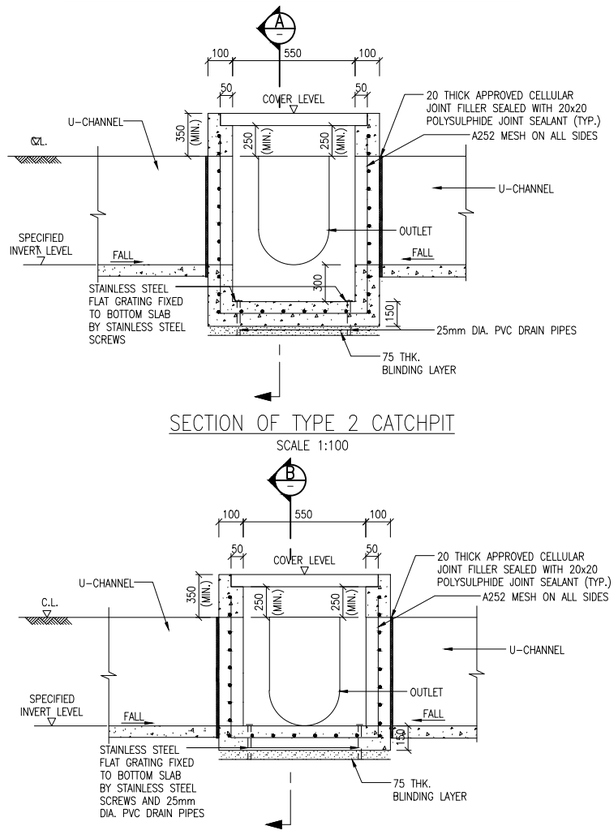
ISO A1 594mm x 841mm

GENERAL NOTES:

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

SCHEDULE OF CATCHPIT WITH SAND TRAP

CATCHPIT NO.	CATCHPIT TYPE	COVER LEVEL (mPD)	BTM. LEVEL (mPD)	INLET LEVEL (mPD)	OUTLET LEVEL (mPD)
CP1	2	+26.00	+25.35	+25.51	+25.50
CP2	2	+25.00	+24.34	A: +24.55 B: +24.50	+24.49
CP3	2	+24.50	+22.82	A: +22.98 B: +23.25	+22.97
CP4	2	+25.00	+23.73	+23.89	A: +23.88 B: +23.88
CP5	1	+25.00	+23.98	+24.14	+24.13
CP6	1	+25.00	+24.51	+24.67	+24.66
CP7	1	+24.50	+23.12	+23.28	+23.27
CP8	1	+24.50	+23.40	+23.56	+23.55
CP9	2	+24.00	+23.08	A: +23.24 B: +23.27	+23.23
CP10	1	+24.00	+23.38	+23.54	+23.53
CP11	2	+25.00	+23.99	+24.15	+24.14
CP12	1	+26.00	+25.21	+25.37	+25.36
CP13	1	+26.00	+25.28	+25.44	+25.43
CP14	1	+26.00	+25.33	A: +25.49 B: +25.50 C: +25.49	+24.48

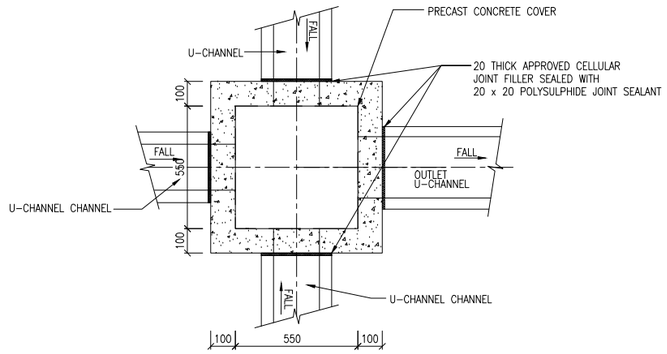


SECTION OF TYPE 2 CATCHPIT

SCALE 1:100

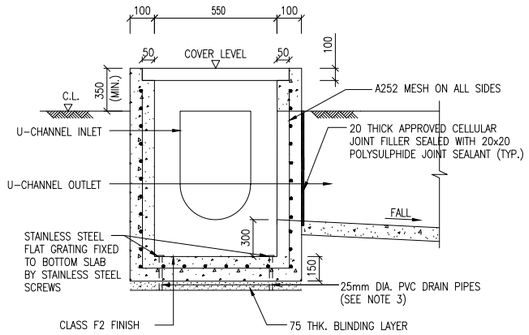
SECTION OF TYPE 1 CATCHPIT

SCALE 1:100



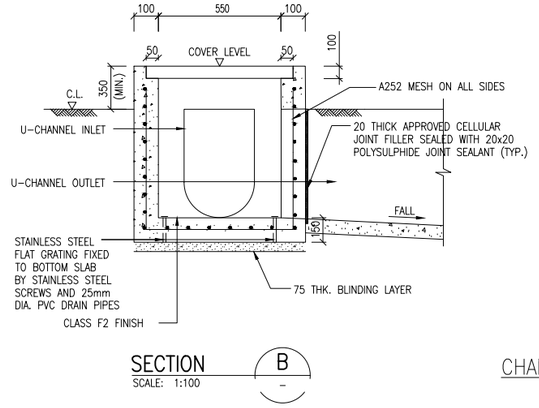
PLAN OF CATCHPIT (TYPE 1&2)

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



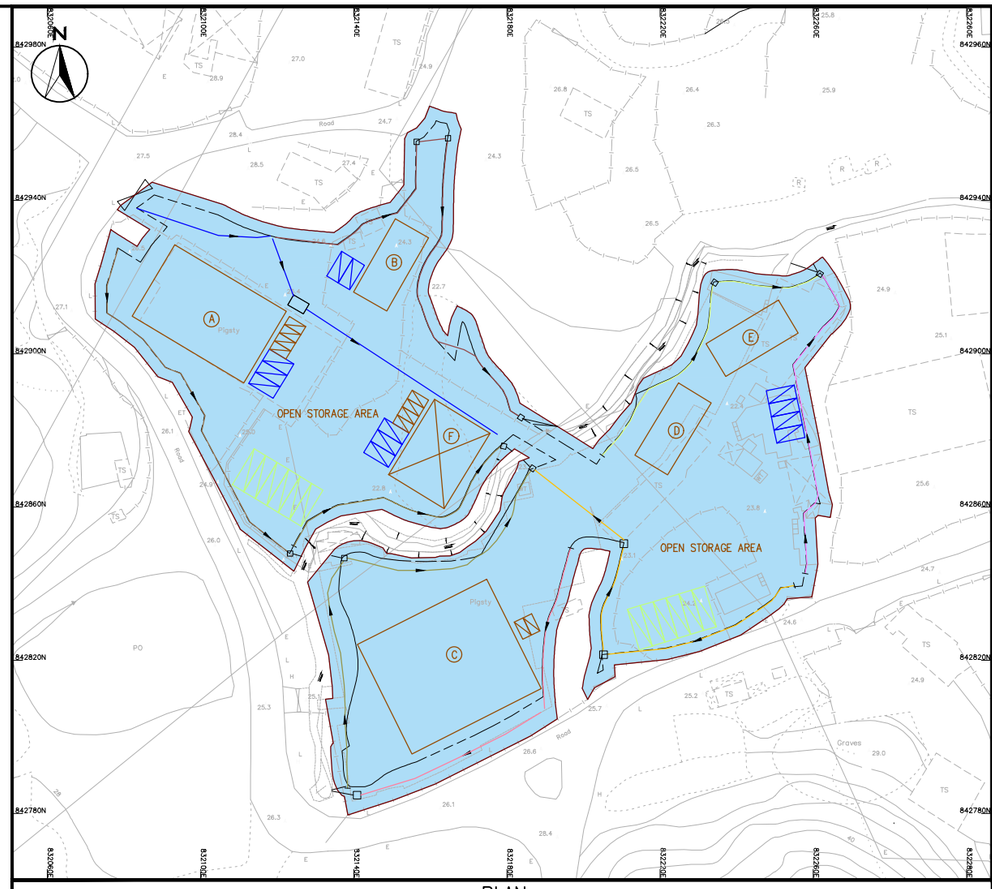
SECTION

SCALE: 1:100



SECTION

SCALE: 1:100



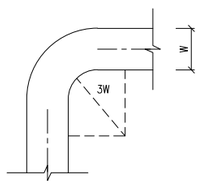
PLAN

SCALE 1:600

LEGEND:

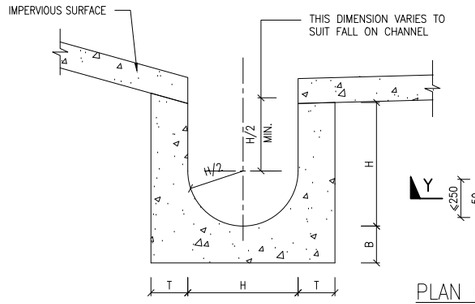
- PROPOSED APPLICATION SITE
- STRUCTURE
  - A: 737 sq.m (about)
  - B: 220 sq.m (about)
  - C: 1200 sq.m (about)
  - D: 220 sq.m (about)
  - E: 220 sq.m (about)
- OPEN-SIDED STRUCTURE
  - F: 393 sq.m (about)
- PRIVATE CARPARKING SPACE 5m(L) X 2.5m(W) (10 nos.)
- L/UL BAY FOR LGVS 7m(L) X 3.5m(W) (12 nos.)
- L/UL BAY FOR HGVS 11m(L) X 3.5m(W) (12 nos.)
- PROPOSED 11m WIDE VEHICULAR ACCESS

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



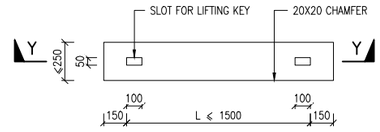
CHANNEL CHANGING DIRECTION THROUGH BENDS

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



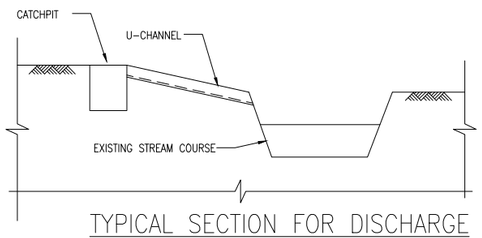
DETAILS OF U-CHANNEL

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



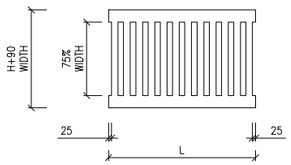
PLAN OF PRECAST CONCRETE COVERS

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

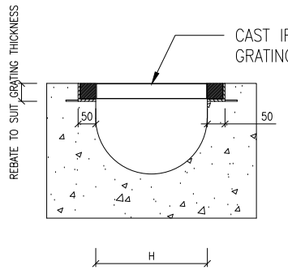


TYPICAL SECTION FOR DISCHARGE CONNECTION

N.T.S.

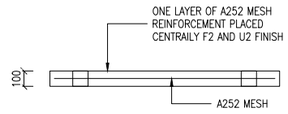


L = 600mm FOR H < 375mm
L = 400mm FOR H > 375mm



CAST IRON GRATING FOR U-CHANNELS

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



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

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

B.D. REF.

F.S.D. REF.

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MP		05/25
DESIGNED BY:	MP		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	AS SHOWN (A3)		
CAD FILE:	WNG_25086_C_DRA_001		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:
GENERAL NOTES AND LAYOUT PLAN

DRAWING NO:	REV:
WNG/25086/C/DRA/001	A

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.
榮翔顧問工程師有限公司

Plot File by: USER42 13/10/2025 7:01:54 pm
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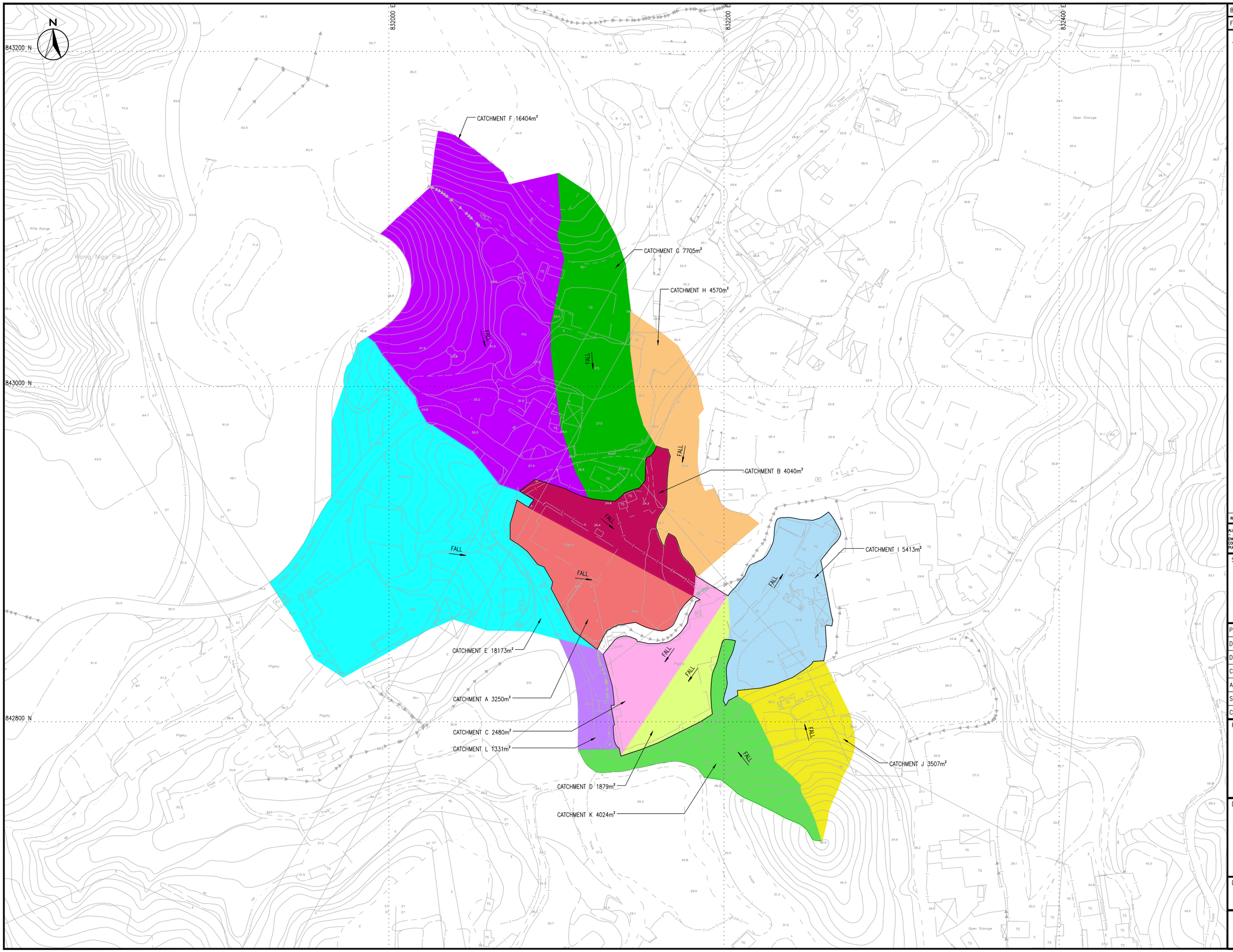
ISO A3 297mm x 420mm



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

LEGEND:

FLOW DIRECTION

BOUNDARY OF LOTS FOR THIS APPLICATION

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:

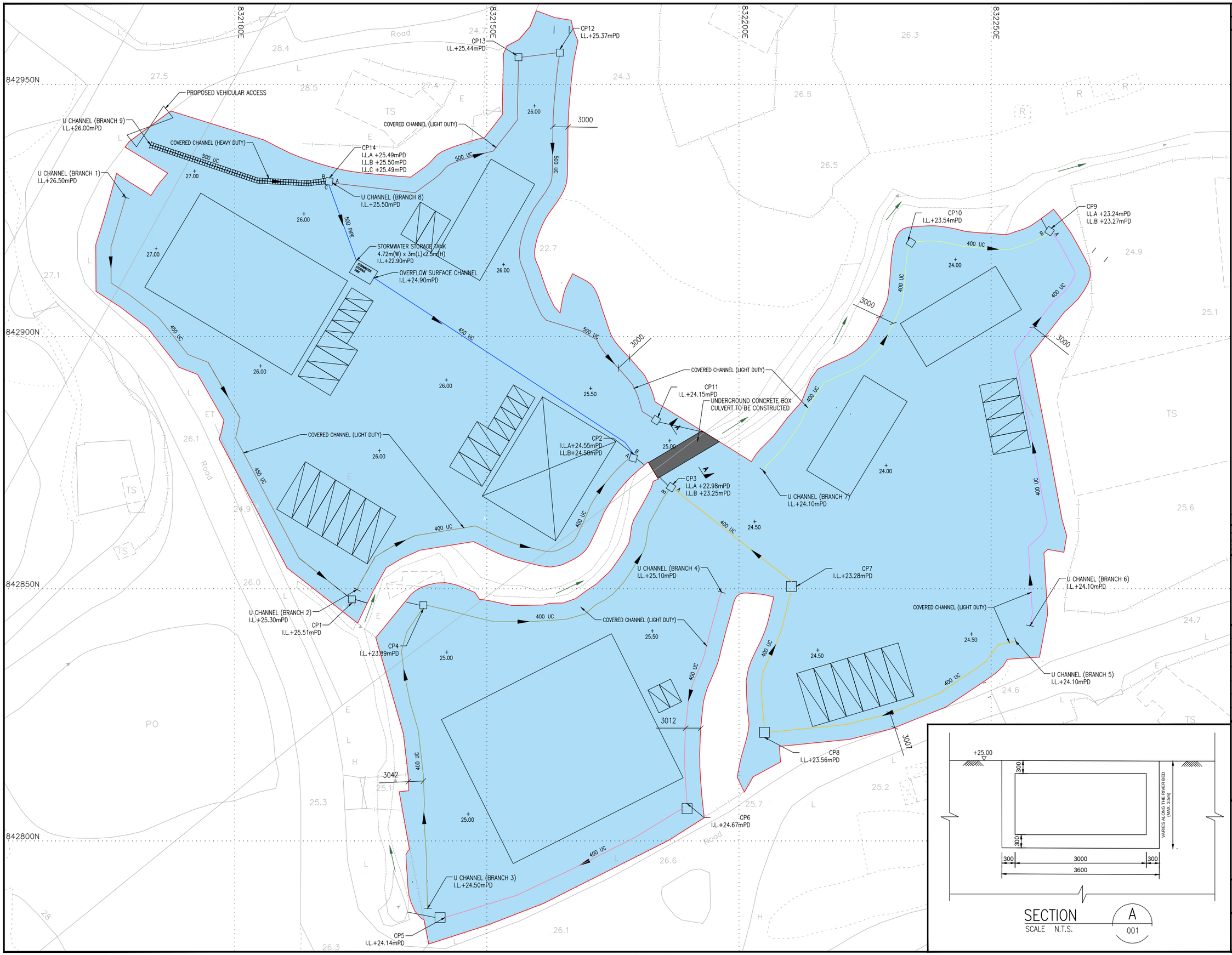
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:

PROPOSED EFFECTVE CATCHMENT AREA FOR SURFACE RUNOFF AFFECTING SUBJECT LOTS

DRAWING NO:	REV:
WNG/25086/C/DRA/002	–

翔翔顧問工程師有限公司
WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.



B.D. REF.

F.S.D. REF.

LEGEND:

- FLOW DIRECTION OF STREAM
- BOUNDARY OF LOTS FOR THIS APPLICATION
- PROPOSED 11m WIDE VEHICULAR ACCESS

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:

DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:

PROPOSED DRAINAGE SYSTEM

DRAWING NO: WNG/25086/C/DRA/003

REV: B

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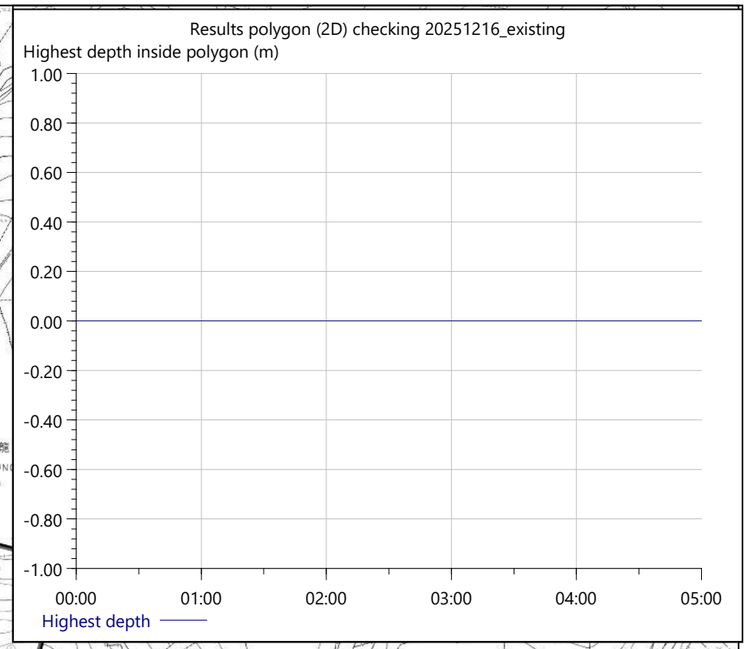
WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.

PATH \\192.168.1.26\eng4-r\2025\P25086 (Drainage Consultancy Services For S.16 Planning Application For Proposed Temporary Open Storage And Ancillary Office At Lot Nos 346 In DD87 At Ping Che)\05-Drawing\20251010\WNG_25086_C_DRA_002-3.dwg Plot File by: USER27 27/11/2025 1:42:18 pm

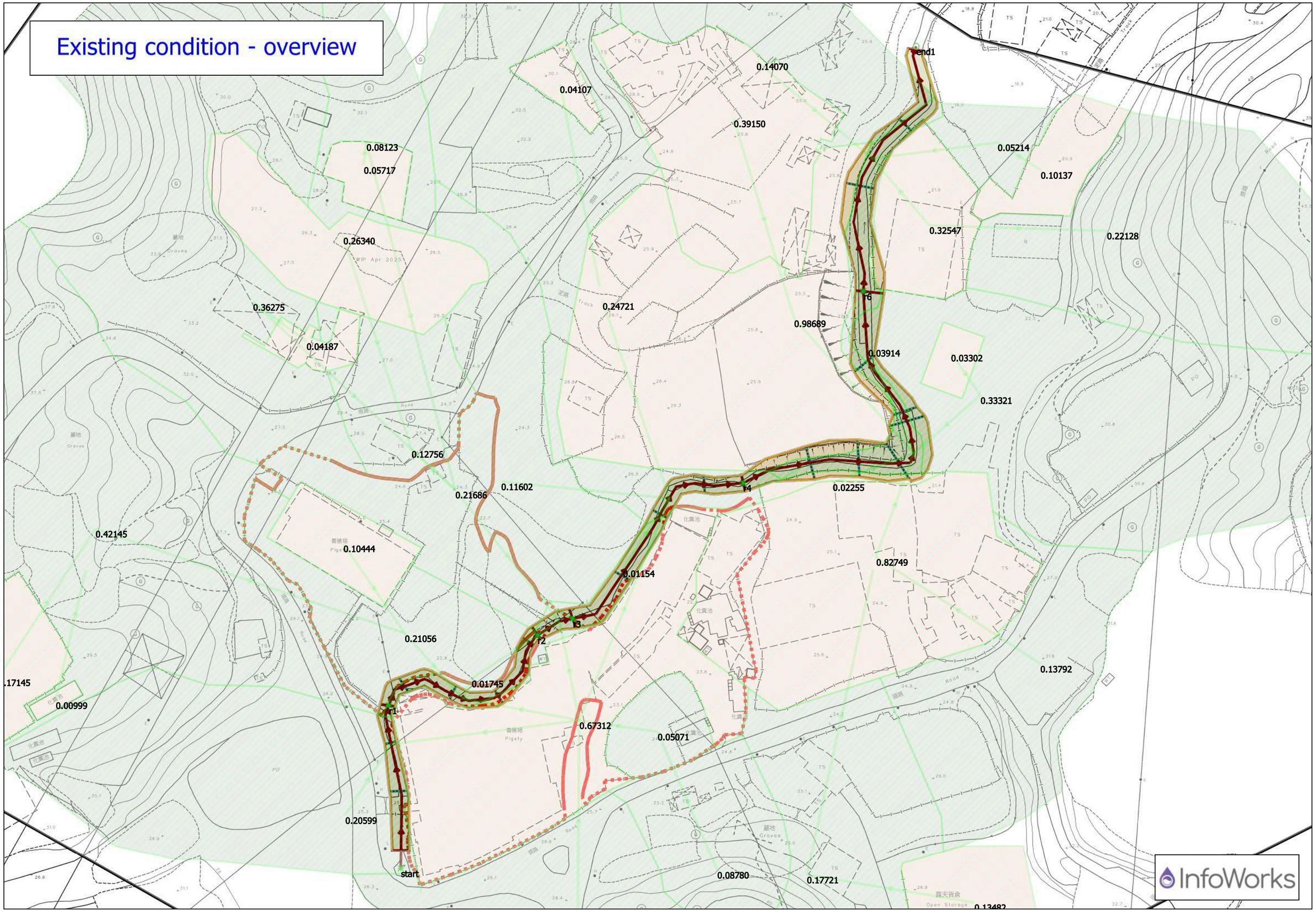
APPENDIX E

InfoWorks result: Drainage Condition – Existing

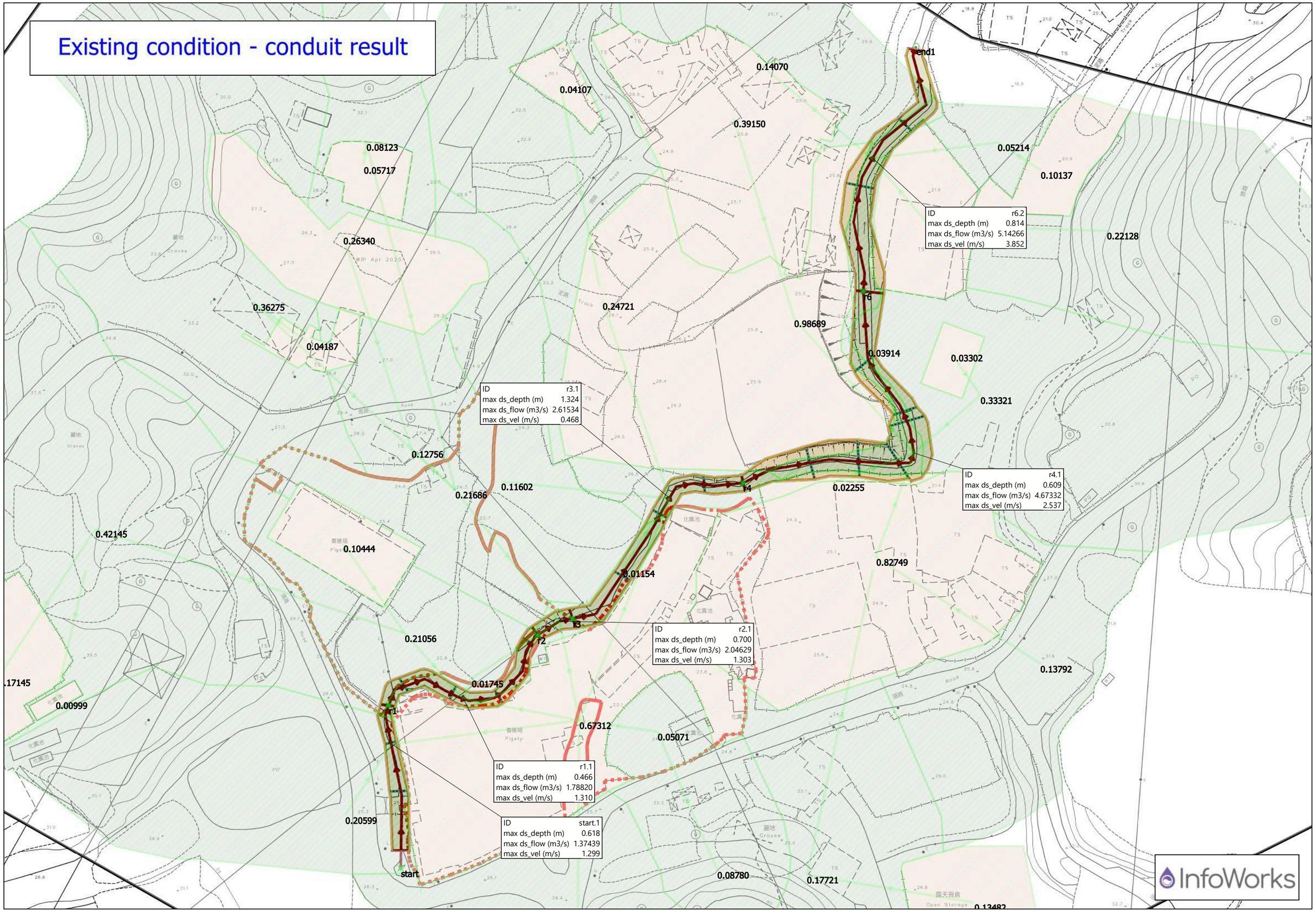
Existing condition_flooding



Existing condition - overview



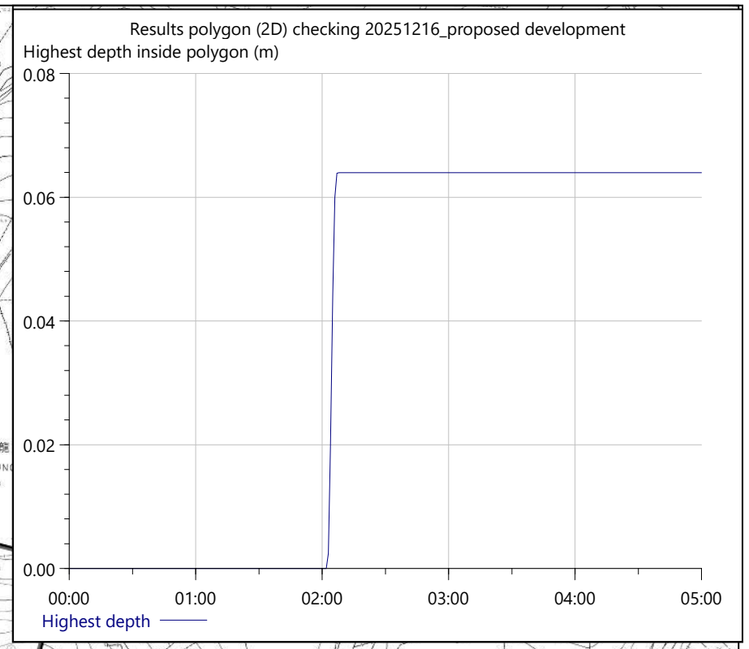
Existing condition - conduit result



APPENDIX F

InfoWorks result: Drainage Condition – Proposed Drainage System

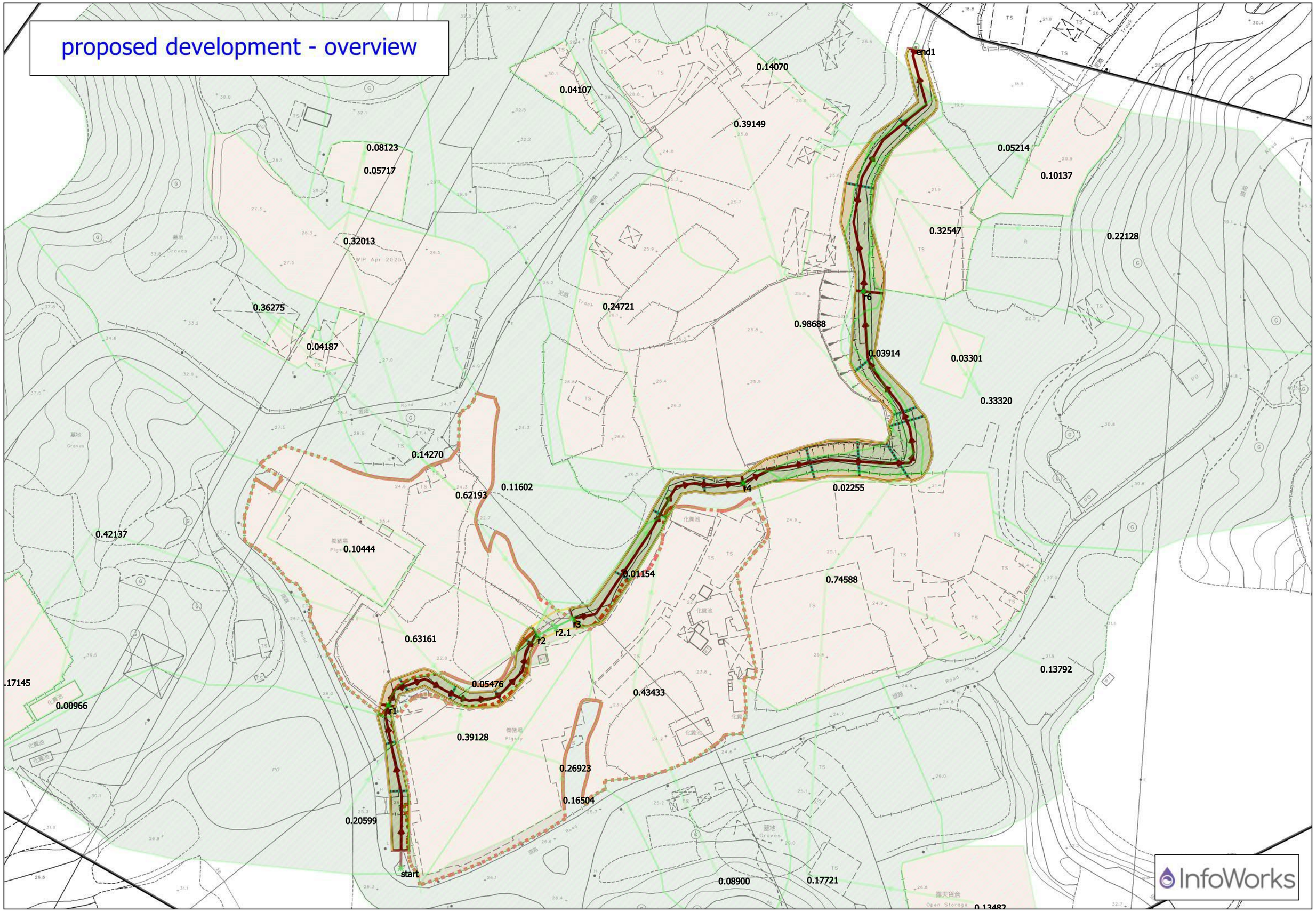
proposed development_flooding



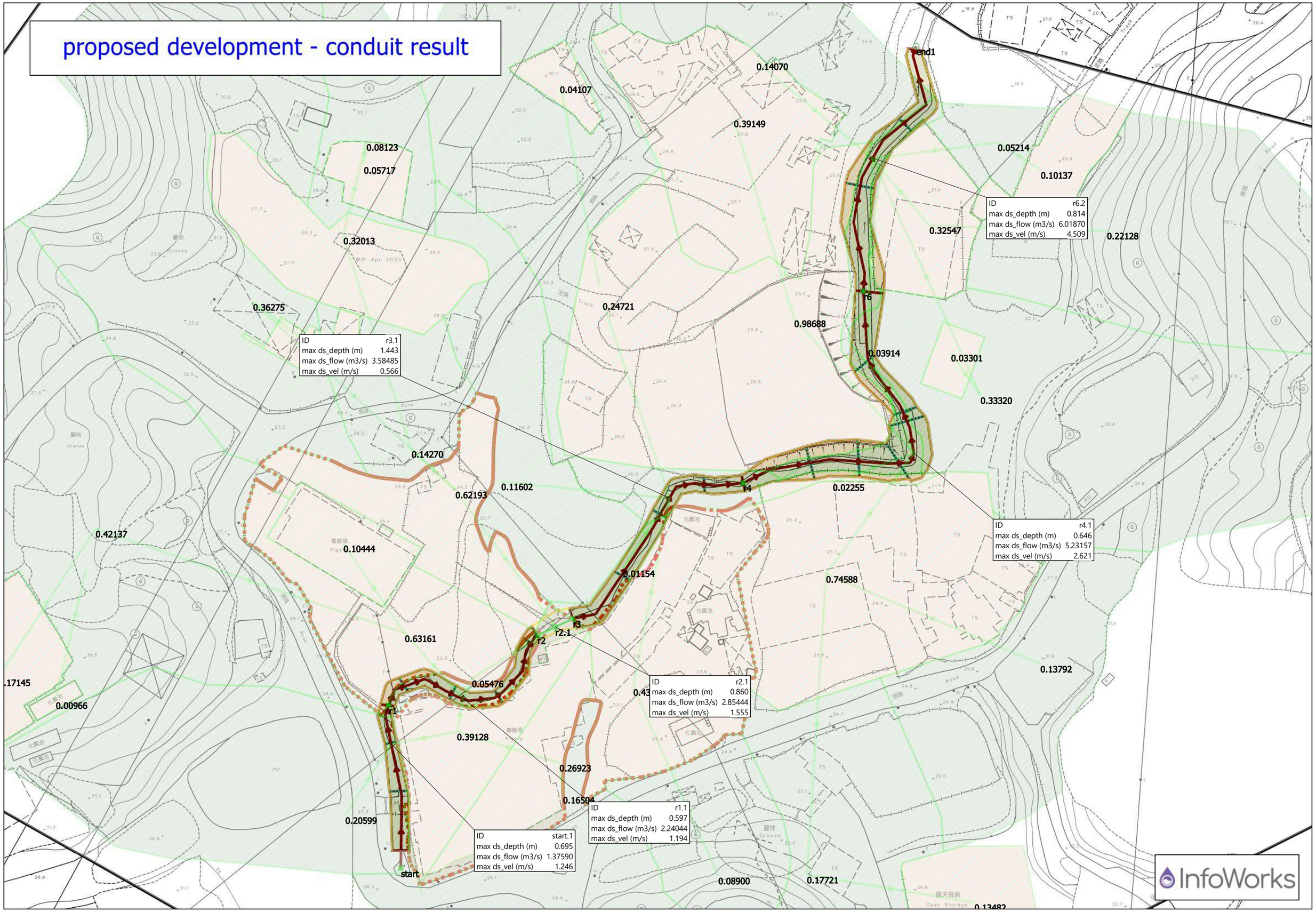
end1
r6
r4
r3
r2
r1
start

InfoWorks

proposed development - overview



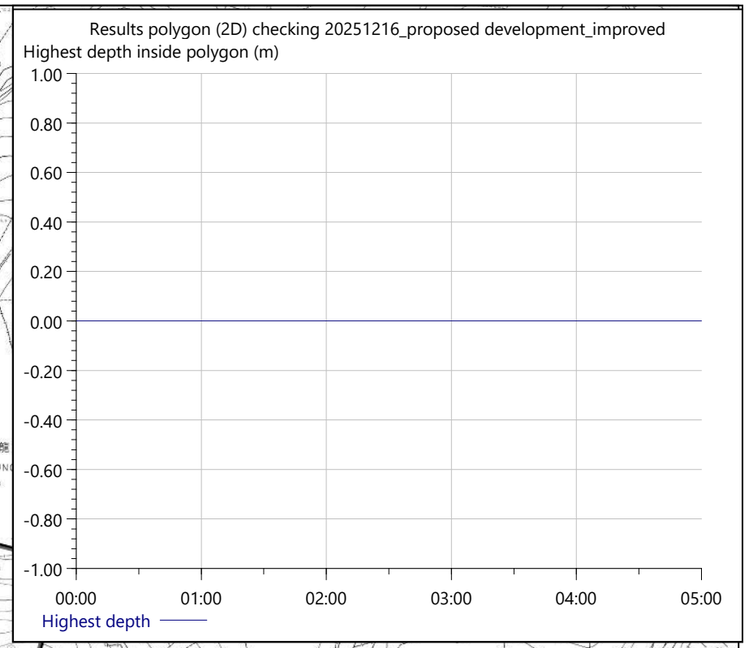
proposed development - conduit result



APPENDIX G

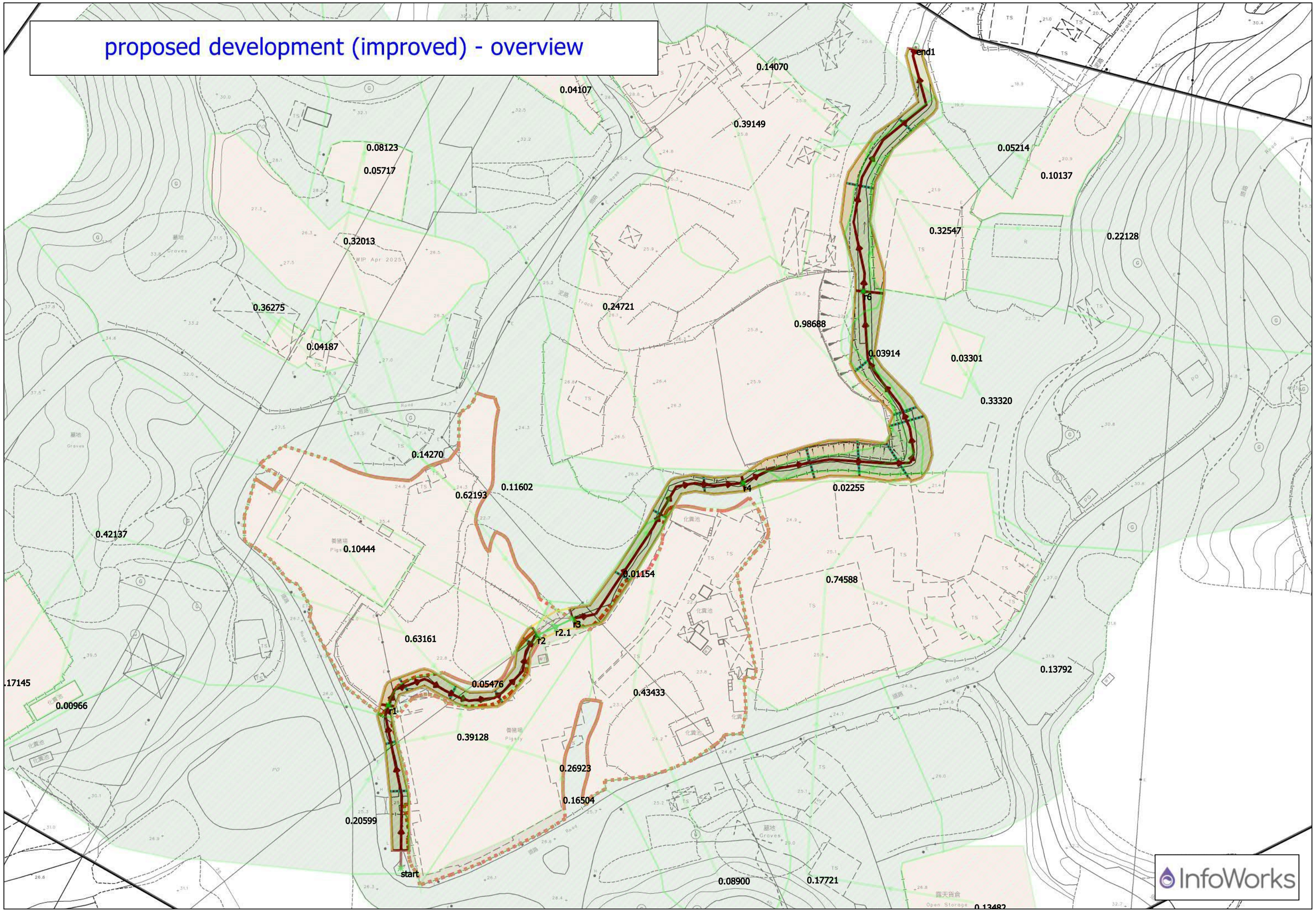
InfoWorks result: Drainage Condition – Proposed Drainage System (With improvement measure)

improved proposed development_flooding

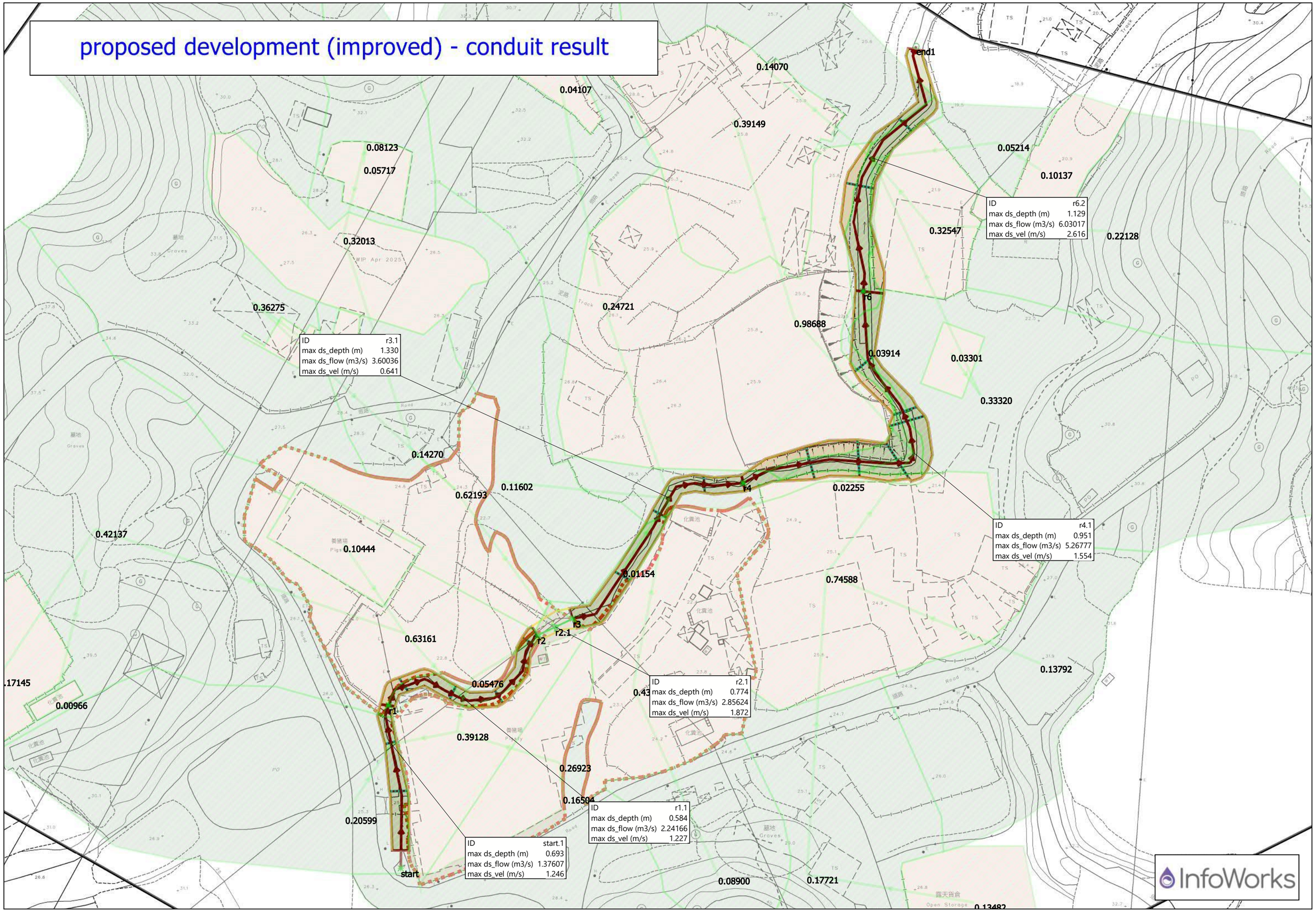


InfoWorks

proposed development (improved) - overview



proposed development (improved) - conduit result



毅勤發展顧問有限公司
Tel 電話：(852) [redacted]
Fax 傳真：(852) [redacted]
Email 電郵：[redacted]
Web 網址：www.aikon.hk

Date : 15th January, 2026
Our Ref. : ADCL/PLG-10315/L008

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

By Email

Dear Sir/Madam,

Re: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(Planning Application No. A/NE-FTA/264)

We refer to the departmental comments received from the Drainage Services Department regarding the subject application and would like to provide a *Responses-to-Comments Table and Revised Drainage Impact Assessment* to address the abovementioned departmental comments and facilitate considerations by the DSD and the Town Planning Board.

Thank you for your kind attention and should you have any queries, please do not hesitate to contact our Mr. Thomas LUK at [redacted].

Yours faithfully,
For and on behalf of
Aikon Development Consultancy Limited

Thomas LUK

Encl.
c.c. Client

Address 地址：
[redacted]

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

Submission of Drainage Impact Assessment

	Comment from DSD	Responses
1	Table 5.4 refers a) It is observed that the flooding overflow situation at note ID r4 would become worse after the development. Please provide structural mitigation measures, such as provision of storage tank, to control the additional surface runoff discharged to the downstream streamcourse during heavy rain. b) Please consider to run sensitivity analysis to study freeboard at Nodes under 10 year return period scenario.	For the flooding overflow situation at note ID r4, we propose to construct two stormwater storage tanks as a flow control and detention measure to mitigate peak runoff rates from the developed site. Our revised Drainage Impact Assessment (DIA) models the system's performance with the storage tank under the 50-year return period storm event. The results confirm that the proposed tank effectively prevents overflowing situation. Please refer to Appendix F for detailed calculations and supporting figures. Apart from that, the Infoworks ICM model has been updated with the latest topographic survey data (refer to Appendix B) to accurately represent the existing site conditions and downstream ground levels for a reliable assessment.
2	Calculation of the storage tank was not found. Please describe the storage tank's design intent, operational mechanism and hydraulic performance.	The storage tank is modelled in the Infowork. Please refer to Drawing No. WNG/25086/C/DRA/004 for details and dimension of the tank. The layout of branch 9 and branch 5 is modified so when extreme rainfall occurs, the excessive stormwater will flow into the tank instead of the stream. Temporarily storing incoming peak flows, thereby attenuating the discharge.

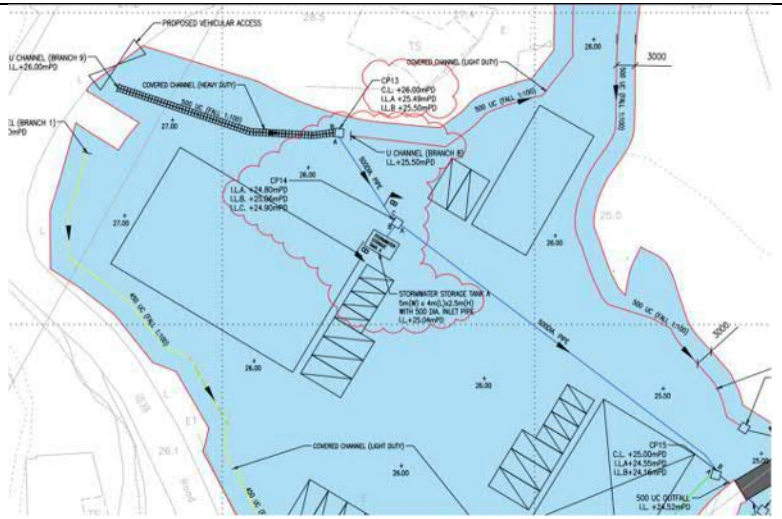


Figure 1: Modification to Branch 9 and storage tank A

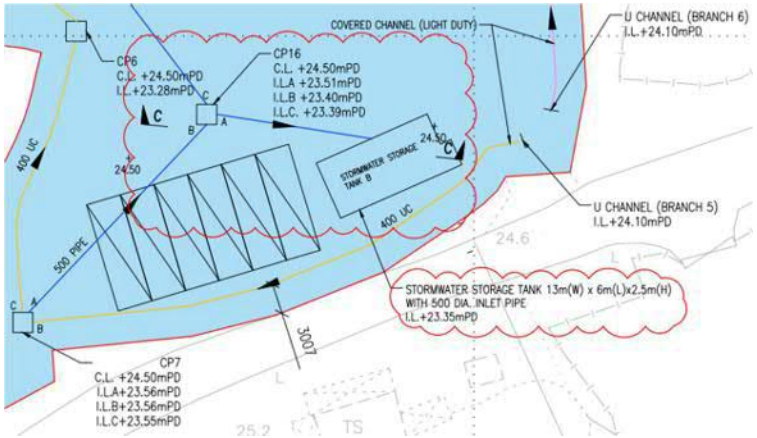


Figure 2: Modification to Branch 5 and storage tank B

Operational Mechanism and Hydraulic Performance: In extreme rainfall events, the inlet pipe connected to the downstream end of existing surface channel diverts into the tank. The stored water in the tank will be emptied by pump after the rainfall

Storage tank A: The inlet level of the tank is set at the highest water level (for branch 9) during the peak flow (see the figure below). This ensures that only

excessive stormwater is diverted into the tank for temporary detention. Once rainfall subsides, the stored water will be pumped out to restore the tank's capacity for the next event.



Figure 3: Water level (+25.066 mPD) from the model result for storage tank A

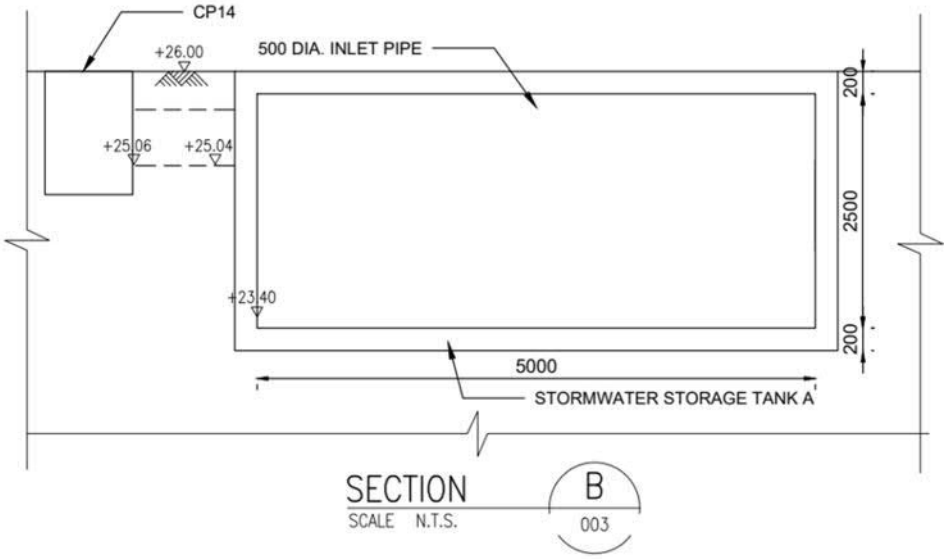
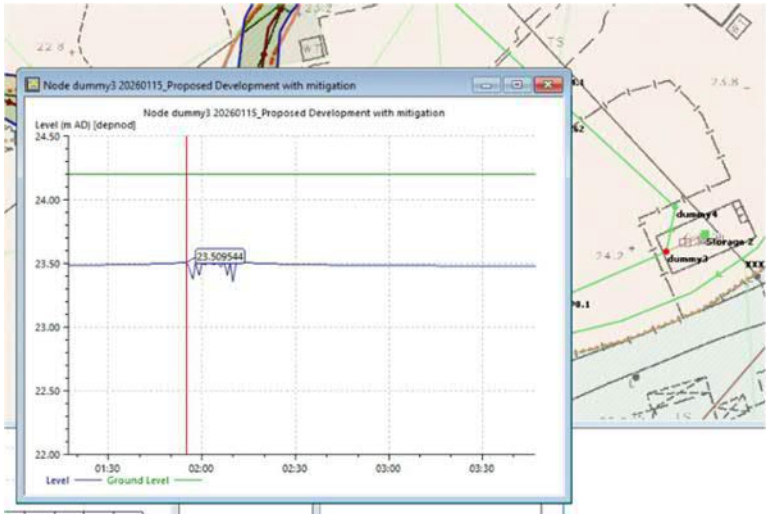
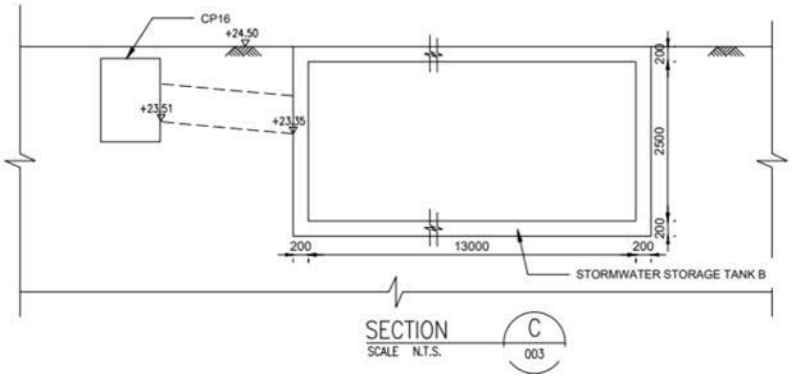
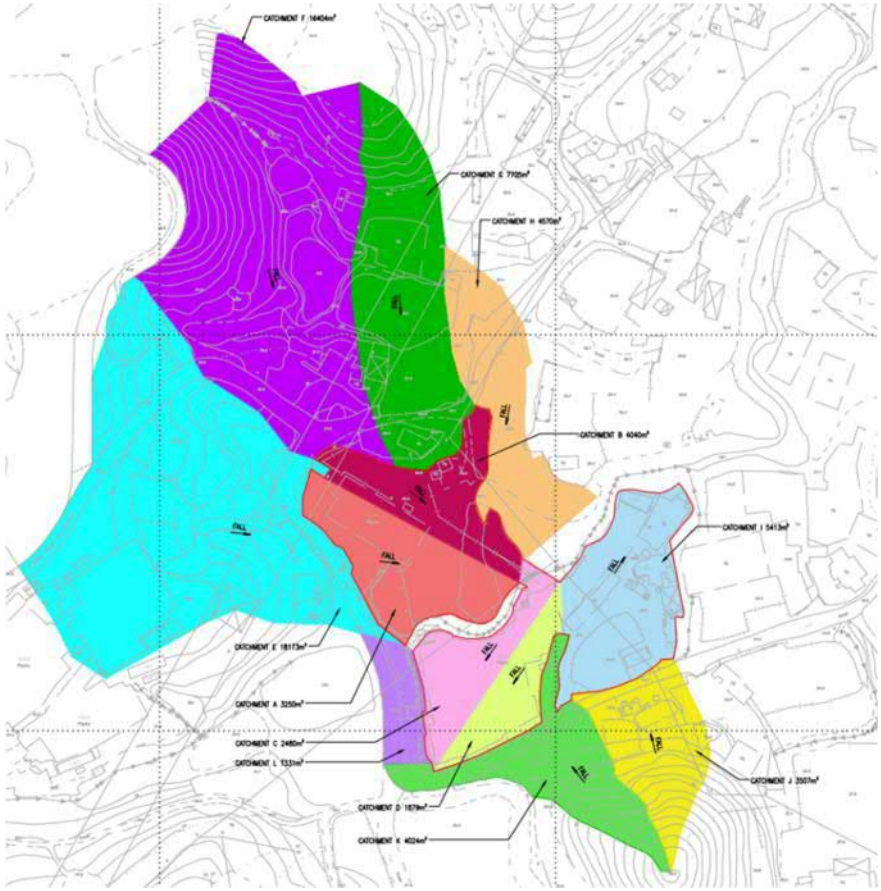


Figure 4: Section of storage tank A (inlet level +25.06mPD)

		Storage tank B: The operation mechanism is the same with tank B, except is diverts excessive stormwater from branch 5  Figure 5: Water level from the model result for storage tank B (+23.509mPD)  Figure 6: Section of storage tank B (inlet level +23.51mPD)
3	Section 4.4 "The adopted parameters are summarised in table 2-1". Table was not found, please revise.	It is a typo and the parameters are referring to table 4-1. The report is revised.

4	Table 4-1 refers a) Manning's n = 0.016 was adopted according to Table 2-2. However, the model adopted different values. Please clarify. b) Based on the site photos, the existing stream does not appear to be a concrete channel. Please review whether the value for "rectangular concrete channels" should be adopted.	Table 4-1 are revised to table 4-2. a) The adopted roughness values are clarified in Table 4-2, stating the values adopted for different conditions (RC channel, surface channel, riverbed, RC pipe). We also would like to clarify the model only assesses the downstream capacity, the internal drainage networks are check through hand calculation (refer to Appendix C). b) For the existing conditions model, the roughness value for RC channel was **not used**, since there are no paved area. The concrete channel roughness was applied only in the improvement case (where a rectangular concrete channel is proposed), to allow a direct comparison between the existing and improved scenario.
5	Section 5.2.1 refers. The statement "Associated stormwater drainage network is proposed along the alignment" lacks specificity on the mitigation measures. Please elaborate.	Noted, Section 5.2.1 is revised. Please refer to the revised report.
6	Section 6.6 refers. It was mentioned that openings on fencing and walls would be provided to prevent obstructing surface flow. However, this seems to conflict with the responses in RtoC item 13. Please clarify.	We wish to clarify that a boundary chainlink fence is proposed as part of the development. A minimum 75mm gap has been provided for the proposed chain-link fence wall, in addition, the hollow nature of the fence prevents any obstruction to the **existing overland flow paths**. Details of the proposed chain-link fence can be found referred to the attached CEDD Standard Drawing attached in Appendix H. Any surface runoff entering the site through these gaps will be collected by the proposed internal drainage network, which has sufficient capacity to convey these flows for proper discharge downstream. Therefore, there will be no adverse impact on overland flow from adjacent catchments.
7	The depth of landfilling works could be up to 3m as inferred from Figure 3-3, which contradicts with response in RtoC item 13. Please clarify.	To clarify, there will be filling to create a flat surface with slight gradient to provide falls to drainage features and match the existing road surface outside the lot boundary. The design of the site's grading and drainage system specifically ensures that the **finished filling levels and gradients will direct overland flow into the proposed internal drainage network**. This system has sufficient capacity to collect and convey all surface runoff (refer to calculation in Appendix C), including flows from adjacent catchments to the approved downstream discharge point without causing obstruction or flooding.



Catchment (outside lot)	Existing ground level (mPD)	Adjacent catchment (color)	Ground level (mPD)
E (Cyan)	+27.0	A (Orange)	+26-27.0
F (Purple)	+27.5	B (Red)	+25.0-26.0
G (Green)	+26.1-27.4	B (Red)	+25.0-26.0
H (Skin)	+25.0-25.5	B (Red)	+25.0-26.0

<table>
<tr><td></td><td></td><td>
<table>
<tr><td>J (Yellow)</td><td>+24.7-25.2</td><td>I (Light blue)</td><td>+24.0-24.5</td></tr>
<tr><td>K (Lime green)</td><td>26.6-28.4</td><td>D (mint)</td><td>+25.0-25.5</td></tr>
<tr><td>L (Light purple)</td><td>26.1-26.3</td><td>C (pink)</td><td>+25.0-25.5</td></tr>
</table>

Furthermore, as shown in the table, although the lot is filled to a higher platform level, the finished level will remain lower than the adjacent catchment. Thus, the filling works will not obstruct the overland flow path.
</td></tr>
<tr><td>8</td><td>Section 6.8 and RtoC item 5 refer. Please clarify whether "mid-century" events were assessed as it was not mentioned in the previous sections.</td><td>Since the “End of 21st Century” event produces the worst drainage impact to the site, "mid-century" events are not assessed or adopted for the drainage assessment.</td></tr>
<tr><td>9</td><td>Appendix C and Drawing No. WNG/25086/C/DRA/003 refer. Branch 1 was shown as 400mm in Appendix C but 450mm in the drawing. Please clarify.</td><td>The dimension should be 450mm. All discrepancies are revised. You may refer to the revised drawings and report.</td></tr>
<tr><td>10</td><td>Section 3.1 notes that the existing channel within the boundary will be backfilled and removed. However, no further discussion on this channel was found in the report.

Please review the text.</td><td>The existing channel within the lot boundary will be removed to facilitate the development. This change was not discussed in further detail as the hydrological design of the site is based entirely on the new, fully engineered condition.

The proposed internal drainage network is designed to replace the function of the existing channel. The new system has sufficient capacity to manage all site runoff and maintain downstream flows, so no adverse impact is anticipated from the channel's removal.</td></tr>
<tr><td>11</td><td>Please clarify if the existing channel was modified to a 450mm UC as shown in the layout below. If so, please provide justification for such modification including the design intent of this 450mm UC and its selected size.</td><td>The existing channel will be removed before the landfilling works and will not be modified or reuse in the proposed development. The 450UC (which revised to 500 pipe in this submission) is now revised as part of the drainage branch 1 to discharge stormwater to the downstream river.</td></tr>
</table>

Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87, and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories

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Drainage Impact Assessment (Rev.3)

Prepared by: Matthew Poon
Date: 15/1/2026

Wings & Associates Consulting Engineers Ltd.
22/F, Elite Centre,
22 Hung To Road,
Kwun Tong, Kowloon
Hong Kong



CONTENTS

1. INTRODUCTION
2. SITE DESCRIPTION
3 DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE
4. HYDRAULIC MODELLING AND DRAINAGE IMPACT ASSESSMENT METHODOLOGY
5. POTENTIAL DRAINAGE IMPACT AND MITIGATION MEASURES
6. CONCLUSION

APPENDICE

Appendix A	Photo Record
Appendix B	Topography Survey Record
Appendix C	Drainage Design Calculation
Appendix D	Design Drawings
Appendix E	InfoWorks result: Drainage Condition – Existing
Appendix F	InfoWorks result: Drainage Condition – Proposed Drainage System
Appendix G	InfoWorks result: Drainage Condition – Proposed Drainage System (With improvement measure)
Appendix H	CEDD Standard Drawing C1006C – Chain Link Fence

1. INTRODUCTION

1.1 Background

The drainage proposal is under the application of Section 16 Planning Application. The proposed uses of the subject lots are temporary warehouse (excluding dangerous goods godown) and open storage of construction material and machineries with ancillary facilities for a period of 3 years at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories.

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

1.2 Scope and Objectives

The objective of this Drainage Impact Assessment Report (DIA) is to assess the drainage impact of the proposed drainage system to existing drainage facilities in the area, ensuring the downstream have sufficient capacity for the proposed development. Assessing the drainage impact and suggest mitigation measures required for the existing drainage network, if necessary. The proposed drainage system within the lot will be checked in the calculation. The surrounding catchments and overall impact to downstream river will be checked by Infowork model.

2. SITE DESCRIPTION

2.1 The general views of the application area can be referred to in the figures below. The combined parts of the lot cover an area of about 16,604m^2.

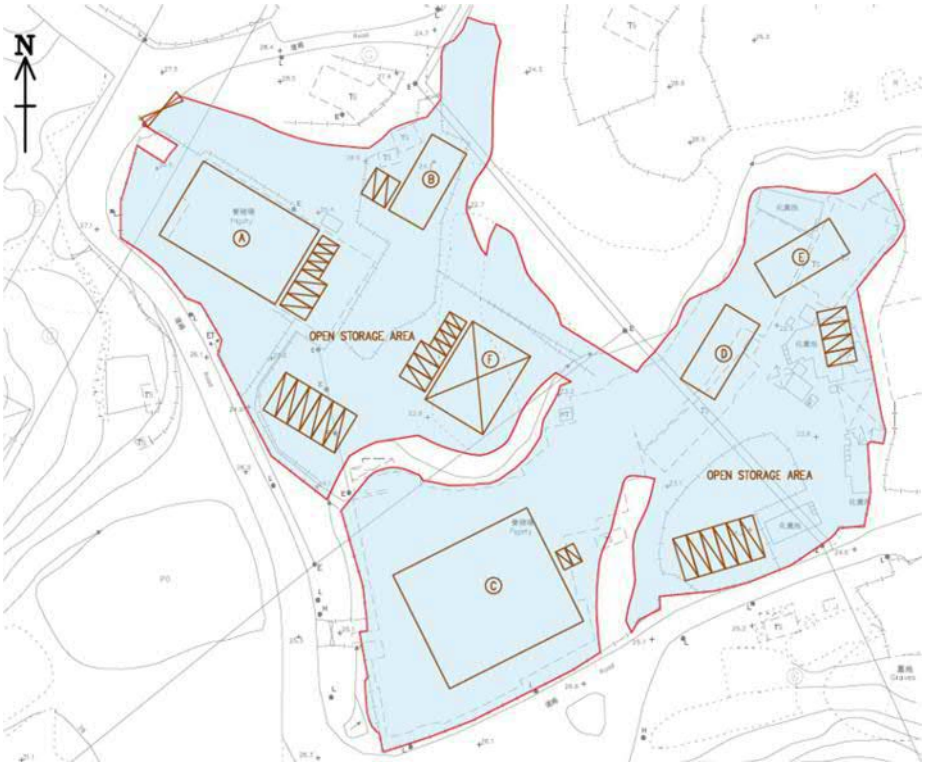


Figure-2.1 Lot information of the Subject Site

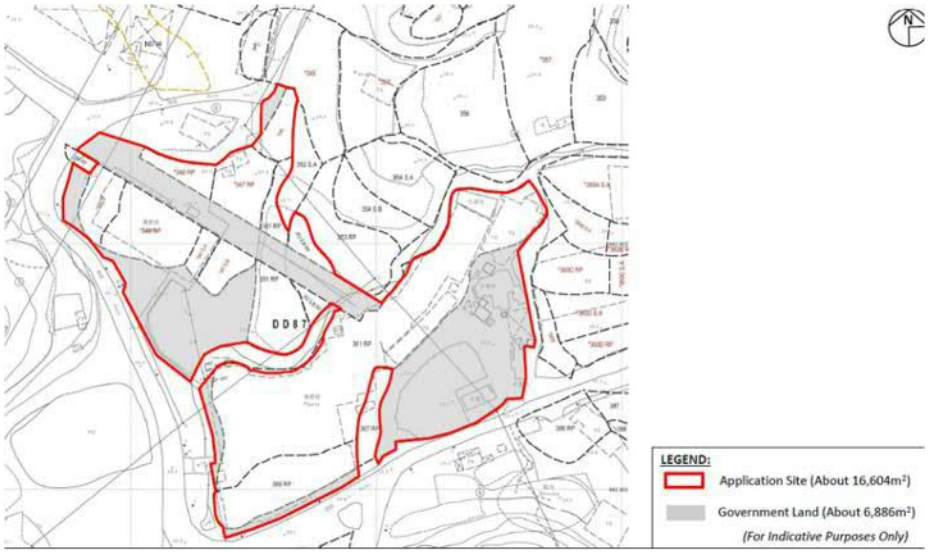


Figure-2.2 Boundary of the Subject Site surrounded by fencing

2.3 The figure below shows the proposed layout of the structures and parking provision within the boundary of the fencing. The subject site consists of six single-storey temporary structures, including 5 nos. of enclosed structures and 1 open-sided structure. No permanent structures and buildings will be placed within the subject site, the flow direction will not be affected by any blockage. All proposed structures will be placed 3m away from the existing stream course.

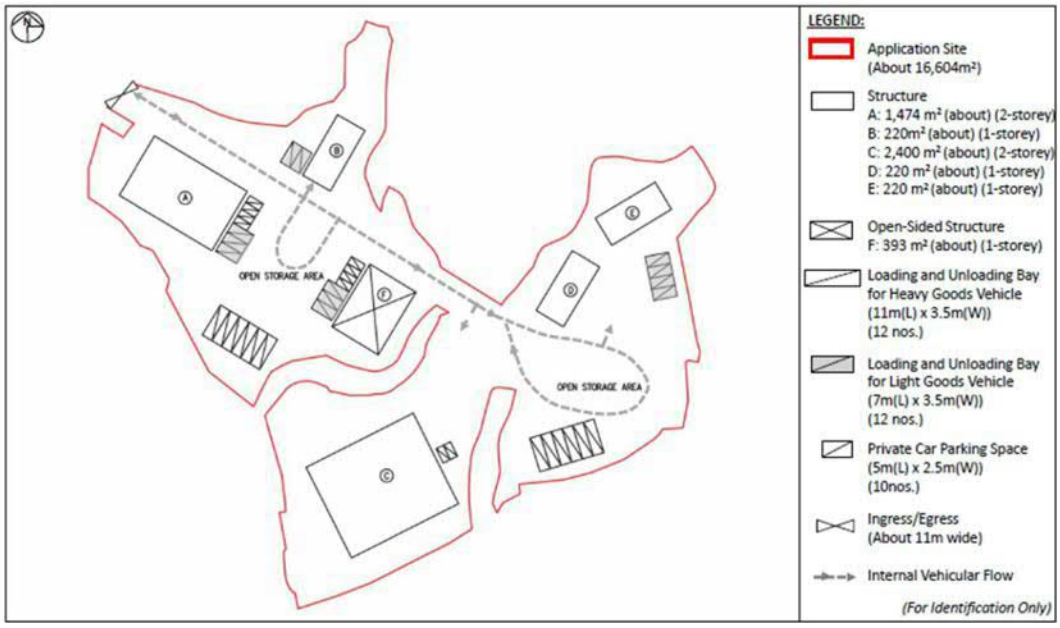


Figure-2.3 Location of the structures and parking areas inside the Subject Site

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

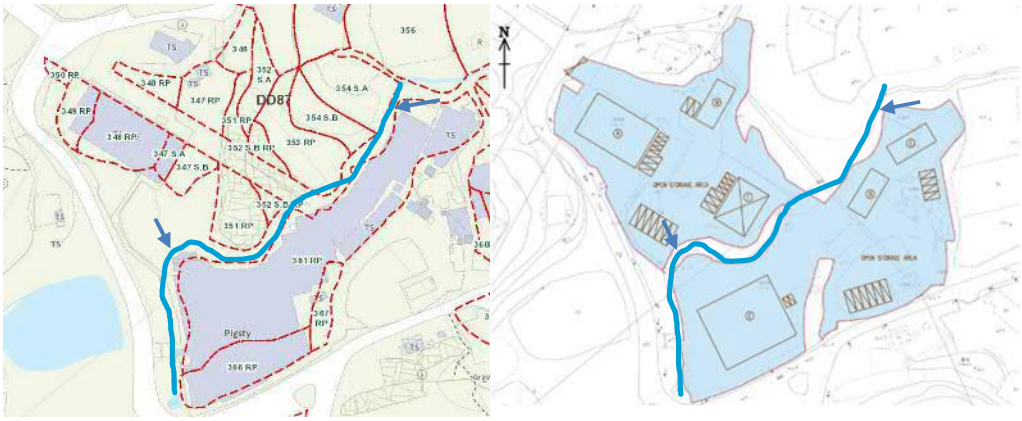


Figure-2.4 Existing drainage features inside the Subject Site

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

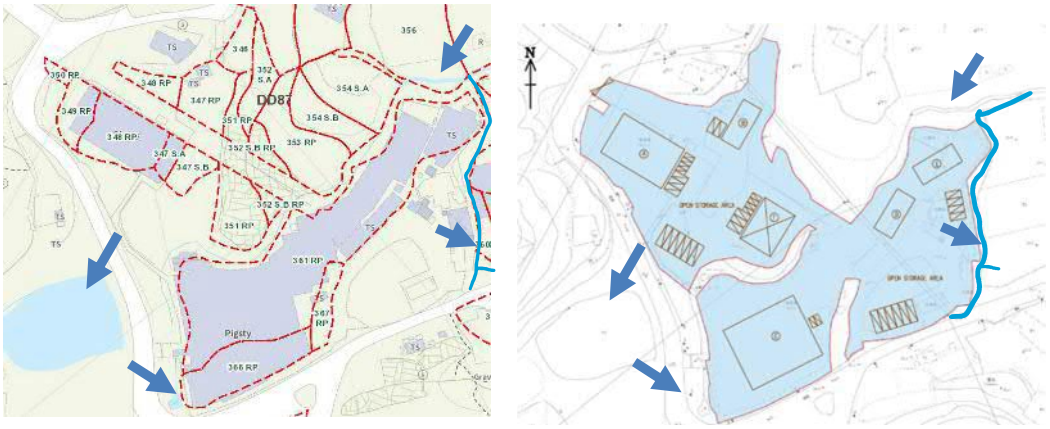


Figure-2.5 Existing drainage features outside the Subject Site

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

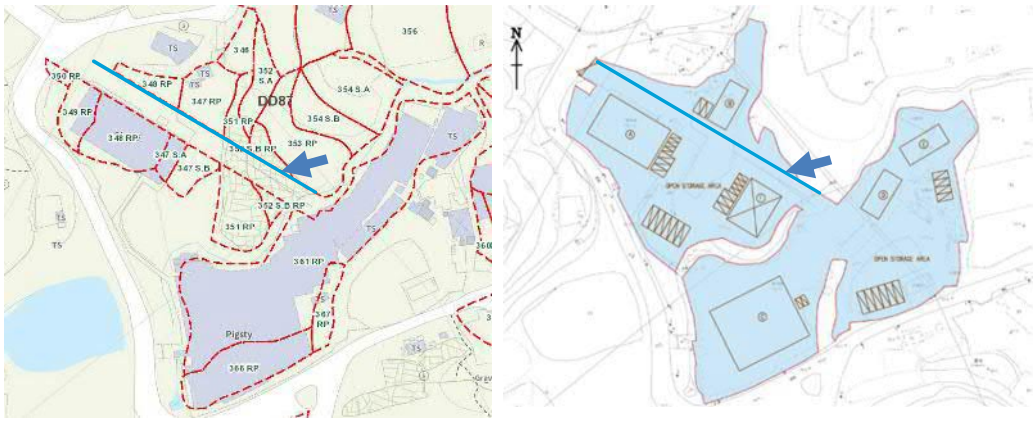


Figure-2.6 Existing U-Channels inside the Subject Site

3. DRAINAGE SYSTEM OF THE SITE FOR STORWATER DISCHARGE

3.1 General Planning

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

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

3.2 Identification of the Effective Catchment Area

Referring to the location plan and the existing ground level, the considered effective catchment area of surface runoff includes: the area of the subject lots and the adjacent area with higher cover level (including uphill and carriageway).

The other adjacent area will be determined as the anticipated catchment areas of runoff which are not affecting the subject site, in case, those areas separate with the subject lots by existing drainage utilities (culvert and channels), carriageway, fencing, and level difference.

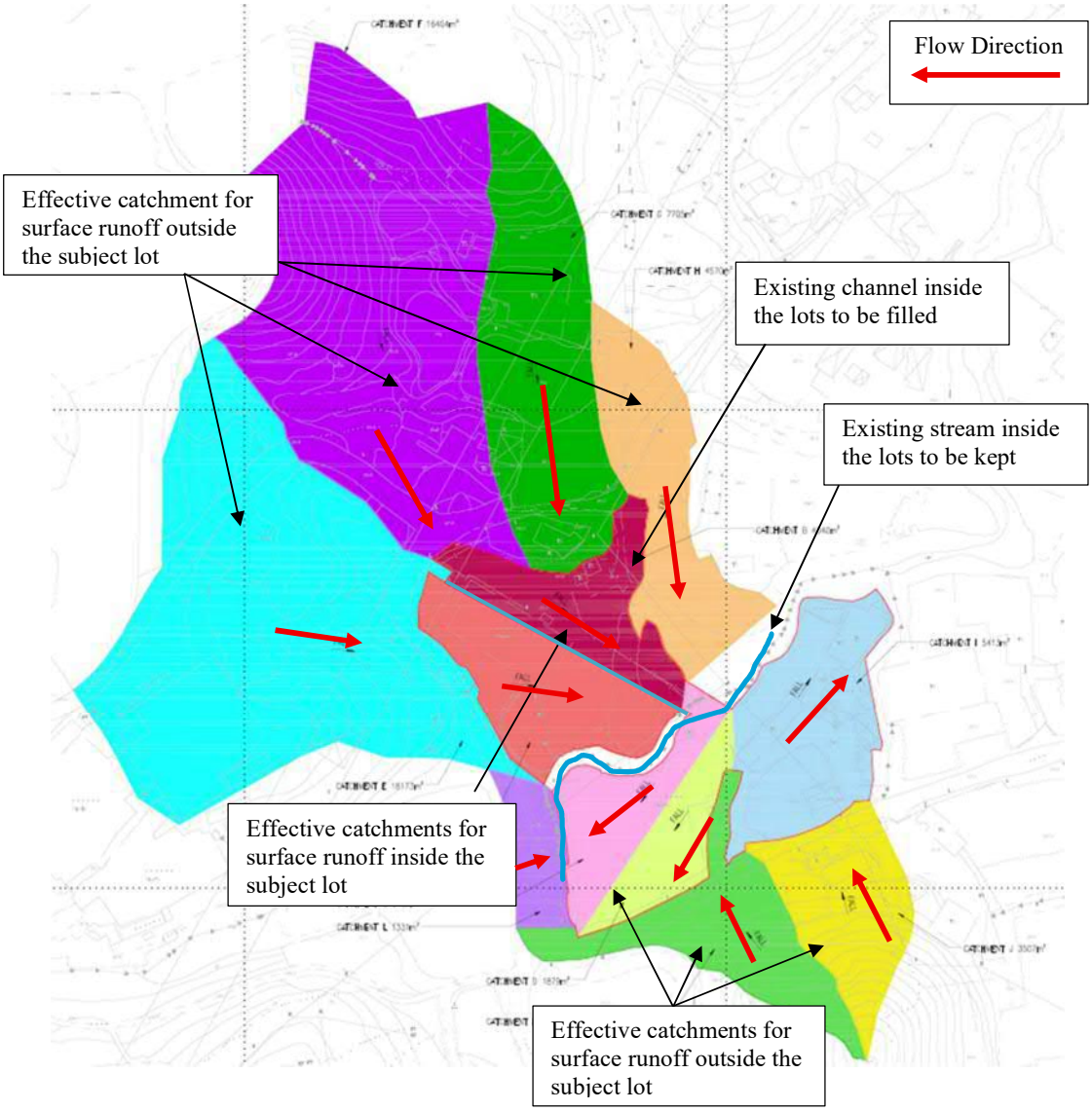


Figure-3.1 Flow Direction of the Effective Catchment Area inside the Subject Site

3.3 Existing Drainage System

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

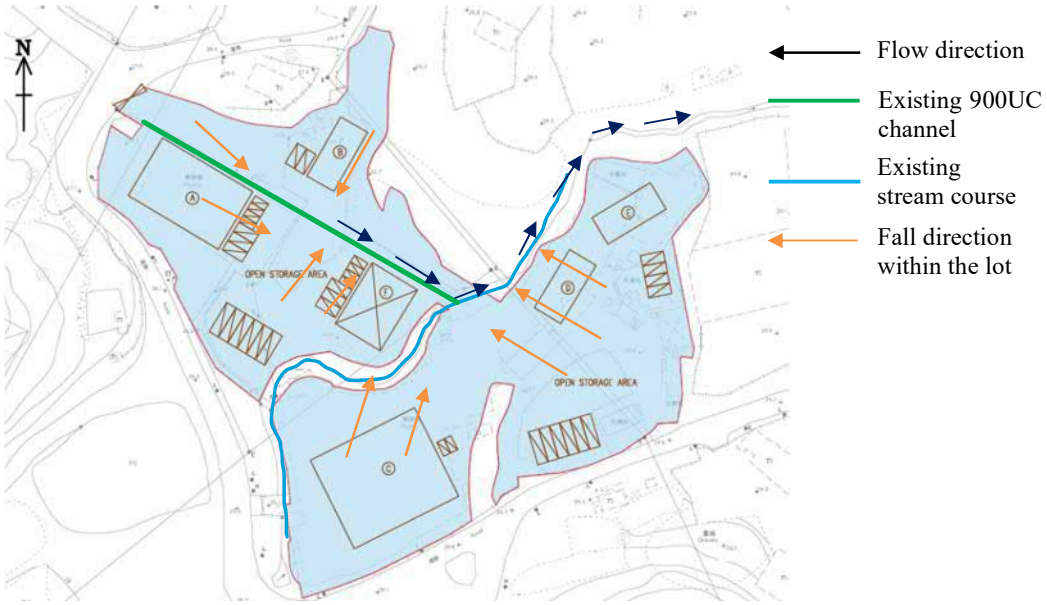


Figure-3.2 Original drainage network inside the Subject Site

Due to changes in ground levels and land profile from the proposed development, the existing channel within the lot boundary will no longer meet the site's drainage requirements and will be removed. A new peripheral drainage network has been designed to ensure adequate runoff conveyance and discharge into the downstream stream course. Refer to **Appendix C** and **D** for detailed calculation and drawings.

3.4 Filling the subject site to rearrange cover level

The area inside the lots will be completely filled up to create a flat surface with slight gradient to provide falls to drainage features and **match the existing road surface** outside the lot boundary. Preventing any obstruction to the **existing overland flow paths**.

The existing concrete pipe at the connection point between the northwest and southeast sections of the lot are proposed to be replaced with a new 3m(W) x 3.5m(H) concrete box culvert. Connecting the upstream and downstream sections. The design checking for the concrete pipe can be found in **Appendix C**.

The ground level is proposed to be raised to a level between +24.0mPD and +27.0mPD for feasible traffic flow and heavy vehicle access. The cover level at the lot boundary will be between +24.0mPD and +27.0mPD matching the existing road level. The details of the cover levels and the flow direction of the surface runoff can be referred to the drawings and the figure below.

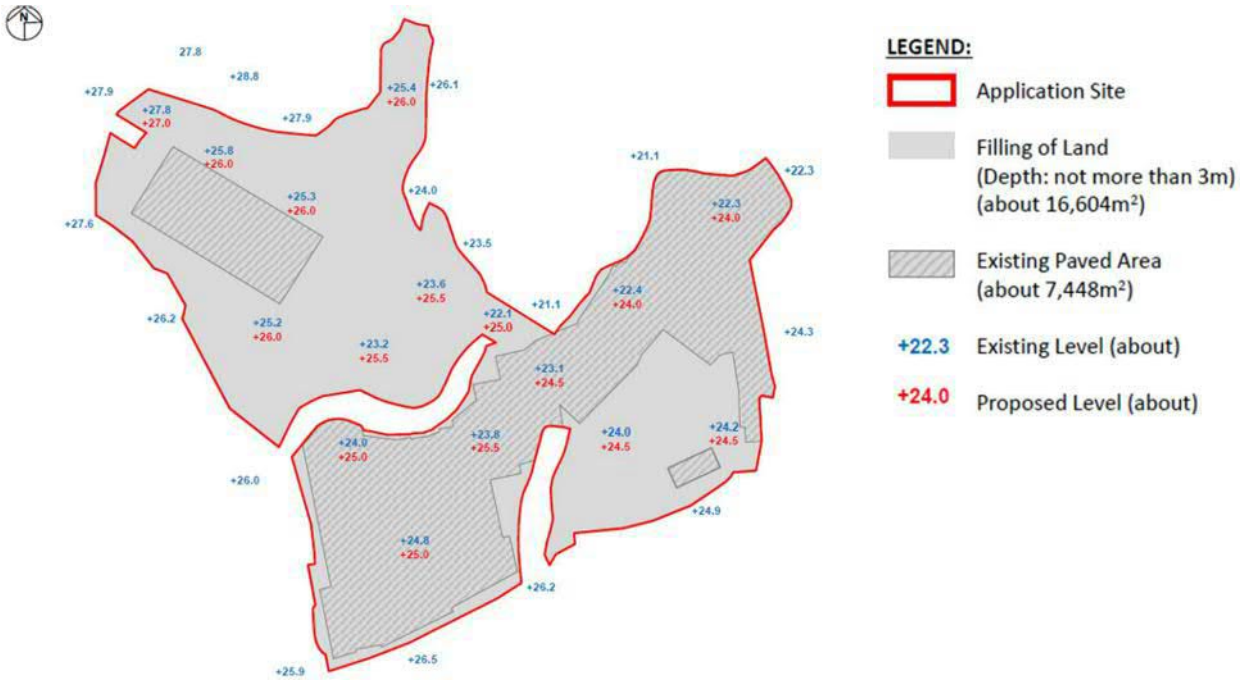


Figure-3.3 Filling plan of the Subject Site

3.5 Proposed Flow Direction and Drainage System

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

3.6 Design of Channels and Catchpits

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

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

3.7 Discharge Point

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

4. HYDRAULIC MODELLING AND DRAINAGE IMPACT ASSESSMENT METHODOLOGY

4.1 Scope of DIA

The surrounding catchments and downstream river is modeled using InfoWorks for the detail analysis of Drainage Impact Assessment (DIA). The details of the model can be found in **Appendic E**. The model simulates stormwater flow under various rainfall scenarios to verify that the proposed drainage system is adequate and that the development does not exacerbate flood risk for the subject site or the surrounding downstream areas.

4.2 Hydraulic Model Established

InfoWorks ICM (version 2025.5) is the modelling software used for the analysis of this 2D model.

The following code are used in the model:

a) Drainage Services Department (DSD) Stormwater Drainage Manual (SDM) fifth edition (2018);
b) DSD SDM Corrigendum Nos. 1/2022, No. 1/2024 and No. 2/2024;
c) Relevant DSD Standard Drawings, Technical Circulars and Practice Notes wherever applicable.

4.3 Design Parameter Adopted

Rainfall Data: 50-year design return period rainfall from HKO region, climate change (Table 28), Rainfall design allowance (Table 31) from Corrigendum 1-2022 of SDM and the storm constants from Corrigendum 1-2024 of SDM are calculated and used for the simulation.

Inflow: Specific inflow has been added at specific nodes to account for the flow coming into the catchment at that location.

Siltation allowance has been considered in the stormwater channel and pipe. According to the SDM (2018) Section 9.3, such flow area reduction factor is estimated in 5% reduction in flow area for gradients greater than 1 in 25 and 10% reduction in flow area for other cases.

4.4 Rainfall Profile used in the Model

Rainfall profiles have been obtained by considering the symmetrically distributed rainfall profile as suggested in SDM (2018) Section 4.3.5:

$$F(t) = \begin{cases} \dfrac{a[b + 2(1-c)t]}{(2t+b)^{c+1}} & 0 \le t \le \frac{td}{2} \\ F(-t) & -\frac{td}{2} \le t \le 0 \end{cases}$$

Where:

F(t) = rate of rainfall or instantaneous intensity in mm/hr at time t (in minutes);

td = rainstorm duration (in minutes) (td ≤ 240)
a, b, c = parameters for the selected return period in HKO Headquarters Rainfall zone as defined in the SDM Corrigendum No. 1/2024

The adopted design rainfall parameters are consistent with the SDM Corrigendum No. 1/2024 table 3d. The adopted parameters are summarised in table 4-1.

Table 4.1 Storm Constants for Different Return Periods of North District Area

Return Period T(years)	**50**
a	474.6
b	2.90
c	0.371

A 4-hour rainstorm is adopted in the hydraulic analysis

4.5 Roughness used in the Model

The established model consists of open channels and river reaches. The equation adopted for open channels and river reaches is Mannings equation.

Sediment depth is considered for pipes, culverts, open channels and river reaches, which is section 9.3 of SDM (10% allowance).

The proposed drainage network roughness coefficients for pipes and culverts have been adopted in consistent with the Table 13 & Table 14 of SDM (2018) and summarized in Table 4-2.

Table 4-1 Adopted Roughness Coefficients

Description	Roughness Value [mm]
Rectangular concrete channels and Concrete surface channel	n = 0.016 (Fair)
Riverbed (Natural-stream channel)	n = 0.050 (Existing)
Riverbed (Natural-stream channel)	n = 0.035 (Improved)
Concrete Pipe	ks = 0.60

4.6 Climate Change

Table 4-3 presents a summary of the design rainfall used for the end-21st century storm events. The simulation events included in Table 4-3 are taken from Corrigendum 1-2022 of SDM.

Table 4-3 Rainfall Increase due to Climate Change

	Rainfall Increase
End of 21st Century	16.0%

4.7 Freeboard

For rivers, a minimum freeboard of 300 mm is adopted and an additional 200mm allowance will be provided at river bends to cover super-elevations at bends and wave run-ups.

5. POTENTIAL DRAINAGE IMPACT AND MITIGATION MEASURES

5.1 Hydraulic Model

Setting of the hydraulic model

- The hydraulic condition of the proposed construction site will be assessed through two scenarios: *existing condition* and *proposed development*.

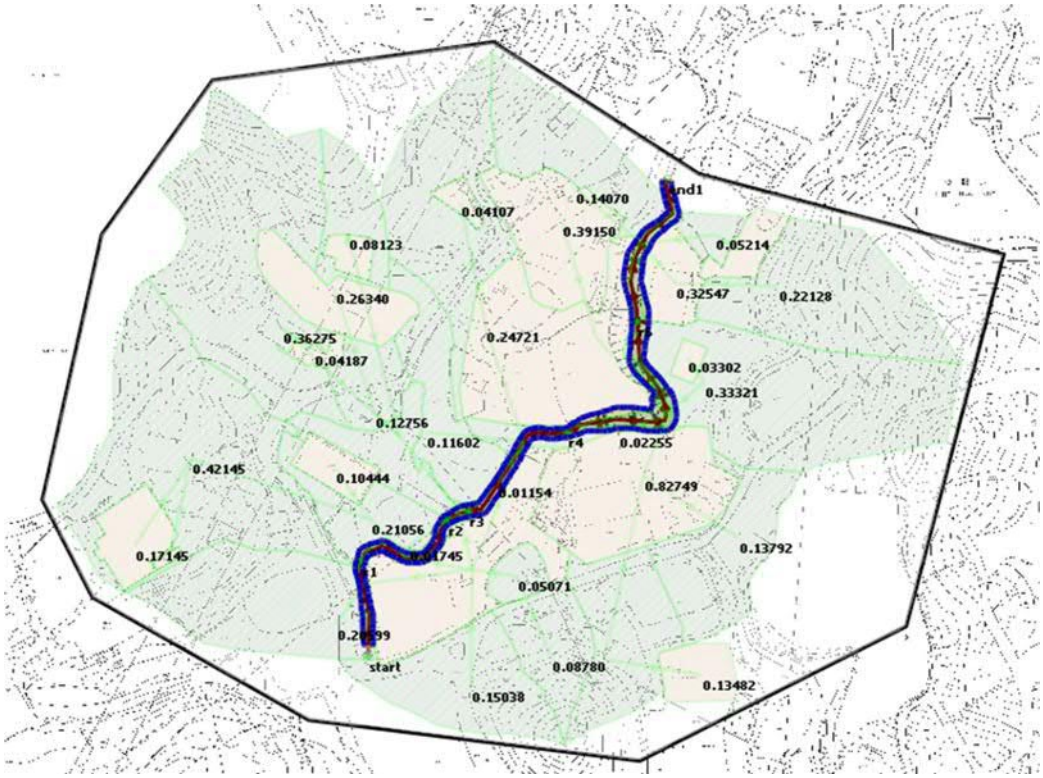


Figure 5.1: Plan view of the existing condition

In the scenario of existing condition, paved areas will be shown in pink, while unpaved areas will be shown in green. The runoff coefficient is set to 0.9 for paved areas and 0.3 for unpaved areas.

Runoff surface ID	Surface type	Initial loss value (m)	Routing model	Fixed runoff coefficient
1	Impervious	0.00007100	Wallingfrd	0.90000
2	Pervious	0.00028000	Wallingfrd	0.30000

Figure 5.2: setting of runoff surface for both scenarios

Land use ID	Runoff surface 1	Default area 1 (%)	Runoff surface 2	Default area 2 (%)
paved	1	100.000		
unpaved	2	100.000	1	100.000

Figure 5.3 setting of land use for both scenarios

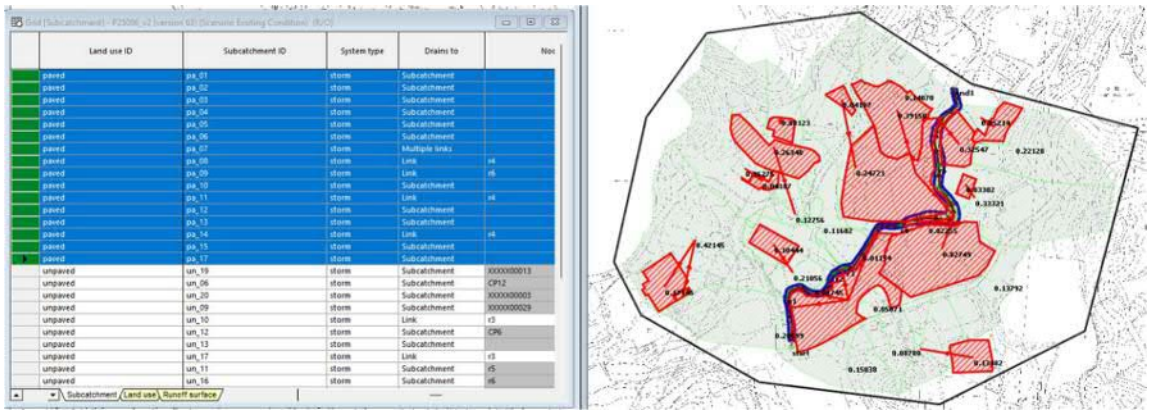
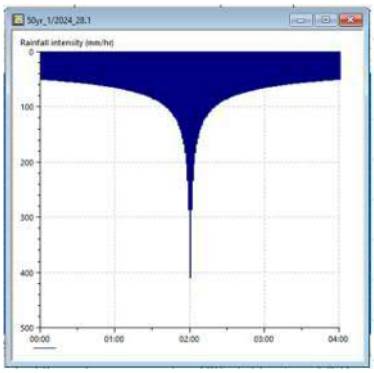


Figure 5.4 selection of paved areas in existing condition scenario



Figure 5.5 selection of unpaved areas in existing condition scenario

Rainfall profile



North District Area (Corrigendum 1/2024)	50
a	474.6
b	2.9
c	0.371

Figure 5.6 adopted rainfall profile in both simulation

The rainfall profile will follow the storm water constant suggested by 1/2024 corrigendum (50yr return period), and then multiplied 1.281 to encounter climate change and design allowance for end of century.

Hydraulic element

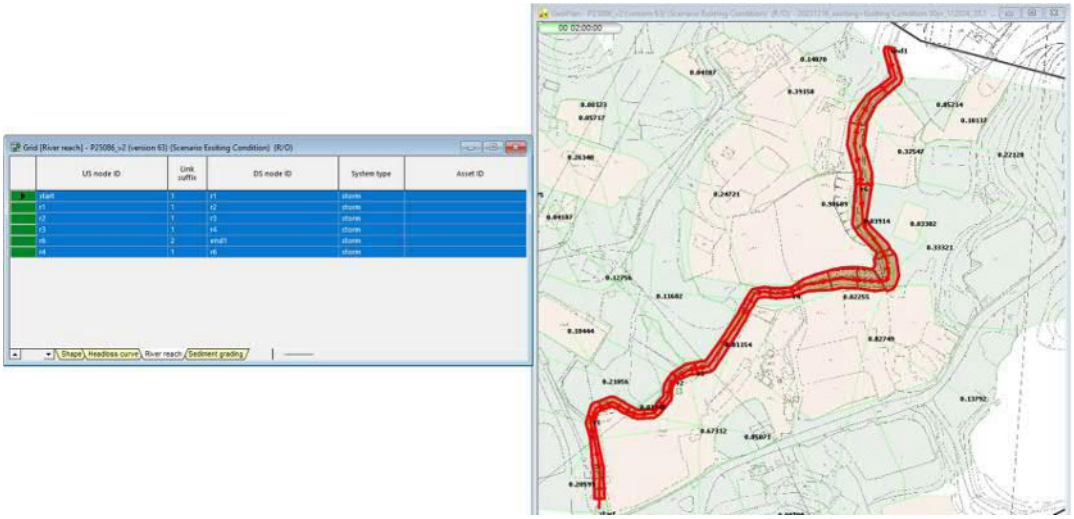


Figure 5.7 selection of river reach in existing scenario

Only river reach is modelled in the existing model. The elevation of cross section of the river reach is mainly adopted from the LiDAR data (2020) of CSDI; while one cross-section line (ID: 12-11) is updated using the data from topo survey. The existing condition of the river can refer to photo record in Appendix A.

Flow path

- Rainfall → sub-catchment→ river reach → outfall

Boundary condition of outfall

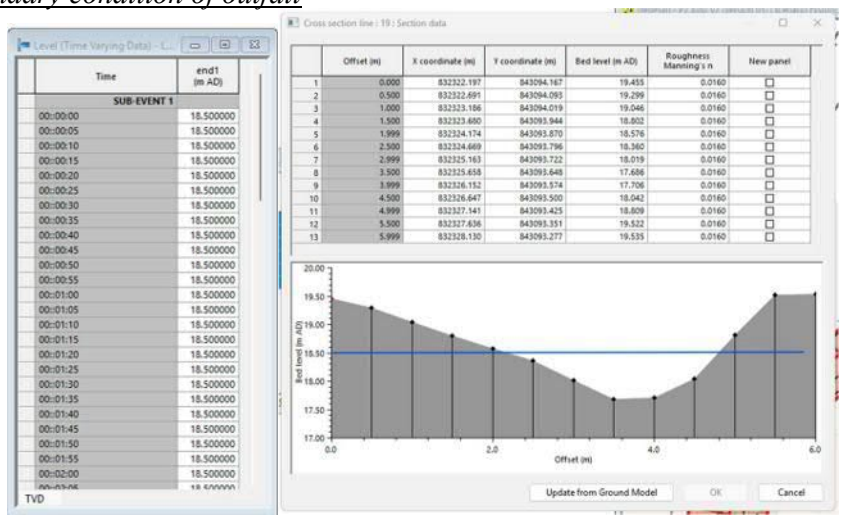


Figure 5.8 boundary setting for both scenarios

The constant water level of 18.5mPD is applied to outfall location to model as boundary condition.

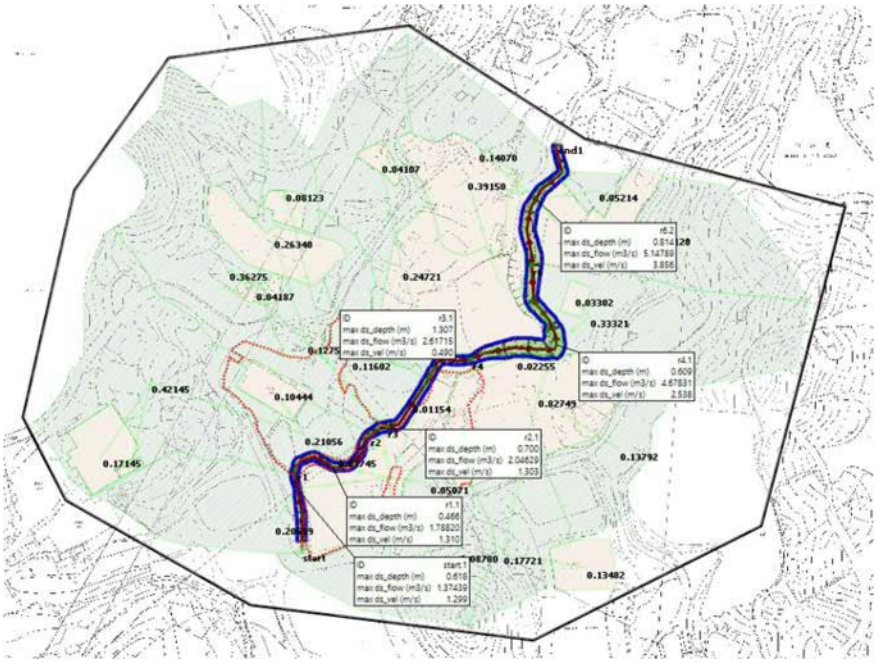


Figure 5.9 stimulation result of existing condition

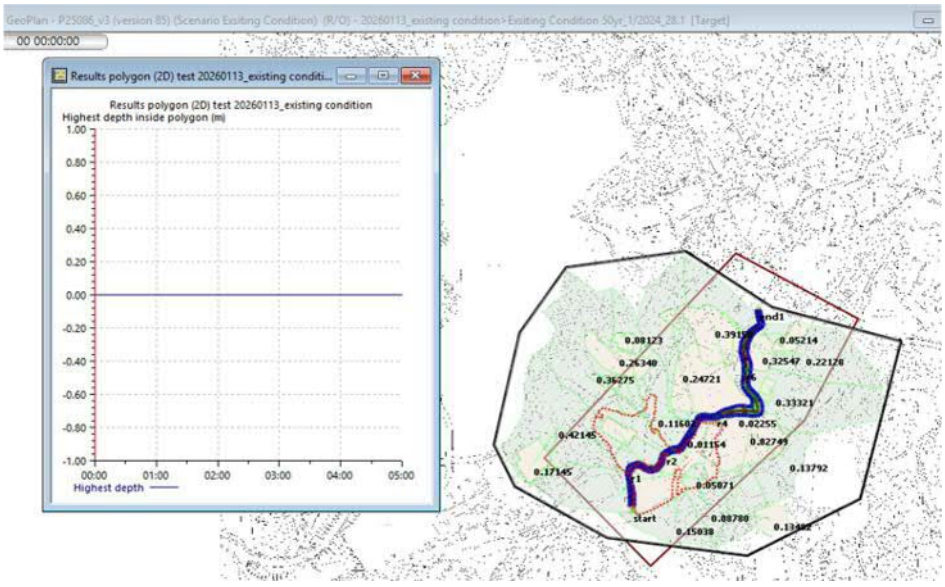


Figure 5.10 stimulation result (2D zone) of existing condition

No flooding observed under existing condition in 50yr return period rainfall scenario.

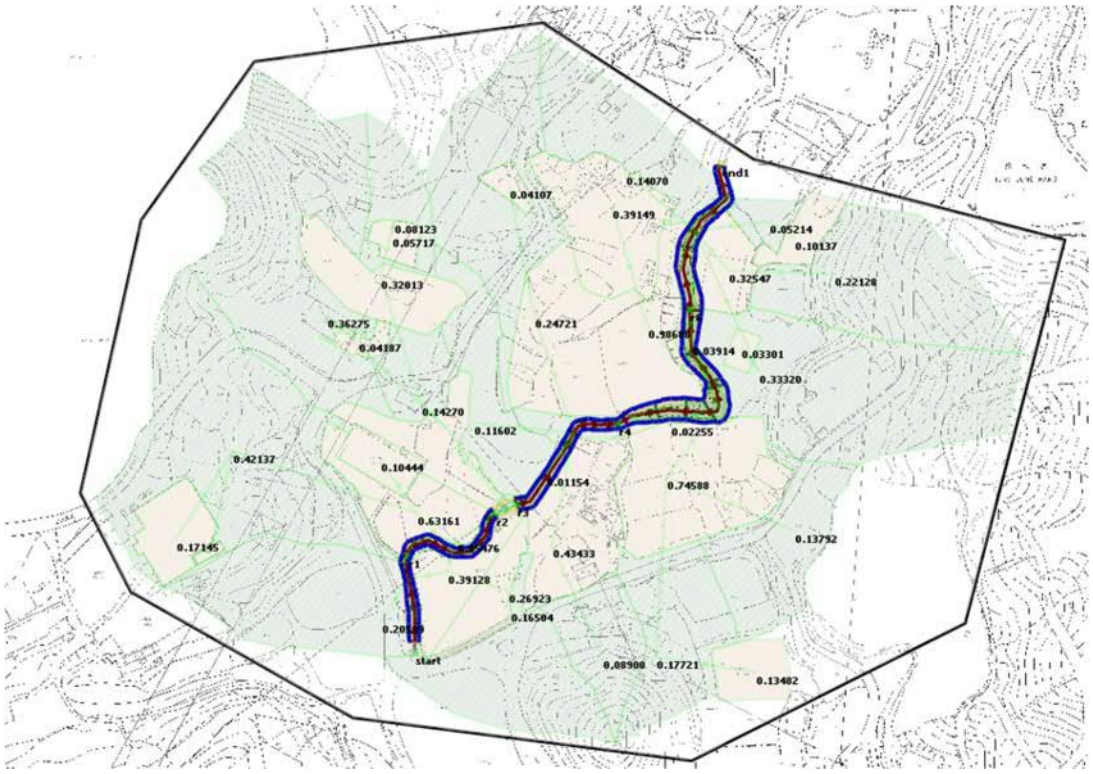


Figure 5.11: Plan view of the proposed development scenario

In the scenario of proposed development, the color setting will be same as scenario of existing condition.

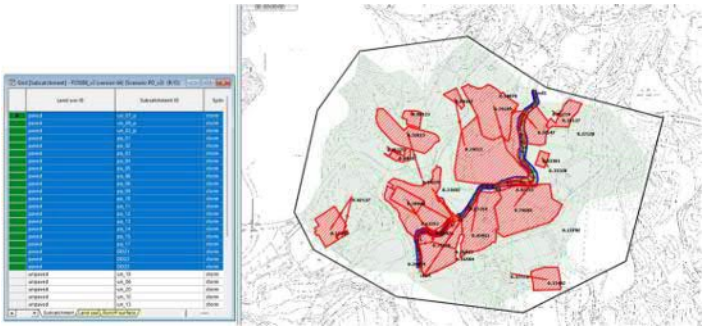


Figure 5.12 selection of paved areas in proposed development scenario

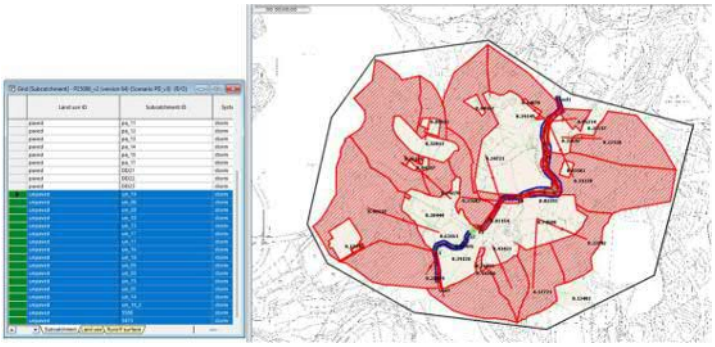


Figure 5.13 selection of unpaved areas in proposed development scenario

Hydraulic element



Figure 5.14 the plan view of the replaced element in the proposed development

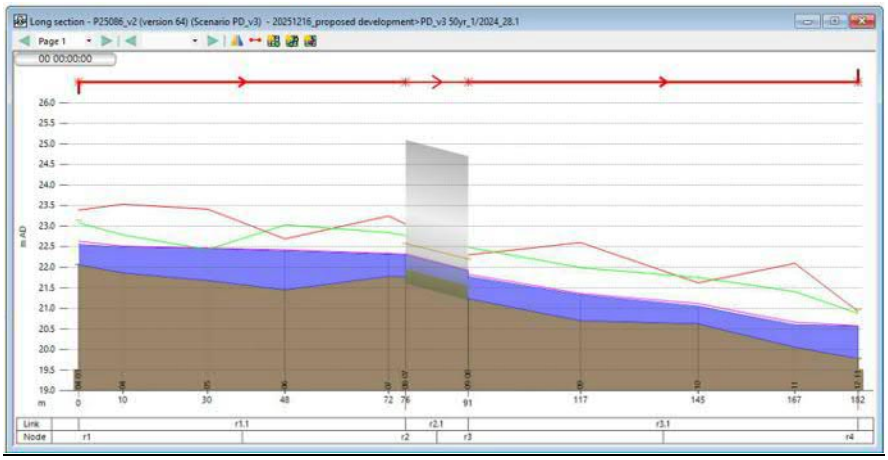


Figure 5.15 the longitudinal profile of replaced element in the proposed development

Part of river reach is replaced to 3600mm(W) x 3500mm(H) concrete box culvert, with 10% sentiment depth, which shown in figure 4.15 and 4.15; while the remaining river reach remained the same setting as the scenario of existing condition.

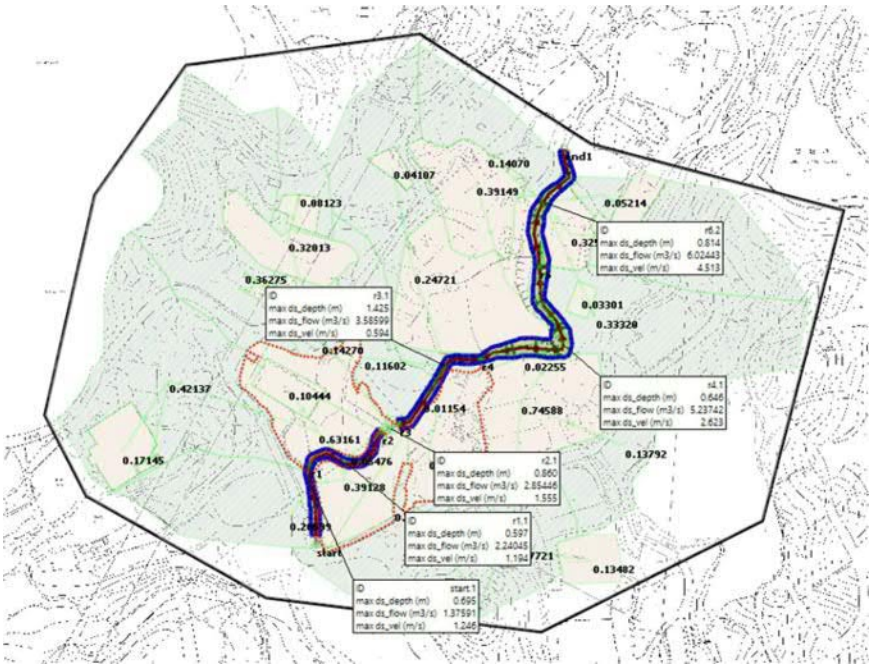


Figure 5.16 stimulation result of proposed development

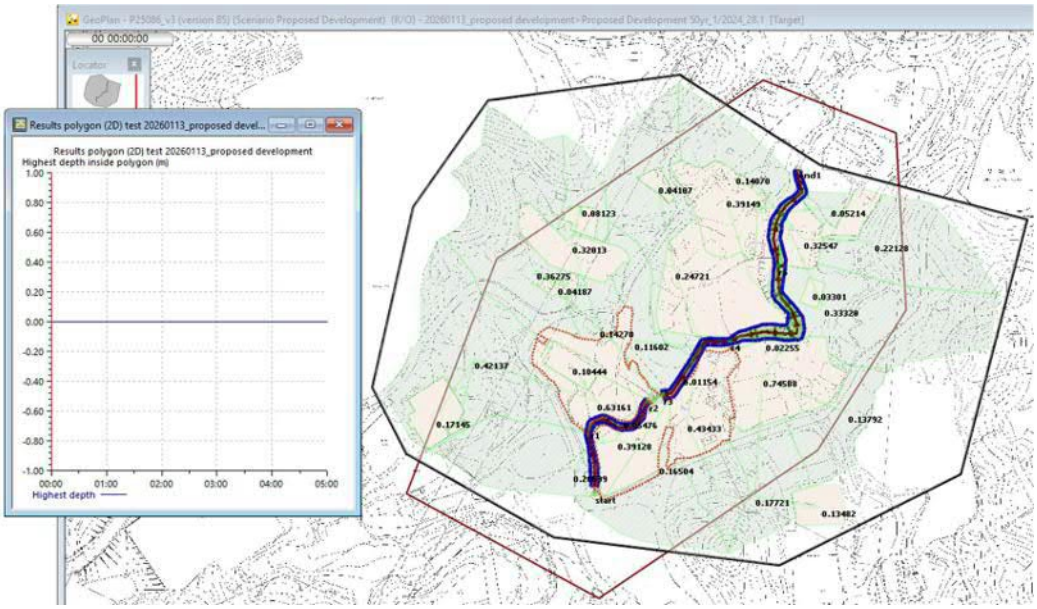


Figure 5.17 stimulation result (2D zone) of proposed development

No flooding observed under proposed in 50yr return period rainfall scenario.

Table 5.1 comparison of water depth before and after development

US node ID	Link suffix	Before Max US depth (m)	Before Max DS depth (m)	After Max US depth (m)	After Max DS depth (m)	difference (%) of Max US depth (m)	difference (%) of Max DS depth (m)
start	1	0.436	0.618	0.436	0.695	0.00	12.46
r1	1	0.618	0.466	0.695	0.597	12.46	28.11
r2#	1	0.466	0.7	0.773	0.86	65.88	22.86
r3	1	0.7	1.307	0.819	1.425	17.00	9.03
r6	2	0.609	0.814	0.646	0.814	6.08	0.00
r4	1	1.307	0.609	1.425	0.646	9.03	6.08

Table 5.2 comparison of velocity before and after development

US node ID	Link suffix	Max US velocity (m/s)	Max DS velocity (m/s)	Max US velocity (m/s)	Max DS velocity (m/s)	difference (%) of Max US velocity (m/s)	difference (%) of Max DS velocity (m/s)
start	1	1.207	1.299	1.207	1.246	0.00	-4.08
r1	1	1.299	1.31	1.246	1.194	-4.08	-8.85
r2#	1	1.31	1.303	1.471	1.555	12.29	19.34
r3	1	1.303	0.49	1.377	0.594	5.68	21.22
r6	2	2.538	3.856	2.622	4.513	3.31	17.04
r4	1	0.49	2.538	0.594	2.623	21.22	3.35

Table 5.3 comparison of flow before and after development

US node ID	Link suffix	Max US flow (m3/s)	Max DS flow (m3/s)	Max US flow (m3/s)	Max DS flow (m3/s)	difference (%) of Max US flow (m3/s)	difference (%) of Max DS flow (m3/s)
start	1	1.00005	1.37439	1.00005	1.37591	0.00	0.11
r1	1	1.37428	1.7882	1.37581	2.24045	0.11	25.29
r2#	1	1.7882	2.04629	2.24056	2.85446	25.30	39.49
r3	1	2.04629	2.61715	2.85447	3.58599	39.49	37.02
r6	2	4.67824	5.14789	5.23742	6.02443	11.95	17.03
r4	1	2.61714	4.67831	3.58595	5.23742	37.02	11.95

#this part of river reach is changed to concrete box culvert.

Table 5.4 comparison of water depth at node before and after development

Node ID	Node type	Flood level (m AD)	Max Level (m AD)	Max Level (m AD)	Freeboard (m)_before	Freeboard (m)_after	difference (m)
start	Break	23.87	23.617	23.617	0.253	0.253	0
r1	Break	23.136	22.684	22.761	0.452	0.375	-0.077
r2	Break	22.576	22.242	22.373	0.334	0.203	-0.131
r3	Break	22.205	21.941	22.06	0.264	0.145	-0.119
r4	Break	21.2	21.094	21.212	0.106	-0.012	-0.118
end1	Outfall	19.076	18.5	18.5	0.576	0.576	0
r6	Break	21.53	19.321	19.358	2.209	2.172	-0.037

The not enough freeboard for node R4 was observed under 50yr return period rainfall scenario for the proposed development, which will be solved through the proposed mitigation measure.

The proposed mitigation includes:

- (1) conduct vegetation removal regularly
- (2) provide storage tanks within site to retain part of stormwater during peak intensity

Additional scenario had been modelled; the roughness Manning's n of downstream river reach is changed from 0.05 to 0.035 under mitigation measure (1).

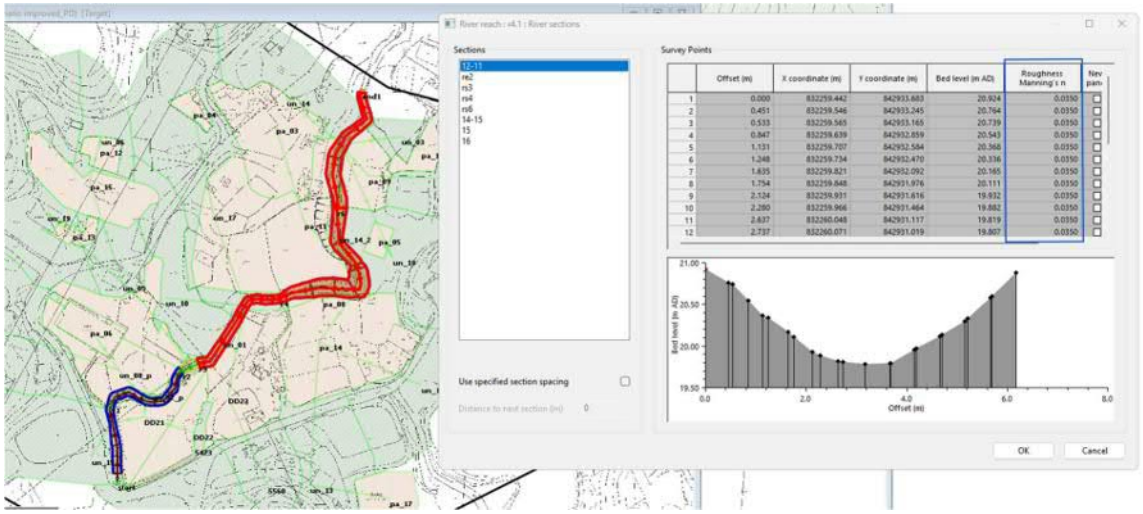


Figure 5.18: mitigated measure (1)

Two storage tanks are modelled within site with the different dimensions under mitigation measure (2).

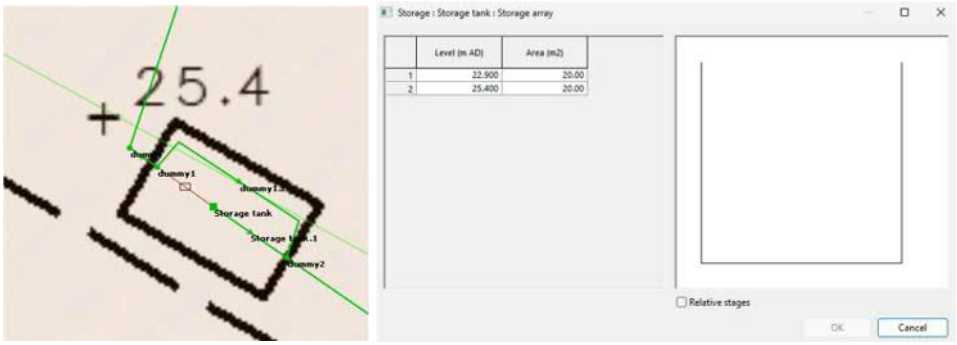


Figure 5.19 mitigated measure (2.1) 20m² x 2.5m



Figure 5.20 mitigated measure (2.1) 78m² x 2.5m

Setting of the storge tank

When water level reaches the preset water level of the upstream nodes, the sluice will open to retain the part of water. (the preset water level is shown in the below figure)

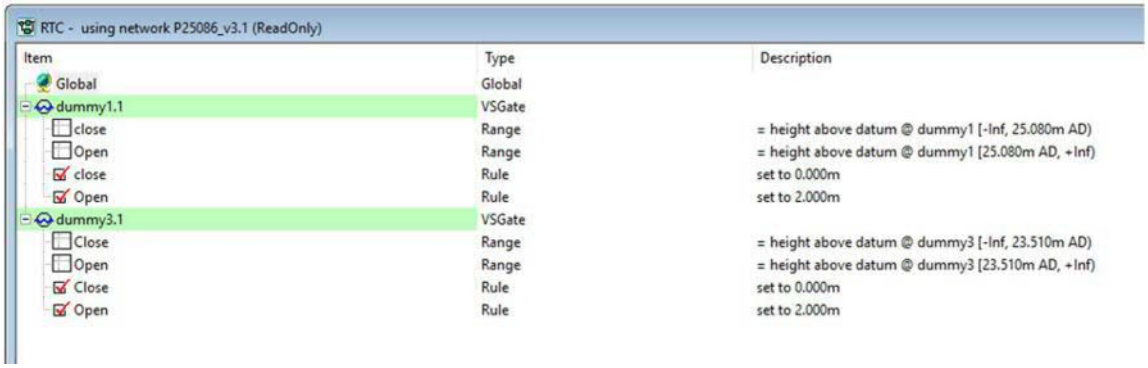


Figure 5.21 RTC Setting of Sluice

Flow path for storage tank

- *Sluice is closed*
- Rainfall → sub-catchment→ U-channel →down pipe →river reach → outfall
- *Sluice is opened*
- Rainfall → sub-catchment→ U channel →down pipe → ***Storage tank*** → after rainfall → pump to downpipe →river reach → outfall

Table 5.5 comparison of water depth at node with and without mitigation

Node ID	Node type	Flood level (m AD)	Max Level (m AD)	Max Level (m AD)	Freeboard (m)	Freeboard (m) with mitigation	difference (m)
start	Break	23.87	23.617	23.617	0.253	0.253	0
r1	Break	23.136	22.761	22.76	0.375	0.376	0.001
r2	Break	22.576	22.373	22.367	0.203	0.209	0.006
r3	Break	22.205	22.06	21.932	0.145	0.273	0.128
r4	Break	21.2	21.212	21.105	-0.012	0.095	0.107
end1	Outfall	19.076	18.5	18.5	0.576	0.576	0
r6	Break	21.53	19.358	19.66	2.172	1.87	-0.302

Table 5.6 comparison of water depth at node between mitigation and baseline

Node ID	Node type	Flood level (m AD)	Max Level (m AD)	Max Level (m AD)	Freeboard (m)_baseline	Freeboard (m) with mitigation	difference (m)
start	Break	23.87	23.617	23.617	0.253	0.253	0
r1	Break	23.136	22.761	22.76	0.452	0.376	-0.076
r2	Break	22.576	22.373	22.367	0.334	0.209	-0.125
r3	Break	22.205	22.06	21.932	0.264	0.273	0.009
r4	Break	21.2	21.212	21.105	0.106	0.095	-0.011
end1	Outfall	19.076	18.5	18.5	0.576	0.576	0
r6	Break	21.53	19.358	19.66	2.209	1.87	-0.339

5.2 Mitigation Measures

The following mitigation measures will be implemented to manage stormwater and minimize the risk of flooding:

5.2.1. Two on-site storage tanks will be installed to retain stormwater during peak rainfall intensity. During a storm, the inlet pipe connected to the downstream end of existing surface channel diverts flows into the tank. The tank functions by temporarily storing incoming peak flows, thereby attenuating the discharge. Infowork modeling result in Table 5.5 and 5.6 confirms that this integrated approach can effectively increase downstream freeboard, thereby helping to prevent flooding events.

5.2.2. When there are existing structures/utilities located in close proximity of/adjacent to the works. Proper design and implementation of temporary works shall be undertaken, and extreme care is taken when carrying out deep excavation for the works adjacent to the existing structures/utilities.

5.2.3. The existing stream and downstream sections will be regularly desilted and cleared of vegetation. Maintenance frequency will be increased to bi-monthly during the rainy season to ensure drainage capability.

6. CONCLUSIONS

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

6.2 The stormwater and surface runoff in the effective catchment area will be discharged to the existing drainage system outside the subject lot area (existing river, culverts, and surface channels). The discharge has been incorporated into the checking of drainage capacity of the existing drainage system (design calculation refers to **Appendix C**)

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

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

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

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

6.7 The development will not have any adverse impact on the drainage in the surrounding area. The construction and development within the subject lot will not alter the flow

direction of surface runoff. There will be no increased risk of flooding, and the capacity of existing drainage utilities will not be exceeded.

6.8 The hydraulic model established for this project has provided an assessment of the susceptibility of the Assessment area to flooding for the end-century extreme storm events with consideration to the effects of climate change.

6.9 The Drainage Impact Assessment showed the drainage system for the proposed development will not increase the risk of flooding in the nearby areas and the existing river has sufficient downstream capacity to receive the runoff and discharge from our proposed development.

6.10 This Drainage Impact Assessment concludes that the proposed development will not result in any flooding or overflow on the site, in adjacent areas, or downstream. The designed drainage system is effective and will safely convey runoff without causing any adverse impacts to the existing river.

6.11 The changes in land use, overland flow paths, surface runoff characteristics, changes on flood extent that will be created by the proposed developments have been represented in the hydraulic model established for the Project.

END OF TEXT

APPENDIX A

Photo Record

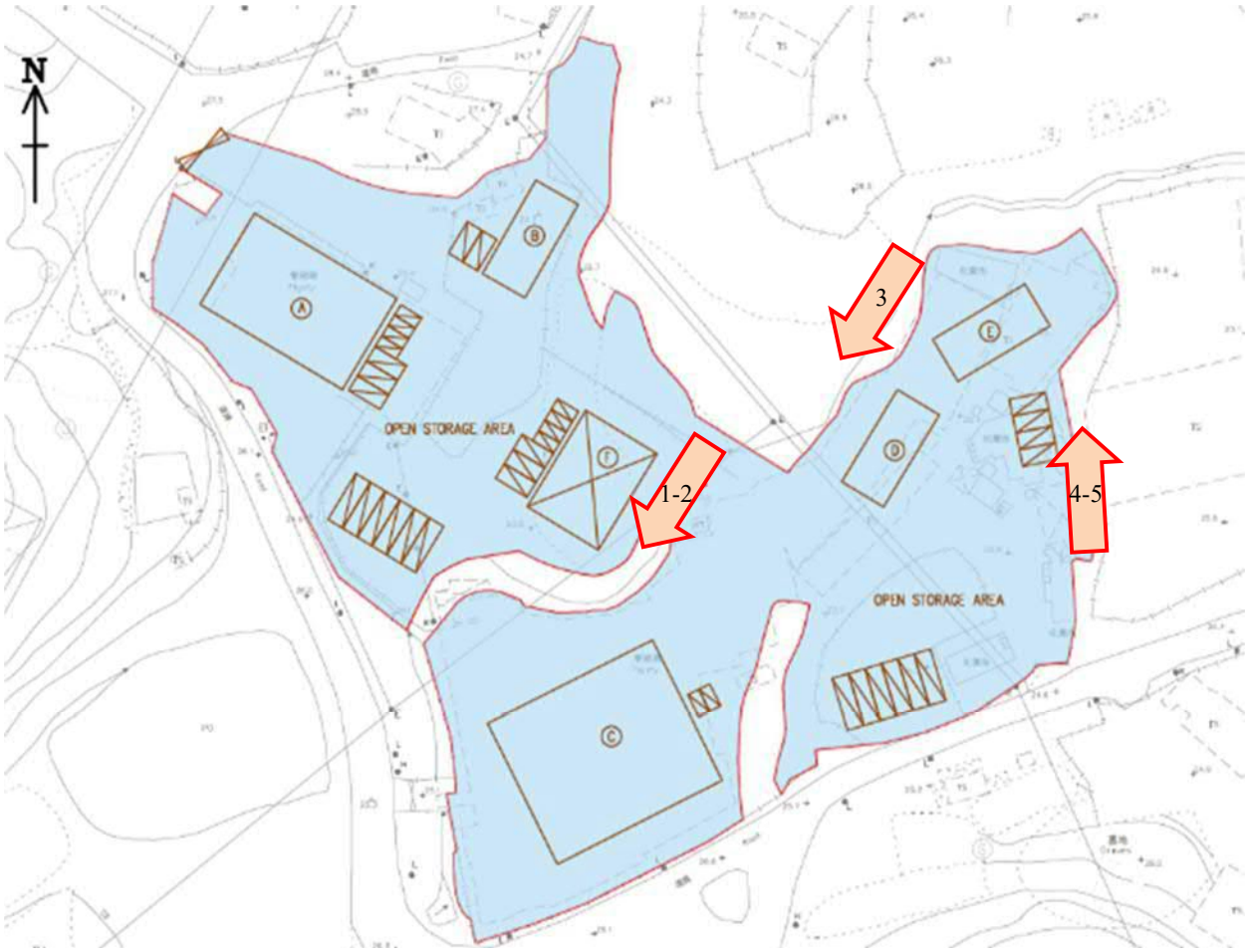


Photo No. 1



Photo No. 2



Photo No. 3



Photo No. 4



Photo No. 5



Additional photos





Photo Ref.: 1



Photo Ref.:2

KONG NGA PO ROAD



Photo Ref.: 3



Photo Ref.:4



Photo Ref.: 5



Photo Ref.:6



Photo Ref.: 7



Photo Ref.:8



Photo Ref.: 9



Photo Ref.:10



Photo Ref.: 11



Photo Ref.:12



Photo Ref.: 13



Photo Ref.:14



Photo Ref.: 15



Photo Ref.:16



Photo Ref.: 17



Photo Ref.:18



Photo Ref.: 19



Photo Ref.:20



Photo Ref.: 21



Photo Ref.:22



Photo Ref.: 23



Photo Ref.:24



Photo Ref.: 25



Photo Ref.:26



Photo Ref.: 27



Photo Ref.:28



Photo Ref.: 29



Photo Ref.:30



Photo Ref.: 31



Photo Ref.:32



Photo Ref.: 33



Photo Ref.:34



Photo Ref.: 35



Photo Ref.:36



Photo Ref.: 37



Photo Ref.:38



Photo Ref.: 39



Photo Ref.:40



Photo Ref.: 41



Photo Ref.:42



Photo Ref.: 43



Photo Ref.:44



Photo Ref.: 45



Photo Ref.:46



Photo Ref.: 47



Photo Ref.:48



Photo Ref.: 49



Photo Ref.:50



Photo Ref.: 51



Photo Ref.: 52



Photo Ref.: 53



Photo Ref.: 54



Photo Ref.: 55



Photo Ref.: 56



Photo Ref.: 57



Photo Ref.: 58



Photo Ref.: 59



Photo Ref.: 60



Photo Ref.: 61



Photo Ref.: 62



Photo Ref.: 63



Photo Ref.: 64



Photo Ref.: 65



Photo Ref.: 66



Photo Ref.: 67



Photo Ref.: 68



Photo Ref.: 69



Photo Ref.: 70



Photo Ref.: 71



Photo Ref.: 72



Photo Ref.: 73



Photo Ref.: 74



Photo Ref.: 75



Photo Ref.: 76



Photo Ref.: 77



Photo Ref.: 78



Photo Ref.: 79

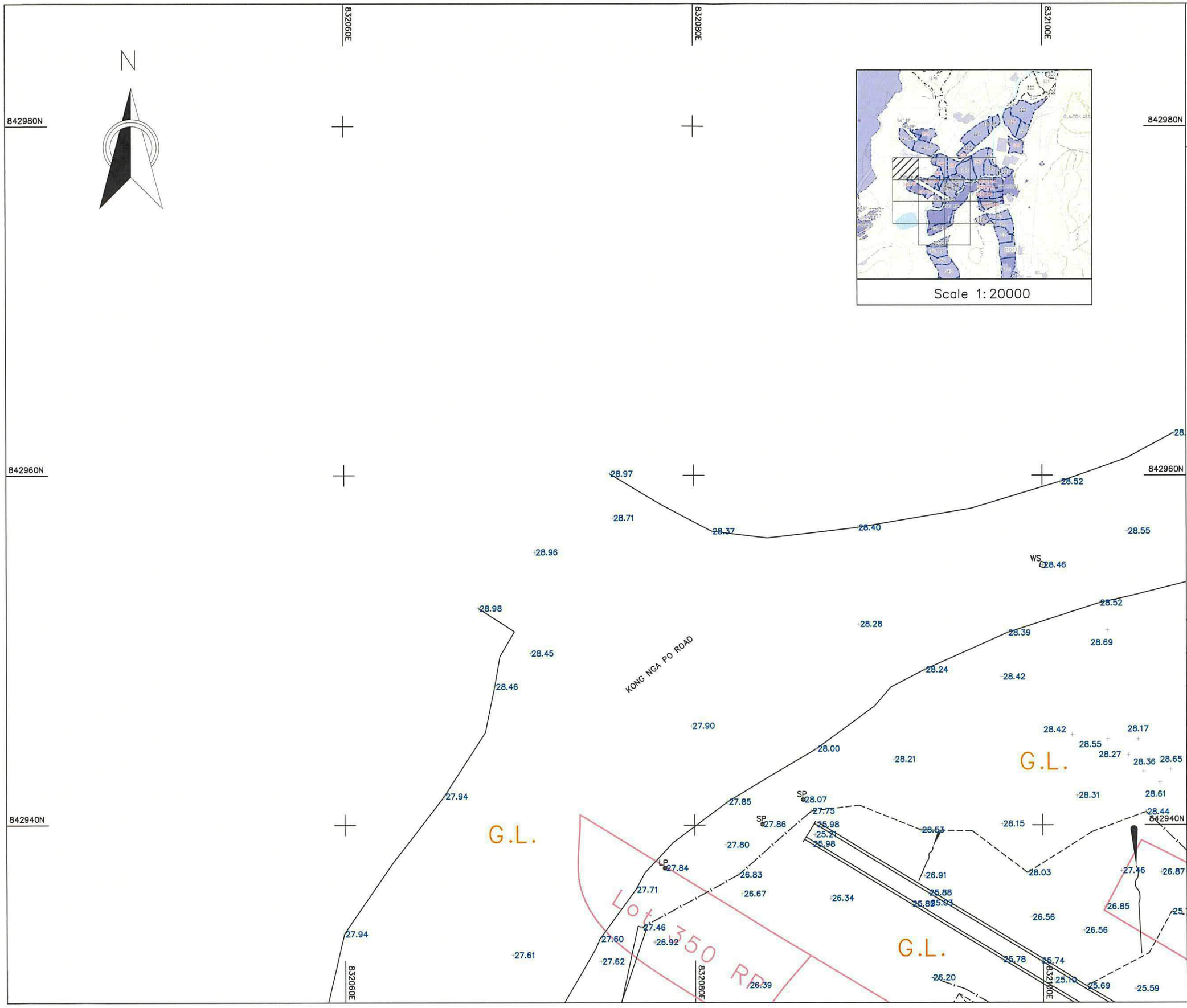
Aerial Photo

taken at late November

CMA CGM

APPENDIX B

Topography Survey Record



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- CUL CULVERT
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- OS OPEN-SIDED STRUCTURE
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- GULLY
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- SP SIDE POLE
- TP TELEPHONE POLE
- EP ELECTRIC POLE
- 1.23 SPOT LEVEL
- 20 CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 1 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
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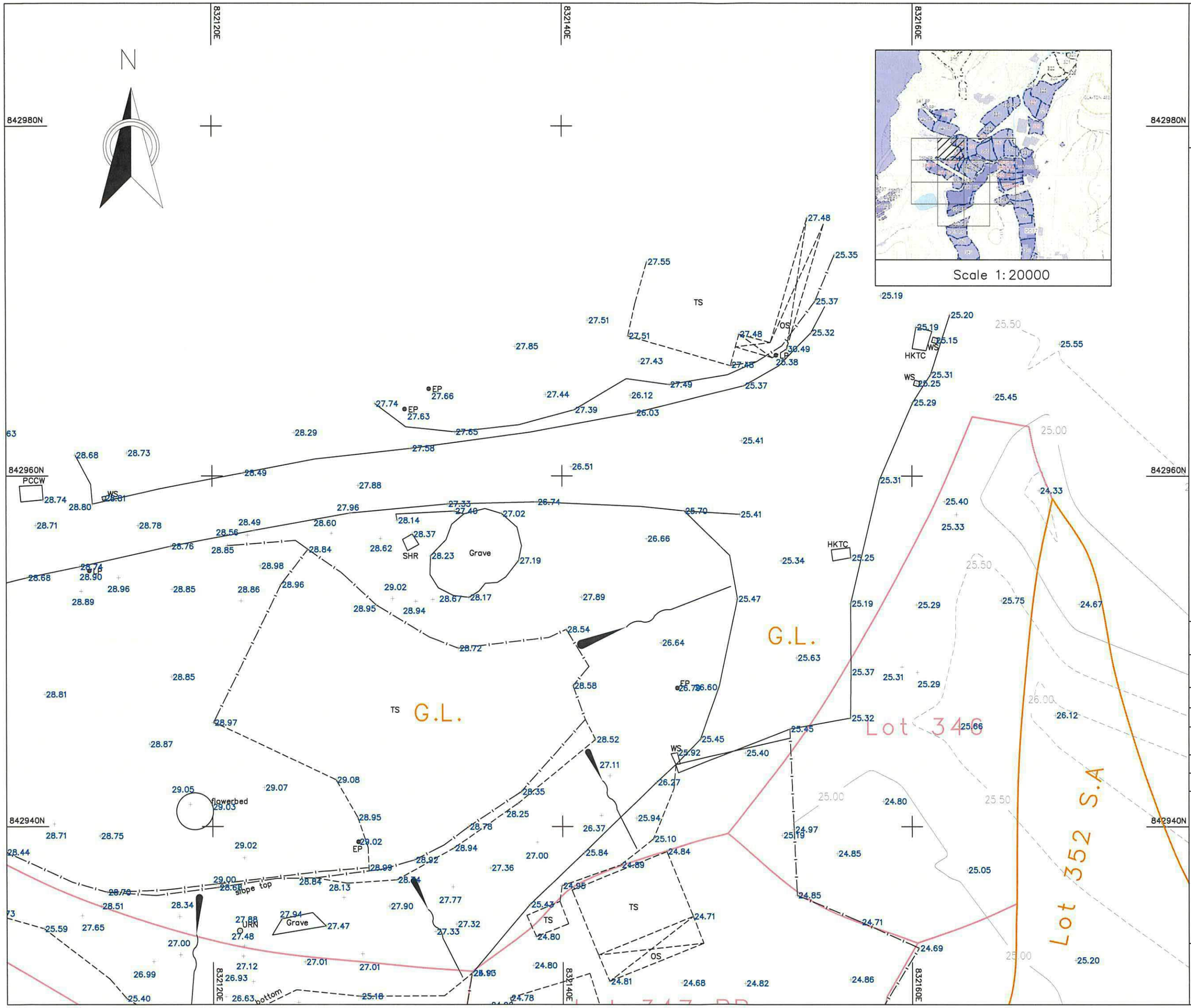

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Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 2 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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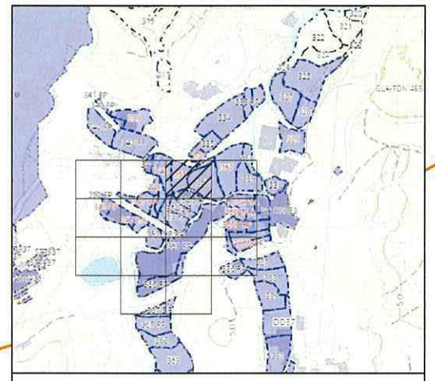
832180E 832200E 832220E 832240E

842980N 842960N 842940N

N



Scale 1: 20000

Lot 356

25.00 25.50 26.00 26.50

26.75 26.07 23.80 26.10 25.90 23.06

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Title :
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Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 3 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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832260E

832280E

832300E

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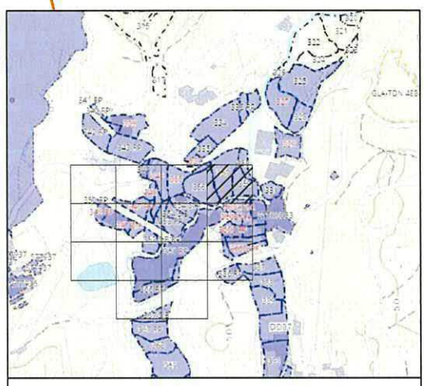
842960N

842940N



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Lot 357

Lot 358

Lot 359

G.L.

N

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 4 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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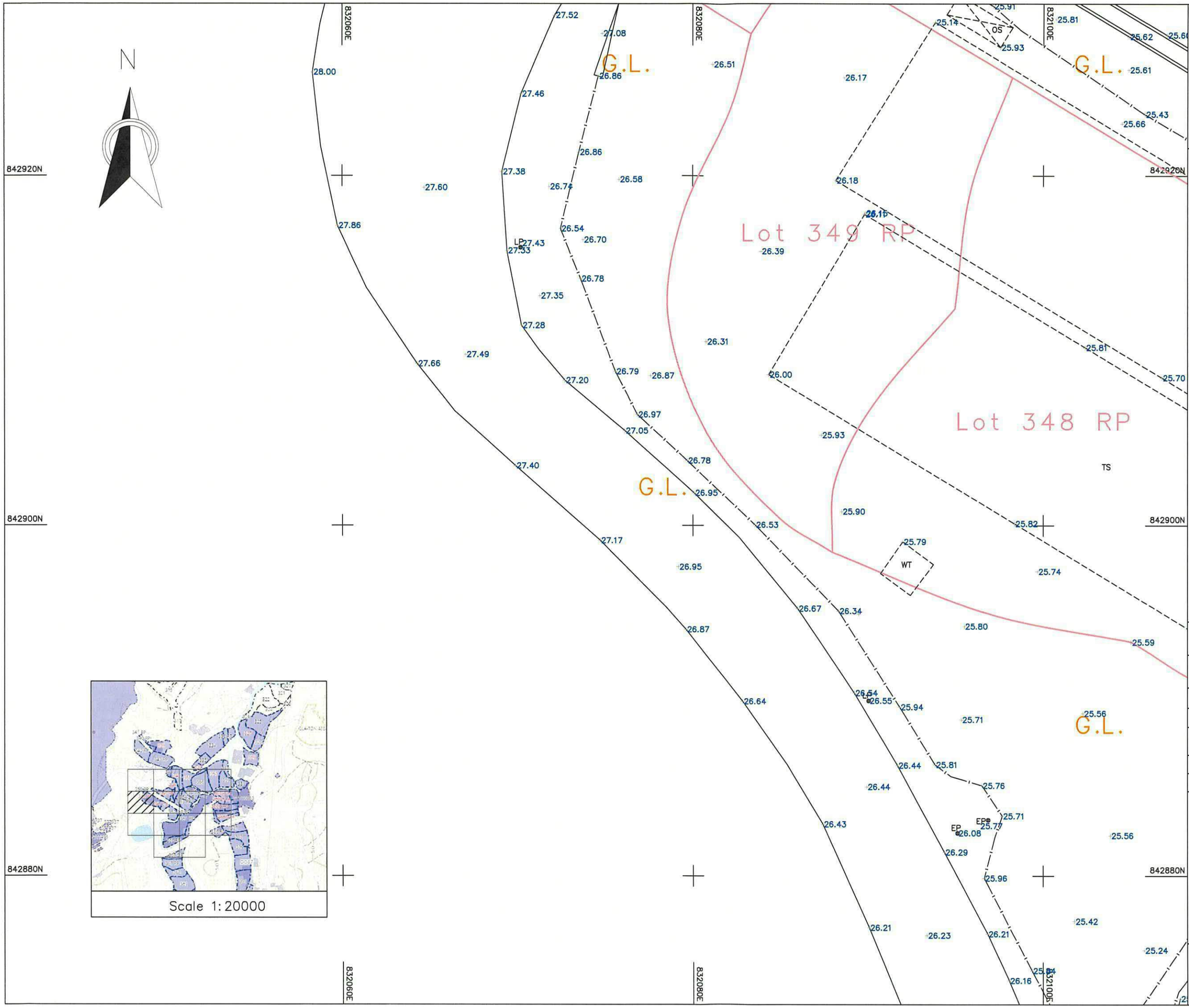

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 5 OF 14)

Scale: 1:200 (A3)

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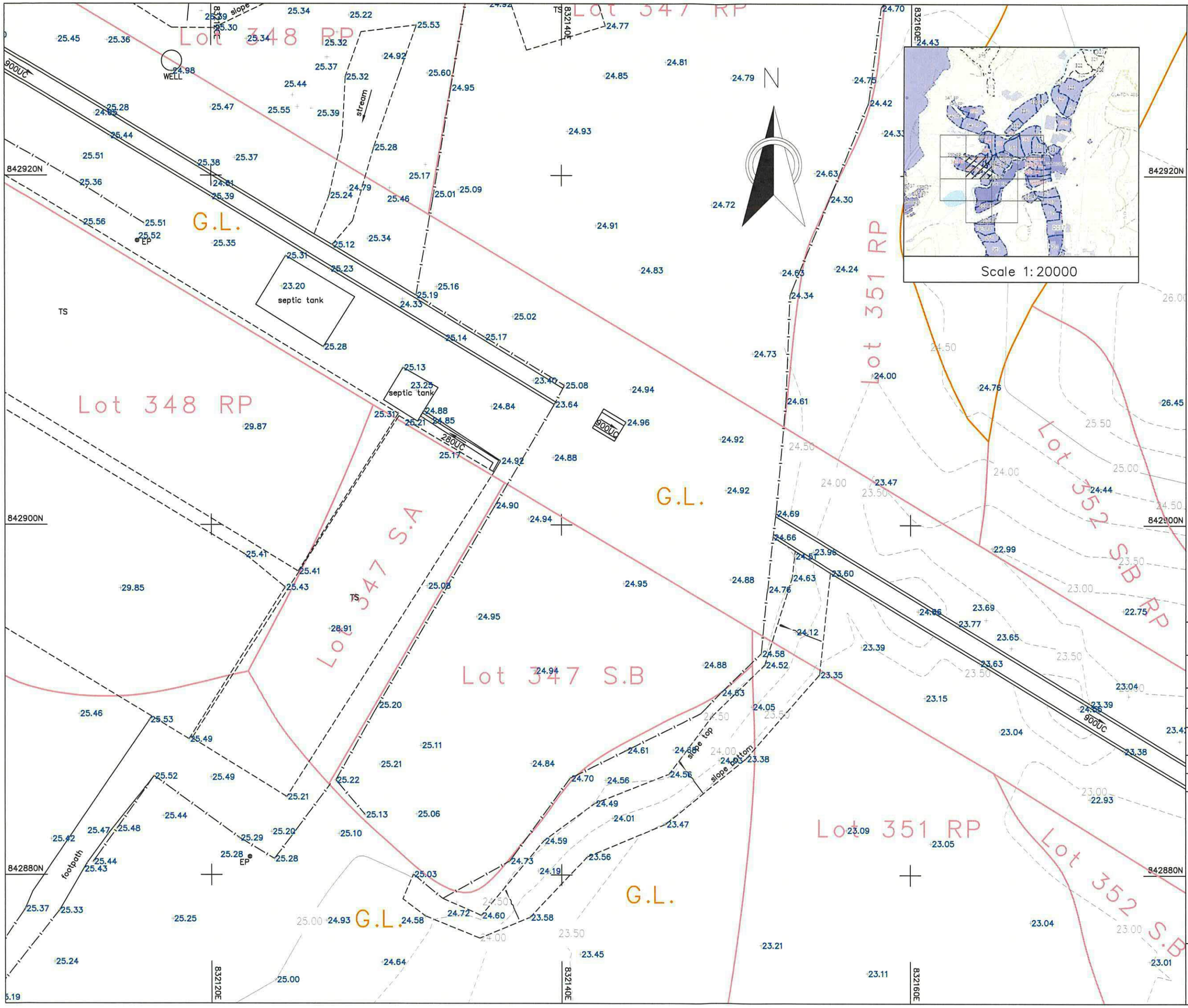

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Topographic Survey of Various Lots in DD87

Locality :
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Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 6 OF 14)

Scale: 1:200 (A3)

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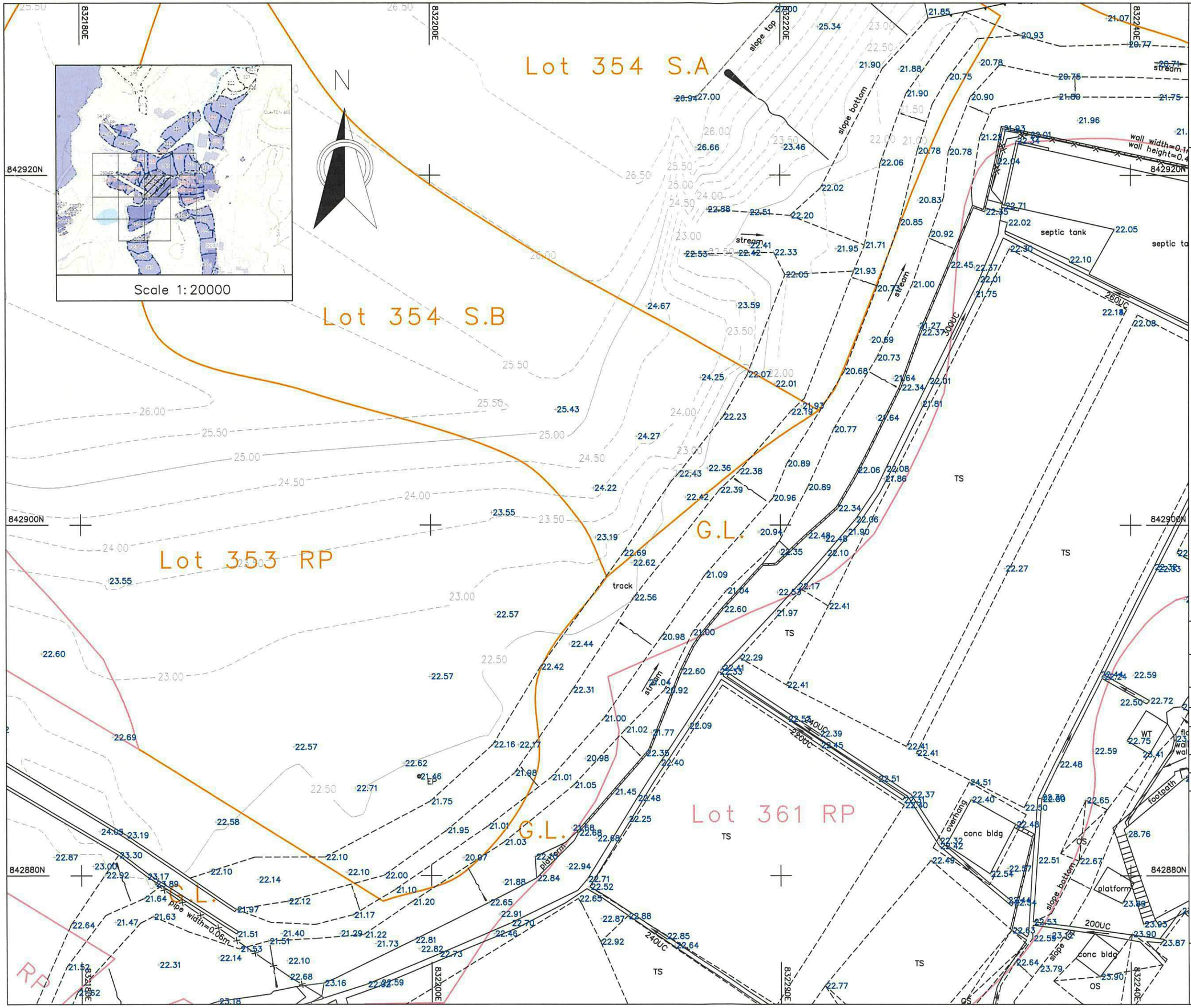

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 7 OF 14)

Scale: 1:200 (A3)

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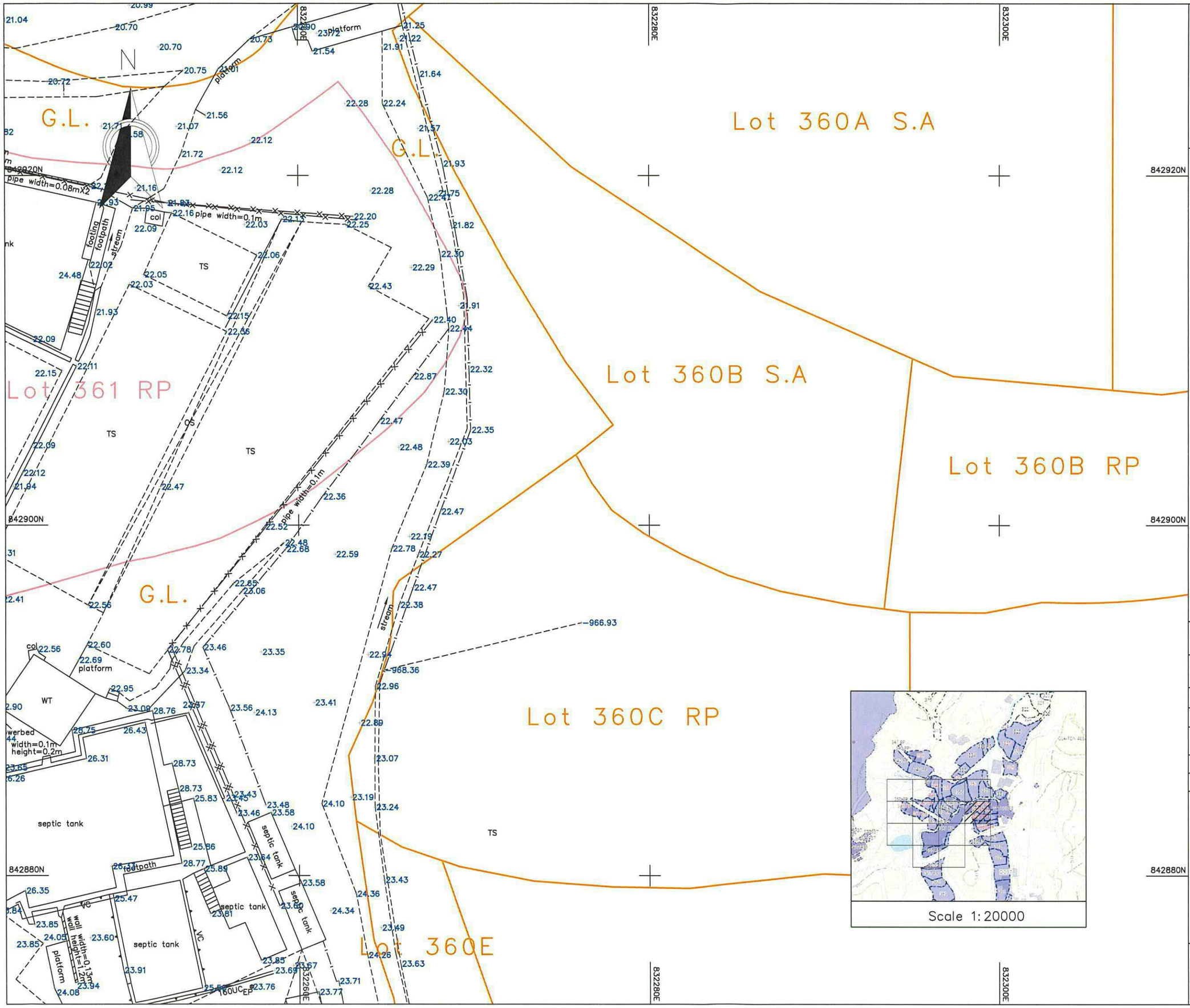

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 8 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
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N

832060E

832080E

832100E

842860N

842840N

842820N

25.19 25.19 25.00

26.03

26.10

25.64 25.08 24.99

25.02

25.73

25.76

26.03

25.99

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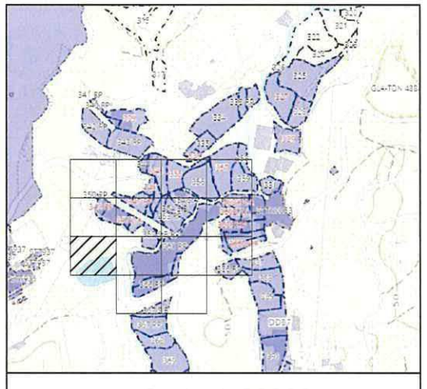

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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 9 OF 14)

Scale: 1:200 (A3)

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Scale 1: 20000

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Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 10 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

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Lot 361 RP

Lot 367 RP

G.L.

N

Scale 1: 20000

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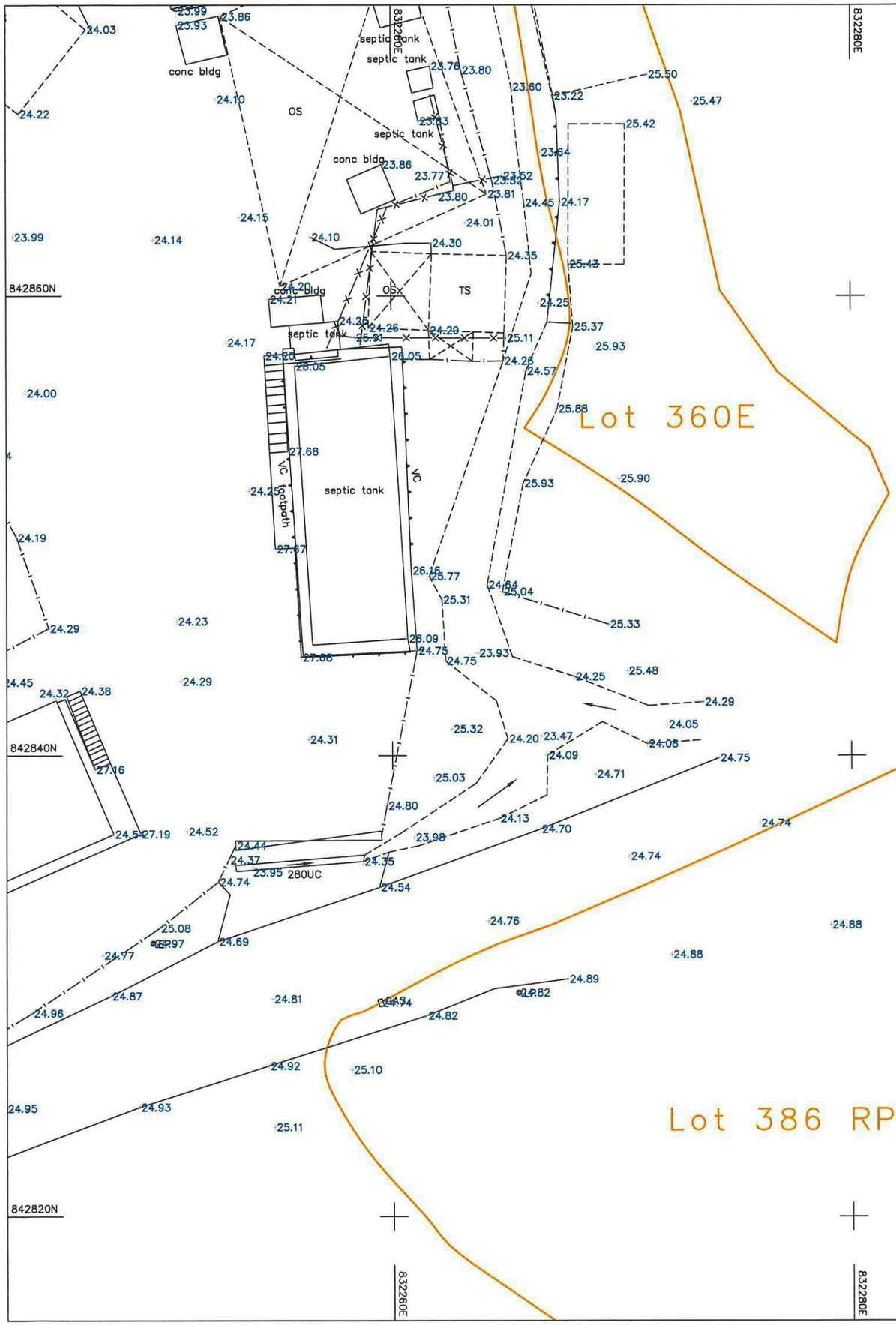
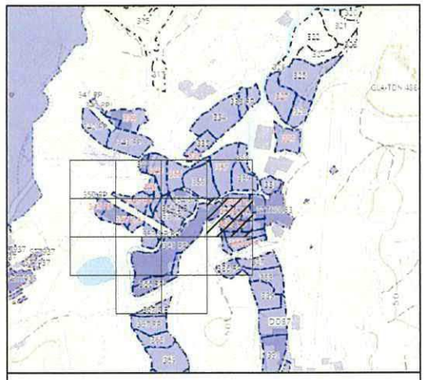




Scale 1: 20000

Notes :

1. All levels are in meters referenced to Hong Kong principal datum (HKPD).
2. All levels are in meters referenced to Hong Kong metric grid (HK1980).
3. All spot levels position are indicated by the decimal point or a cross.
4. Lot boundary is showed approximalty for reference only.

Legend :

- SUBJECT LOT BOUNDARY LINE
- ADJACENT LOT BOUNDARY LINE
- FENCE,RAILING
- PIPE
- ARTIFICIAL SLOPE
- UC — CONCRETE DRAIN & CATCHPIT
- COL — COLUMN
- CUL — CULVERT
- TS — TEMPORARY STRUCTURE
- OS — OPEN-SIDED STRUCTURE
- VERTICAL MASONRY (RETAINING WALL)
- PARAPET OR WALL
- STEPS
- GULLY
- GATE
- TC — HONG KONG TELECOM
- MH — MANHOLE FOUL WATER
- WS — WATER SERVICE
- IC — INSPECTION COVER
- LP — LAMP POLE
- SP — SIDE POLE
- TP — TELEPHONE POLE
- EP — ELECTRIC POLE
- 1.23 — SPOT LEVEL
- 20 — CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO
(SHEET 12 OF 14)

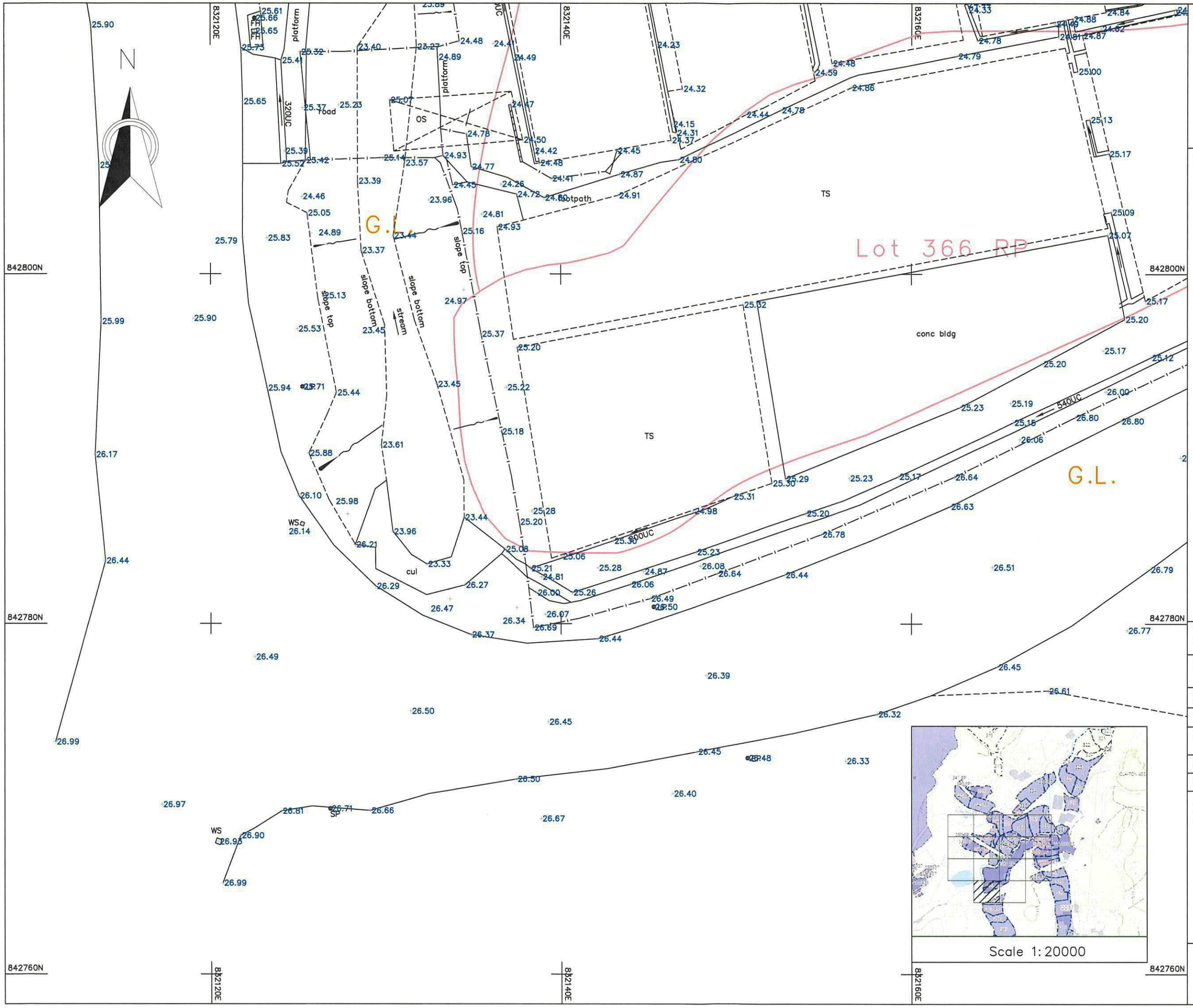
Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
Registered Professional Surveyor
(Land Surveying Division)

Tang & Au Land Surveyors Limited
Room 502, 5/F, Keader Centre,
Nos.129-149, On Lok Road, Yuen Long, N.T.
Tel.: 2652 2351 Fax: 2652 2322



Scale 1:20000

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- 1.23 SPOT LEVEL
- 20 CONTOURS INTERPOLATED AT ONE METRE INTERVAL

Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 13 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

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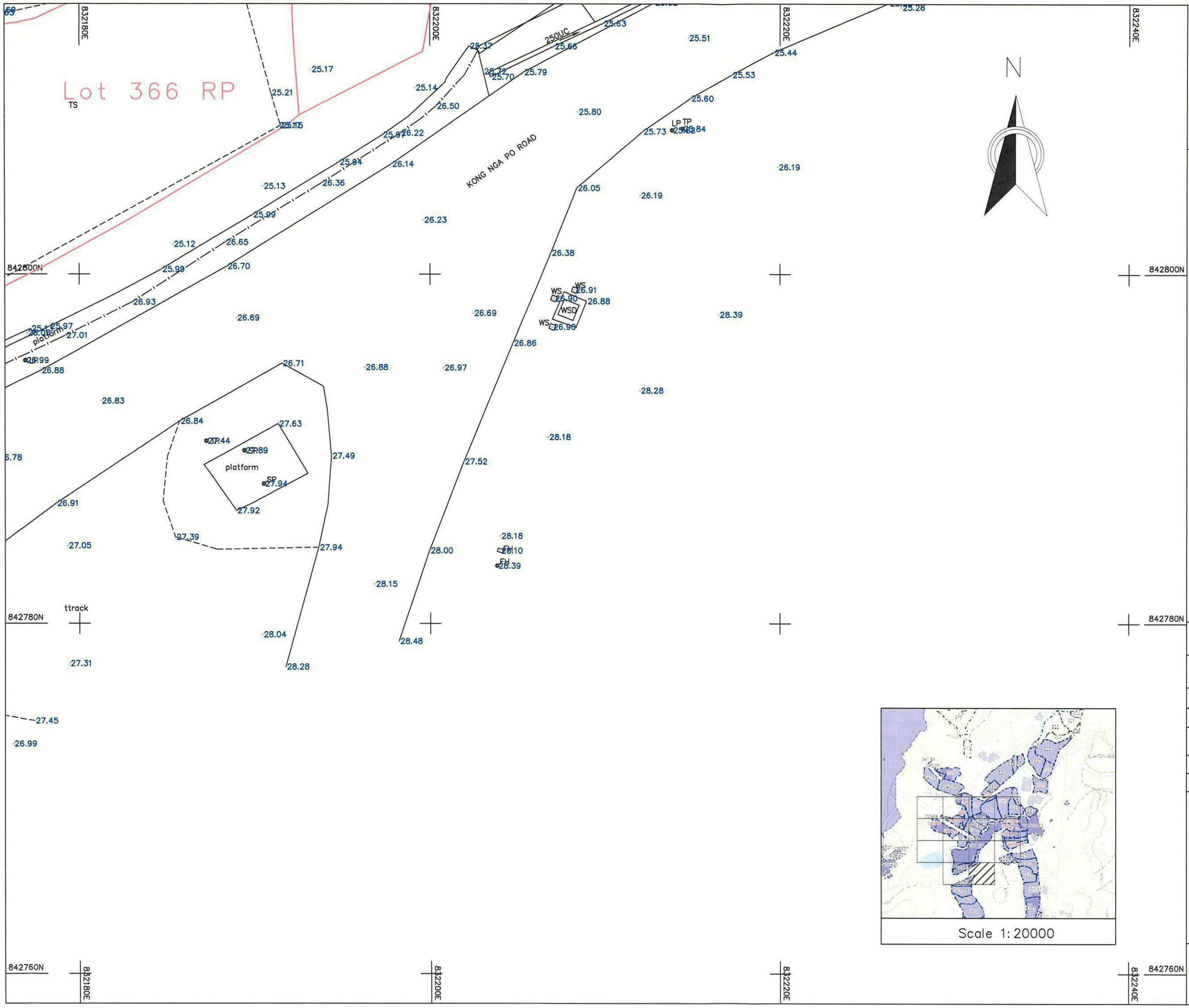

Scale 1:20000

Notes :

1. All levels are in meters referenced to Hong Kong principal datum (HKPD).
2. All levels are in meters referenced to Hong Kong metric grid (HK1980).
3. All spot levels position are indicated by the decimal point or a cross.
4. Lot boundary is showed approximalty for reference only.

Legend :

- SUBJECT LOT BOUNDARY LINE
- ADJACENT LOT BOUNDARY LINE
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Title :
Topographic Survey of Various Lots in DD87

Locality :
Sheung Shui, North

Survey Sheet No : 3-NW-22A/22B

Date of Survey : 14 April 2025

Plan No: DN/2212/87/351RP-TOPO (SHEET 14 OF 14)

Scale: 1:200 (A3)

Our Ref: 25019

Approved by:
Date : 15 May 2025

Tang Chi Ho
Registered Professional Surveyor
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APPENDIX C

Drainage Design Calculation

Design Calculation of U-Channel

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

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

Assumption:

Runoff Coefficient for grass	0.2		(Steep and sandy grassland)			
Runoff Coefficient for concrete	1.0					
Catchment A	3250	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	234.8	mm/hr
Catchment B	4040	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	236.1	mm/hr
Catchment C	2480	m^2	(Effective catchment inside subject lots)	Rainfall Intensity =	219.7	mm/hr
Catchment D	1879.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	218.0	mm/hr
Catchment E	18173.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	223.6	mm/hr
Catchment F	16404.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	224.8	mm/hr
Catchment G	7705.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	231.0	mm/hr
Catchment H	4570.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	225.8	mm/hr
Catchment I	5413.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	215.4	mm/hr
Catchment J	3507.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	283.2	mm/hr
Catchment K	4257.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	282.3	mm/hr
Catchment L	1497.0	m^2	(Effective catchment outside subject lots)	Rainfall Intensity =	310.4	mm/hr
Allowance	10.0		% reduction in flow area due to permissible degradation between desilting cycles			
Roughness of concrete	0.016					

Abbreviation and Terms:

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

Cathcment		USGL mPD	DSGL mPD	USIL mPD	DSIL mPD	AVG. DEPTH m	INVERT DIFF. m	LENGTH m	GRADIENT 1 in	RAINFALL INTENSITY mm/hr	RUNOFF COEF.	CATCH MENT m^2	Affected Area (catchment)	EFF. AREA m^2	DESIGN FLOW m^3/s	CUM. DESIGN FLOW m^3/s	SIZE mm	TYPE	VEL m/s	ALLOWANCE (REDUCTION %)	FLOW CAP. m^3/s	SPARE CAP. m^3/s	UTILISATION %	RESULT	A (m^2)	P (m)	R (m)
E	Branch 1	27.00	26.00	26.50	24.90	1.10	1.60	110.0	69	223.6	0.2	18173	E	3634.6	0.22590	0.22590	450	UC	2.3	10	0.998	0.772	23	OK	0.426	2.457	0.173
Resultant & Discharge															0.22590	0.22590	450	UC	2.3	10	0.998	0.772	23	OK	0.426	2.457	0.173
A	Branch 2	26.00	25.00	25.30	24.55	0.45	0.75	74.3	99	234.8	1	3250	A	3250	0.21212	0.21212	450	UC	1.7	10	0.276	0.064	77	OK	0.163	1.157	0.141
Resultant & Discharge															0.21212	0.21212	450	UC	1.7	10	0.276	0.064	77	OK	0.163	1.157	0.141
C	Branch 3	25.00	24.50	24.50	23.25	1.25	1.25	124.0	100	219.7	1	2480	C	2480	0.15150	0.15150	400	UC	1.8	10	0.797	0.645	19	OK	0.433	2.720	0.159
L		25.00	25.00	24.50	23.25	1.75	1.25	124.0	100	310.4	0.2	1497	L	299.4	0.02584	0.02584	400	UC	1.9	10	1.154	1.128	2	OK	0.613	3.720	0.165
Resultant & Discharge															0.17734	0.17734	400	UC	1.8	10	0.797	0.619	22	OK	0.433	2.720	0.159
D	Branch 4	25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	218.0	1	1879	D	1879	0.11389	0.11389	400	UC	1.8	10	0.521	0.407	22	OK	0.294	1.948	0.151
K		25.50	25.00	25.10	24.14	0.86	0.96	96.0	100	282.3	0.2	4257	K	851.4	0.06682	0.06682	400	UC	1.8	10	0.521	0.454	13	OK	0.294	1.948	0.151
Resultant & Discharge															0.18071	0.18071	400	UC	1.8	10	0.521	0.341	35	OK	0.294	1.948	0.151
I	Branch 5	24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	215.4	1	5413	I	5413	0.32420	0.32420	400	UC	1.9	10	0.986	0.662	33	OK	0.532	3.268	0.163
J		24.50	24.50	24.10	22.98	1.52	1.12	113.0	101	283.2	0.2	3507	J	701.4	0.05522	0.05522	400	UC	1.9	10	0.986	0.931	6	OK	0.532	3.268	0.163
Resultant & Discharge															0.37941	0.37941	400	UC	1.9	10	0.986	0.607	38	OK	0.532	3.268	0.163
I	Branch 6	24.50	24.00	24.10	23.24	0.76	0.86	85.0	99	215.4	1	5413	I	5413	0.32420	0.32420	400	UC	1.8	10	0.453	0.129	72	OK	0.258	1.748	0.148
Resultant & Discharge															0.32420	0.32420	400	UC	1.8	10	0.453	0.129	72	OK	0.258	1.748	0.148

I	Branch 7	24.50	24.00	24.10	23.27	0.73	0.83	83.1	100	215.4	1	5413	I	5413	0.32420	0.32420	400	UC	1.7	10	0.429	0.105	76	OK	0.247	1.688	0.147
Resultant & Discharge															0.32420	0.32420	400	UC	1.7	10	0.429	0.105	76	OK	0.247	1.688	0.147
B	Branch 8	27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	236.1	1	4040	B	4040	0.26518	0.26518	500	UC	1.9	10	0.684	0.419	39	OK	0.358	1.985	0.180
H		27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	225.8	0.2	4570	H	914	0.05737	0.05737	500	UC	1.9	10	0.684	0.627	8	OK	0.358	1.985	0.180
G		27.00	25.00	25.50	24.15	0.85	1.35	147.7	109	215.4	0.2	7705	G	1541	0.09229	0.09229	500	UC	1.9	10	0.684	0.592	13	OK	0.358	1.985	0.180
Resultant & Discharge															0.41485	0.41485	500	UC	1.9	10	0.684	0.269	61	OK	0.358	1.985	0.180
F	Branch 9	27.00	26.00	26.00	25.50	0.50	0.50	37.0	74	224.8	0.2	16404	F	3280.8	0.20500	0.20500	450	UC	2.0	10	0.368	0.163	56	OK	0.183	1.257	0.146
Resultant & Discharge															0.20500	0.20500	450	UC	2.0	10	0.368	0.163	56	OK	0.183	1.257	0.146
Pipe to Septic tank	pipe	27.00	26.00	24.90	22.90	3.10	2.00	60.2	30						0.20500	0.20500	450	UC	2.7	10	0.422	0.217	49	OK	0.159	1.414	0.113
Resultant & Discharge															0.20500	0.20500	450	UC	2.7	10	0.422	0.217	49	OK	0.159	1.414	0.113

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **A**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3250.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	1.653	m
L =	length which water takes the longest time to reach the design section	=	121.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.05 min say 7.05 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

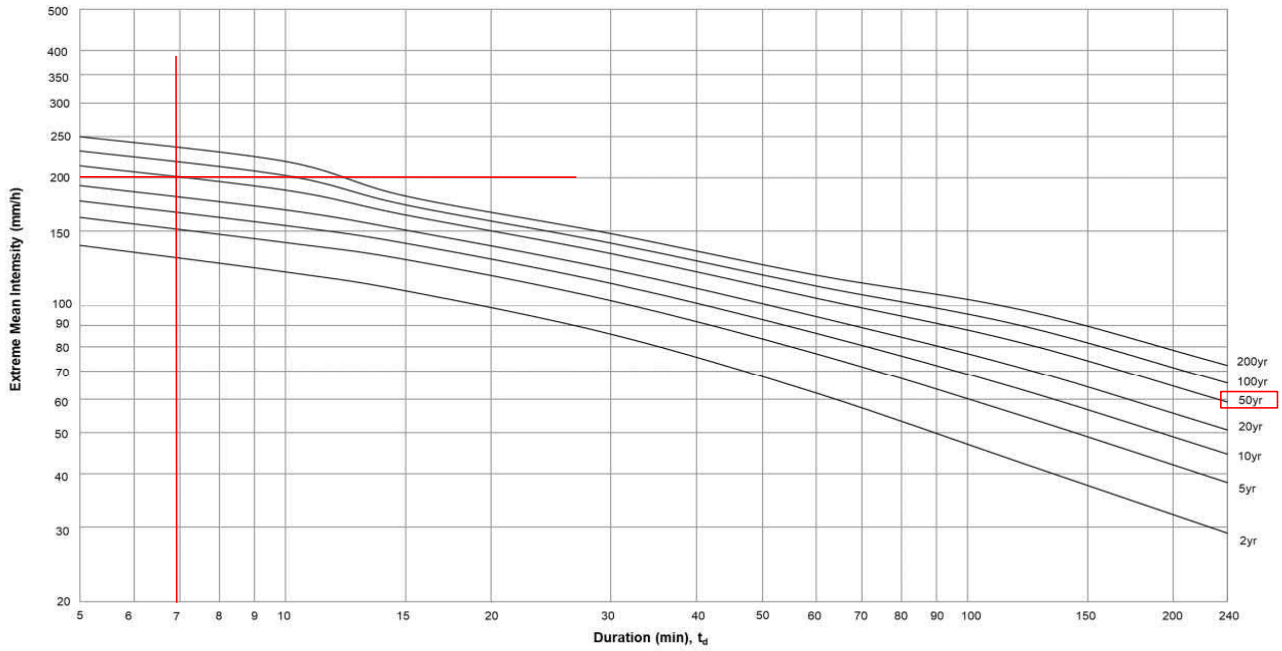


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	202.4	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	234.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **B**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4040.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	1.65	m
L =	length which water takes the longest time to reach the design section	=	121.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 6.90 min say 6.90 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

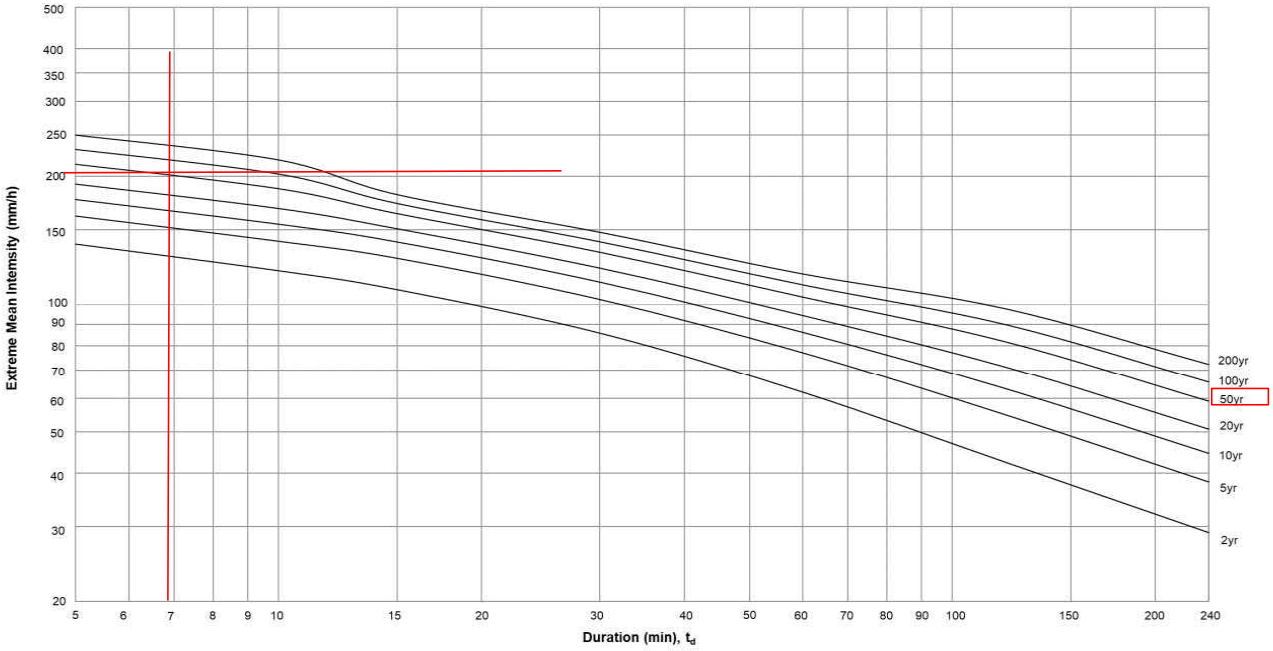


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	203.5	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	236.1	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **C**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	2480.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.43	m
L =	length which water takes the longest time to reach the design section	=	115.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.99 min say 8.99 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

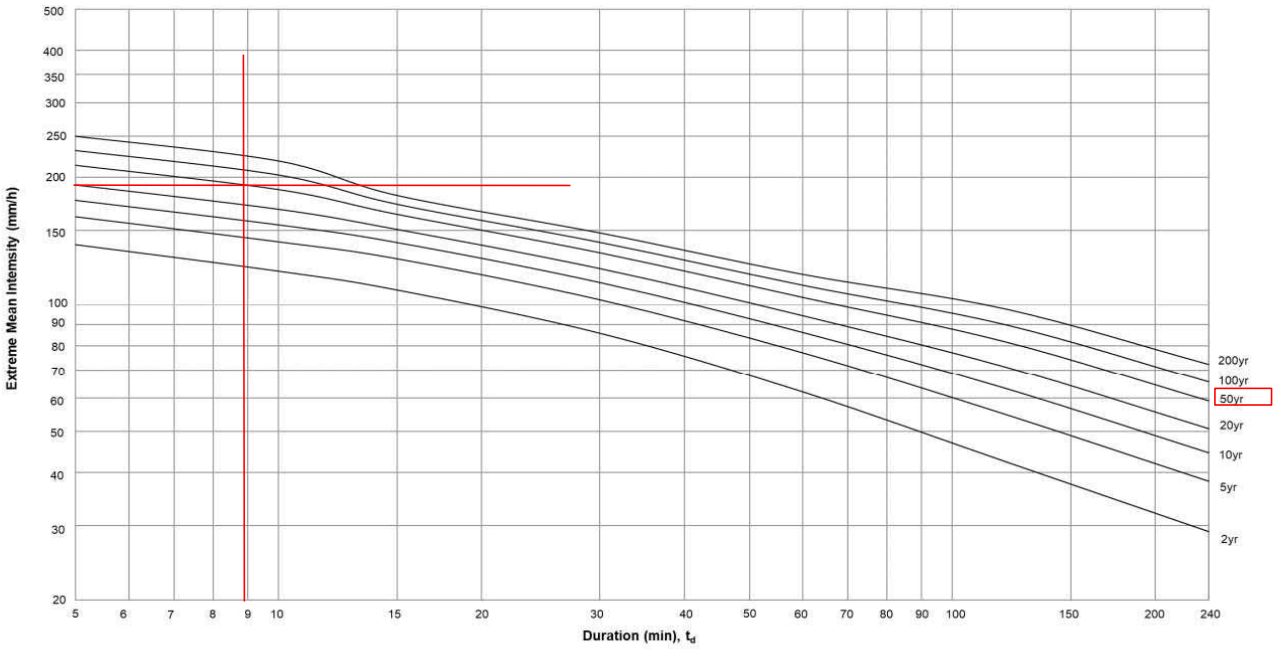


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	189.4	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	219.7	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **D**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1879.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.43	m
L =	length which water takes the longest time to reach the design section	=	115.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.24 min say 9.24 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

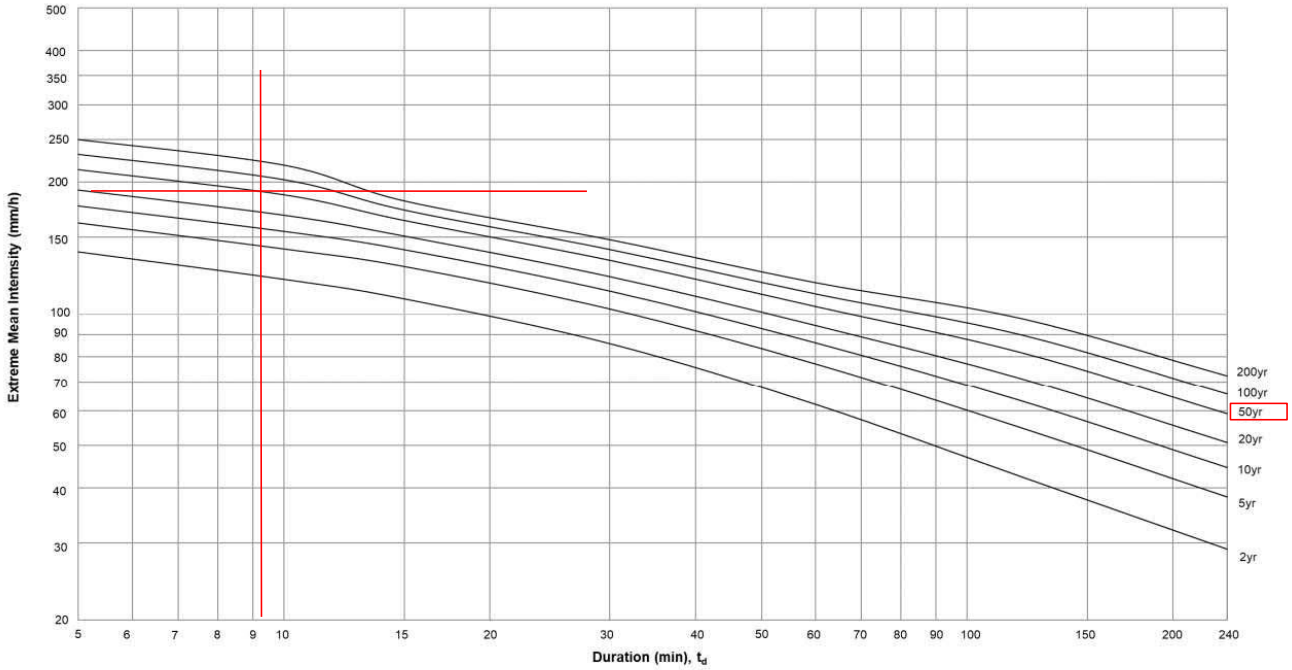


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	188.0	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	218.0	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **E**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	18173.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	7.97	m
L =	length which water takes the longest time to reach the design section	=	236.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.45 min say 8.45 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

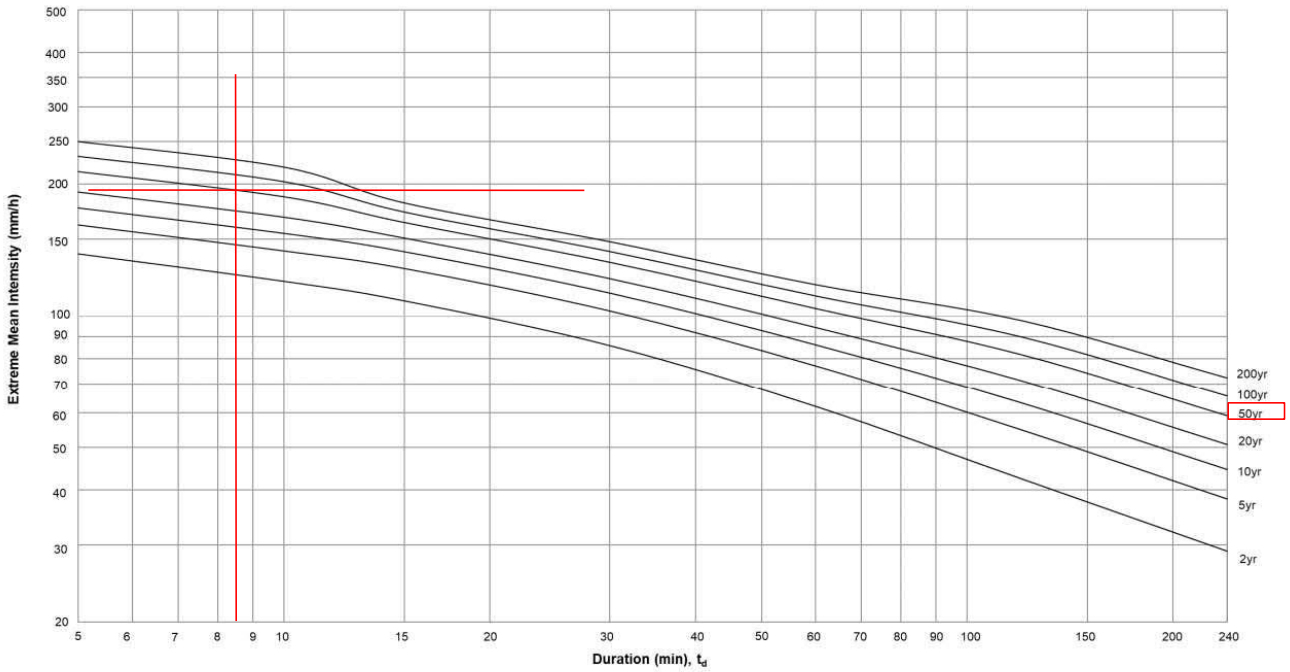


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	192.7	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	223.6	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **F**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	16404.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	9.24	m
L =	length which water takes the longest time to reach the design section	=	236.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.29 min say 8.29 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

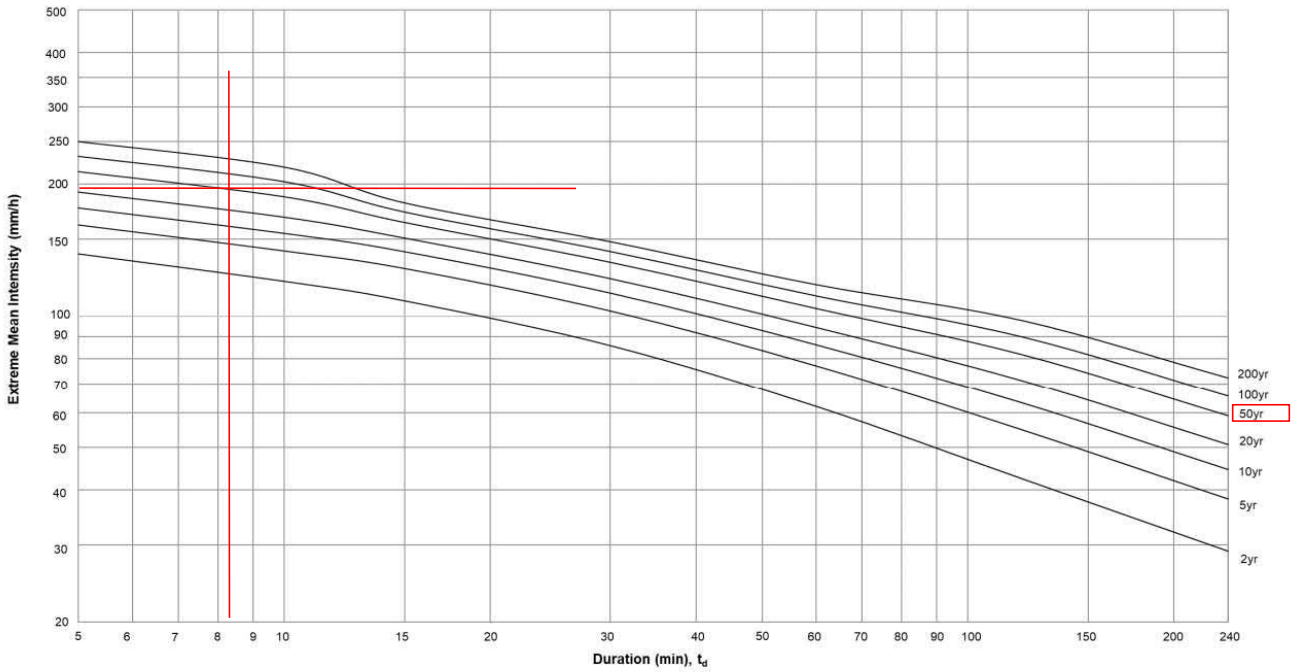


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	193.8	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	224.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **G**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	7705.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	9.29	m
L =	length which water takes the longest time to reach the design section	=	198.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 7.49 min say 7.49 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

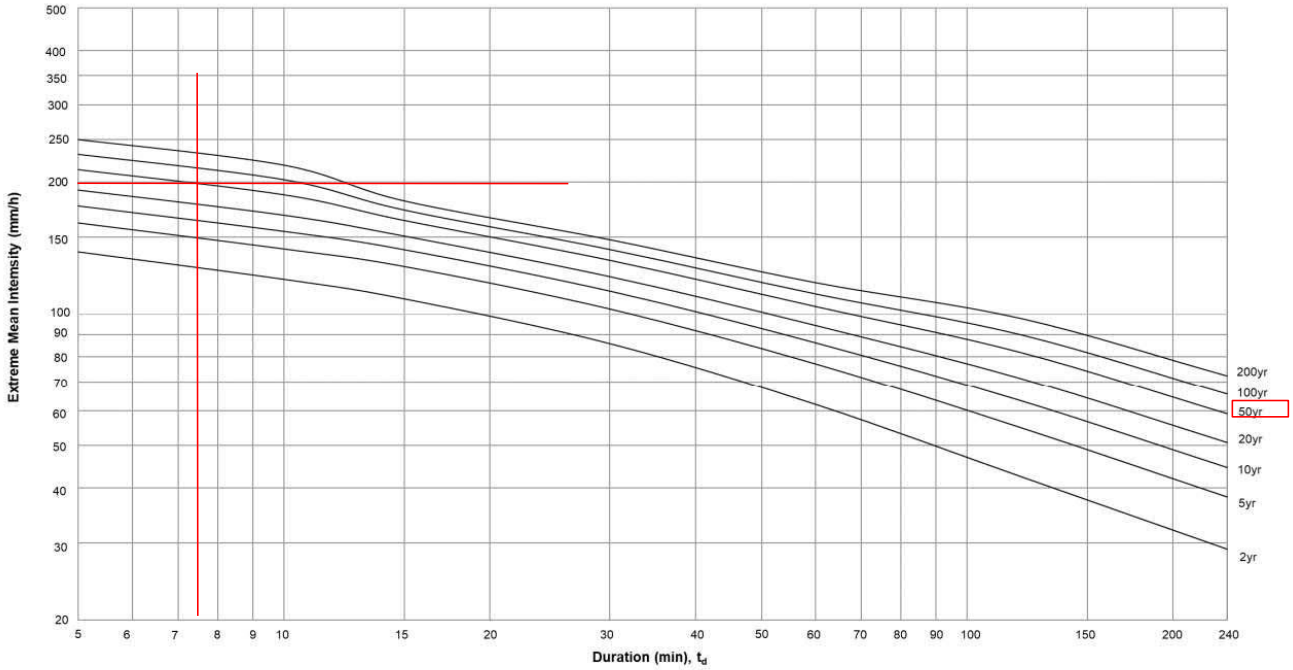


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	199.2	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	231.0	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **H**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4570.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	2.90	m
L =	length which water takes the longest time to reach the design section	=	162.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 8.15 min say 8.15 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

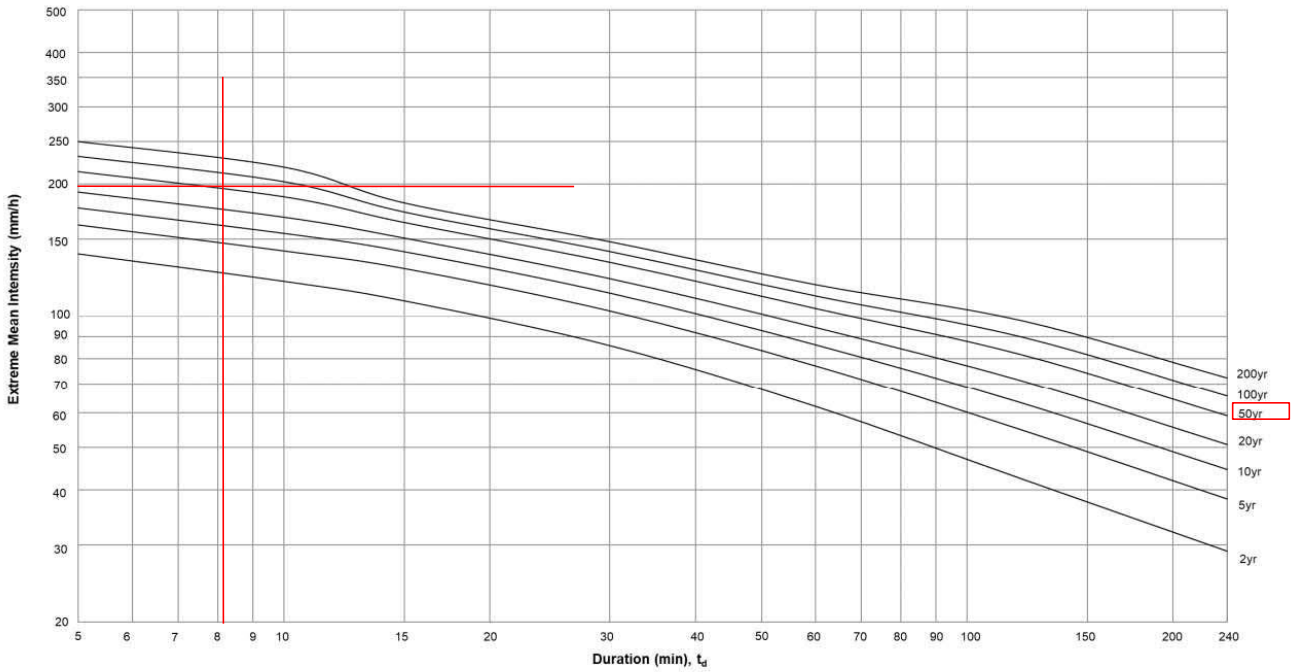


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	194.7	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	225.8	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **I**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	5413.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.38	m
L =	length which water takes the longest time to reach the design section	=	130.1	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 9.64 min say 9.64 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

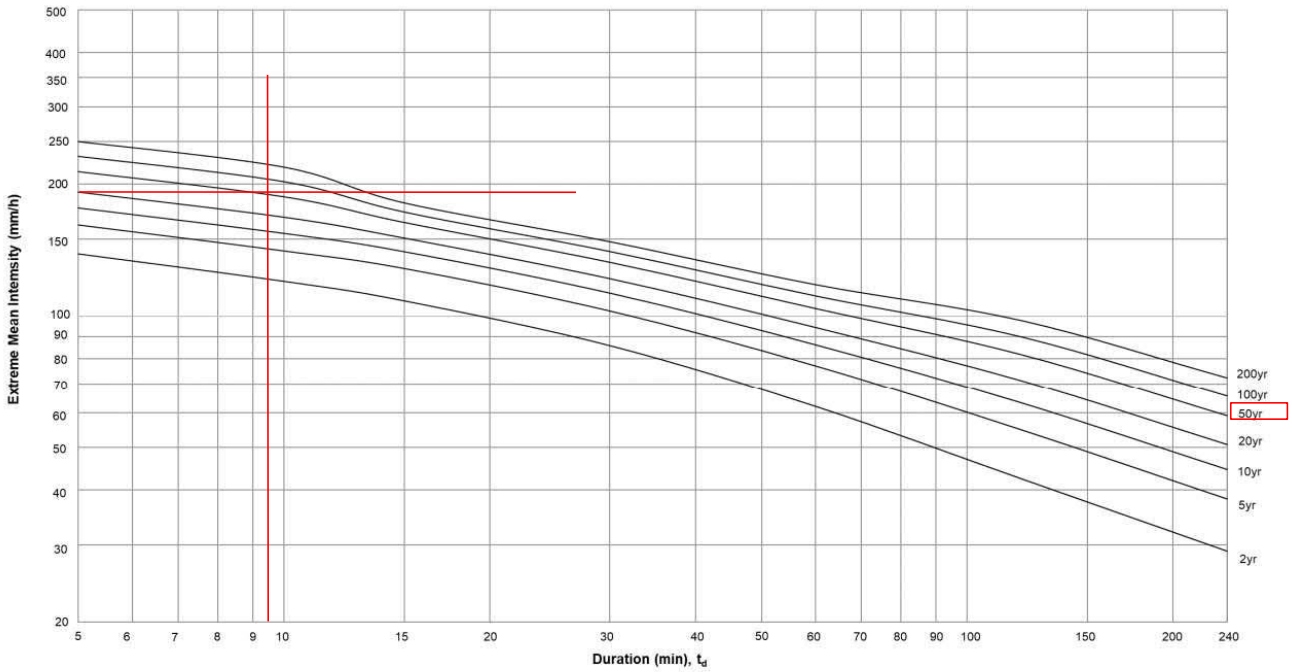


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	185.7	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	215.4	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **J**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	3507.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	32.89	m
L =	length which water takes the longest time to reach the design section	=	97.6	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 3.10 min say 3.10 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

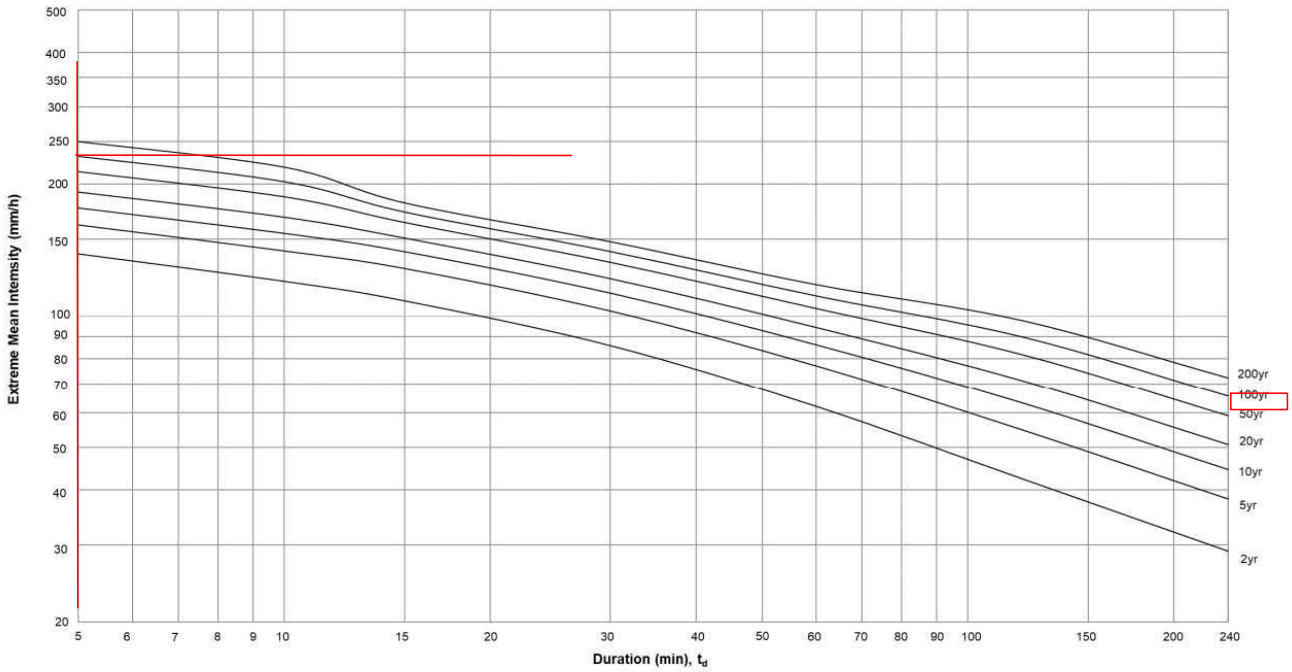


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	244.1	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	283.2	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **K**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	4257.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	31.10	m
L =	length which water takes the longest time to reach the design section	=	100.0	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 3.15 min say 3.15 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

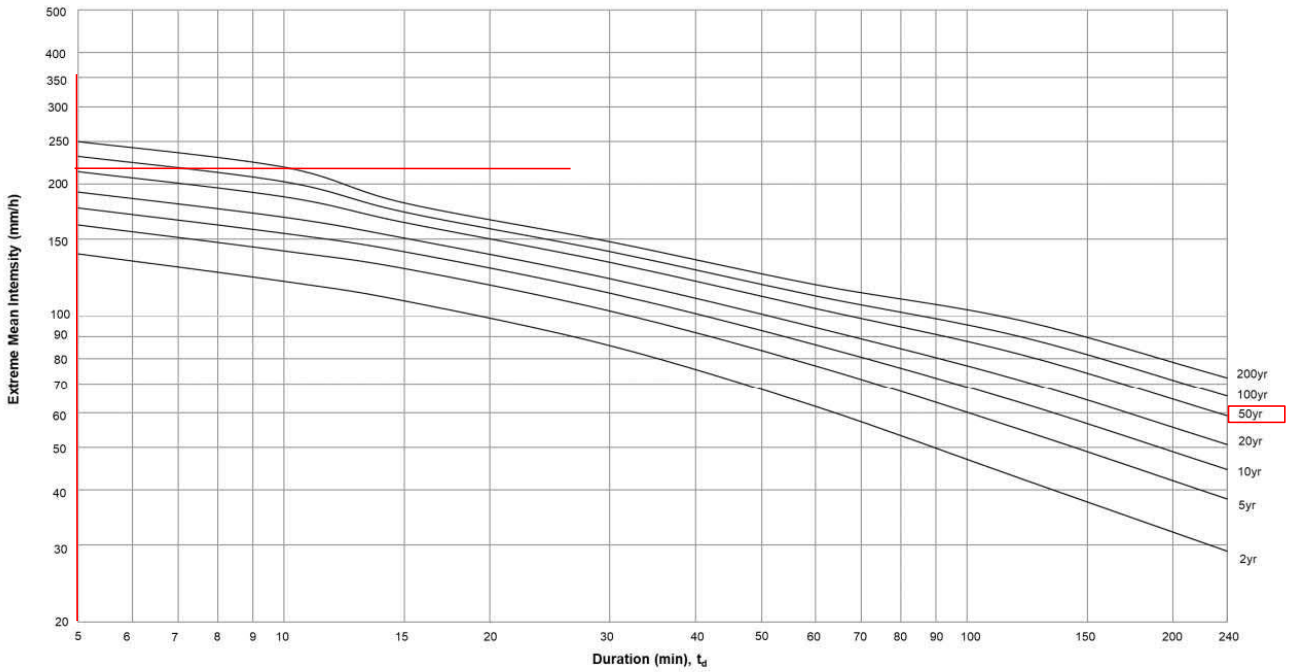


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	243.4	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	282.3	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Project : **S.16 Planning Application at Lots 346, 347 S.A, 347 S.B, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87**

Catchment Area : **L**

Determination of Time of Concentration and Designed Mean Rainfall Intensity

A =	area of catchment (m^2)	=	1497.0	m^2
H =	average fall (per 100m) from the summit of catchment to the point of design	=	0.81	m
L =	length which water takes the longest time to reach the design section	=	24.6	m

Time of concentration, $t = 0.14456 \times (L / (H^{0.2} \times A^{0.1}))$ = 1.78 min say 1.78 min

From Figure 4d of Corrigendum No.1 2024 Stormwater Drainage Manual, assuming storm return period is 1 in 50 years,

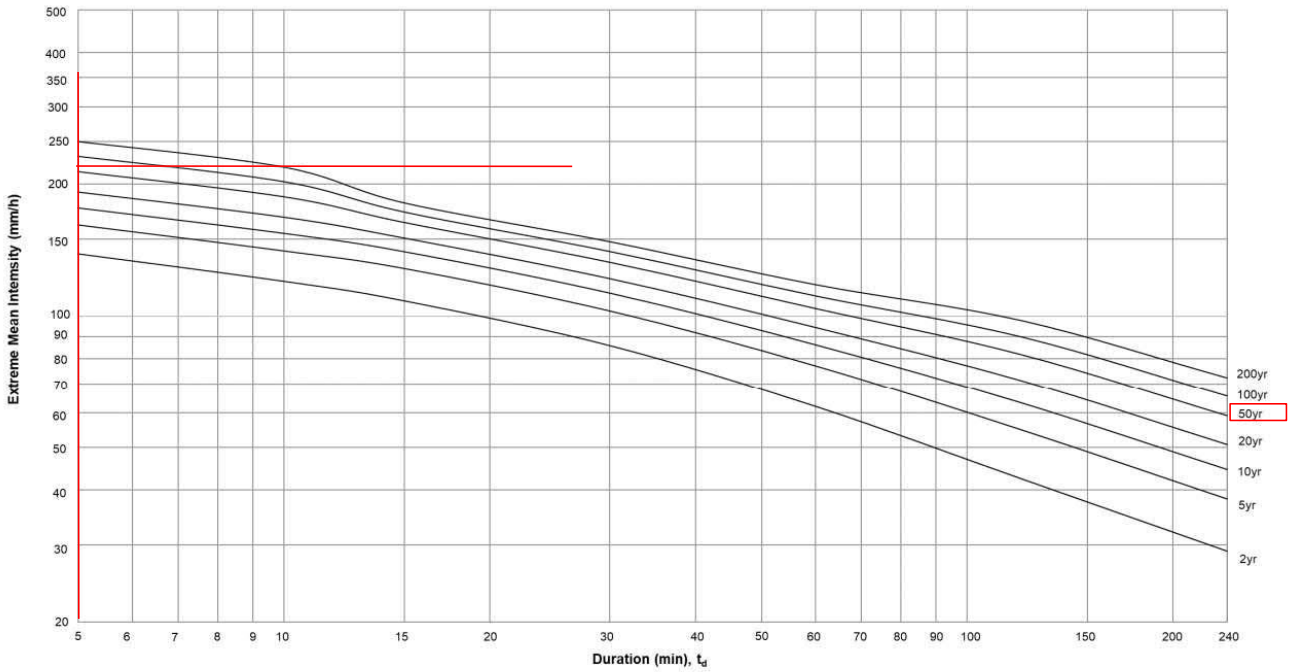


Figure 4d – Intensity-Duration-Frequency Curves of North District Area
(for durations not exceeding 4 hours)

i =	designed mean intensity of rainfall (mm/hr)	=	267.6	mm/hr
	Rainfall increased due to Climate Change (16%)	i x 1.16 =	310.4	mm/hr
	(With reference to Corrigendum-No.-1_2022-of-Stormwater-Drainage-Manual)			

Structural checking for the box culvert

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Stability)**	Project No.:	P25086

Ref. Output

1.0 Design Codes and Standards

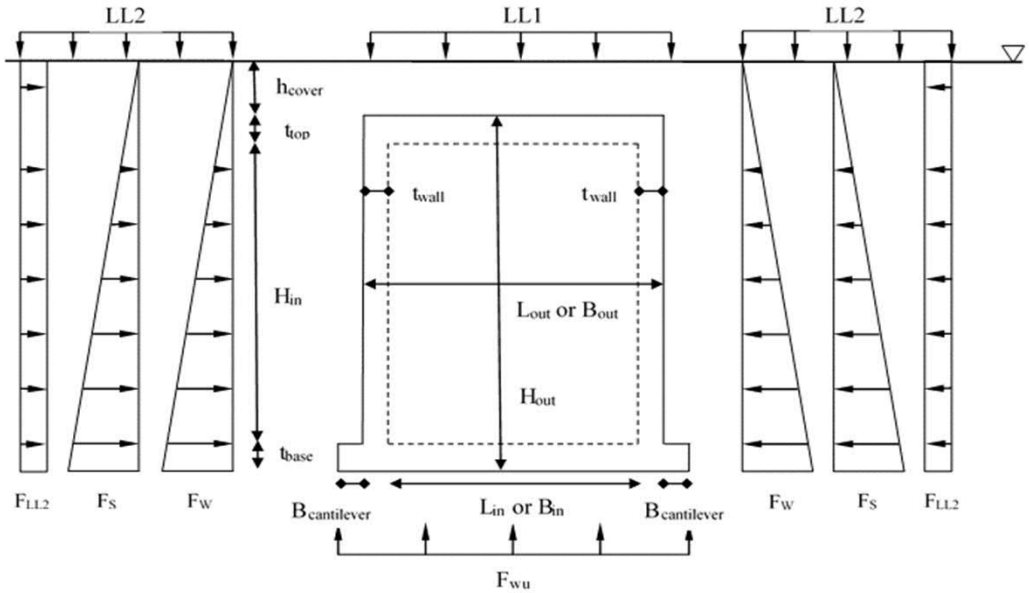
CoP DL & IL	Code of Practice for Dead and Imposed Loads 2011
Geoguide 1	Geoguide 1 "Guide to Retaining Wall Design (2017 Version)"
CoP Fdn. 2017	Code of Practice for Foundations 2017
CoP Conc. 2013	Code of Practice for Structural Use of Concrete 2013

2.0 Geotechnical Parameters and Assumptions

Density of Concrete	γ_{conc}	=	24.5	kN/m^3	(for reinforced concrete)
Density of Soil (Unsaturated)	γ_{soil}	=	19	kN/m^3	
Density of Soil (Saturated)	$\gamma_{soil, sat}$	=	20	kN/m^3	
Friction Angle of Soil	ϕ_{soil}	=	30	°	
Friction Angle of Backfill	$\phi_{backfill}$	=	30	°	
Density of Water	γ_{water}	=	10	kN/m^3	
Active coefficient	K_a	=	0.33		
Inactive coefficient	K_o	=	0.50		
Passive coefficient	K_p	=	3.00		

3.0 Dimension of Chamber

Cover of backfill	h_{cover}	=	0	mm	
Internal length	L_{in}	=	1000	mm	per m run
Internal width	B_{in}	=	3000	mm	
Internal height	H_{in}	=	2900	mm	= C.L. - D.T.I.L. of Manhole
Thickness of top slab	t_{top}	=	300	mm	
Thickness of base slab	t_{base}	=	300	mm	
Thickness of wall	t_{wall}	=	300	mm	
Outer length	L_{out}	=	1000	mm	per m run
Outer width	B_{out}	=	3600	mm	= Bin + 2 × twall + 2 × Bcantilever
Outer height	H_{out}	=	3500	mm	= Hin + 75 + trap + ttop + tbase
Maximum depth of manhole	H_{max}	=	3500	mm	= Hout + hcover
Depth of soil above W.L.	$D_{aboveWT}$	=	2143.33	mm	=C.L. - W.L.
Submerged soil depth	h_{water}	=	1356.67	m	=H_{max} - $D_{aboveWT}$



		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Stability)**	Project No.:	P25086

Ref.								Output
	4.0 Loading on Chamber							
	4.1 **Self weight of chamber, G**	**= 26.5 + 26.5 + 21.3**	=	**74.3**	**kN**			
	Weight of top slab =	= γconc × Bout × Lout × ttop	=	24.5 × 3.6 × 1 × 0.3	=	26.5	kN	
	Weight of base slab =	= γconc × Bout × Lout × tbase	=	24.5 × 3.6 × 1 × 0.3	=	26.5	kN	
	Weight of side wall =	= γconc × Hin × twall × Lout	=	24.5 × 2.9 × 1 × 0.3	=	21.3	kN	
	4.2 Hydrostatic pressure							
	Water pressure (Inner)	**= γwater × Bin × Lin × 0**	=	**0**	**kN**	Assume the inner space of the chamber does not store water		
	Water pressure (Outer)	**= γwater × Bout × Lout × Hout**	=	**126**	**kN**			
	Uplift	**= γwater × Bout × Lout × Hout**	=	**36**	**kN**	Uplifting force for the whole manhole = Fwu		
	4.3 Earth pressure							
	Soil weight on top slab	**= γsat × Bout × Lout × Cover**	=	**0**	**kN**	(Assume the soil is saturated)		
	Soil weight inside the chamber		=	**0**	**kN**	(Assume no soil inside the chamber)		
CoP DL & IL	4.4 Live loading on cover of top slab	q_{LL1}	=	20	kPa	(Consider the manhole located at public road)		
c.l. 3.9	**Q_{LL1}**	**qLL1 × Hout x Bout**	=	**72**	**kN**			
		q_{LL2}	=	20	kPa	(Assume Crtical Case)		
CoP Fdn. 2017	**5.0 Resistance to Sliding, Uplift and Overturning**							
C.l. 2.5.4 (3)	For design based on highest possible groundwater table							
	Self weight of chamber		=	74.3	kN	Weight of structural element		
	Soil weight on top slab		=	0	kN	Weight of backfill above the top slab		
	Soil weight inside the chamber		=	0	kN	No backfill inside the manhole		
	Minimum dead load	**G_{Total}**	=	**74.3**	**kN**			
	5.1 Checking for resistance to sliding and overturning							
	Since the sliding forces and the overturning moments acting on the manholes are balanced on each sides, checking on these 2 criteria are not required.							
C.l. 2.5.4 (3)	5.2 Checking for resistance to uplift force							
	Downward force due to the minimum deadload		=	74.3	kN	= G_Total		
	Downward force due to any permitted anchorage resistance		=	0	kN			
C.l. 2.5.4 (4)	**Resistance to uplift force**		=	**74.3**	**kN**	= Summation of the above 2 elements		
	Uplifting force due to groundwater	**F_{WU}**	=	**36**	kN	= Water pressure (Outer)		
	(3)(b) 1.1 times the uplift force due to groundwater		=	39.6	kN	= 1.1 × F_wu		
	(3)(b) 1.5 times the uplift force due to other loads		=	0	kN			
	(3)(b) Required resistance to uplift force		=	39.6	kN	= Summation of the above 2 elements		
				< Resistance to uplift force = 74.3 kN				**OK !**
Geoguide 1	**6.0 Bearing Capacity Checking**							
	Total gravity load on chamber		=	74.3	kN			
	Check base on Geoguide 1 "Guide to Retaining Wall Design"							
	Saturated Unit Weight of soil		=	20	kN/m^3	= $\gamma_{soil,\,sat}$		
	Effective Unit Weight of soil, γ'		=	10	kN/m^3			
	Factored Shearing Angle, ϕ'_f		=	30	degree	= ϕ_{soil}		
	Effective Cohesion, c'		=	0	kPa			
	Width of Foundation Base, B		=	3.6	m			
	Length of Foundation Base, L		=	1	m			
	Eccentricity of Resultant Load in B Direction, eB		=	0	m			
	Eccentricity of Resultant Load in L Direction, el		=	0	m			
	Effective Width, B'		=	3.6	m	= B – 2eB		
	Effective Length, L'		=	1	m	= L – 2eL		
	Depth of Embedment, d		=	3.5	m	= H_{max} (Assumed)		
	Total overburden pressure at maximum depth	q_t	=	70	kPa	= γsoil,sat × Hmax	= FS	
	Effective surcharge, q'		=	35	kPa	= γ' d cosβ		
	Vertival Load, V		=	74.3	kN			
	Horizontal Load, H		=	0	kN			
	The inclination of the foundation to the horizontal, α (<=45)		=	0	degree			
	Angle of Slope in front of Foundation, β		=	0	degree			
CoP Fdn. 2017	Maximum Bearing Pressure, q_{max}		=	20.6	kPa			
Table 2.1				**< presumed values for allowable bearing pressure = 50 kPa**				**OK !**

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Wall)**	Project No.:	P25086

Ref. Output

1.0 Design Codes and Standards

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2.0 Geotechnical Parameters and Assumptions

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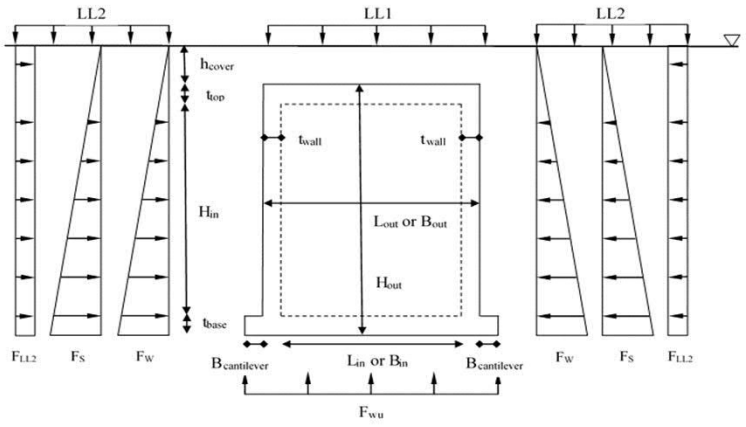
Density of Soil (Unsaturated)	γ_{soil}	=	19	kN/m^3	
Density of Soil (Saturated)	$\gamma_{soil, sat}$	=	20	kN/m^3	
Angle of Soil	ϕ_{soil}	=	30	°	
Angle of Backfill	$\phi_{backfill}$	=	30	°	
Density of Water	γ_{water}	=	10	kN/m^3	
Active lateral earth coefficient	K_a	=	0.33	=	(1-sinϕ) / (1+sinϕ)
At rest lateral earth coefficient	K_o	=	0.50	=	(1-sinϕ)
Passive lateral earth coefficient	K_p	=	3.00	=	1 / K_a

3.0 Dimension of Chamber

Ground level		=	+25.00	mPD	
Box culvert bottom level		=	+21.50	mPD	
Groundwater level		=	+22.86	mPD	(Assume 1/3 water level)
Height of Wall	H	=	3.50	m	(G.L. - Box Top)
Dry soil depth	h_1	=	2.14	m	(G.L. - G.W.T.)
Submerged soil depth	h_2	=	1.36	m	(G.W.T. - Box Top)
Thickness of wall	t_{wall}	=	300	mm	



		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Wall)**	Project No.:	P25086

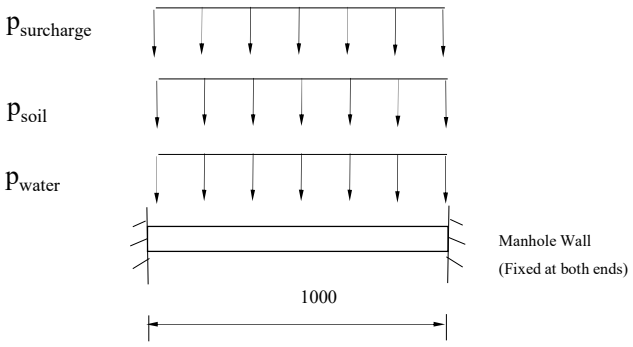
Ref. Output

4.0 Dimension of Wall

For each side wall of the manhole, we consider

Width	=	1000	mm	(per m run)
Height	=	3500	mm	
Thickness	=	300	mm	

5.0 Loading on Side Wall



Consider the side wall as a beam with both ends fixed per m width for analysis, we have

5.1 **Earth pressure:**

Consider at-rest lateral earth pressure,

$p_{s'} = K_0 \times \gamma_{soil} \times h_1 + K_0 \times (\gamma_{soil,sat} - \gamma_{water}) \times h_2$

$= 0.5 \times 19 \times 2.14333333333333 + 0.5 \times (20 - 10) \times 1.3566666666$ = 27.145 kN/m per m run Pressure due to soil

5.2 **Water pressure:**

$p_w = \gamma_{water} \times h_{water} =$ 10×3.5 = 35 kN/m per m run Pressure due to water

5.3 **Surcharge:**

q_{LL2} = 20 kN/m per m run

$p_{surcharge} = K_0 \times q_{LL2} =$ = 10 kN/m per m run CoP DL & IL Table 3.17

6.0 Forces on Side Wall

Load case	Unfactored UDL	Load factor	Factored UDL
Soil	27.145	1.4	38.003
Water	35	1.4	49
Surcharge	10	1.6	16
Total =	72.145		103.003

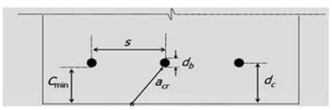
	SLS	ULS	
Max. Shear Force on side wall = wL/2	36.07	51.50	kN
Max. Bending Moment on side wall = $wL^2/12$	6.01	8.58	kNm

Prepared by:
Check by:

Project: Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che — Date: 13/10/2025

Subject: Structural Design for Box Culvert **(Checking of Wall)** — Project No.: P25086

Ref.									Output
CoP Conc. 2013	**7.0 RC Design against Bending Moment and Shear Force**								
	For the dimension of wall with,					V_{ULS} =	51.5	kN per m run	
	Width =	1000	mm	WITH		M_{ULS} =	8.6	kNm per m run	
	Height =	3500	mm			V_{SLS} =	36.1	kN per m run	
	Thickness =	300	mm			M_{SLS} =	6.0	kNm per m run	
	Consider the RC design in a width of 1m, we have								
	7.1 **Reinforcement for moment:**								
	With M_ULS,wall = 8.6 kNm per m run								
	Width			b	=	1000	mm		
	Effective depth			d	=	245	mm		
	Yield strength of steel			f_y	=	500	N/mm^2	(Table 15 of sewerage manual for XA Exposure Condition)	
	Concrete strength			f_{cu}	=	30	N/mm^2	(Table 15 of sewerage manual for XA Exposure Condition)	
	Span			L	=	1000	mm		
	Wall thickness			t_{wall}	=	300	mm		
Table 4.2	Concrete cover				=	50	mm	(Table 15 of sewerage manual for XA Exposure Condition)	
c.l. 6.1	7.1.1 Checking for compression steel								
eq 6.8	K' (for fcu ≦ 45N/mm^2)				=	0.156			
eq 6.7	$K = M / (f_{cu} \times b \times d^2)$				=	0.005	< K' = 0.156	**Compression reinforcement IS NOT required**	
	7.1.2 Checking for tensile steel								
eq 6.10	$z = d [0.5 + \sqrt{(0.25 - K/0.9)}]$				=	0.995d	**> 0.95d, and thus use 0.95d**	= 233	mm
eq 6.11	Required steel reinforcement	$A_{s,req} = M / (0.87 \times f_y \times z)$			=	85	mm^2		
	Provided steel reinforcement =	T	10		@	200	mm spacing		
		$A_{s,prov}$			=	393	mm^2	> Required steel reinforcement	**OK !**
	Percentage of reinforcement	$p_s = A_{s,prov} / bd$			=	0.16	%		
c.l. 9.3.1					>	minimum percentage of steel =	0.13	%	**OK !**
c.l. 9.2.1.3					<	maximum percentage of steel =	4.00	%	**OK !**
	7.1.3 Checking for shear reinforcement								
	Design shear stress	$v = V / (b_v \times d)$			=	0.210	MPa		
c.l. 6.1.2.5	Design concrete shear stress			v_c	=	$0.79/\gamma_m \times p_s^{1/3} \times (400/d)^{1/4} \times (\max(40, f_{cu})/25)^{1/3}$			
					=	0.454	MPa	> v	**Shear reinforcement IS NOT required**
c.l. 7.3.4	7.1.4 Checking for deflection								
Table 7.4	$M_{SLS} / (b \times d^2)$				=	0.100			
Table 7.4	Design service stress in tension reinforcement			f_s	=	72	N/mm^2	$= 2/3 \times f_y \times A_{st,req} / A_{st,prov} \times 1/\beta_b$	$< 0.8 \times f_y$
Table 7.4	Modification factor = $0.55 + (477 - f_s) / (120 [0.9 + M/bd^2])$				=	4.3	> 2.0	Take 2.0	
Table 7.3	Basic span / effecive depth ratio				=	7	(for cantilever)		
c.l. 7.3.4.4	Modified span / effecive depth ratios (for tensile reinforcement)				=	14	= Basic span / d × Modification factor (Tensile)		
	Actual span / effecive depth ratio				=	4	< 14		**OK !**
	7.1.5 Checking for crack width								
c.l. 7.2.1	Allowable surface crack width			w	=	0.2	mm		
c.l. 7.2.3	Thickness of element			h	=	300	mm	$= t_{wall}$	
	Width of element to be considered			b	=	1000	mm	1m width	
	Effective depth			d	=	245	mm		
	Diameter of steel bars			d_b	=	10	mm		
	Spacing of steel bars			s	=	200	mm		
	Concrete Cover			$c = c_{min}$	=	50	mm		
	Concrete strength			f_{cu}	=	30	N/mm^2		
	Strength of steel			f_s	=	72	N/mm^2		
	Young's Modulus of steel			E_s	=	200	kN/mm^2		
	Applied moment			M_{SLS}	=	6.0	kNm		
	Area of reinforcement			$A_{s,prov}$	=	393	mm^2		
	Depth of the neutral axis			x	=	122.5	mm	≦ 0.5d	
c.l. 7.2.3	Strain in the tension reinforcement			ε_s	=	0.0004	= fs / Es		
appendix	a = 300 = h								
appendix	ε_1 = 0.0005 = ε_s (a-x) / (d-x)								
	For limiting design surface crack width of 0.2mm								
	(BS8007) ε_2 = $[b_t(h-x)(a'-x)]/[3E_sA_s(d-x)]$ (from CoP Conc. 2013)							= 0.0011	
	ε_m = $\varepsilon_1 - \varepsilon_2$ = -0.0006								
	Effective cover = $d_c = c + d_b / 2$ = 55.0 mm								
	a_{cr} = $[(s/2)^2 + d_c^2]^{0.5} - d_b / 2$				=	109.1	mm		
	Design surface crack width			ω	=	$3a_{cr}\varepsilon_m / [1+2(a_{cr}-c_{min}) / (h-x)]$			
					=	-0.11	mm		
					<	Allowable surface crack width = 0.2 mm			**OK !**



Prepared by:
Check by:

Project: Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che — Date: 13/10/2025

Subject: Structural Design for Box Culvert **(Checking of Base Slab)** — Project No.: P25086

Ref. — Output

1.0 Dimension of Base Slab

For the base slab of the manhole, we consider

Width = 3600 mm
Length = 1000 mm
Thickness = 300 mm

2.0 Loading on base slab

Consider the loading of base slab more conservatively as the loading on wall, we have

Shear Force on side wall (ULS)	$V_{ULS,wall}$ =	=	51.5	kN per m run
Bending Moment on side wall (ULS)	$M_{ULS,wall}$ =	=	8.6	kNm per m run
Shear Force on side wall (SLS)	$V_{SLS,wall}$ =	=	36.1	kN per m run
Bending Moment on side wall (SLS)	$M_{SLS,wall}$ =	=	6.0	kNm per m run

CoP Conc. 2013

3.0 RC Design against Bending Moment and Shear Force

For the dimension of base slab with,

Width = 3600 mm
Length = 1000 mm
Thickness = 300 mm

WITH

V_{ULS} = 51.5 kN per m run
M_{ULS} = 8.6 kNm per m run
V_{SLS} = 36.1 kN per m run
M_{SLS} = 6.0 kNm per m run

Consider the RC design in a width of 1m, we have

3.1 Reinforcement for moment:

With M_ULS,slab = 8.6 kNm per m run

Width	b	=	1000	mm	
Effective depth	d	=	265	mm	
Yield strength of steel	f_y	=	500	N/mm^2	
Concrete strength	f_{cu}	=	30	N/mm^2	
Span	L	=	3600	mm	
Base slab thickness	t_{base}	=	300	mm	
Table 4.2 Concrete cover		=	30	mm	

c.l. 6.1 3.1.1 Checking for compression steel

eq 6.8 K' (for fcu ≦ 45N/mm^2) = 0.156

eq 6.7 $K = M / (f_{cu} \times b \times d^2)$ = 0.004 < K' = 0.156 **Compression reinforcement IS NOT required**

3.1.2 Checking for tensile steel

eq 6.10 $z = d [0.5 + \sqrt{} (0.25 - K/0.9)]$ = 1d **> 0.95d, and thus use 0.95d** = 252 mm

eq 6.11 Required steel reinforcement $A_{s,req} = M / (0.87 \times f_y \times z)$ = 78 mm^2

Provided steel reinforcement T 10 @ 200 mm spacing $A_{s,prov}$ = 393 mm^2

Percentage of reinforcement $p_s = A_{s,prov} / bd$ = 0.15 %

c.l. 9.3.1 > minimum percentage of steel = 0.13 % **OK !**

c.l. 9.2.1.3 < maximum percentage of steel = 4.00 % **OK !**

3.1.3 Checking for shear reinforcement

Design shear stress $v = V / (b_v \times d)$ = 0.194 MPa

c.l. 6.1.2.5 Design concrete shear stress v_c = $0.79/\gamma_m \times p_s^{1/3} \times (400/d)^{1/4} \times (\max(40, f_{cu})/25)^{1/3}$

= 0.434 MPa > v **Shear reinforcement is NOT required**

c.l. 7.3.4 3.1.4 Checking for deflection

Table 7.4 $M_{SLS} / (b \times d^2)$ = 0.086

Table 7.4 Design service stress in tension reinforcement f_s = 66 N/mm^2 $= 2/3 \times f_y \times A_{st,req} / A_{st,prov} \times$ < $0.8 \times f_y$ $\beta_b = 1$

Table 7.4 Modification factor = $0.55 + (477 - f_s) / (120 [0.9 + M/bd^2])$ = 4.4 > 2.0 Take 2.0

Table 7.3 Basic span / effecive depth ratio = 7 (for cantilever)

c.l. 7.3.4.4 Modified span / effecive depth ratios (for tensile reinforcement) = 14 = Basic span / d × Modification factor (Tensile)

Actual span / effecive depth ratio = 14 < 14 **OK !**

		Prepared by:	
		Check by:	
Project:	Drainage Consultancy Services for S.16 Planning Application for Proposed Temporary Open Storage and Ancillary Office at Lot Nos 346 in DD87 at Ping Che	Date:	13/10/2025
Subject:	Structural Design for Box Culvert **(Checking of Base Slab)**	Project No.:	P25086

Ref. Output

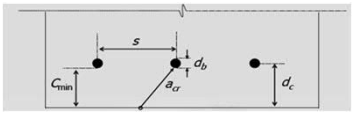
3.1.5 Checking for crack width

c.l. 7.2.1	Allowable surface crack width	w	=	0.2	mm		
c.l. 7.2.3	Thickness of element	h	=	300	mm	= t_{base}	
	Width of element to be considered	b	=	1000	mm	1m width	
	Effective depth	d	=	265	mm		
	Diameter of steel bars	d_b	=	10	mm		
	Spacing of steel bars	s	=	200	mm		
	Concrete Cover	$c = c_{min}$	=	30	mm		
	Concrete strength	f_{cu}	=	30	N/mm^2		
	Strength of steel	f_s	=	66	N/mm^2		
	Young's Modulus of steel	E_s	=	200	kN/mm^2		
	Applied moment	M_{SLS}	=	6.0	kNm		
	Area of reinforcement	$A_{s,prov}$	=	393	mm^2		
	Depth of the neutral axis	x	=	132.5	mm	≦ 0.5d	
c.l. 7.2.3	Strain in the tension reinforcement	ε_s	=	0.0003	= fs / Es		

appendix	a	=	300	= h
appendix	ε_1	=	0.0004	= ε_s (a-x) / (d-x)

For limiting design surface crack width of 0.2mm

(BS8007)	ε_2	=	$[b_t(h-x)(a'-x)]/[3E_sA_s(d-x)]$	(from CoP Conc. 2013)		=	0.0009
	ε_m	=	$\varepsilon_1 - \varepsilon_2$	=	-0.0005		
Effective cover		=	$d_c = c + d_b / 2$	=	35.0	mm	
	a_{cr}	=	$[(s/2)^2 + d_c^2]^{0.5} - d_b / 2$		=	100.9	mm
Design surface crack width				ω	=	$3a_{cr}\varepsilon_m / [1+2(a_{cr}-c_{min}) / (h-x)]$	
					=	-0.08	mm
					<	Allowable surface crack width = 0.2 mm	**OK !**



APPENDIX D

Design Drawings

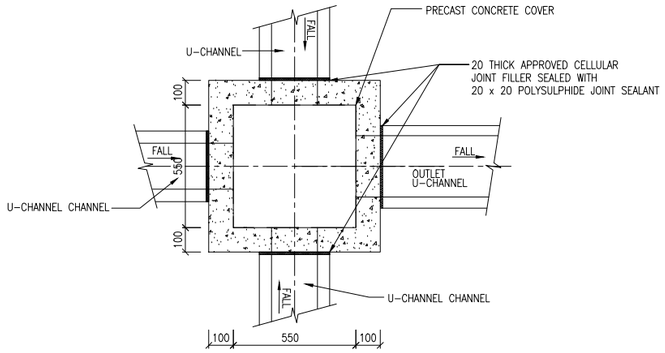
ISO A1 594mm x 841mm

GENERAL NOTES:

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

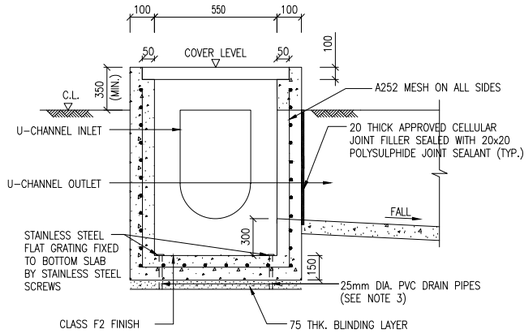
SCHEDULE OF CATCHPIT WITH SAND TRAP

CATCHPIT NO.	CATCHPIT TYPE	COVER LEVEL (mPD)	BTM. LEVEL (mPD)	INLET LEVEL (mPD)	OUTLET LEVEL (mPD)
CP1	2	+26.00	+25.24	+25.40	+25.39
CP2	2	+24.50	+22.82	A: +22.98 B: +23.25	+22.97
CP3	2	+25.00	+23.73	+23.89	A: +23.88 B: +23.88
CP4	2	+25.00	+23.98	+24.14	+24.13
CP5	1	+25.00	+24.51	+24.67	+24.66
CP6	1	+24.50	+23.12	+23.28	+23.27
CP7	1	+24.50	+23.39	A: +23.55 B: +23.56	+23.54
CP8	2	+24.00	+23.08	A: +23.24 B: +23.27	+23.23
CP9	1	+24.00	+23.38	+23.54	+23.53
CP10	2	+25.00	+23.99	+24.15	+24.14
CP11	1	+26.00	+25.21	+25.37	+25.36
CP12	1	+26.00	+25.28	+25.44	+25.43
CP13	1	+26.00	+25.33	A: +25.49 B: +25.50	+24.48
CP14	1	+26.00	+24.64	A: +24.80 B: +25.18 C: +24.90	+24.79
CP15	2	+25.00	+24.00	A: +24.55 B: +24.16	+24.15
CP16	1	+24.50	+24.00	A: +23.51 B: +23.40 C: +23.39	+24.38



PLAN OF CATCHPIT (TYPE 1&2)

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



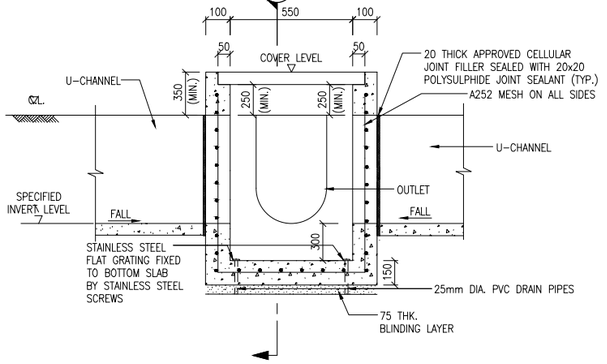
SECTION A

SCALE: 1:100



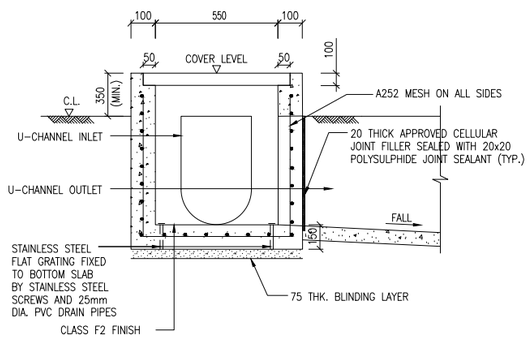
PLAN

SCALE 1:600



SECTION OF TYPE 2 CATCHPIT

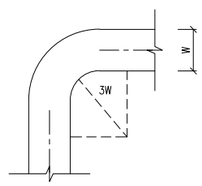
SCALE 1:100



SECTION B

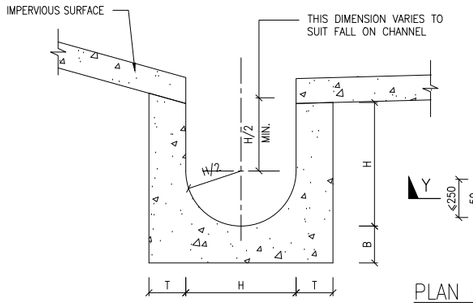
SCALE: 1:100

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



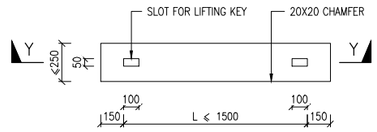
CHANNEL CHANGING DIRECTION THROUGH BENDS

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



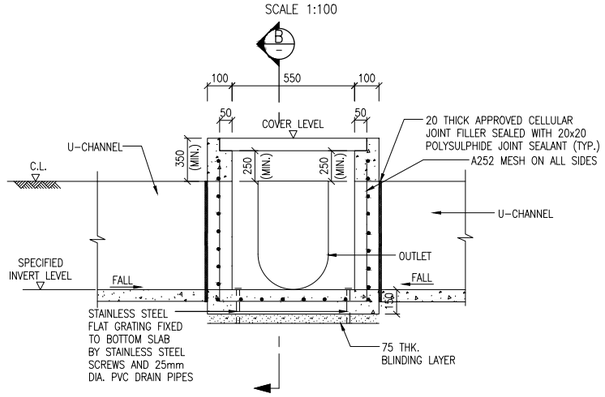
DETAILS OF U-CHANNEL

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



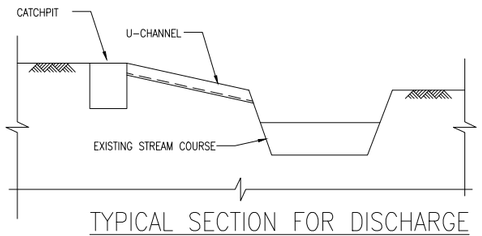
PLAN OF PRECAST CONCRETE COVERS

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



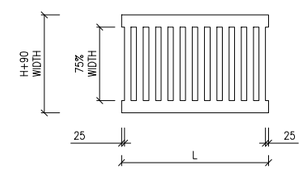
SECTION OF TYPE 1 CATCHPIT

SCALE 1:100

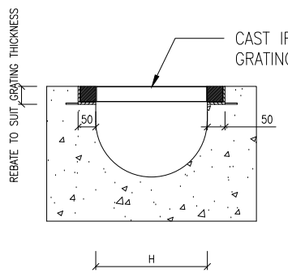


TYPICAL SECTION FOR DISCHARGE CONNECTION

N.T.S.

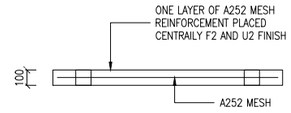


L = 600mm FOR H < 375mm
L = 400mm FOR H > 375mm



CAST IRON GRATING FOR U-CHANNELS

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



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

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

B.D. REF.

F.S.D. REF.

LEGEND:

- PROPOSED APPLICATION SITE
- STRUCTURE
  - A: 737 sq.m (about)
  - B: 220 sq.m (about)
  - C: 1200 sq.m (about)
  - D: 220 sq.m (about)
  - E: 220 sq.m (about)
- OPEN-SIDED STRUCTURE
  - F: 393 sq.m (about)
- PRIVATE CARPARKING SPACE 5m(L) X 2.5m(W) (10 nos.)
- L/UL BAY FOR LGVS 7m(L) X 3.5m(W) (12 nos.)
- L/UL BAY FOR HGVS 11m(L) X 3.5m(W) (12 nos.)
- PROPOSED 11m WIDE VEHICULAR ACCESS

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MP		05/25
DESIGNED BY:	MP		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	AS SHOWN (A3)		
CAD FILE:	WNG_25086_C_DRA_001		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

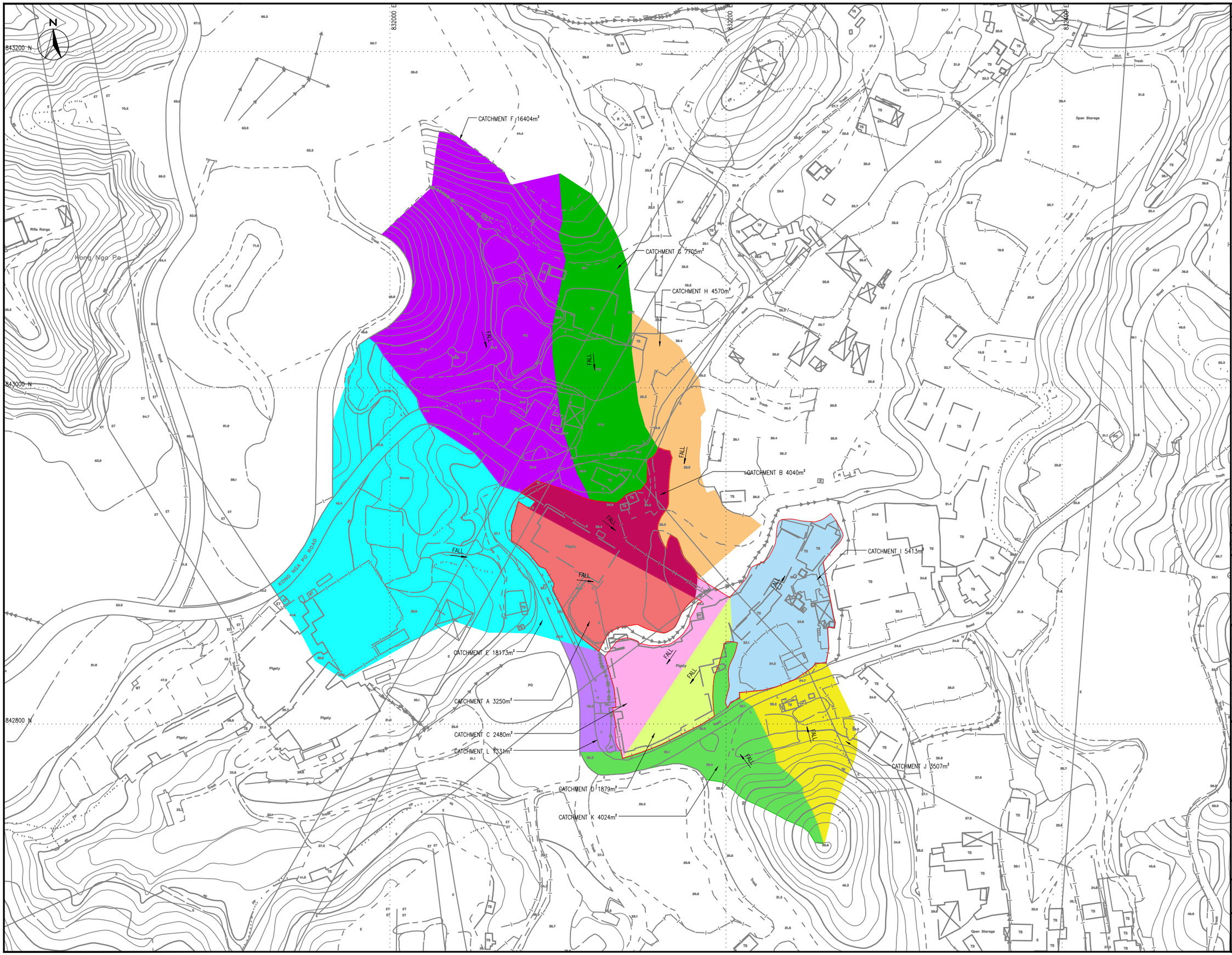
DRAWING TITLE:
GENERAL NOTES AND LAYOUT PLAN

DRAWING NO:	REV:
WNG/25086/C/DRA/001	B

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.
和翔顧問工程師有限公司

Plot File by: USER42 15/1/2026 5:44:23 pm
PATH \\192.168.1.26\eng4-r\2025\P25086 (Drainage Consultancy Services For S.16 Planning Application For Proposed Temporary Open Storage And Ancillary Office At Lot Nos 346 In DD87 At Ping Che)\05-Drawing\20251010\WNG_25086_C_DRA_001.dwg

ISO A3 297mm x 420mm



B.D. REF.

F.S.D. REF.

LEGEND:

FLOW DIRECTION

BOUNDARY OF LOTS FOR THIS APPLICATION

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:

DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:

PROPOSED EFFECTVE CATCHMENT AREA FOR SURFACE RUNOFF AFFECTING SUBJECT LOTS

DRAWING NO: WNG/25086/C/DRA/002

REV: –

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.
和翔顧問工程師有限公司

ISO A3 297mm x 420mm

832100E 832150E 832200E 832250E

842950N 842900N 842850N 842800N

CP11
C.L. +26.00mPD
I.L.+25.37mPD

CP12
C.L. +26.00mPD
I.L.+25.44mPD

500 UC (FALL 1:100)

PROPOSED VEHICULAR ACCESS

U CHANNEL (BRANCH 9)
I.L.+26.00mPD

COVERED CHANNEL (HEAVY DUTY)

COVERED CHANNEL (LIGHT DUTY)

CP13
C.L. +26.00mPD
I.L.A +25.49mPD
I.L.B +25.50mPD

3000

500 UC (FALL 1:100)

U CHANNEL (BRANCH 1)
I.L.+26.50mPD

U CHANNEL (BRANCH 8)
I.L.+25.50mPD

500DIA. PIPE

CP14
I.L.A. +24.80mPD
I.L.B. +25.06mPD
I.L.C. +24.90mPD

STORMWATER STORAGE TANK A

STORMWATER STORAGE TANK A
5m(W) x 4m(L)x2.5m(H)
WITH 500 DIA. INLET PIPE
I.L.+25.04mPD

450 UC (FALL 1:100)

500 UC (FALL 1:100)

3000

COVERED CHANNEL (LIGHT DUTY)

CP10
C.L. +25.00mPD
I.L.+24.15mPD

UNDERGROUND CONCRETE BOX CULVERT TO BE CONSTRUCTED

400 UC OUTFALL
I.L. 24.05mPD

400 UC

CP15
C.L. +25.00mPD
I.L.A+24.55mPD
I.L.B+24.16mPD

500 UC OUTFALL
I.L. +24.52mPD

U CHANNEL (BRANCH 7)
I.L.+24.10mPD

CP2 C.L. +25.00mPD
I.L.A +22.98mPD
I.L.B +23.25mPD

500DIA. PIPE OUTFALL
I.L. 22.94mPD

400 UC OUTFALL
I.L. +22.95mPD

400 UC (FALL 1:100)

500DIA. PIPE

500 OVERFLOW UC (FALL 1:100)

400 UC OUTFALL
I.L. +23.85mPD

U CHANNEL (BRANCH 4)
I.L.+25.10mPD

U CHANNEL (BRANCH 2)
I.L.+25.30mPD

CP1
C.L. +26.00mPD
I.L.+25.40mPD

450 UC OUTFALL
I.L. +25.48mPD

CP3
C.L. +25.00mPD
I.L.+23.89mPD

400 UC

COVERED CHANNEL (LIGHT DUTY)

CP6
C.L. +24.50mPD
I.L.+23.28mPD

CP16
C.L. +24.50mPD
I.L.A +23.51mPD
I.L.B +23.40mPD
I.L.C. +23.39mPD

COVERED CHANNEL (LIGHT DUTY)

U CHANNEL (BRANCH 6)
I.L.+24.10mPD

STORMWATER STORAGE TANK B

500 PIPE

3012

3007

U CHANNEL (BRANCH 5)
I.L.+24.10mPD

STORMWATER STORAGE TANK 13m(W) x 6m(L)x2.5m(H)
WITH 500 DIA. INLET PIPE
I.L.+23.35mPD

CP7
C.L. +24.50mPD
I.L.A+23.56mPD
I.L.B+23.56mPD
I.L.C+23.55mPD

400 UC OUTFALL
I.L. +24.07mPD

CP4
C.L. +25.00mPD
I.L.+24.14mPD

U CHANNEL (BRANCH 3)
I.L.+24.50mPD

3042

CP5
C.L. +25.00mPD
I.L.+24.67mPD

400 UC OUTFALL
I.L. +24.00mPD

CP9
C.L. +24.00mPD
I.L.+23.54mPD

CP8
C.L. +24.00mPD
I.L.A +23.24mPD
I.L.B +23.27mPD

400 UC OUTFALL

LEGEND:

- FLOW DIRECTION OF STREAM
- BOUNDARY OF LOTS FOR THIS APPLICATION
- PROPOSED 11m WIDE VEHICULAR ACCESS

B.D. REF.

F.S.D. REF.

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

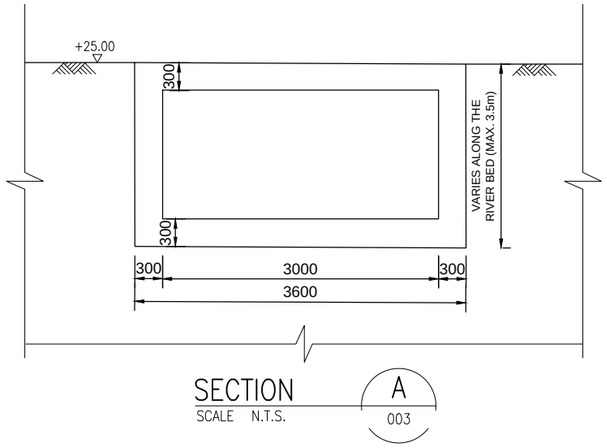
DRAWING TITLE:
PROPOSED DRAINAGE SYSTEM

DRAWING NO: WNG/25086/C/DRA/003

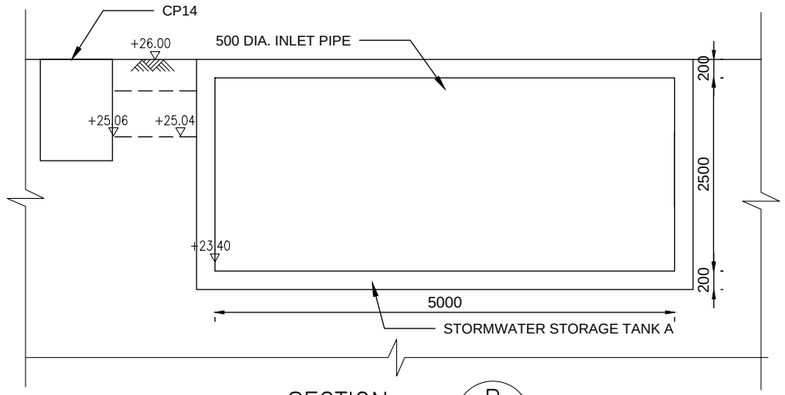
REV: C

WINGS & ASSOCIATES CONSULTING ENGINEERS LTD.
榮遠顧問工程師有限公司

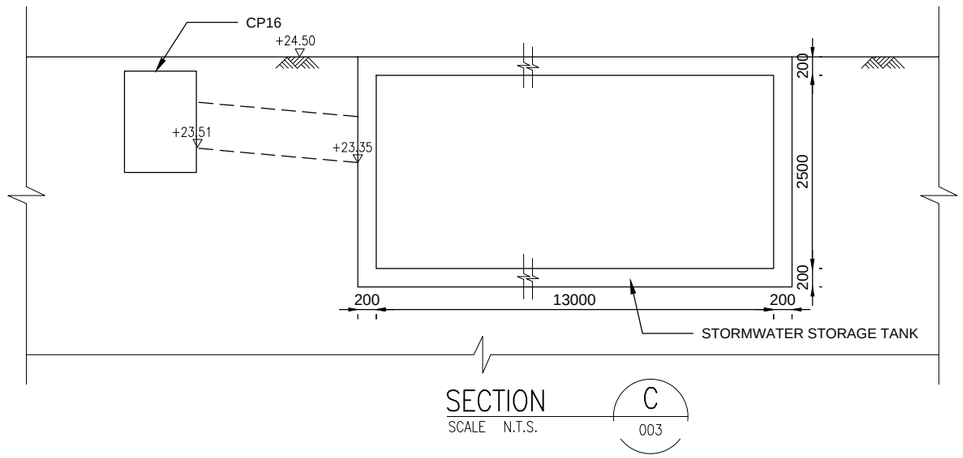
ISO A3 297mm x 420mm



SECTION A
SCALE N.T.S.
003



SECTION B
SCALE N.T.S.
003



SECTION C
SCALE N.T.S.
003

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

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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

SIGNATURE FOR SUBMISSION/ CONSTRUCTION

PROJECT NO:	25086		
DRAWN BY:	MYZ		05/25
DESIGNED BY:	NL		05/25
CHECKED BY:	RM		05/25
APPROVED BY:	VT		05/25
SCALE:	1:2000 (A3)		
CAD FILE:	WNG_25086_C_DRA_002-3		

PROJECT:
DRAINAGE CONSULTANCY SERVICES FOR S.16 PLANNING APPLICATION FOR PROPOSED TEMPORARY OPEN STORAGE AND ANCILLARY OFFICE AT LOT NOS 346 IN DD87 AT PING CHE

DRAWING TITLE:
SECTION OF STORMWATER STORAGE TANK

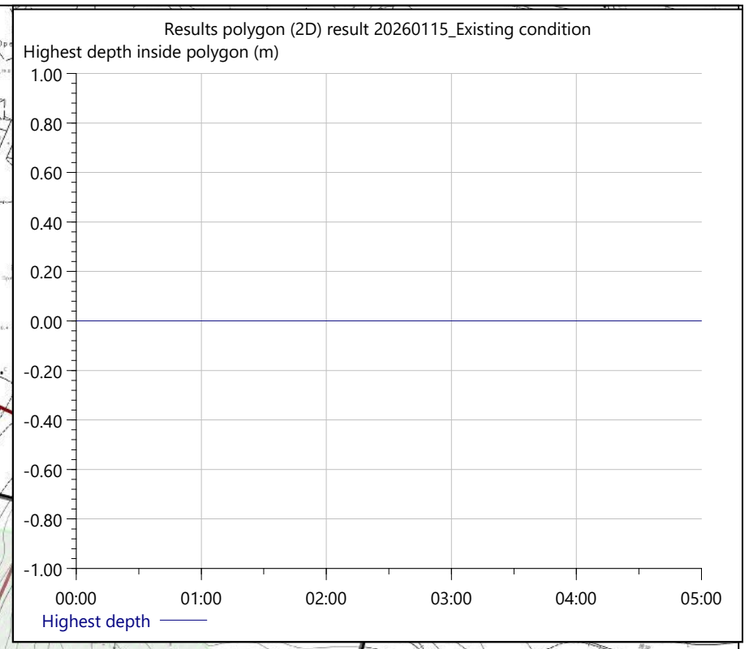
DRAWING NO:	REV:
WNG/25086/C/DRA/004	–

威翔建築工程師有限公司
WINGS & ASSOCIATES
CONSULTING ENGINEERS LTD.

APPENDIX E

InfoWorks result: Drainage Condition – Existing

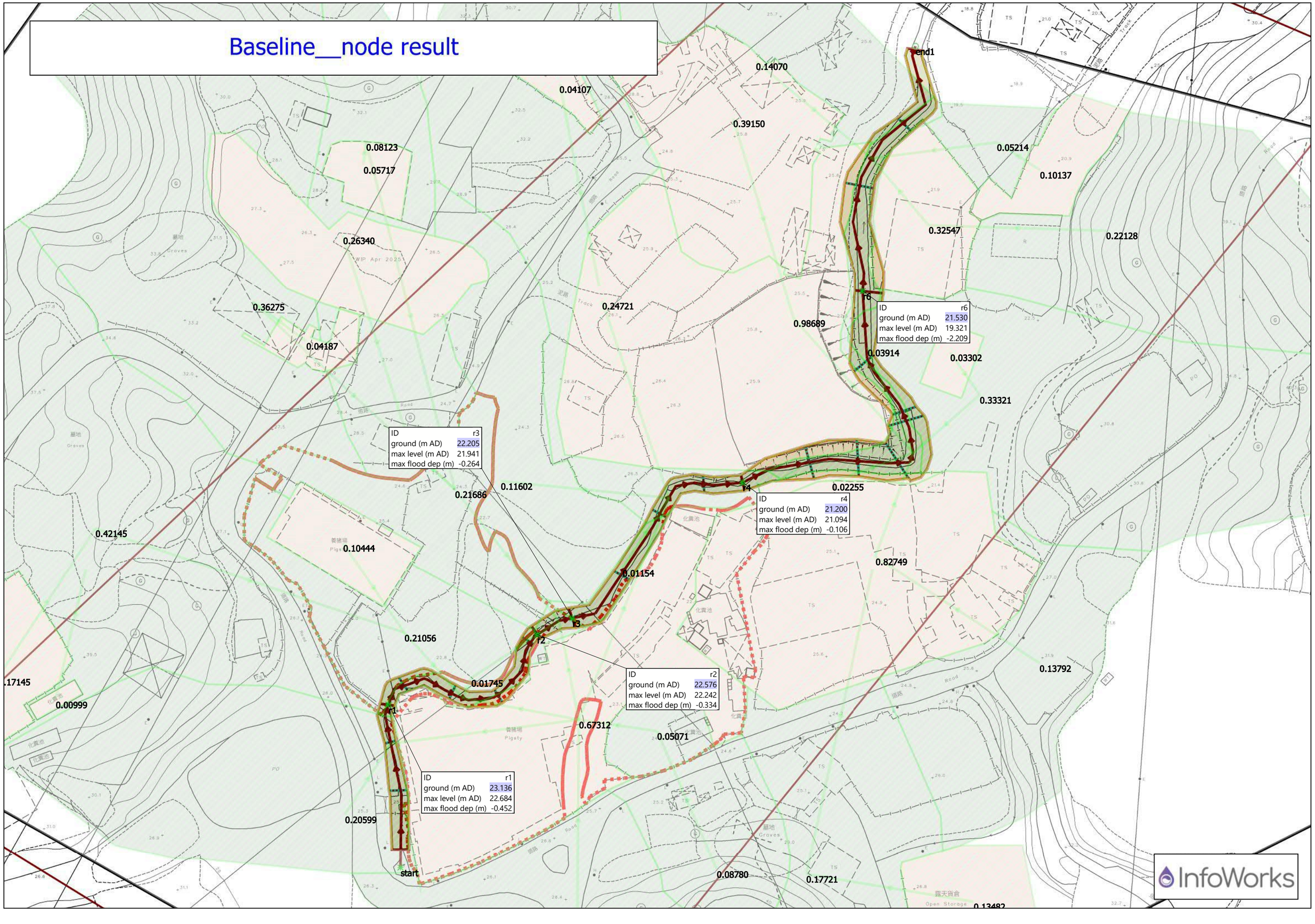
baseline



0.14070
0.04107
end1
0.39150
0.08123
0.05717
0.05214
0.10137
0.26340
0.32547
0.22128
0.36275
0.24721
r6
0.98689
0.04187
0.03914
0.03302
0.33321
0.12756
0.11602
r4
0.02255
0.42145
0.10444
0.01154
0.82749
r3
0.21056
r2
0.13792
0.17145
0.01745
0.00999
r1
0.67312
0.05071
0.20599
start
0.08780
0.17721
0.13482
0.15038

InfoWorks

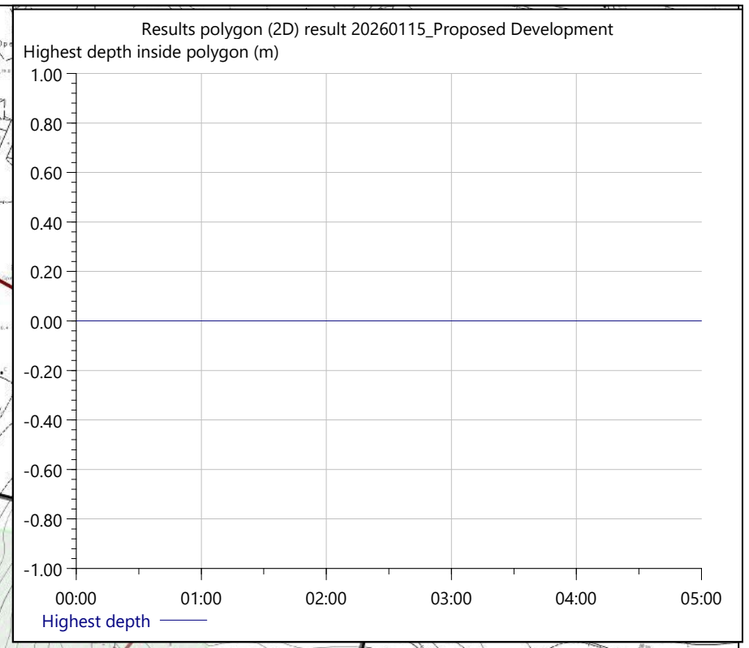
Baseline__node result



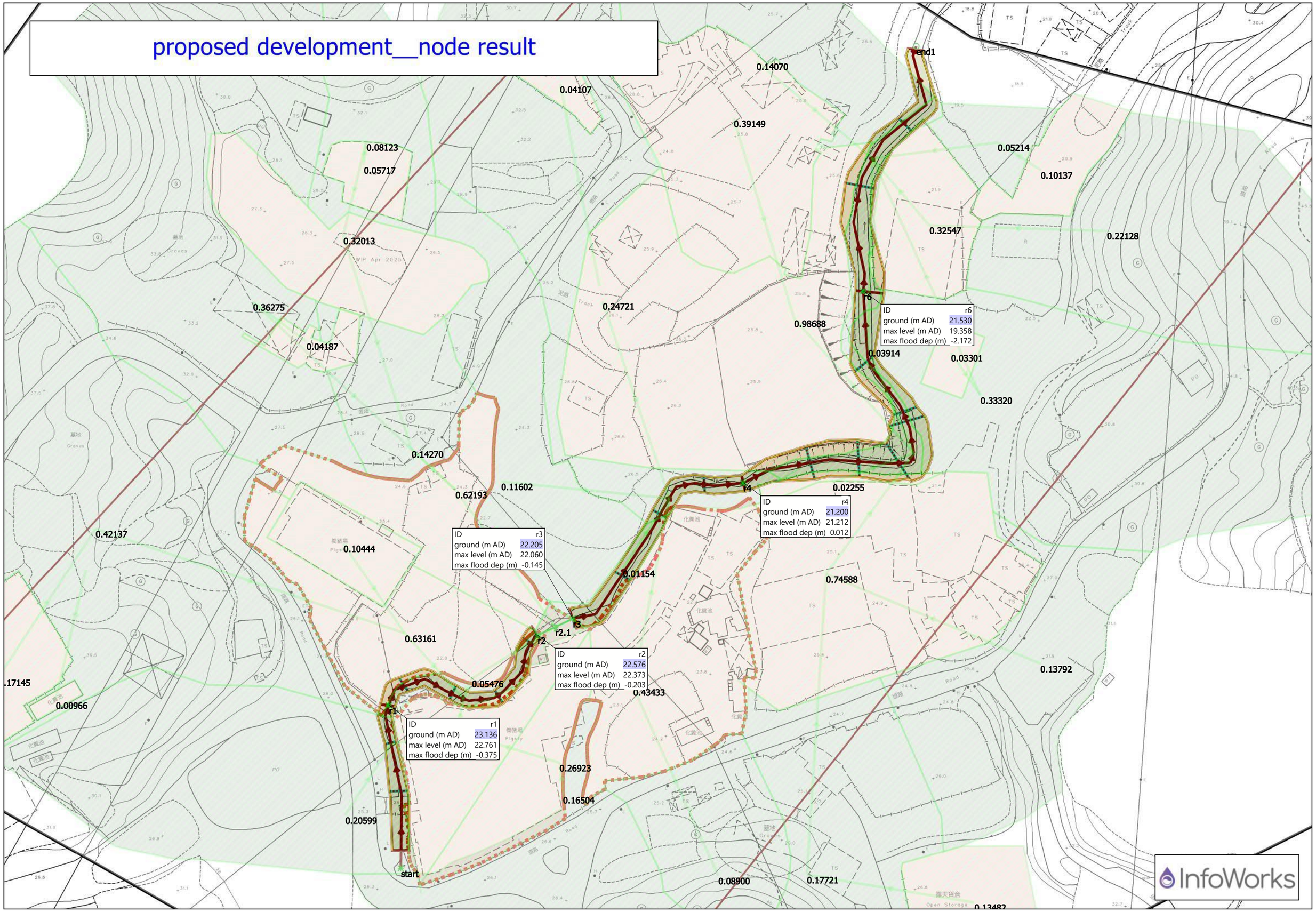
APPENDIX F

InfoWorks result: Drainage Condition – Proposed Drainage System

proposed development

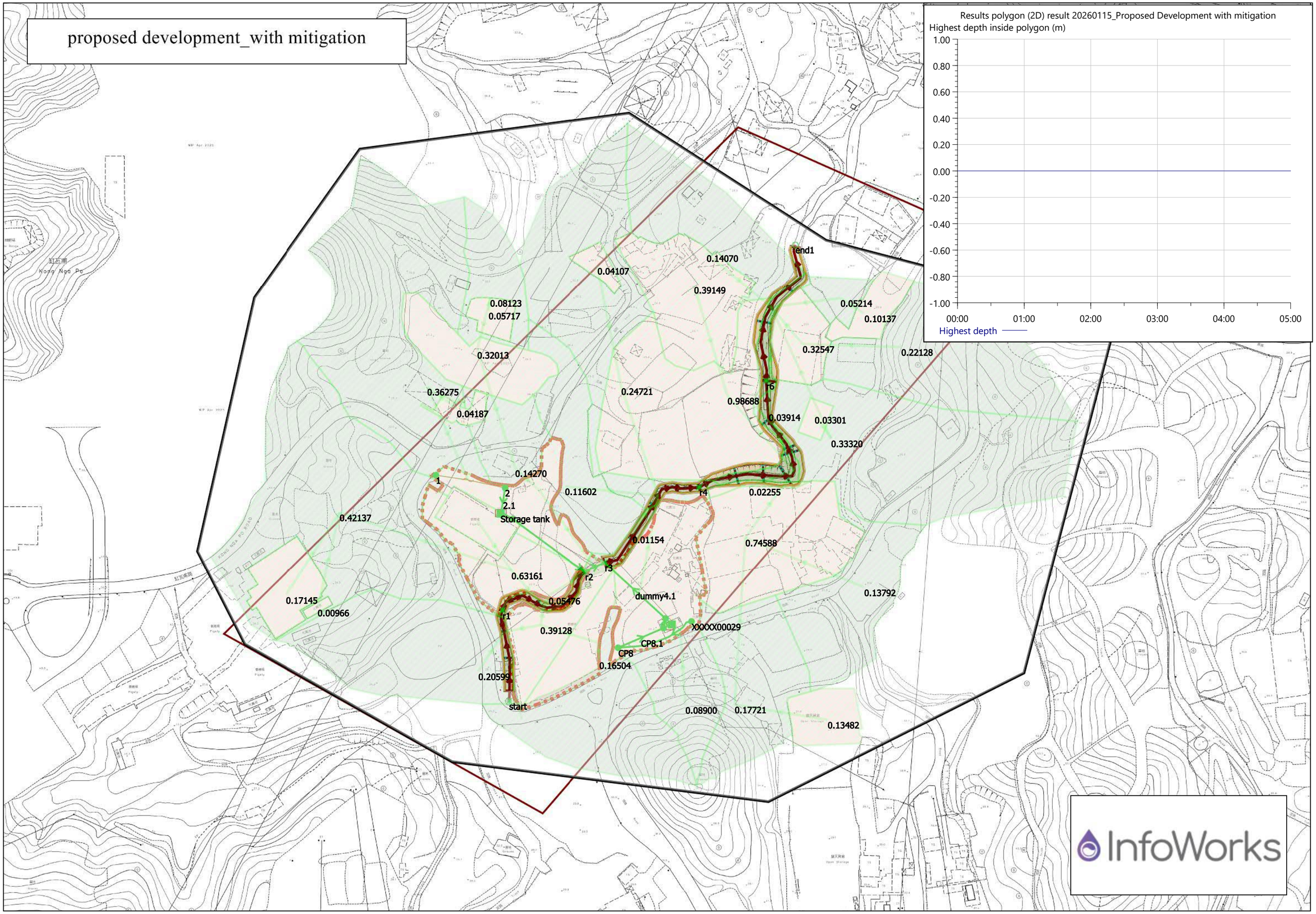


proposed development__node result

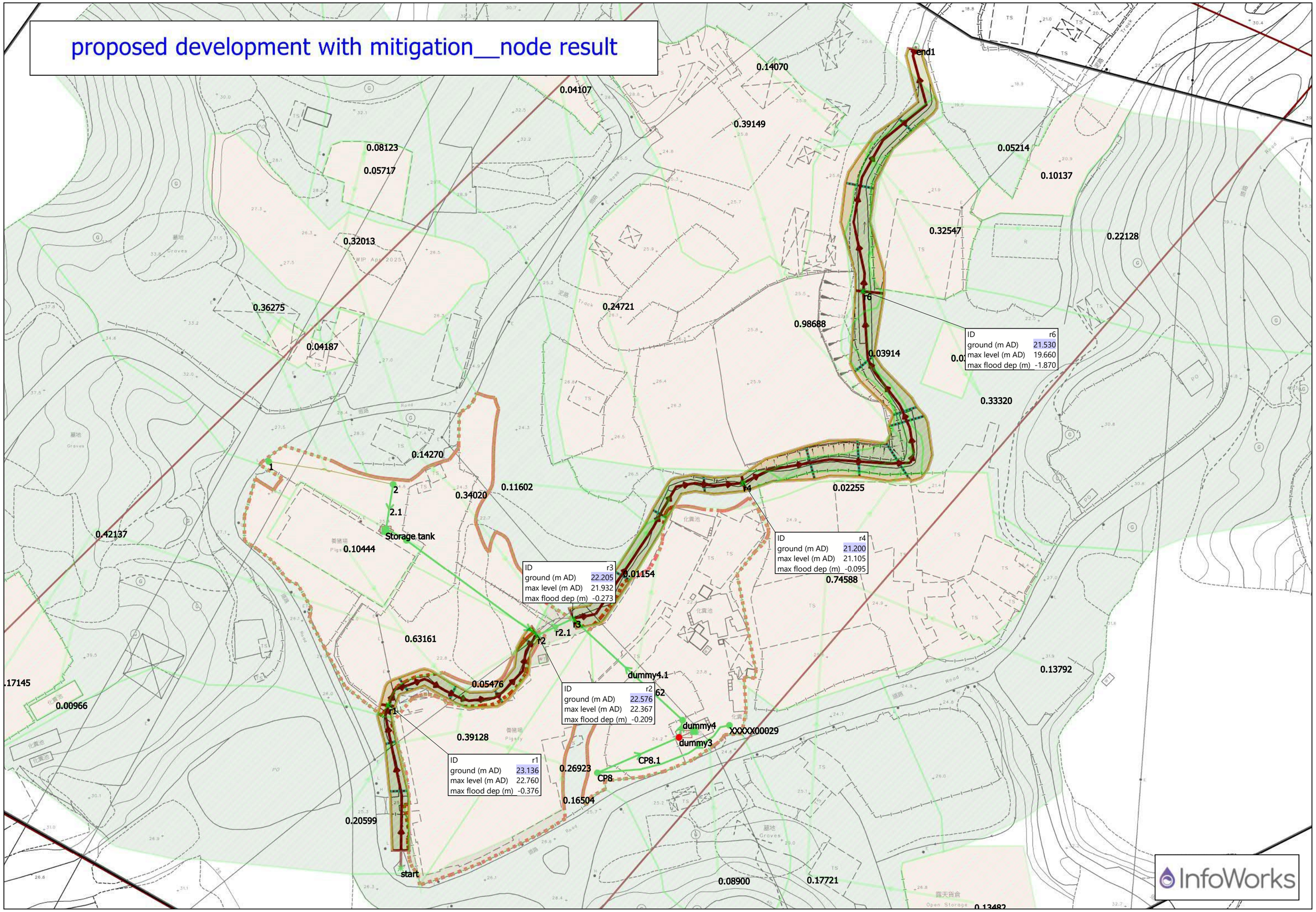


APPENDIX G

InfoWorks result: Drainage Condition – Proposed Drainage System (With improvement measure)

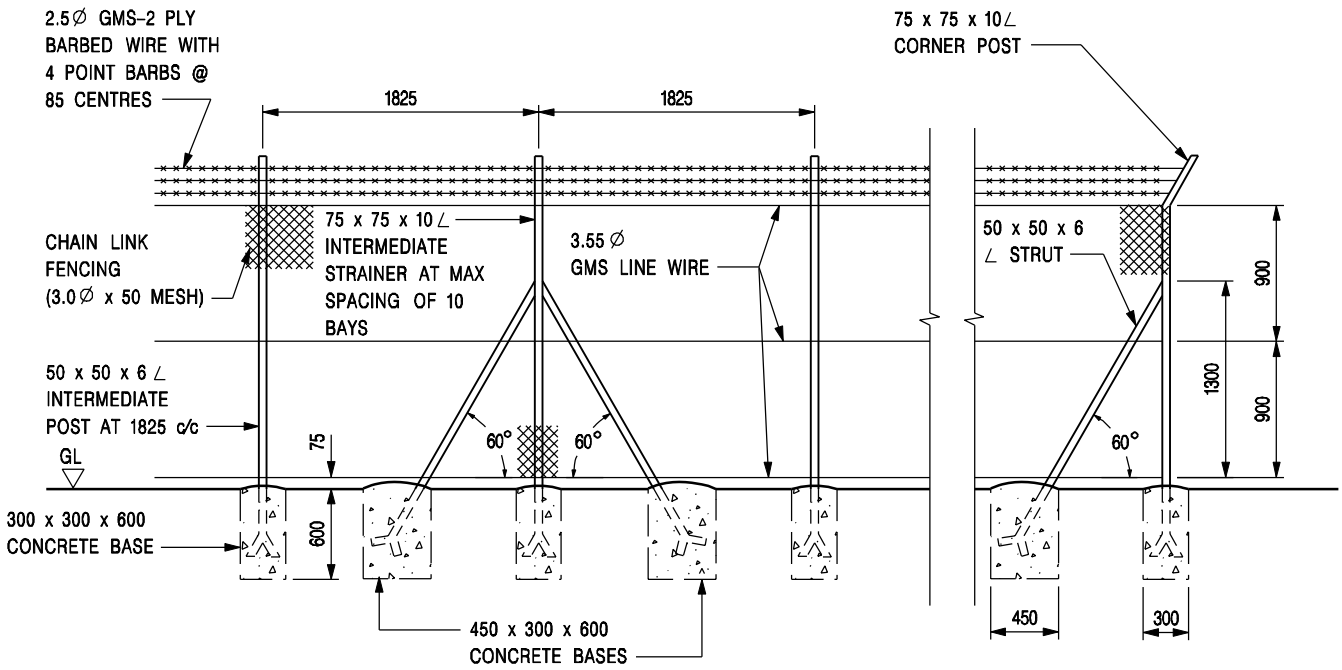

proposed development_with mitigation
Results polygon (2D) result 20260115_Proposed Development with mitigation
Highest depth inside polygon (m)
1.00
0.80
0.60
0.40
0.20
0.00
-0.20
-0.40
-0.60
-0.80
-1.00
00:00
01:00
02:00
03:00
04:00
05:00
Highest depth
end1
0.14070
0.04107
0.39149
0.08123
0.05717
0.05214
0.10137
0.32013
0.32547
0.22128
0.36275
0.24721
r6
0.98688
0.04187
0.03914
0.03301
0.33320
0.14270
1
2
2.1
Storage tank
0.11602
r4
0.02255
0.42137
0.01154
0.74588
r3
0.63161
r2
0.05476
dummy4.1
0.13792
0.17145
0.00966
r1
0.39128
XXXXX00029
CP8.1
CP8
0.16504
0.20599
start
0.08900
0.17721
0.13482
InfoWorks

proposed development with mitigation__node result



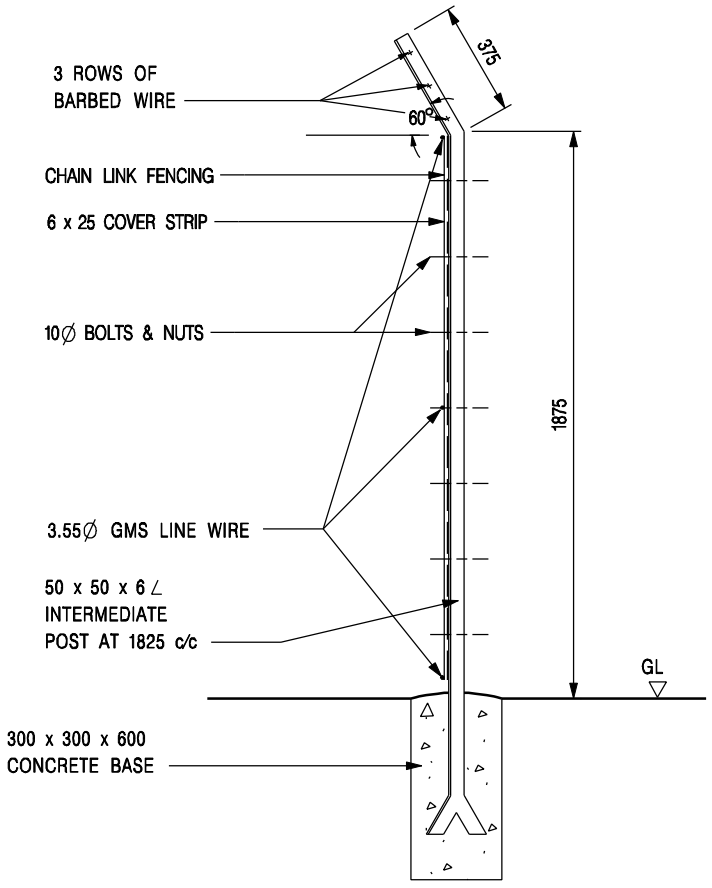
APPENDIX H

CEDD Standard Drawing C1006C – Chain Link Fence



ELEVATION OF INTERMEDIATE POST
INTERMEDIATE STRAINER & CORNER POST

(SCALE 1 : 50)



NOTATION :

GMS – GALVANIZED MILD STEEL

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL CONCRETE SHALL BE GRADE 20 /20. THE USE OF RECYCLED AGGREGATES SHALL BE CONSIDERED.
3. ALL POSTS AND FENCES SHALL BE HOT DIP GALVANIZED TO BS EN ISO 1461.
4. WELDS SHALL BE WIRE BRUSHED AND PAINTED WITH TWO COATS OF ALUMINIUM MASTIC PAINT.
5. ALL STEELWORK SHALL BE OF GRADE S275 TO BS EN 10025.

INTERMEDIATE POST

(SCALE 1 : 25)

REF.	REVISION	SIGNATURE	DATE
C	NOTE 5 AMENDED	Original Signed	09.2018
B	NOTE 3 AMENDED; NOTE 5 ADDED	Original Signed	03.2015
A	NAME OF DEPARTMENT AMENDED	Original Signed	02.2005

CHAIN LINK FENCE

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE AS SHOWN

DATE JAN 1991

DRAWING NO. C1006C

毅勤發展顧問有限公司
Tel 電話：[redacted]
Fax 傳真：
Email 電郵：
Web 網址：

Date : 19th January, 2026
Our Ref. : ADCL/PLG-10315/L009

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

By Email

Dear Sir/Madam,

Re: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(Planning Application No. A/NE-FTA/264)

We refer to the captioned application and would like to provide further information to facilitate considerations by relevant authorities and the Town Planning Board.

The Applicant intends to make use of the application site to facilitate the relocation of brownfield operations affected by land resumption for New Development Areas. A Memorandum of Understanding has been established with the existing brownfield operators. The Applicant and the existing brownfield operators have agreed that upon approval of the current application by the Board, the application site will be utilised by the existing brownfield operators for the proposed use during the planning approval period. Please refer to the attached documents.

Given the challenges in identifying a relocation site of adequate scale, the application site offers a timely solution that ensures operational continuity with minimal disruption. The Applicant sincerely hopes the Board will consider this application favorably, allowing for the proposed use for a temporary period of 3 years.

Thank you for your kind attention and should you have any queries, please do not hesitate to contact our Mr. Thomas LUK at [redacted].

Yours faithfully,
For and on behalf of
Aikon Development Consultancy Limited

Thomas LUK

Encl.
c.c. Client

Address 地址：
[redacted]

金先鋒貿易有限公司 與 Brilliant Profit Limited
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 Brilliant Profit Limited（下稱「**甲方**」）與金先鋒貿易有限公司（下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2026 年 1 月 9 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段之現行租用者；

(二) **乙方**為新界上水丈量約份第 52 約地段**第 354 號（部分）、第 358 號（部分）、第 361 號（部分）、第 369 號（部分）、第 370 號（部分）及第 371 號（部分）**（下稱「**舊地盤**」）作貨倉（危險品倉庫除外）及露天存放用途之現行作業者。受古洞北新發展區及粉嶺北新發展計劃餘下階段相關之收地安排影響，**乙方**未來將難以繼續在舊地盤進行現行作業。**乙方**有意重置其現時位於舊地盤內作貨倉（危險品倉庫除外）及露天存放作業至其他地盤以確保有穩定且充足的土地繼續其日常業務；以及

(三) **甲方**已根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請，(規劃申請編號: A/NE-FTA/264)（下稱「**規劃申請**」），擬議在新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地（下稱「**申請地點**」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）。**雙方**合意在規劃申請獲批准後，並於規劃許可生效期間，**甲方**將申請地點租予**乙方**作臨時貨倉（危險品倉庫除外）及露天存放用途。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程，並依從租賃協議內的條款及條件容許**乙方**租用申請地點內臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，依從租賃協議內的條款及條件租用申請地點作臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

.....
Authorized Signature(s)

(_____)

代表　甲方（Brilliant Profit Limited）
商業登記證號碼：[redacted]

(_____)

代表　乙方（**金先鋒貿易有限公司**）
商業登記證號碼：[redacted]

致： 香港北角渣華道 333 號
北角政府合署 15 樓
城市規劃委員會

敬啟者：

新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地
根據城市規劃條例第 16 條申請作擬議臨時貨倉（危險品倉庫除外）及
露天存放建築物料、機械連附屬設施及相 關填土工程（為期 3 年）
（規劃申請編號：A/NE-FTA/264）

本公司，金先鋒貿易有限公司（商業登記證號碼：[redacted]）多年於新界上水丈量約份第 52 約地段**第 354 號（部分）、第 358 號（部分）、第 361 號（部分）、第 369 號（部分）、第 370 號（部分）及第 371 號（部分）**（下稱「舊地盤」）經營作貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施。然而，最近受政府於古洞北新發展區及粉嶺北新發展計劃 餘下階段之收地影響，本公司未來將難以繼續在舊地盤進行現行作業。

經過廣泛搜尋合適的地段，並考慮到資金許可及儘量減少運作模式的變更，本公司已與 Brilliant Profit Limited（商業登記證號碼：[redacted]）達成共識，期望儘早租用以上申請地段以繼續目前的運作。

本公司得悉 Brilliant Profit Limited 已在多個月前向城市規劃委員會遞交了上述申請，現正受委員會及各政府部門審核中，並將於 2026 年 2 月 6 日作出決議。

若有關申請再進一步延誤或未能獲得批准，本公司將需要重新尋找合適的搬遷地段，此過程將耗時且非常困難。因此，我們懇請委員會可以批准有關申請，以讓我司等受影響戶可以儘快安排搬遷和重新安置，繼續進行受影響的棕地作業，以解燃眉之急。

金先鋒貿易有限公司 TRADING CO., LIMITED

商業登記證號碼 [redacted]

日期：2026 年 1 月 9 日

仁記 與 Brilliant Profit Limited
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 Brilliant Profit Limited（下稱「**甲方**」）與仁記（下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2026 年 1 月 9 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段之現行租用者；

(二) **乙方**為新界上水丈量約份第 52 約地段**第 375 號餘段(部分)、及第 484 號 A 分段(部分)**（下稱「**舊地盤**」）作貨倉（危險品倉庫除外）及露天存放用途之現行作業者。受古洞北新發展區及粉嶺北新發展計劃餘下階段相關之收地安排影響，**乙方**未來將難以繼續在舊地盤進行現行作業。**乙方**有意重置其現時位於舊地盤內作貨倉（危險品倉庫除外）及露天存放作業至其他地盤以確保有穩定且充足的土地繼續其日常業務；以及

(三) **甲方**已根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請，(規劃申請編號: A/NE-FTA/264)（下稱「**規劃申請**」），擬議在新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地（下稱「**申請地點**」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）。**雙方**合意在規劃申請獲批准後，並於規劃許可生效期間，**甲方**將申請地點租予**乙方**作臨時貨倉（危險品倉庫除外）及露天存放用途。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程，並依從租賃協議內的條款及條件容許**乙方**租用申請地點內臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，依從租賃協議內的條款及條件租用申請地點作臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

.....
Authorized Signature(s)

(_____)

代表　甲方　（Brilliant Profit Limited）

商業登記證號碼：[redacted]

(_____)

代表　乙方（仁記）

商業登記證號碼 [redacted]

致： 香港北角渣華道 333 號
北角政府合署 15 樓
城市規劃委員會

敬啟者：

新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地
根據城市規劃條例第 16 條申請作擬議臨時貨倉（危險品倉庫除外）及
露天存放建築物料、機械連附屬設施及相 關填土工程（為期 3 年）
（規劃申請編號：A/NE-FTA/264）

本公司，仁記（商業登記證號碼：[redacted]）多年於新界上水丈量約份第 52 約地段**第 375 號餘段（部分）、及第 484 號 A 分段(部分)**（下稱「舊地盤」）經營作貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施。然而，最近受政府於古洞北新發展區及粉嶺北新發展計劃 餘下階段之收地影響，本公司未來將難以繼續在舊地盤進行現行作業。

經過廣泛搜尋合適的地段，並考慮到資金許可及儘量減少運作模式的變更，本公司已與 Brilliant Profit Limited（商業登記證號碼：[redacted]）達成共識，期望儘早租用以上申請地段以繼續目前的運作。

本公司得悉 Brilliant Profit Limited 已在多個月前向城市規劃委員會遞交了上述申請，現正受委員會及各政府部門審核中，並將於 2026 年 2 月 6 日作出決議。

若有關申請再進一步延誤或未能獲得批准，本公司將需要重新尋找合適的搬遷地段，此過程將耗時且非常困難。因此，我們懇請委員會可以批准有關申請，以讓我司等受影響戶可以儘快安排搬遷和重新安置，繼續進行受影響的棕地作業，以解燃眉之急。

KEE YAN 為仁

商業登記證號碼 [redacted]

日期：2026 年 1 月 9 日

深圳市榮利達貨運代理有限公司 與 Brilliant Profit Limited
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 Brilliant Profit Limited（下稱「**甲方**」）與深圳市榮利達貨運代理有限公司 （下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2026 年 1 月 9 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段之現行租用者；

(二) **乙方**為新界上水丈量約份第 52 約地段**第 410 號餘段(部分)、第 407 號(部分)、第 436 號餘段(部分)及第 437 號(部分)**（下稱「**舊地盤**」）作貨倉（危險品倉庫除外）及露天存放用途之現行作業者。受古洞北新發展區及粉嶺北新發展計劃餘下階段相關之收地安排影響，**乙方**未來將難以繼續在舊地盤進行現行作業。**乙方**有意重置其現時位於舊地盤內作貨倉（危險品倉庫除外）及露天存放作業至其他地盤以確保有穩定且充足的土地繼續其日常業務；以及

(三) **甲方**已根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請，(規劃申請編號: A/NE-FTA/264)（下稱「**規劃申請**」），擬議在新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地（下稱「**申請地點**」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）。**雙方**合意在規劃申請獲批准後，並於規劃許可生效期間，**甲方**將申請地點租予**乙方**作臨時貨倉（危險品倉庫除外）及露天存放用途。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程，並依從租賃協議內的條款及條件容許**乙方**租用申請地點內臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，依從租賃協議內的條款及條件租用申請地點作臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

Authorized Signature(s)

_____
(_____)
代表 甲方 （Brilliant Profit Limited）
商業登記證號碼：[redacted]

鄭華蓮
_____
(_____)
代表 乙方（深圳市榮利達貨運代理有限公司）
商業登記證號碼：_____

致： 香港北角渣華道 333 號
北角政府合署 15 樓
城市規劃委員會

敬啟者：

新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地
根據城市規劃條例第 16 條申請作擬議臨時貨倉（危險品倉庫除外）及
露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）
(規劃申請編號: A/NE-FTA/264)

本公司，深圳市榮利達貨運代理有限公司（商業登記證號碼：_____）多年於新界上水丈量約份第 52 約地段**第 410 號餘段(部分)、第 407 號(部分)、第 436 號餘段(部分)及第 437 號(部分)**（下稱「舊地盤」）經營作貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施。然而，最近受政府於古洞北新發展區及粉嶺北新發展計劃 餘下階段之收地影響，本公司未來將難以繼續在舊地盤進行現行作業。

經過廣泛搜尋合適的地段，並考慮到資金許可及儘量減少運作模式的變更，本公司已與 Brilliant Profit Limited（商業登記證號碼：[redacted]）達成共識，期望儘早租用以上申請地段以繼續目前的運作。

本公司得悉 Brilliant Profit Limited 已在多個月前向城市規劃委員會遞交了上述申請，現正受委員會及各政府部門審核中，並將於 2026 年 2 月 6 日作出決議。

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鄭翠蓮
商業登記證號碼

日期：2026 年 1 月 9 日

電　話　Tel:　3529 2415
圖文傳真　Fax:　3793 4547
電郵地址　Email:　grc3@landsd.gov.hk
本署檔號　Our Ref.:　LD/C(NDA)/DN/1
來函檔號　Your Ref.:
來函請註明本署檔號
Please quote our reference in your reply

地政總署
新發展區組清拆小組
CLEARANCE TEAM
NEW DEVELOPMENT AREA SECTION
LANDS DEPARTMENT

我們矢志努力不懈，提供盡善盡美的土地行政服務。
We strive to achieve excellence in land administration.
新界上水彩園邨彩屏樓地下 129 至 136 號
Unit 129-136, G/F, Choi Ping House, Choi Yuen Estate, Sheung Shui, N.T.
網址 Website: www.landsd.gov.hk

Serial No.: 25/C(NDA)/090

LAND (MISCELLANEOUS PROVISIONS) ORDINANCE
(Chapter 28 of The Laws of Hong Kong Special Administrative Region)
NOTICE UNDER SECTION 6(1)

LOCATION: Unleased land as shown coloured pink on Plan 1 in the Remaining Phase Development of Fanling North New Development Area, New Territories

TAKE NOTICE that the Authority designated pursuant to section 3 of the captioned Ordinance hereby requires unlawful occupation of the unleased land at the above location to cease **before the 30th day of November of 2025**.

.....

(FU Yue-ping)
for Director of Lands

Date 28 August 2025

NOTE:
Pursuant to section 6(2) of the Land (Miscellaneous Provisions) Ordinance (the Ordinance), if the occupation of unleased land does not cease as required by this Notice, any public officer, or other person, acting on the direction of the Authority may, with the assistance of such other public officers or other persons as may be necessary (a) remove from the unleased land the persons (if any) thereon; and (b) take possession of any property or structure on the unleased land in question. By virtue of section 6(3) of the Ordinance, any property or structure of which possession is taken under section 6(2)(b) of the Ordinance shall become the property of the Government free from the rights of any person and may be demolished or otherwise dealt with as the Authority thinks fit. Any person who, without reasonable excuse, does not cease the occupation as required by this Notice, may be convicted under section 6(4) of the Ordinance. According to section 6(5) of the Ordinance, the Authority may recover from the person convicted of an offence under section 6(4) of the Ordinance any cost incurred in or arising out of the demolition of any property or structure in the unleased land under section 6(3) of the Ordinance and the exercise of the powers conferred by section 6 of the Ordinance.

編號: 25/C(NDA)/090

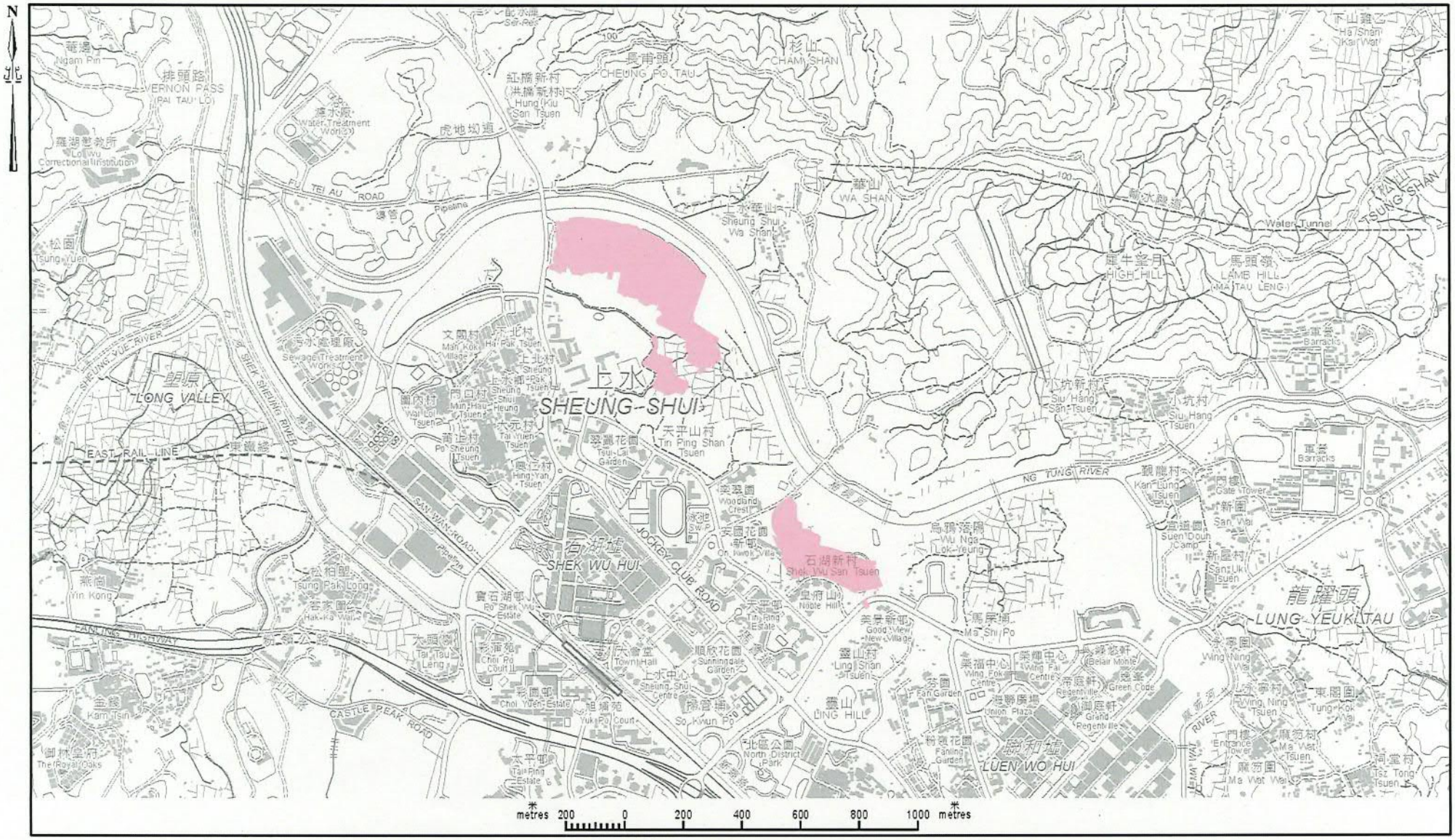
土地(雜項條文)條例
(香港特別行政區法例第 28 章)
根據第 6(1)條所發的通知

現公布，依據上述條例第 3 條指定的當局現飭令不合法佔用位於新界粉嶺北新發展區餘下階段發展在圖則一中粉紅色所示範圍內的未批租土地的情況於**二零二五年十一月三十日之前**停止。

地政總署署長
(傅裕平 代行)

二零二五年八月廿八日

附註：
依據《土地(雜項條文)條例》(該條例)第 6(2)條，如佔用未批租土地的情況未有遵照本通知所飭令者而停止，則按當局指示行事的任何公職人員或其他人(有需要時由其他公職人員或其他人協助)，可(a)將該未批租土地上的任何人(如有的話)驅逐；及(b)接管該未批租土地上的任何財產或構築物。憑藉該條例第 6(3)條，根據該條例第 6(2)(b)條接管的任何財產或構築物即成為政府的財產而不再受任何人在該財產或構築物中的任何權益所規限，並可按當局認為適合的任何方式，將該財產或構築物拆掉或作其他處理。任何人在無合理辯解下未有遵照本通知所飭令者而停止佔用情況，可因觸犯該條例第 6(4)條而被定罪。此外，根據該條例第 6(5)條，當局可向根據該條例第 6(4)條被定罪的人收回因根據該條例第 6(3)條拆掉該未批租土地上的財產或構築物以及行使該條例第 6 條所賦權力而招致或引起的任何費用。


N
上水
SHEUNG SHUI
SHEUNG SHUI
LONG VALLEY
EAST RAIL LINE
SHEUNG YUE RIVER
SHEK SHEUNG RIVER
NG TUNG RIVER
LUEN WO HUI
SHEK WU HUI
LUNG YEUK TAU
CASTLE PEAK ROAD
FANLING HIGHWAY
SAN WAN ROAD
JOCKEY CLUB ROAD
TAI TAU ROAD
Water Tunnel
HIGH HILL
LAMB HILL
WA SHAN
CHAU SHAN
LING HILL
metres 200 0 200 400 600 800 1000 metres

任何財產或構築物（包括但不限於構築物編號）不合法佔用粉紅色所示範圍的未批租土地的情況應在二零二五年十一月三十日之前停止。

Unlawful occupation by any property or structure (including but not limited to structure numbers) on the unleased land as shown coloured pink should cease before the 30th day of November 2025.

X4/13, X4/14, X4/15, X4/16, X4/17/1-12, X4/18, X4/19, X4/20, X4/21, X4/22, X4/23, X4/24, X4/25, X4/26, X4/27/1-5, X4/28, X4/29, X4/30/1-3, X4/31, X4/32, X4/33, X4/34, X4/35, X4/36, X4/37, X4/38, X4/39, X4/40, X4/41, X4/42, X4/43, X4/44, X4/45, X4/46, X4/47, X4/48, X4/49, X4/50, X4/51, X4/52/1-5, X4/53, X4/54, X4/55, X4/56, X4/57, X4/58/1-4, X4/59, X4/60, X4/61, X4/62, X4/63, X4/64, X4/65, X4/66, X4/67-1-3, X4/68, X4/69, X4/70, X4/71, X4/72, X4/73, X4/74, X4/75, X4/76, X4/77/1-6, X4/78, X4/79, X4/80, X4/81, X4/82, X4/83, X4/84-93, X4/94, X4/95, X4/96, X4/97, X4/98, X4/99, X4/100/1-6, X4/101, X4/102, X4/103, X4/104, X4/105, X4/106/1-4, X4/107, X4/108, X4/109, X4/110 & 112, X4/111/1-13, X4/113, X4/114, X4/115, 115A, 116/1-3, X4/117, X4/118, X4/119, X4/120/1-13, X4/121-122, X4/123, X4/124, X4/125, X4/126, X4/127, X4/128, X4/129-137, X4/138, X4/139, X4/140, X4/141, X4/142/1-8, X4/143, X4/144, X4/145, X4/146-148, X4/149-150, X4/151, X4/152, X4/153, X4/154/1-3, X4/155, X4/156, X4/157, X4/158, X4/159/1-5, X4/160, X4/161, X4/162, X4/163, X4/163A, X4/164, X4/165/1-2, X4/166, X4/167, X4/168, X4/169, X4/170/1-4, X4/171, X4/172, X4/173/1-7, X4/174, X4/175, X4/176, X4/177, X4/178, X4/179, X4/180, X4/181, X4/182, X4/183, X4/184-193, X4/194, X4/195-200, X4/211D, X4/211E, X4/211F, X4/244, X4/245/1-2, X4/246, X4/247, X4/248, X4/249, X4/250, X4/251, X4/252, X4/253, X4/254, X4/255, X4/256, X4/257, X4/258, X4/259/1-13, X4/260, X4/S/3, X4/S/4, X4/S/5, X5/66, X5/67, X5/68-72, X5/70A, X5/154, X5/156, X5/157, X5/158, X5/159, X5/160, X5/161, X5/162, X5/163, X5/164, X5/165, X5/166, X5/167, X5/168, X5/169, X5/170, X5/171, X6/46, X6/119, X6/201, X6/202-204, X6/205, X6/206, X6/207, X6/208, X6/209, X6/210, X6/211, X6/212, X6/213, X6/214, X6/215, X6/216, X6/217, X6/218, X6/219, X6/220, X6/221, X6/222, X6/223, X6/224, X6/225, X6/226, X6/227, X6/228-233, X6/234, X6/235, X6/236, X6/237, X6/238, X6/239, X6/240, X6/241, X6/242, X6/243, X6/244, X6/245, X6/246, X6/247, X6/248, X6/249, X6/250, X6/251, X6/252, X6/253, X6/254, X6/255, X6/256-259, X6/260, X6/261, X6/262, X6/263, X6/264, X6/265, X6/266, X6/267, X6/268, X6/269, X6/270, X6/271, X6/272, X6/273, X6/274, X6/275, X6/276, X6/277, X6/278, X6/279, X6/280, X6/281, X6/282, X6/283, X6/284, X6/285, X6/286, X6/287, X6/288-290, X6/291, X6/292, X6/293, X6/294, X6/295, X6/296, X6/297, X6/298, X6/299, X6/300, X6/301, X6/302, X6/303, X6/304, X6/305, X6/306, X6/307, X6/308, X6/309, X6/310, X6/311, X6/312, X6/313-315, X6/316, X6/317-322, X6/323, X6/324-327, X6/328, X6/329-331, X6/332, X6/333, X6/334-337, X6/343, X6/344, X6/345A-G, X6/352, X6/353-357, X6/358, X6/372, X6/384, X6/391, X6/392, X6/393, X6/394, X6/395, X6/399, X6/400-410, X7/S/1

第 205 號公告 地政總署

收回土地條例 (第 124 章)

(根據第 4 條發出的公告)

收回土地
以便進行古洞北新發展區及
粉嶺北新發展區發展計劃——
餘下階段

致下文詳述並在第 DNM5339a 號收地圖則上以橙色標示，位於新界的各塊或各幅土地的業主，以及就該等土地擁有權益、權利或地役權的每名人士。該等土地稱為：

丈量約份第 51 約地段第 172 號餘段 (部分)、第 174 號、第 175 號、第 176 號、第 178 號、第 179 號餘段、第 180 號、第 182 號、第 209 號 (部分)、第 227 號 (部分)、第 228 號 (部分)、第 229 號、第 230 號、第 231 號 (部分)、第 232 號 A 分段、第 232 號 B 分段、第 233 號、第 234 號、第 235 號、第 236 號、第 237 號 (部分)、第 238 號餘段 (部分)、第 239 號 (部分)、第 240 號 (部分)、第 241 號 (部分)、第 242 號、第 245 號 B 分段餘段 (部分)[又稱第 245B 號餘段 (部分)]、第 246 號餘段 (部分)、第 248 號、第 249 號 (部分)、第 252 號 (部分)、第 256 號 (部分)、第 257 號 (部分)、第 258 號 (部分)、第 259 號、第 260 號 A 分段、第 260 號餘段 (部分)、第 261 號 (部分)、第 262 號、第 263 號、第 264 號、第 265 號、第 270 號 (部分)、第 306 號餘段 (部分)、第 332 號 (部分)、第 333 號 (部分)、第 334 號 (部分)、第 335 號 (部分)、第 358 號 (部分)、第 359 號 (部分)、第 396 號 (部分)、第 397 號、第 398 號、第 399 號 (部分)、第 400 號 (部分)、第 401 號、第 402 號、第 403 號、第 404 號 (部分)、第 406 號 (部分)、第 407 號 (部分)、第 414 號 (部分)、第 416 號 (部分)、第 418 號 (部分)、第 419 號、第 420 號 (部分)、第 421 號 (部分)、第 422 號、第 424 號 (部分)、第 425 號 (部分)、第 428 號 (部分)、第 429 號 (部分)、第 430 號、第 431 號 (部分)、第 432 號 (部分)、第 433 號 (部分)、第 434 號 (部分)、第 435 號 (部分)、第 437 號餘段、第 442 號、第 443 號、第 444 號、第 445 號、第 446 號、第 447 號、第 448 號 (部分)、第 450 號 (部分)、第 451 號、第 452 號、第 453 號、第 455 號、第 456 號餘段、第 457 號、第 458 號 B 分段餘段、第 482 號 (部分)、第 483 號 (部分)、第 484 號 A 分段 (部分)、第 484 號餘段 (部分)、第 485 號 D 分段 (部分)、第 485 號餘段、第 486 號、第 532 號餘段 (部分)、第 533 號餘段 (部分)、第 534 號餘段 (部分)、第 538 號、第 539 號 (部分)、第 540 號 (部分)、第 541 號 (部分)、第 542 號 (部分)、第 543 號 (部分)、第 544 號、第 545 號 (部分)、第 546 號 (部分)、第 547 號 (部分)、第 548 號 (部分)、第 549 號、第 550 號、第 551 號 (部分)、第 552 號 (部分)、第 553 號 (部分)、第 554 號、第 555 號、第 556 號、第 557 號 A 分段、第 557 號餘段、第 558 號 A 分段、第 558 號餘段、第 559 號、第 560 號、第 561 號、第 562 號 (部分)、第 566 號餘段 (部分)、第 608 號 (部分)、第 609 號 (部分)、第 610 號餘段 (部分)、第 611 號餘段 (部分)、第 612 號、第 613 號餘段、第 614 號餘段、第 619 號餘段、第 620 號餘段、第 621 號餘段、第 622 號 A 分段第 1 小分段 (部分)、第 622 號 A 分段餘段、第 622 號 B 分段第 1 小分段 (部分)、第 622 號 B 分段餘段、第 624 號 A 分段 (部分)、第 624 號餘段、第 625 號 A 分段 (部分)、第 625 號餘段、第 626 號 (部分)、第 627 號餘段、第 628 號餘段 (部分)、第 629 號餘段 (部分)、第 636 號餘段、第 646 號餘段 (部分)、第 647 號餘段 (部分)、第 648 號餘段 (部分)、第 650 號餘段、第 651 號餘段、第 652 號、第 653 號、第 654 號、第 655 號餘段 (部分)、第 656 號、第 657 號 (部分)、第 741 號、第 791 號餘段、第 792 號餘段、第 793 號、第 806 號、第 807 號 A 分段 (部分)、第 2013 號 A 分段餘段 (部分)、第 2013 號 B 分段餘段 (部分)、第 2013 號 C 分段餘段 (部

分)、第 2014 號、第 2015 號 (部分)、第 2016 號 A 分段餘段 (部分)、第 2016 號 B 分段餘段 (部分)、第 2018 號 A 分段、第 2018 號 B 分段 (部分)、第 2018 號餘段、第 2019 號 A 分段 (部分)、第 2019 號餘段 (部分)、第 2020 號餘段 (部分)、第 2021 號 A 分段、第 2022 號 A 分段 (部分)、第 2022 號 B 分段、第 2022 號餘段、第 2023 號、第 2024 號、第 2025 號、第 2026 號、第 2027 號 A 分段、第 2027 號 B 分段、第 2028 號、第 2029 號餘段、第 2030 號餘段、第 2031 號餘段、第 2032 號餘段、第 2034 號 (部分)、第 2035 號 A 分段、第 2035 號 B 分段 (部分)、第 2036 號 (部分)、第 2037 號 (部分)、第 2038 號 (部分)、第 2039 號餘段、第 2041 號、第 2042 號 A 分段 (部分)、第 2042 號 B 分段、第 2043 號 (部分)、第 2044 號 A 分段 (部分)、第 2044 號餘段、第 2045 號 (部分)、第 2046 號 A 分段 (部分)、第 2046 號 B 分段、第 2046 號餘段、第 2047 號 B 分段、第 2047 號 C 分段 (部分)、第 2047 號餘段、第 2048 號、第 2049 號 A 分段、第 2049 號餘段、第 2050 號餘段、第 2052 號餘段、第 2053 號 B 分段、第 2053 號餘段、第 2054 號、第 2055 號餘段、第 2056 號、第 2057 號、第 2058 號、第 2059 號餘段、第 2060 號餘段、第 2061 號 B 分段、第 2061 號 C 分段、第 2061 號餘段、第 2062 號 A 分段、第 2062 號 B 分段、第 2062 號餘段、第 2063 號 A 分段、第 2063 號餘段、第 2064 號、第 2066 號、第 2067 號、第 2069 號餘段、第 2070 號餘段、第 2071 號、第 2072 號、第 2073 號、第 2074 號 (部分)、第 2075 號、第 2076 號、第 2077 號 (部分)、第 2078 號、第 2080 號 A 分段 (部分)、第 2080 號餘段、第 2081 號 A 分段、第 2081 號餘段、第 2082 號 A 分段、第 2082 號餘段、第 2083 號 A 分段、第 2083 號 B 分段、第 2083 號 C 分段、第 2083 號餘段、第 2084 號、第 2085 號 A 分段、第 2085 號餘段、第 2086 號 A 分段、第 2086 號餘段、第 2087 號 A 分段、第 2087 號 B 分段、第 2087 號餘段、第 2088 號 A 分段、第 2088 號 B 分段、第 2088 號餘段、第 2089 號 A 分段、第 2089 號餘段、第 2090 號、第 2091 號 A 分段、第 2091 號餘段、第 2092 號、第 2093 號、第 2094 號 A 分段、第 2094 號餘段、第 2095 號 A 分段、第 2095 號餘段、第 2096 號 A 分段第 1 小分段、第 2096 號 A 分段餘段、第 2096 號 B 分段、第 2096 號餘段、第 2097 號餘段、第 2124 號餘段 (部分)、第 2125 號餘段 (部分)、第 2127 號 A 分段餘段、第 2127 號 B 分段餘段、第 2128 號、第 2129 號、第 2130 號 A 分段 (部分)、第 2130 號 B 分段、第 2130 號餘段、第 2131 號餘段 (部分)、第 2133 號餘段、第 2134 號餘段、第 2135 號、第 2136 號餘段、第 2137 號 A 分段、第 2137 號餘段、第 2138 號 A 分段、第 2138 號餘段、第 2139 號 A 分段、第 2139 號餘段、第 2140 號、第 2141 號 A 分段、第 2141 號餘段、第 2144 號餘段、第 4541 號餘段、第 4644 號 (部分)、第 4666 號 (部分)、第 4849 號 A 分段 (部分)、第 4849 號 B 分段、第 4849 號 C 分段、第 4849 號 D 分段第 1 小分段、第 4849 號 D 分段餘段、第 4849 號 E 分段第 1 小分段 (部分)、第 4849 號 E 分段餘段、第 4849 號 F 分段第 1 小分段 (部分)、第 4849 號 F 分段餘段 (部分)、第 4849 號 G 分段 (部分)、第 4849 號 H 分段和第 4849 號餘段；

丈量約份第 52 約地段第 55 號 (部分)、第 56 號、第 74 號餘段、第 75 號餘段 (部分)、第 76 號、第 77 號餘段、第 78 號 A 分段餘段、第 78 號 B 分段餘段、第 79 號餘段、第 80 號餘段、第 81 號、第 82 號 A 分段餘段 [又稱第 82A 號餘段]、第 86 號 A 分段餘段 (部分)、第 87 號餘段 (部分)、第 89 號、第 90 號 A 分段、第 90 號 B 分段、第 92 號、第 93 號、第 94 號餘段、第 95 號 B 分段、第 96 號 B 分段、第 97 號、第 98 號 A 分段 (部分)、第 99 號、第 100 號 (部分)、第 101 號 (部分)、第 104 號 A 分段、第 104 號 B 分段 (部分)、第 104 號餘段 (部分)、第 117 號 A 分段餘段 (部分)、第 118 號 A 分段餘段、第 130 號 A 分段餘段、第 131 號 A 分段餘段、第 132 號、第 133 號、第 134 號餘段、第 135 號、第 147 號 (部分)、第 149 號 (部分)、第 150 號、第 151 號、第 152 號、第 153 號餘段、第 154 號 B 分段餘段 (部分)、第 159 號 C 分段餘段、第 160 號 B 分段、第 161 號、第 162 號、第 163 號、第 164 號 (部分)、第 166 號餘段、第 167 號 A 分段 (部分)、第 167 號餘段 (部分)、第 168 號 A 分段 (部分)、第 168 號餘段 (部分)、第 170 號餘段 (部分)、第 171 號餘段 (部分)、第 172 號餘段 (部分)、第 173 號餘段、第 174 號餘段、第 176 號餘段、第 177 號餘段、第 179 號

餘段、第 181 號餘段 (部分)、第 187 號餘段 (部分)、第 194 號 A 分段餘段 (部分)、第 195 號餘段 (部分)、第 210 號 (部分)、第 212 號 (部分)、第 231 號餘段 (部分)、第 318 號、第 319 號餘段、第 320 號餘段 (部分)、第 321 號 (部分)、第 329 號 B 分段餘段 (部分)、第 330 號餘段 (部分)、第 331 號 A 分段餘段、第 331 號餘段、第 332 號餘段、第 333 號餘段、第 334 號 (部分)、第 335 號 (部分)、第 336 號 (部分)、第 337 號 (部分)、第 338 號 (部分)、第 339 號 (部分)、第 340 號 (部分)、第 341 號 (部分)、第 342 號 (部分)、第 343 號 (部分)、第 344 號 (部分)、第 345 號 (部分)、第 346 號、第 347 號 (部分)、第 348 號 (部分)、第 350 號、第 351 號 (部分)、第 352 號、第 353 號 A 分段、第 353 號餘段、第 354 號、第 355 號、第 356 號、第 357 號、第 358 號、第 359 號、第 360 號、第 361 號、第 362 號、第 363 號、第 364 號、第 365 號餘段、第 366 號餘段、第 367 號 (部分)、第 369 號、第 370 號、第 371 號、第 372 號餘段、第 373 號、第 374 號、第 375 號餘段、第 376 號、第 377 號 A 分段餘段、第 377 號 B 分段餘段、第 378 號、第 379 號、第 380 號、第 381 號餘段、第 397 號餘段、第 398 號餘段、第 399 號、第 400 號、第 401 號、第 402 號、第 403 號、第 404 號、第 405 號 A 分段、第 405 號餘段、第 406 號、第 407 號、第 408 號、第 409 號餘段、第 410 號餘段、第 414 號 AB 分段餘段 [又稱第 414AB 號餘段]、第 414 號 C 分段餘段 [又稱第 414C 號餘段]、第 415 號餘段、第 416 號餘段、第 420 號餘段、第 421 號、第 422 號、第 423 號餘段、第 424 號、第 425 號、第 426 號、第 427 號、第 428 號、第 429 號、第 430 號、第 431 號、第 432 號、第 433 號、第 436 號餘段、第 437 號、第 438 號、第 439 號、第 440 號、第 441 號、第 442 號、第 443 號、第 444 號、第 445 號餘段 (部分)、第 446 號 (部分)、第 449 號 (部分)、第 451 號餘段 (部分)、第 452 號 (部分)、第 454 號 A 分段 (部分)、第 457 號 (部分)、第 459 號、第 462 號 (部分)、第 463 號 (部分)、第 464 號 A 分段餘段 (部分)、第 466 號 (部分)、第 467 號、第 468 號、第 474 號、第 475 號 (部分)、第 477 號、第 478 號、第 479 號、第 480 號、第 481 號、第 482 號 A 分段、第 482 號餘段、第 483 號、第 484 號 A 分段、第 486 號 A 分段餘段、第 528 號 A 分段餘段 (部分)、第 529 號 A 分段餘段、第 804 號 (部分)、第 805 號餘段 (部分)、第 806 號 (部分)、第 809 號 (部分)、第 810 號、第 811 號、第 812 號餘段、第 813 號餘段、第 814 號、第 815 號、第 816 號餘段、第 817 號餘段、第 1193A 號 (部分)、第 1207 號 (部分)、第 1208 號、第 1210 號、第 1319 號、第 1322 號 A 分段、第 1322 號餘段、第 1380 號、第 1381 號餘段和第 1454 號；

丈量約份第 83 約地段第 1130 號餘段 (部分)、第 1131 號餘段 (部分)、第 1132 號、第 1133 號、第 1134 號 (部分)、第 1135 號 A 分段 (部分)、第 1135 號 B 分段 (部分)、第 1135 號餘段、第 1136 號 A 分段第 1 小分段 (部分)、第 1136 號 A 分段餘段、第 1136 號餘段、第 1149 號 A 分段 (部分)、第 1149 號餘段、第 1150 號餘段 (部分)、第 1152 號 A 分段 (部分)、第 1152 號餘段、第 1153 號 A 分段 (部分)、第 1153 號餘段、第 1154 號 A 分段、第 1154 號 B 分段 (部分)、第 1154 號餘段、第 1156 號 B 分段、第 1156 號餘段、第 1157 號 A 分段第 1 小分段 (部分)、第 1157 號 A 分段第 2 小分段、第 1157 號 A 分段餘段、第 1157 號 B 分段第 1 小分段 (部分)、第 1157 號 B 分段餘段、第 1157 號 C 分段 (部分)、第 1157 號 D 分段第 1 小分段、第 1157 號 D 分段餘段、第 1157 號 E 分段、第 1157 號餘段、第 1158 號 A 分段第 1 小分段、第 1158 號 A 分段餘段、第 1158 號 B 分段第 1 小分段、第 1158 號 B 分段餘段、第 1158 號 C 分段、第 1158 號餘段、第 1159 號 A 分段、第 1159 號餘段、第 1160 號 A 分段第 1 小分段、第 1160 號 A 分段餘段、第 1160 號 B 分段、第 1160 號餘段、第 1161 號 A 分段、第 1161 號餘段、第 1162 號 A 分段餘段、第 1162 號 B 分段、第 1162 號 C 分段第 1 小分段、第 1162 號 C 分段第 2 小分段 A 分段、第 1162 號 C 分段第 2 小分段餘段、第 1162 號 D 分段第 1 小分段、第 1162 號 D 分段餘段、第 1175 號 A 分段、第 1175 號餘段、第 1176 號、第 1177 號 A 分段和第 1177 號餘段；

丈量約份第 88 約地段第 41 號、第 43 號 B 分段 (部分)、第 45 號、第 46 號 B 分段、第 49 號和第 53 號 (部分)；

丈量約份第 92 約地段第 739 號 A 分段、第 739 號 B 分段第 1 小分段、第 739 號 B 分段餘段、第 739 號 C 分段 (部分)、第 739 號餘段 (部分)、第 741 號 A 分段 (部分)、第 741 號 B 分段、第 741 號 C 分段 (部分)、第 741 號 D 分段、第 741 號 E 分段 (部分)、第 741 號 F 分段 (部分)、第 741 號 G 分段、第 741 號 H 分段、第 741 號餘段 (部分)、第 742 號 A 分段、第 742 號 B 分段、第 742 號餘段、第 743 號 A 分段、第 743 號餘段、第 744 號餘段、第 745 號 A 分段、第 745 號餘段、第 746 號餘段、第 749 號餘段、第 857 號 (部分)、第 858 號、第 859 號 (部分)、第 860 號 (部分)、第 861 號 (部分)、第 862 號、第 863 號、第 864 號、第 865 號、第 868 號、第 871 號餘段 (部分)、第 872 號餘段 (部分)、第 879 號 A 分段餘段 (部分)、第 880 號 C 分段餘段 (部分)、第 903 號 B 分段 (部分)、第 904 號 A 分段、第 904 號 B 分段、第 904 號 C 分段、第 904 號 D 分段 (部分)、第 904 號 E 分段 (部分)、第 904 號 F 分段 (部分)、第 904 號 G 分段 (部分)、第 905 號、第 906 號、第 908 號 A 分段、第 908 號 B 分段、第 908 號餘段、第 909 號 A 分段、第 910 號 (部分)、第 911 號 C 分段餘段 (部分)、第 912 號 A 分段第 1 小分段 (部分)、第 912 號餘段 (部分)、第 913 號、第 914 號 A 分段第 1 小分段 (部分)、第 914 號餘段、第 915 號 A 分段第 1 小分段 (部分)、第 915 號餘段 (部分)、第 916 號 (部分)、第 917 號 (部分)、第 918 號 (部分)、第 919 號 (部分)、第 920 號、第 923 號 (部分) 和第 2222 號 (部分)；

丈量約份第 95 約地段第 4 號 (部分)、第 5 號、第 6 號 A 分段、第 6 號餘段 (部分)、第 7 號、第 8 號 A 分段、第 9 號、第 10 號 A 分段、第 10 號餘段、第 12 號 A 分段、第 13 號、第 14 號 A 分段、第 14 號餘段、第 16 號 A 分段第 2 小分段 (部分)、第 16 號 A 分段第 3 小分段 (部分)、第 16 號 A 分段第 4 小分段、第 16 號 A 分段第 5 小分段 (部分)、第 16 號 A 分段第 6 小分段 (部分)、第 16 號 A 分段第 7 小分段 (部分)、第 16 號 A 分段第 8 小分段、第 16 號 A 分段第 9 小分段、第 16 號 A 分段第 10 小分段、第 16 號 A 分段第 11 小分段、第 16 號 A 分段第 12 小分段、第 16 號 A 分段第 13 小分段、第 16 號 A 分段第 14 小分段 (部分)、第 17 號 A 分段餘段、第 19 號、第 20 號、第 21 號、第 22 號、第 23 號、第 24 號、第 25 號、第 26 號、第 27 號、第 28 號 (部分)、第 29 號 (部分)、第 38 號 A 分段 (部分)、第 38 號 B 分段 (部分)、第 38 號餘段 (部分)、第 39 號 A 分段 (部分)、第 39 號餘段 (部分)、第 40 號 (部分)、第 42 號餘段、第 43 號 (部分)、第 44 號 (部分)、第 45 號 (部分)、第 53 號 (部分)、第 59 號 (部分)、第 61 號 (部分)、第 62 號 (部分)、第 63 號、第 64 號、第 65 號 (部分)、第 66 號 (部分)、第 67 號、第 69 號、第 70 號、第 71 號、第 72 號、第 73 號、第 74 號、第 75 號、第 76 號、第 77 號、第 78 號 A 分段、第 78 號餘段、第 79 號、第 80 號、第 81 號 (部分)、第 82 號 (部分)、第 83 號 (部分)、第 84 號 (部分)、第 85 號 (部分)、第 86 號 (部分)、第 87 號 (部分)、第 88 號 (部分)、第 89 號 (部分)、第 90 號 (部分)、第 91 號 (部分)、第 94 號 A 分段餘段 (部分)、第 95 號 A 分段第 2 小分段、第 95 號 A 分段餘段 (部分)、第 96 號 A 分段 (部分)、第 97 號 A 分段第 1 小分段、第 97 號 A 分段餘段、第 98 號 A 分段、第 98 號餘段 (部分)、第 99 號 (部分)、第 100 號 A 分段 (部分)、第 100 號餘段、第 102 號 (部分)、第 104 號 (部分)、第 106 號 (部分)、第 111 號 A 分段 (部分)、第 111 號 B 分段 (部分)、第 111 號餘段 (部分)、第 112 號 (部分)、第 118 號 (部分)、第 119 號 (部分)、第 122 號 (部分)、第 123 號 (部分)、第 124 號 (部分)、第 126 號、第 127 號、第 128 號、第 129 號、第 131 號、第 132 號 (部分)、第 133 號 (部分)、第 139 號 (部分)、第 140 號、第 143 號 (部分)、第 145 號 (部分)、第 148 號、第 149 號、第 150 號 (部分)、第 151 號 (部分)、第 152 號 (部分)、第 153 號 (部分)、第 154 號 (部分)、第 157 號、第 158 號、第 161 號 (部分)、第 162 號、第 163 號 (部分)、第 164 號 A 分段 (部分)、第 166 號 B 分段、第 167 號 A 分段餘段、第 168 號 A 分段餘段、第 169 號餘段、第 170 號、第 171 號、第 172 號 (部分)、第 173 號、第 174 號、第 175 號、第 176 號、第 177 號、第

178 號、第 180 號、第 181 號、第 182 號、第 183 號、第 184 號、第 186 號、第 187 號、第 188 號、第 189 號、第 190 號 A 分段、第 191 號、第 193 號、第 194 號 A 分段、第 195 號 A 分段餘段 (部分)、第 196 號餘段、第 197 號 A 分段 (部分)、第 198 號餘段 (部分)、第 199 號 A 分段、第 200 號 A 分段、第 201 號 A 分段 (部分)、第 203 號 (部分)、第 204 號 (部分)、第 205 號 (部分)、第 206 號、第 207 號 (部分)、第 208 號 A 分段 (部分)、第 208 號 B 分段 (部分)、第 208 號餘段 (部分)、第 210 號 A 分段、第 211 號 A 分段餘段、第 212 號 A 分段、第 212 號餘段、第 213 號、第 214 號 A 分段、第 214 號餘段、第 215 號、第 216 號、第 217 號、第 218 號、第 219 號、第 220 號、第 221 號 A 分段餘段、第 222 號 A 分段餘段 (部分)、第 223 號、第 224 號、第 225 號、第 229 號、第 231 號 B 分段餘段 (部分)、第 233 號 A 分段 (部分)、第 234 號 A 分段第 1 小分段 (部分)、第 234 號 A 分段餘段、第 235 號 A 分段第 1 小分段 (部分)、第 235 號 A 分段餘段、第 236 號 A 分段餘段 (部分)、第 237 號 B 分段 (部分)[又稱 237B(部分)；亦稱 237(部分)]、第 238 號 (部分)、第 240 號 (部分)、第 241 號 (部分)、第 242 號、第 244 號、第 245 號 (部分)、第 246 號、第 247 號 (部分)、第 249 號 (部分)、第 252 號 (部分)、第 253 號 (部分)、第 255 號 (部分)、第 256 號 (部分)、第 257 號、第 258 號、第 259 號 (部分)、第 261 號、第 262 號、第 263 號、第 264 號、第 265 號 A 分段、第 265 號餘段、第 266 號、第 268 號 (部分)、第 270 號 (部分)、第 271 號 A 分段餘段 (部分)、第 272 號 (部分)、第 273 號、第 276 號 (部分)、第 280 號 (部分)、第 283 號 (部分)、第 285 號、第 286 號、第 287 號、第 288 號、第 289 號 (部分)、第 292 號 A 分段 (部分)、第 292 號餘段 (部分)、第 306 號 (部分)、第 308 號 (部分)、第 314 號餘段 (部分)、第 321 號 B 分段、第 321 號 C 分段、第 321 號 D 分段、第 321 號 E 分段、第 321 號餘段、第 322 號餘段、第 323 號、第 325 號 A 分段、第 325 號 B 分段、第 325 號餘段、第 328 號 A 分段、第 328 號餘段 (部分)、第 329 號 (部分)、第 331 號、第 334 號 A 分段、第 334 號 B 分段、第 334 號 C 分段、第 334 號 D 分段、第 334 號 E 分段、第 334 號 F 分段、第 334 號餘段、第 335 號 A 分段 (部分)、第 335 號 B 分段、第 335 號 C 分段、第 335 號 D 分段、第 335 號 E 分段、第 335 號 F 分段、第 335 號 G 分段、第 335 號 H 分段、第 335 號 I 分段、第 335 號 J 分段、第 335 號餘段 (部分)、第 337 號 (部分)、第 338 號、第 341 號餘段、第 346 號 A 分段 (部分)、第 346 號 B 分段 (部分)、第 349 號 (部分)、第 351 號、第 352 號、第 353 號 A 分段、第 353 號 B 分段、第 353 號 C 分段、第 353 號 D 分段、第 355 號 (部分)、第 356 號 (部分)、第 357 號、第 359 號、第 360 號、第 372 號餘段 (部分)、第 373 號餘段 (部分)、第 691 號 C 分段第 2 小分段 (部分)、第 691 號 C 分段第 3 小分段、第 691 號 C 分段第 4 小分段、第 691 號 C 分段第 5 小分段、第 691 號 C 分段第 6 小分段、第 691 號 C 分段第 7 小分段、第 691 號 C 分段第 8 小分段、第 691 號 C 分段第 9 小分段、第 691 號 C 分段餘段 (部分)、第 694 號 (部分)、第 695 號 (部分)、第 696 號 (部分)、第 697 號、第 698 號、第 699 號、第 700 號、第 701 號、第 702 號 (部分)、第 703 號 (部分)、第 711 號餘段 (部分)、第 713 號餘段、第 714 號餘段、第 715 號餘段、第 716 號餘段、第 717 號餘段、第 719 號餘段 (部分)、第 720 號餘段 (部分)、第 722 號餘段 (部分)、第 723 號餘段、第 724 號、第 725 號 A 分段、第 725 號 B 分段、第 725 號餘段 (部分)、第 726 號餘段 (部分)、第 727 號餘段 (部分)、第 728 號 A 分段、第 728 號 B 分段、第 728 號 C 分段、第 728 號 D 分段、第 728 號 E 分段、第 728 號 F 分段、第 728 號 G 分段餘段 (部分)、第 728 號 H 分段、第 728 號 J 分段、第 728 號 K 分段、第 728 號 L 分段、第 728 號 M 分段、第 728 號 N 分段、第 728 號餘段、第 729 號 A 分段第 1 小分段、第 729 號 A 分段第 2 小分段 A 分段、第 729 號 A 分段第 2 小分段 B 分段、第 729 號 A 分段第 2 小分段 C 分段、第 729 號 A 分段第 2 小分段餘段、第 729 號 A 分段第 3 小分段、第 729 號 A 分段第 4 小分段、第 729 號 A 分段第 5 小分段餘段、第 729 號 A 分段第 6 小分段餘段、第 729 號 A 分段第 7 小分段、第 729 號 A 分段第 8 小分段、第 729 號 A 分段第 9 小分段、第 729 號 A 分段第 10 小分段 A 分段、第 729 號 A 分段第 10 小分段餘段、第 729 號 A 分段第 11 小分段、第 729 號 A 分段第 12 小分段、第 729 號 A 分段第 13 小分段、

第 729 號 A 分段餘段、第 730 號 A 分段第 1 小分段、第 730 號 A 分段第 2 小分段、第 730 號 A 分段第 3 小分段、第 730 號 A 分段第 4 小分段、第 730 號 A 分段第 5 小分段、第 730 號 A 分段第 6 小分段、第 730 號 A 分段第 7 小分段、第 730 號 A 分段第 8 小分段、第 730 號 A 分段餘段、第 730 號餘段 (部分)、第 731 號 A 分段第 2 小分段、第 731 號 A 分段第 3 小分段、第 731 號 A 分段第 4 小分段、第 731 號 A 分段第 5 小分段 (部分)、第 731 號 A 分段第 6 小分段 (部分)、第 731 號 A 分段第 7 小分段 A 分段、第 731 號 A 分段第 7 小分段餘段、第 731 號 A 分段第 8 小分段 (部分)、第 731 號 A 分段第 10 小分段、第 731 號 A 分段第 11 小分段 (部分)、第 731 號 A 分段第 12 小分段 (部分)、第 731 號 A 分段第 13 小分段 (部分)、第 731 號 A 分段第 14 小分段、第 731 號 A 分段第 15 小分段、第 731 號 A 分段第 16 小分段、第 731 號 A 分段餘段 (部分)、第 731 號餘段 (部分)、第 732 號 B 分段、第 732 號 C 分段 (部分)、第 732 號餘段 (部分)、第 733 號 C 分段餘段 (部分)、第 736 號餘段 (部分)、第 737 號餘段 (部分)、第 738 號餘段、第 739 號餘段、第 740 號餘段 (部分)、第 741 號 (部分)、第 742 號 A 分段 (部分)、第 742 號餘段 (部分)、第 743 號 A 分段、第 743 號餘段、第 744 號 A 分段、第 744 號餘段、第 745 號 A 分段、第 745 號餘段 (部分)、第 747 號、第 748 號餘段、第 749 號、第 750 號、第 751 號 (部分)、第 752 號 (部分)、第 754 號 A 分段、第 754 號 B 分段、第 754 號 C 分段、第 754 號 D 分段、第 754 號餘段、第 755 號 A 分段、第 755 號 B 分段、第 755 號 C 分段、第 755 號 D 分段 (部分)、第 755 號餘段 (部分)、第 757 號 A 分段、第 757 號 B 分段、第 757 號餘段 (部分)、第 758 號、第 759 號 A 分段 (部分)、第 759 號 B 分段、第 759 號 C 分段 (部分)、第 759 號餘段 (部分)、第 761 號 A 分段 (部分)、第 761 號 B 分段、第 761 號 C 分段 (部分)、第 761 號 D 分段、第 761 號餘段、第 762 號 A 分段、第 762 號 B 分段、第 762 號 C 分段 (部分)、第 762 號 D 分段、第 762 號餘段、第 763 號、第 764 號、第 765 號、第 766 號 A 分段、第 766 號餘段、第 767 號 A 分段餘段 (部分)、第 767 號餘段 (部分)、第 768 號 A 分段餘段 (部分)、第 768 號 B 分段餘段 (部分)、第 768 號 C 分段、第 768 號餘段、第 769 號餘段 (部分)、第 770 號 A 分段餘段、第 774 號 A 分段 (部分)、第 776 號 A 分段餘段 (部分)、第 778 號餘段 (部分)、第 783 號餘段 (部分)、第 784 號餘段 (部分)、第 790 號餘段、第 794 號餘段、第 795 號、第 796 號餘段、第 798 號 A 分段、第 798 號 B 分段、第 798 號餘段、第 799 號餘段、第 803 號 A 分段第 1 小分段餘段、第 803 號 A 分段第 2 小分段、第 803 號 A 分段第 3 小分段 (部分)、第 803 號 A 分段餘段、第 805 號 A 分段餘段、第 805 號 B 分段餘段 (部分)、第 806 號 (部分)、第 807 號餘段、第 809 號餘段、第 811 號 A 分段、第 811 號餘段、第 812 號、第 814 號、第 815 號餘段 (部分)、第 816 號 A 分段第 1 小分段 (部分)、第 816 號 A 分段第 2 小分段、第 816 號 A 分段餘段 (部分)、第 816 號餘段、第 817 號餘段、第 818 號餘段、第 819 號餘段、第 820 號餘段 (部分)、第 821 號 A 分段餘段、第 821 號 B 分段、第 821 號 C 分段、第 821 號餘段 (部分)、第 822 號 A 分段餘段、第 822 號 B 分段第 1 小分段、第 822 號 B 分段第 2 小分段、第 822 號 B 分段第 3 小分段 (部分)、第 822 號 B 分段餘段 (部分)、第 823 號、第 824 號 (部分)、第 825 號 (部分)、第 826 號、第 827 號 (部分)、第 829 號 (部分)、第 830 號 (部分)、第 831 號 A 分段 (部分)、第 831 號 B 分段 (部分)、第 832 號、第 833 號、第 834 號、第 835 號、第 837 號、第 839 號、第 840 號、第 841 號 (部分)、第 842 號、第 844 號 A 分段、第 844 號餘段、第 845 號、第 846 號 A 分段、第 846 號 B 分段、第 846 號餘段、第 847 號、第 849 號 A 分段、第 849 號 B 分段、第 850 號、第 851 號 (部分)、第 852 號 A 分段、第 852 號餘段 (部分)、第 853 號 (部分)、第 856 號 A 分段、第 856 號餘段、第 857 號、第 858 號 A 分段、第 858 號餘段、第 859 號、第 860 號 A 分段、第 860 號 B 分段、第 860 號 C 分段、第 860 號餘段、第 861 號 A 分段、第 861 號餘段、第 863 號、第 864 號、第 865 號、第 866 號 A 分段、第 867 號、第 868 號 A 分段、第 869 號 A 分段、第 870 號 A 分段、第 871 號 A 分段、第 871 號餘段、第 872 號 A 分段、第 872 號 B 分段 (部分)、第 872 號餘段、第 873 號 A 分段、第 873 號餘段 (部分)、第 874 號 A 分段、第 874 號餘段 (部分)、第 875 號 (部分)、第 876 號 (部分)、第 877 號 (部

分)、第 878 號 (部分)、第 879 號 (部分)、第 880 號、第 881 號、第 882 號、第 884 號、第 885 號、第 886 號、第 887 號 (部分)、第 888 號餘段 (部分)、第 889 號 (部分)、第 890 號 (部分)、第 891 號 (部分)、第 892 號 (部分)、第 893 號 (部分)、第 900 號、第 910 號餘段 (部分)、第 913 號餘段、第 914 號 (部分)、第 915 號、第 916 號 (部分)、第 917 號 (部分)、第 918 號、第 919 號、第 920 號、第 921 號、第 922 號、第 923 號、第 924 號、第 925 號、第 927 號 (部分)、第 928 號、第 929 號、第 930 號 (部分)、第 931 號 (部分)、第 932 號、第 933 號 (部分)、第 934 號 (部分)、第 935 號、第 936 號、第 937 號、第 938 號、第 939 號餘段 (部分)、第 940 號、第 941 號、第 942 號餘段、第 943 號餘段、第 944 號餘段、第 945 號餘段、第 966 號餘段 (部分)、第 986 號餘段、第 989 號餘段、第 991 號餘段、第 998 號餘段、第 999 號餘段、第 1001 號餘段、第 1002 號、第 1003 號餘段、第 1004 號 A 分段、第 1004 號餘段 (部分)、第 1005 號 (部分)、第 1007 號 A 分段、第 1007 號餘段 (部分)、第 1008 號 (部分)、第 1009 號 A 分段、第 1009 號餘段 (部分)、第 1010 號 A 分段、第 1011 號 A 分段、第 1011 號餘段、第 1012 號 A 分段、第 1012 號餘段、第 1013 號 A 分段、第 1014 號 A 分段、第 1014 號餘段、第 1015 號 A 分段、第 1015 號餘段、第 1016 號 (部分)、第 1017 號 (部分)、第 1018 號餘段 (部分)、第 1019 號 (部分)、第 1126 號 A 分段餘段 (部分)、第 1126 號 B 分段餘段、第 1127 號、第 1128 號餘段、第 1130 號餘段、第 1140 號餘段、第 1141 號、第 1142 號、第 1143 號 (部分)、第 1144 號 A 分段、第 1144 號 B 分段 (部分)、第 1144 號餘段、第 1145 號 (部分)、第 1146 號餘段 (部分)、第 1157 號餘段 (部分)、第 1158 號、第 1159 號、第 1160 號、第 1161 號、第 1162 號、第 1914 號、第 1917 號、第 1921 號 B 分段、第 1921 號餘段、第 1924 號、第 1952 號 (部分)、第 1971 號 (部分)、第 1975 號、第 1994 號 (部分)、第 1995 號、第 2067 號、第 2072 號 (部分)、第 2074 號和第 2079 號；

丈量約份第 96 約第 626 號 A 分段餘段、第 627 號、第 629 號、第 630 號 A 分段、第 630 號 B 分段餘段、第 631 號餘段、第 632 號餘段 (部分)、第 633 號餘段 (部分)、第 634 號 C 分段餘段、第 637 號餘段、第 638 號餘段、第 643 號餘段、第 644 號餘段、第 645 號 A 分段餘段、第 645 號 C 分段餘段、第 647 號餘段、第 657 號 A 分段餘段 (部分)、第 659 號 A 分段餘段 (部分)、第 659 號 B 分段 (部分)、第 659 號 C 分段餘段 (部分)、第 662 號 (部分)、第 663 號 (部分)、第 664 號餘段 (部分)、第 665 號餘段、第 666 號餘段 (部分)、第 667 號 (部分)、第 668 號 (部分)、第 671 號 (部分)、第 747 號 B 分段餘段 (部分)、第 747 號 C 分段餘段 (部分)、第 747 號 D 分段第 1 小分段 (部分)、第 834 號餘段 (部分)、第 839 號 B 分段 (部分)、第 839 號 C 分段第 1 小分段 (部分)、第 839 號 C 分段餘段 (部分)、第 839 號餘段 (部分)、第 855 號餘段、第 858 號、第 859 號 B 分段餘段 (部分)、第 860 號 (部分)、第 861 號 (部分)、第 862 號餘段、第 863 號、第 864 號、第 866 號、第 868 號、第 869 號餘段 (部分)、第 870 號 (部分)、第 871 號 (部分)、第 872 號 (部分)、第 875 號、第 876 號、第 877 號、第 878 號、第 882 號餘段、第 884 號餘段、第 886 號餘段、第 888 號餘段 (部分)、第 897 號、第 898 號 (部分)、第 899 號 (部分)、第 900 號 (部分)、第 901 號 (部分)、第 904 號 (部分)、第 905 號 (部分)、第 920 號 (部分)、第 922 號 (部分)、第 923 號 (部分)、第 924 號 (部分)、第 925 號 (部分)、第 954 號 (部分)、第 965 號、第 976A 號、第 979 號、第 980 號、第 982 號 (部分)、第 983 號 (部分)、第 989 號 (部分)、第 990 號 A 分段 (部分)、第 990 號 B 分段 (部分)、第 991 號 (部分)、第 992 號 (部分)、第 993 號、第 994 號 (部分)、第 998 號 (部分)、第 999 號 (部分)、第 1000 號 (部分)、第 1004 號 (部分)、第 1005 號、第 1006 號、第 1007 號、第 1008 號 (部分)、第 1015 號 (部分)、第 1017 號 (部分)、第 1020 號、第 1021 號 (部分)、第 1033 號、第 1035 號、第 1037 號、第 1040 號、第 1042 號、第 1056 號 (部分)、第 1057 號和第 2252 號餘段 (部分)；以及

粉嶺上水市地段第 182 號餘段 (部分)。

現公布行政長官會同行政會議已決定，須收回上述土地作公共用途。本人並已根據香港特別行政區行政長官所授予的權力，發出命令，在本公告張貼於上述土地的日期起計三個月屆滿時，上述土地須予收回，並歸還香港特別行政區政府所有。

本公告已於 2024 年 1 月 11 日張貼於上述土地。在通知期屆滿時，即 2024 年 4 月 11 日午夜，上述土地須予收回，並歸還香港特別行政區政府所有。土地歸還日期為 2024 年 4 月 12 日。

公眾人士可在本公告刊登《憲報》之後，於地政總署網頁 (https://www.landsd.gov.hk/tc/resources/gov-notices/acq.html) 政府公告一欄內，瀏覽本公告及上述收地圖則的電子版本。下列辦事處亦備有本公告的副本及上述收地圖則，公眾人士可於辦事處下述一般開放時間內免費查閱：

辦事處地址	*開放時間* *(公眾假期除外)*
香港中環統一碼頭道 38 號 海港政府大樓地下 中西區民政諮詢中心	星期一至星期五 上午 9 時至晚上 7 時
新界粉嶺璧峰路 3 號 北區政府合署地下 北區民政諮詢中心	
新界元朗青山公路 269 號 元朗民政事務處大廈地下 元朗民政諮詢中心	
新界粉嶺璧峰路 3 號 北區政府合署 6 樓 北區地政處	星期一至星期五 上午 8 時 45 分至下午 12 時 30 分 以及 下午 1 時 30 分至下午 5 時 30 分
新界元朗橋樂坊 2 號 元朗政府合署 9 樓 元朗地政處	

2024 年 1 月 11 日

地政總署副署長 (專業事務) 趙莉莉

毅勤發展顧問有限公司
Tel 電話：(852) 3180 7811
Fax 傳真：(852) 3180 7611
Email 電郵：info@aikon.hk
Web 網址：www.aikon.hk

Date : 2nd February, 2026
Our Ref. : ADCL/PLG-10315/L011

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

By Email

Dear Sir/Madam,

Re: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(Planning Application No. A/NE-FTA/264)

We refer to the departmental comments received from the Agriculture, Fisheries and Conservation Department regarding the subject application and would like to provide a *Responses-to-Comments Table* to address the abovementioned departmental comments and facilitate considerations by the AFCD and the Town Planning Board.

Thank you for your kind attention and should you have any queries, please do not hesitate to contact our Mr. Thomas LUK at [redacted].

Yours faithfully,
For and on behalf of
Aikon Development Consultancy Limited

Thomas LUK

Encl.
c.c. Client

Address 地址：
[redacted]

Department	Date	Comments	Responses to Departmental Comments
Agriculture, Fisheries and Conservation Department	29.1.2026	From nature conservation perspective: the applicant should implement measures to protect nearby watercourses from adverse impacts during the construction and operational phases.	The applicant would implement mitigation measures to protect nearby watercourses from adverse impacts during the construction and operational phases. The applicant and contractor will follow good site practice and be responsible for the design construction, operation and maintenance of all the mitigation measures a specified in ProPECC PN 1/94 for construction and site drainage. During construction phase, temporary sand bag barriers would be provided on site to properly direct storm water. The contractor would observe and comply with the WPCO and its subsidiary regulation and carry out the Works in such as manner as to minimise adverse impacts on the water quality during execution of the works. During operation phase, all operation activities would be confined within the application site, sufficient buffer distance from the watercourse would be provided during operation. No non point/diffuse source pollution, such as dust, tyre scraps, etc. would be washed into the watercourses during rainstorms. In addition, runoff would be controlled by best management practice. The applicant is committed to protect nearby watercourses from adverse impacts with the provision and implementation of the mitigation measures.

Aikon Development Consultancy Ltd.
毅 勤 發 展 顧 問 有 限 公 司
Tel 電話：(852) 3180 7811
Fax 傳真：(852) 3180 7611
Email 電郵：info@aikon.hk
Web 網址：www.aikon.hk

Date : 5th February, 2026
Our Ref. : ADCL/PLG-10315/L012

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

By Email

Dear Sir/Madam,

Re: Section 16 Planning Application for Proposed Temporary Warehouse (excluding Dangerous Goods Godown) and Open Storage of Construction Material and Machineries with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land at Lot Nos 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part), 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui, New Territories
(Planning Application No. A/NE-FTA/264)

We would like to supersede our submission dated 19.1.2026 (*Ref. ADCL/PLG-10315/L009*) and provide further information to facilitate considerations by relevant authorities and the Town Planning Board.

The Applicant intends to make use of the application site to facilitate the relocation of brownfield operations affected by land resumption for New Development Areas. A Memorandum of Understanding has been established with three existing brownfield operators, who have collaboratively conducted extensive site search and identified the application site as suitable for the relocation (please refer to the attached site search and information of the existing brownfield operators). The Applicant and the existing brownfield operators have agreed that upon approval of the current application by the Board, the application site will be utilised by the existing brownfield operators for the proposed use during the planning approval period.

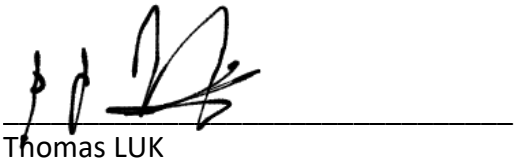
Since the existing operations have been in place for many years and the current facilities no longer meet modern operational standards, this relocation would provide operators with an upgraded, safer, and more spacious facility that can accommodate growing infrastructural demands. The proposed upgrade will enhance the working environment, making it safer and more spacious, thereby improving the capacity to deliver essential services to the expanding construction and industrial sectors. Additionally, the Applicant is concurrently liaising with other affected operators to ensure the utilisation of the site.

Given the challenges in identifying a relocation site of adequate scale, the application site offers a timely solution that ensures operational continuity with minimal disruption. The Applicant sincerely hopes the Board will consider this application favorably, allowing for the proposed use for a temporary period of 3 years.

Thank you for your kind attention and should you have any queries, please do not hesitate to contact our Mr. Thomas LUK at [redacted].

Address 地址：
[redacted]

Yours faithfully,
For and on behalf of
Aikon Development Consultancy Limited



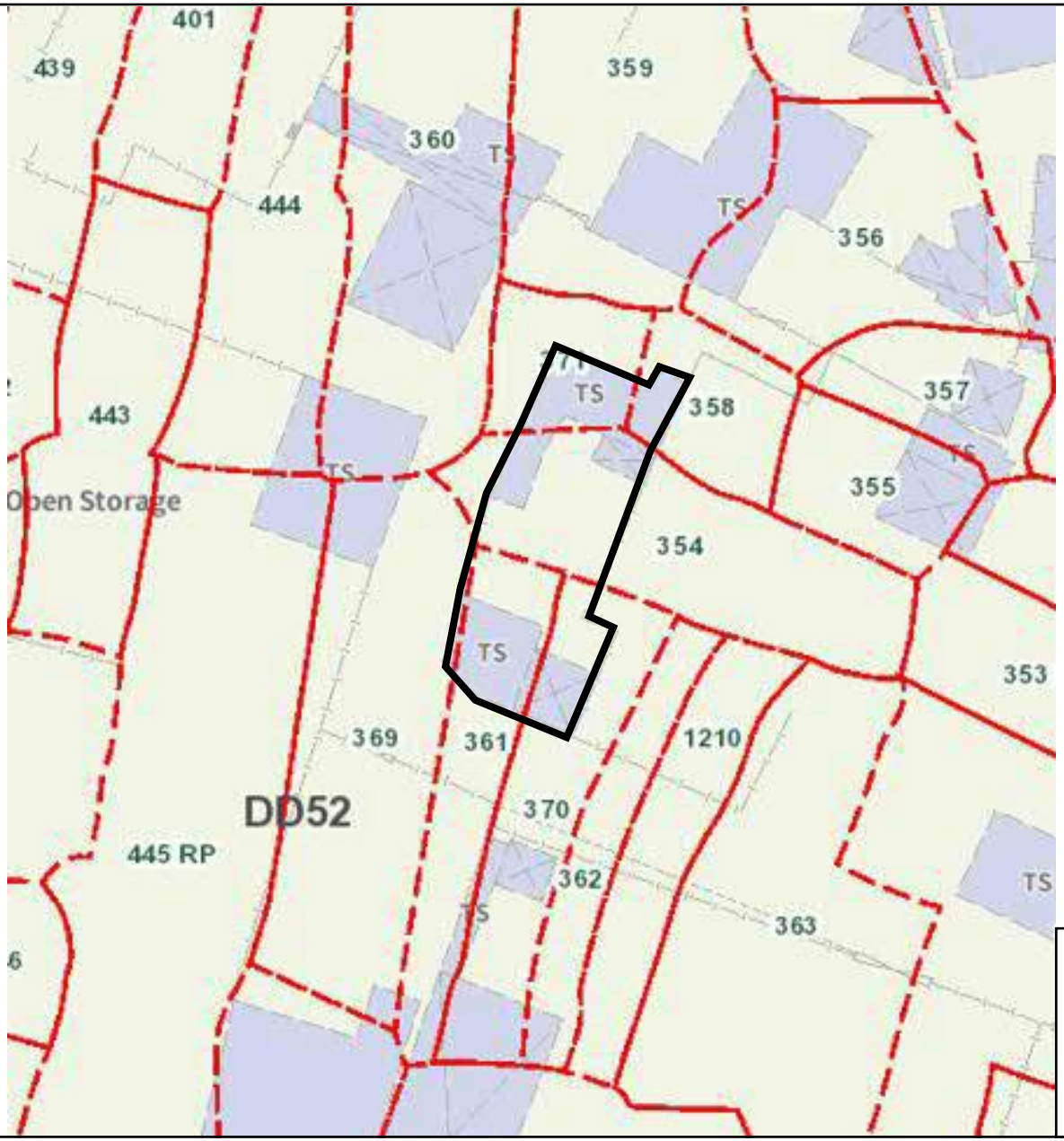
Thomas LUK

Encl.
c.c. Client

Table 1. Alternative Sites for the Relocation of the Affected Brownfield Operations

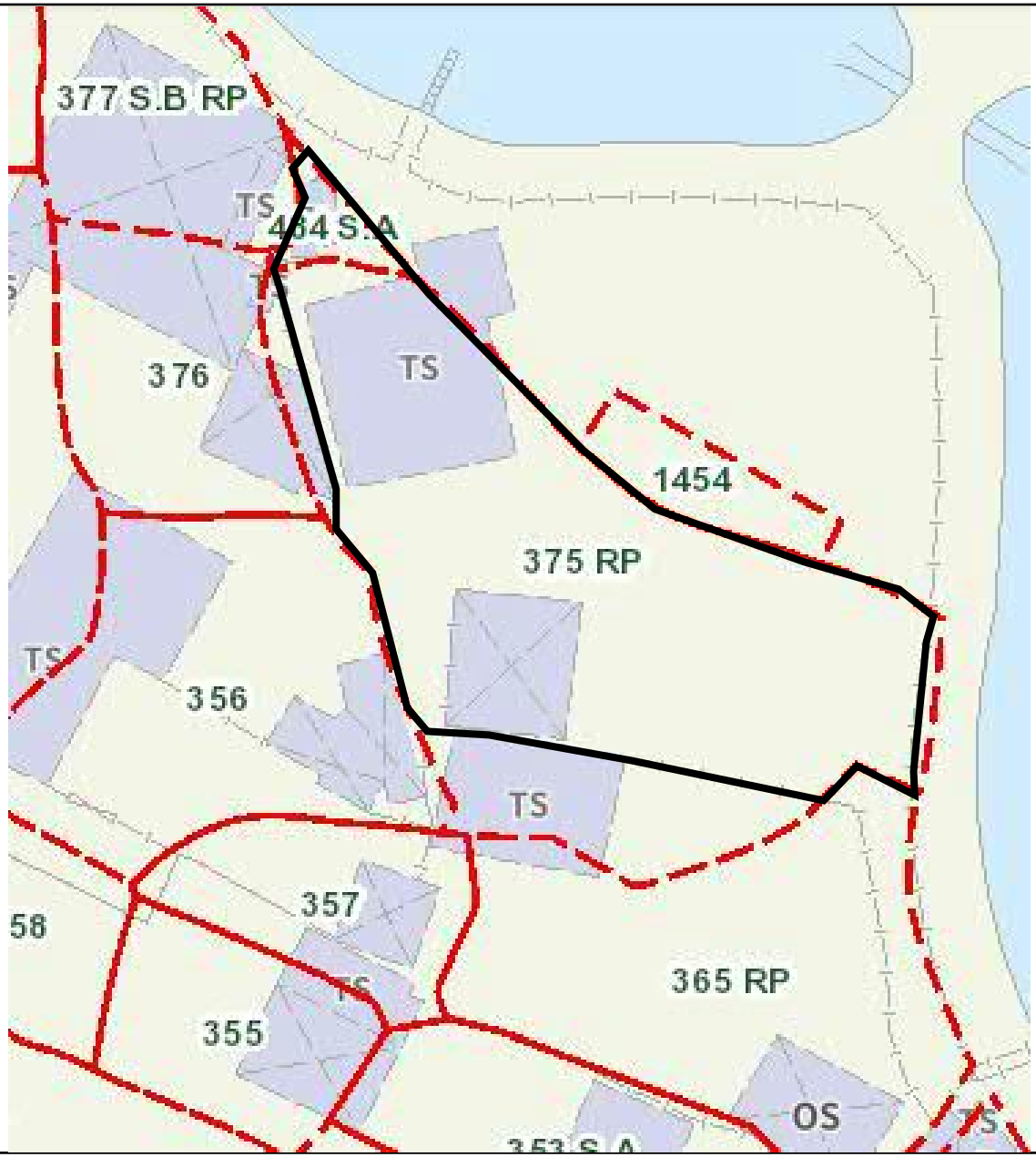
Sites	Alternative Site 1	Alternative Site 2	Alternative Site 3	Application Site
Location	Various Lots in D.D. 78, Ta Kwu Ling, New Territories	Various Lots in D.D. 129, Lau Fau Shan, Yuen Long	Various Lots in D.D. 104, Yau Mei San Tsuen, Mai Po, Yuen Long	Various Lots in D.D. 87, Kong Nga Po, Sheung Shui
Site Area	8,950m^2 (about)	9,570m^2 (about)	17,910m^2 (about)	16,604m^2 (about)
Accessibility	Accessible from Heung Yuen Wai Highway via a local access	Accessible from Deep Bay Road via a local access	Accessible from Geranium Path	Accessible from Kong Nga Po Road
Distance from Existing Operations	4.2 km (about)	15 km (about)	10 km (about)	1.2 km (about)
Zonings	“AGR” on the Approved Wo Keng Shan Outline Zoning Plan (OZP) No. S/NE-WKS/10 and the Ta Kwu Ling North OZP No. S/NE-TKLN/2	"GB" on the Approved Lau Fau Shan And Tsim Bei Tsui Outline Zoning Plan No. S/YL-LFS/11	"Other Specified Uses (Wetland Conservation Park)" and "Recreation" on the Approved Mai Po And Fairview Park Outline Zoning Plan No. S/YL-MP/8	“AGR” on the Approved Fu Tei Au and Sha Ling Outline Zoning Plan No. S/NE-FTA/18
Existing Condition	Mainly covered by vegetation	Vegetated	With fishponds and temporary structures	Vacant
Surrounding Area	Surrounded by Greenbelt and temporary structures	Surrounded by Greenbelt and Coastal Protection Area	Surrounded by fishponds and houses	Surrounded by government facilities, warehouse, open storages/storage yards

Suitability for Relocation	Not suitable for relocation – Distant location of original operation; Not compatible with the surrounding area	Not suitable for relocation – Remote location; Not compatible with the surrounding area	Not suitable for relocation – Remote location; Not compatible with the surrounding area	Comparatively suitable for relocation: - In close proximity to the original operation, established road network - Vacant without active agricultural activities



Affected Operator: 金先峰貿易有限公司

Lots 354 (Part), 358 (Part), 361 (Part), 369 (Part), 370 (Part) and 371 (Part) in D.D. 52

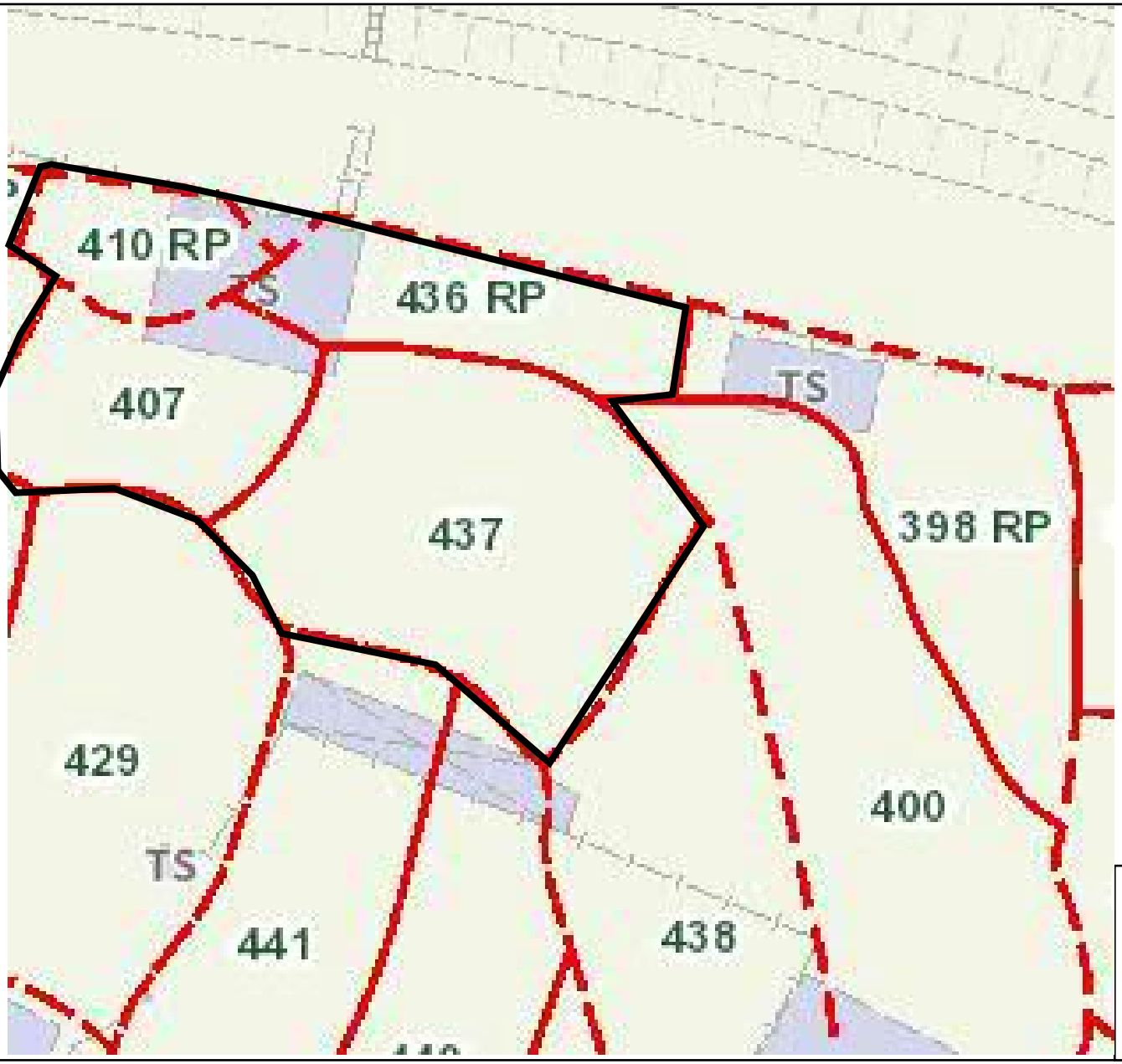


LEGEND:

Site of the Existing Operations (Site B) About 2,650m²
仁記

(For Indicative Purposes Only)

Affected Operator: 仁記
Lots 375 RP (Part) and 484 S.A (Part) in D.D. 52



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LEGEND:

Site of the Existing Operations
(Site C) About 3,300m²
深圳市榮利達貨運代理有限公司

(For Indicative Purposes Only)

Affected Operator:深圳市榮利達貨運代理有限公司
Lots 410 RP (Part), 407 (Part), 436 RP (Part) and 437 (Part) in D.D. 52

金先鋒貿易有限公司 與 Brilliant Profit Limited
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 Brilliant Profit Limited（下稱「**甲方**」）與金先鋒貿易有限公司（下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2026 年 1 月 9 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段之現行租用者；

(二) **乙方**為新界上水丈量約份第 52 約地段**第 354 號（部分）、第 358 號（部分）、第 361 號（部分）、第 369 號（部分）、第 370 號（部分）及第 371 號（部分）**（下稱「**舊地盤**」）作貨倉（危險品倉庫除外）及露天存放用途之現行作業者。受古洞北新發展區及粉嶺北新發展計劃餘下階段相關之收地安排影響，**乙方**未來將難以繼續在舊地盤進行現行作業。**乙方**有意重置其現時位於舊地盤內作貨倉（危險品倉庫除外）及露天存放作業至其他地盤以確保有穩定且充足的土地繼續其日常業務；以及

(三) **甲方**已根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請，(規劃申請編號: A/NE-FTA/264)（下稱「**規劃申請**」），擬議在新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地（下稱「**申請地點**」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）。**雙方**合意在規劃申請獲批准後，並於規劃許可生效期間，**甲方**將申請地點租予**乙方**作臨時貨倉（危險品倉庫除外）及露天存放用途。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程，並依從租賃協議內的條款及條件容許**乙方**租用申請地點內臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，依從租賃協議內的條款及條件租用申請地點作臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

.....
Authorized Signature(s)

_____
(_____)
代表　甲方（Brilliant Profit Limited）
商業登記證號碼：[redacted]

_____
(_____)
代表　乙方（**金先鋒貿易有限公司**）
商業登記證號碼：[redacted]

致： 香港北角渣華道 333 號
北角政府合署 15 樓
城市規劃委員會

敬啟者：

新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地
根據城市規劃條例第 16 條申請作擬議臨時貨倉（危險品倉庫除外）及
露天存放建築物料、機械連附屬設施及相 關填土工程（為期 3 年）
（規劃申請編號：A/NE-FTA/264）

本公司，金先鋒貿易有限公司（商業登記證號碼：[redacted]）多年於新界上水丈量約份第 52 約地段**第 354 號（部分）、第 358 號（部分）、第 361 號（部分）、第 369 號（部分）、第 370 號（部分）及第 371 號（部分）**（下稱「舊地盤」）經營作貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施。然而，最近受政府於古洞北新發展區及粉嶺北新發展計劃 餘下階段之收地影響，本公司未來將難以繼續在舊地盤進行現行作業。

經過廣泛搜尋合適的地段，並考慮到資金許可及儘量減少運作模式的變更，本公司已與 Brilliant Profit Limited（商業登記證號碼：[redacted]）達成共識，期望儘早租用以上申請地段以繼續目前的運作。

本公司得悉 Brilliant Profit Limited 已在多個月前向城市規劃委員會遞交了上述申請，現正受委員會及各政府部門審核中，並將於 2026 年 2 月 6 日作出決議。

若有關申請再進一步延誤或未能獲得批准，本公司將需要重新尋找合適的搬遷地段，此過程將耗時且非常困難。因此，我們懇請委員會可以批准有關申請，以讓我司等受影響戶可以儘快安排搬遷和重新安置，繼續進行受影響的棕地作業，以解燃眉之急。

金先鋒貿易有限公司 TRADING CO., LIMITED

商業登記證號碼[redacted]

日期：2026 年 1 月 9 日

仁記 與 Brilliant Profit Limited
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 Brilliant Profit Limited（下稱「**甲方**」）與仁記（下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2026 年 1 月 9 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段之現行租用者；

(二) **乙方**為新界上水丈量約份第 52 約地段**第 375 號餘段(部分)、及第 484 號 A 分段(部分)**（下稱「**舊地盤**」）作貨倉（危險品倉庫除外）及露天存放用途之現行作業者。受古洞北新發展區及粉嶺北新發展計劃餘下階段相關之收地安排影響，**乙方**未來將難以繼續在舊地盤進行現行作業。**乙方**有意重置其現時位於舊地盤內作貨倉（危險品倉庫除外）及露天存放作業至其他地盤以確保有穩定且充足的土地繼續其日常業務；以及

(三) **甲方**已根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請，(規劃申請編號: A/NE-FTA/264)（下稱「**規劃申請**」），擬議在新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地（下稱「**申請地點**」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）。**雙方**合意在規劃申請獲批准後，並於規劃許可生效期間，**甲方**將申請地點租予**乙方**作臨時貨倉（危險品倉庫除外）及露天存放用途。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程，並依從租賃協議內的條款及條件容許**乙方**租用申請地點內臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，依從租賃協議內的條款及條件租用申請地點作臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

Authorized Signature(s)

(_____)

代表 甲方 （Brilliant Profit Limited）

商業登記證號碼：[redacted]

(_____)

代表 乙方（仁記）

商業登記證號碼：[redacted]

致： 香港北角渣華道 333 號
北角政府合署 15 樓
城市規劃委員會

敬啟者：

新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地
根據城市規劃條例第 16 條申請作擬議臨時貨倉（危險品倉庫除外）及
露天存放建築物料、機械連附屬設施及相 關填土工程（為期 3 年）
(規劃申請編號: A/NE-FTA/264)

本公司，仁記（商業登記證號碼：[redacted]）多年於新界上水丈量約份第 52 約地段**第 375 號餘段(部分)、及第 484 號 A 分段(部分)**（下稱「舊地盤」）經營作貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施。然而，最近受政府於古洞北新發展區及粉嶺北新發展計劃 餘下階段之收地影響，本公司未來將難以繼續在舊地盤進行現行作業。

經過廣泛搜尋合適的地段，並考慮到資金許可及儘量減少運作模式的變更，本公司已與 Brilliant Profit Limited（商業登記證號碼：[redacted]）達成共識，期望儘早租用以上申請地段以繼續目前的運作。

本公司得悉 Brilliant Profit Limited 已在多個月前向城市規劃委員會遞交了上述申請，現正受委員會及各政府部門審核中，並將於 2026 年 2 月 6 日作出決議。

若有關申請再進一步延誤或未能獲得批准，本公司將需要重新尋找合適的搬遷地段，此過程將耗時且非常困難。因此，我們懇請委員會可以批准有關申請，以讓我司等受影響戶可以儘快安排搬遷和重新安置，繼續進行受影響的棕地作業，以解燃眉之急。

商業登記證號碼[redacted]

日期：2026 年 1 月 9 日

深圳市榮利達貨運代理有限公司 與 Brilliant Profit Limited
共同簽訂的諒解備忘錄

本**諒解備忘錄**（下稱「**備忘錄**」）由 Brilliant Profit Limited（下稱「**甲方**」）與深圳市榮利達貨運代理有限公司 （下稱「**乙方**」）（甲方及乙方以下合稱「**雙方**」）於 2026 年 1 月 9 日簽訂。

雙方考慮到：

(一) **甲方**為新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段之現行租用者；

(二) **乙方**為新界上水丈量約份第 52 約地段**第 410 號餘段(部分)、第 407 號(部分)、第 436 號餘段(部分)及第 437 號(部分)**（下稱「**舊地盤**」）作貨倉（危險品倉庫除外）及露天存放用途之現行作業者。受古洞北新發展區及粉嶺北新發展計劃餘下階段相關之收地安排影響，**乙方**未來將難以繼續在舊地盤進行現行作業。**乙方**有意重置其現時位於舊地盤內作貨倉（危險品倉庫除外）及露天存放作業至其他地盤以確保有穩定且充足的土地繼續其日常業務；以及

(三) **甲方**已根據《城市規劃條例》（第 131 章）第 16 條提出規劃許可申請，(規劃申請編號: A/NE-FTA/264)（下稱「**規劃申請**」），擬議在新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地（下稱「**申請地點**」）作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）。**雙方**合意在規劃申請獲批准後，並於規劃許可生效期間，**甲方**將申請地點租予**乙方**作臨時貨倉（危險品倉庫除外）及露天存放用途。

鑑於上述考慮，雙方根據備忘錄達成以下共同協議：

(四) **甲方**同意在取得規劃申請許可後及於規劃許可生效期間，在申請地點作擬議臨時貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施及相關填土工程，並依從租賃協議內的條款及條件容許**乙方**租用申請地點內臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立；以及

(五) **乙方**同意在**甲方**取得規劃申請許可後及於規劃許可生效期間，依從租賃協議內的條款及條件租用申請地點作臨時貨倉（危險品倉庫除外）及露天存放用途。該租賃協議有待雙方在進一步同意下另行訂立。

茲見證備忘錄於文首所註年份日期由**雙方**妥為簽署並生效。

For and on behalf of
BRILLIANT PROFIT LIMITED

Authorized Signature(s)

_____
(_____)
代表 甲方 （Brilliant Profit Limited）
商業登記證號碼：[redacted]

鄭華蓮
_____
(_____)
代表 乙方（深圳市榮利達貨運代理有限公司）
商業登記證號碼：_____

致： 香港北角渣華道 333 號
北角政府合署 15 樓
城市規劃委員會

敬啟者：

新界上水缸瓦甫丈量約份第 87 約地段第 346 號、第 347 號 A 分段、第 347 號 B 分段、第 347 號餘段、第 348 號餘段、第 349 號餘段、第 351 號餘段、第 352 號 B 分段餘段、第 361 號餘段（部分）及第 366 號餘段和毗連政府土地
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露天存放建築物料、機械連附屬設施及相關填土工程（為期 3 年）
(規劃申請編號: A/NE-FTA/264)

本公司，深圳市榮利達貨運代理有限公司（商業登記證號碼：_____）多年於新界上水丈量約份第 52 約地段**第 410 號餘段(部分)、第 407 號(部分)、第 436 號餘段(部分)及第 437 號(部分)**（下稱「舊地盤」）經營作貨倉（危險品倉庫除外）及露天存放建築物料、機械連附屬設施。然而，最近受政府於古洞北新發展區及粉嶺北新發展計劃 餘下階段之收地影響，本公司未來將難以繼續在舊地盤進行現行作業。

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鄭翠蓮
商業登記證號碼

日期：2026 年 1 月 9 日

電　話　Tel:　3529 2415
圖文傳真　Fax:　3793 4547
電郵地址　Email:　grc3@landsd.gov.hk
本署檔號　Our Ref.:　LD/C(NDA)/DN/1
來函檔號　Your Ref.:
來函請註明本署檔號
Please quote our reference in your reply



地政總署
新發展區組清拆小組
CLEARANCE TEAM
NEW DEVELOPMENT AREA SECTION
LANDS DEPARTMENT

我們矢志努力不懈，提供盡善盡美的土地行政服務。
We strive to achieve excellence in land administration.
新界上水彩園邨彩屏樓地下 129 至 136 號
Unit 129-136, G/F, Choi Ping House, Choi Yuen Estate, Sheung Shui, N.T.
網址 Website: www.landsd.gov.hk

Serial No.: 25/C(NDA)/090

LAND (MISCELLANEOUS PROVISIONS) ORDINANCE
(Chapter 28 of The Laws of Hong Kong Special Administrative Region)
NOTICE UNDER SECTION 6(1)

LOCATION: Unleased land as shown coloured pink on Plan 1 in the Remaining Phase Development of Fanling North New Development Area, New Territories

TAKE NOTICE that the Authority designated pursuant to section 3 of the captioned Ordinance hereby requires unlawful occupation of the unleased land at the above location to cease **before the 30th day of November of 2025**.

.....

(FU Yue-ping)
for Director of Lands

Date 28 August 2025

NOTE:
Pursuant to section 6(2) of the Land (Miscellaneous Provisions) Ordinance (the Ordinance), if the occupation of unleased land does not cease as required by this Notice, any public officer, or other person, acting on the direction of the Authority may, with the assistance of such other public officers or other persons as may be necessary (a) remove from the unleased land the persons (if any) thereon; and (b) take possession of any property or structure on the unleased land in question. By virtue of section 6(3) of the Ordinance, any property or structure of which possession is taken under section 6(2)(b) of the Ordinance shall become the property of the Government free from the rights of any person and may be demolished or otherwise dealt with as the Authority thinks fit. Any person who, without reasonable excuse, does not cease the occupation as required by this Notice, may be convicted under section 6(4) of the Ordinance. According to section 6(5) of the Ordinance, the Authority may recover from the person convicted of an offence under section 6(4) of the Ordinance any cost incurred in or arising out of the demolition of any property or structure in the unleased land under section 6(3) of the Ordinance and the exercise of the powers conferred by section 6 of the Ordinance.

編號: 25/C(NDA)/090

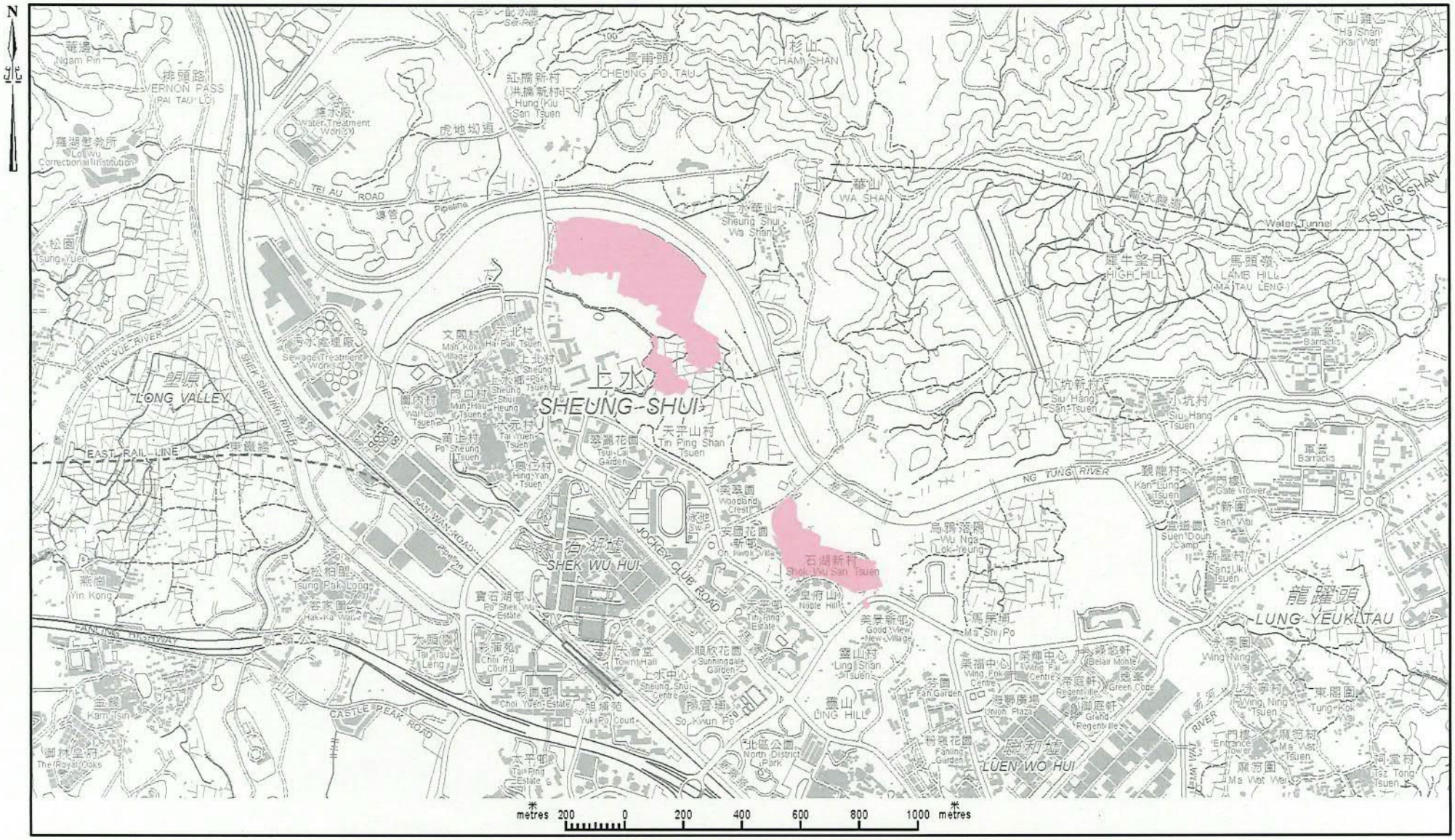
土地(雜項條文)條例
(香港特別行政區法例第 28 章)
根據第 6(1)條所發的通知

現公布，依據上述條例第 3 條指定的當局現飭令不合法佔用位於新界粉嶺北新發展區餘下階段發展在圖則一中粉紅色所示範圍內的未批租土地的情況於**二零二五年十一月三十日之前**停止。

地政總署署長
(傅裕平　代行)

二零二五年八月廿八日

附註：
依據《土地(雜項條文)條例》(該條例)第 6(2)條，如佔用未批租土地的情況未有遵照本通知所飭令者而停止，則按當局指示行事的任何公職人員或其他人(有需要時由其他公職人員或其他人協助)，可(a)將該未批租土地上的任何人(如有的話)驅逐；及(b)接管該未批租土地上的任何財產或構築物。憑藉該條例第 6(3)條，根據該條例第 6(2)(b)條接管的任何財產或構築物即成為政府的財產而不再受任何人在該財產或構築物中的任何權益所規限，並可按當局認為適合的任何方式，將該財產或構築物拆掉或作其他處理。任何人在無合理辯解下未有遵照本通知所飭令者而停止佔用情況，可因觸犯該條例第 6(4)條而被定罪。此外，根據該條例第 6(5)條，當局可向根據該條例第 6(4)條被定罪的人收回因根據該條例第 6(3)條拆掉該未批租土地上的財產或構築物以及行使該條例第 6 條所賦權力而招致或引起的任何費用。


N
上水
SHEUNG SHUI
SHEUNG YUE RIVER
LONG VALLEY
EAST RAIL LINE
SHEK WU HUI
LUEN WO HUI
LUNG YEUK TAU
NG TUNG RIVER
LAM TSUEN RIVER
FANLING HIGHWAY
CASTLE PEAK ROAD
JOCKEY CLUB ROAD
SAN WAN ROAD
PI TEI AU ROAD
VERNON PASS
CHEUNG PO TAU
CHAM SHAN
WA SHAN
HIGH HILL
LAMB HILL
TAI TSUNG SHAN
Water Tunnel
Pipeline
Sewage Treatment Works
Water Treatment Works
Correctional Institution
Barracks
Tower
Camp
Centre
Estate
Garden
Park
Village
Hill
Court
Plaza
Centre
Tsuen
Wai
Shan
metres 200 0 200 400 600 800 1000 metres

任何財產或構築物（包括但不限於構築物編號）不合法佔用粉紅色所示範圍的未批租土地的情況應在二零二五年十一月三十日之前停止。

Unlawful occupation by any property or structure (including but not limited to structure numbers) on the unleased land as shown coloured pink should cease before the 30th day of November 2025.

X4/13, X4/14, X4/15, X4/16, X4/17/1-12, X4/18, X4/19, X4/20, X4/21, X4/22, X4/23, X4/24, X4/25, X4/26, X4/27/1-5, X4/28, X4/29, X4/30/1-3, X4/31, X4/32, X4/33, X4/34, X4/35, X4/36, X4/37, X4/38, X4/39, X4/40, X4/41, X4/42, X4/43, X4/44, X4/45, X4/46, X4/47, X4/48, X4/49, X4/50, X4/51, X4/52/1-5, X4/53, X4/54, X4/55, X4/56, X4/57, X4/58/1-4, X4/59, X4/60, X4/61, X4/62, X4/63, X4/64, X4/65, X4/66, X4/67-1-3, X4/68, X4/69, X4/70, X4/71, X4/72, X4/73, X4/74, X4/75, X4/76, X4/77/1-6, X4/78, X4/79, X4/80, X4/81, X4/82, X4/83, X4/84-93, X4/94, X4/95, X4/96, X4/97, X4/98, X4/99, X4/100/1-6, X4/101, X4/102, X4/103, X4/104, X4/105, X4/106/1-4, X4/107, X4/108, X4/109, X4/110 & 112, X4/111/1-13, X4/113, X4/114, X4/115, 115A, 116/1-3, X4/117, X4/118, X4/119, X4/120/1-13, X4/121-122, X4/123, X4/124, X4/125, X4/126, X4/127, X4/128, X4/129-137, X4/138, X4/139, X4/140, X4/141, X4/142/1-8, X4/143, X4/144, X4/145, X4/146-148, X4/149-150, X4/151, X4/152, X4/153, X4/154/1-3, X4/155, X4/156, X4/157, X4/158, X4/159/1-5, X4/160, X4/161, X4/162, X4/163, X4/163A, X4/164, X4/165/1-2, X4/166, X4/167, X4/168, X4/169, X4/170/1-4, X4/171, X4/172, X4/173/1-7, X4/174, X4/175, X4/176, X4/177, X4/178, X4/179, X4/180, X4/181, X4/182, X4/183, X4/184-193, X4/194, X4/195-200, X4/211D, X4/211E, X4/211F, X4/244, X4/245/1-2, X4/246, X4/247, X4/248, X4/249, X4/250, X4/251, X4/252, X4/253, X4/254, X4/255, X4/256, X4/257, X4/258, X4/259/1-13, X4/260, X4/S/3, X4/S/4, X4/S/5, X5/66, X5/67, X5/68-72, X5/70A, X5/154, X5/156, X5/157, X5/158, X5/159, X5/160, X5/161, X5/162, X5/163, X5/164, X5/165, X5/166, X5/167, X5/168, X5/169, X5/170, X5/171, X6/46, X6/119, X6/201, X6/202-204, X6/205, X6/206, X6/207, X6/208, X6/209, X6/210, X6/211, X6/212, X6/213, X6/214, X6/215, X6/216, X6/217, X6/218, X6/219, X6/220, X6/221, X6/222, X6/223, X6/224, X6/225, X6/226, X6/227, X6/228-233, X6/234, X6/235, X6/236, X6/237, X6/238, X6/239, X6/240, X6/241, X6/242, X6/243, X6/244, X6/245, X6/246, X6/247, X6/248, X6/249, X6/250, X6/251, X6/252, X6/253, X6/254, X6/255, X6/256-259, X6/260, X6/261, X6/262, X6/263, X6/264, X6/265, X6/266, X6/267, X6/268, X6/269, X6/270, X6/271, X6/272, X6/273, X6/274, X6/275, X6/276, X6/277, X6/278, X6/279, X6/280, X6/281, X6/282, X6/283, X6/284, X6/285, X6/286, X6/287, X6/288-290, X6/291, X6/292, X6/293, X6/294, X6/295, X6/296, X6/297, X6/298, X6/299, X6/300, X6/301, X6/302, X6/303, X6/304, X6/305, X6/306, X6/307, X6/308, X6/309, X6/310, X6/311, X6/312, X6/313-315, X6/316, X6/317-322, X6/323, X6/324-327, X6/328, X6/329-331, X6/332, X6/333, X6/334-337, X6/343, X6/344, X6/345A-G, X6/352, X6/353-357, X6/358, X6/372, X6/384, X6/391, X6/392, X6/393, X6/394, X6/395, X6/399, X6/400-410, X7/S/1

第 205 號公告 地政總署

收回土地條例 (第 124 章)

(根據第 4 條發出的公告)

收回土地
以便進行古洞北新發展區及
粉嶺北新發展區發展計劃——
餘下階段

致下文詳述並在第 DNM5339a 號收地圖則上以橙色標示，位於新界的各塊或各幅土地的業主，以及就該等土地擁有權益、權利或地役權的每名人士。該等土地稱為：

丈量約份第 51 約地段第 172 號餘段 (部分)、第 174 號、第 175 號、第 176 號、第 178 號、第 179 號餘段、第 180 號、第 182 號、第 209 號 (部分)、第 227 號 (部分)、第 228 號 (部分)、第 229 號、第 230 號、第 231 號 (部分)、第 232 號 A 分段、第 232 號 B 分段、第 233 號、第 234 號、第 235 號、第 236 號、第 237 號 (部分)、第 238 號餘段 (部分)、第 239 號 (部分)、第 240 號 (部分)、第 241 號 (部分)、第 242 號、第 245 號 B 分段餘段 (部分)[又稱第 245B 號餘段 (部分)]、第 246 號餘段 (部分)、第 248 號、第 249 號 (部分)、第 252 號 (部分)、第 256 號 (部分)、第 257 號 (部分)、第 258 號 (部分)、第 259 號、第 260 號 A 分段、第 260 號餘段 (部分)、第 261 號 (部分)、第 262 號、第 263 號、第 264 號、第 265 號、第 270 號 (部分)、第 306 號餘段 (部分)、第 332 號 (部分)、第 333 號 (部分)、第 334 號 (部分)、第 335 號 (部分)、第 358 號 (部分)、第 359 號 (部分)、第 396 號 (部分)、第 397 號、第 398 號、第 399 號 (部分)、第 400 號 (部分)、第 401 號、第 402 號、第 403 號、第 404 號 (部分)、第 406 號 (部分)、第 407 號 (部分)、第 414 號 (部分)、第 416 號 (部分)、第 418 號 (部分)、第 419 號、第 420 號 (部分)、第 421 號 (部分)、第 422 號、第 424 號 (部分)、第 425 號 (部分)、第 428 號 (部分)、第 429 號 (部分)、第 430 號、第 431 號 (部分)、第 432 號 (部分)、第 433 號 (部分)、第 434 號 (部分)、第 435 號 (部分)、第 437 號餘段、第 442 號、第 443 號、第 444 號、第 445 號、第 446 號、第 447 號、第 448 號 (部分)、第 450 號 (部分)、第 451 號、第 452 號、第 453 號、第 455 號、第 456 號餘段、第 457 號、第 458 號 B 分段餘段、第 482 號 (部分)、第 483 號 (部分)、第 484 號 A 分段 (部分)、第 484 號餘段 (部分)、第 485 號 D 分段 (部分)、第 485 號餘段、第 486 號、第 532 號餘段 (部分)、第 533 號餘段 (部分)、第 534 號餘段 (部分)、第 538 號、第 539 號 (部分)、第 540 號 (部分)、第 541 號 (部分)、第 542 號 (部分)、第 543 號 (部分)、第 544 號、第 545 號 (部分)、第 546 號 (部分)、第 547 號 (部分)、第 548 號 (部分)、第 549 號、第 550 號、第 551 號 (部分)、第 552 號 (部分)、第 553 號 (部分)、第 554 號、第 555 號、第 556 號、第 557 號 A 分段、第 557 號餘段、第 558 號 A 分段、第 558 號餘段、第 559 號、第 560 號、第 561 號、第 562 號 (部分)、第 566 號餘段 (部分)、第 608 號 (部分)、第 609 號 (部分)、第 610 號餘段 (部分)、第 611 號餘段 (部分)、第 612 號、第 613 號餘段、第 614 號餘段、第 619 號餘段、第 620 號餘段、第 621 號餘段、第 622 號 A 分段第 1 小分段 (部分)、第 622 號 A 分段餘段、第 622 號 B 分段第 1 小分段 (部分)、第 622 號 B 分段餘段、第 624 號 A 分段 (部分)、第 624 號餘段、第 625 號 A 分段 (部分)、第 625 號餘段、第 626 號 (部分)、第 627 號餘段、第 628 號餘段 (部分)、第 629 號餘段 (部分)、第 636 號餘段、第 646 號餘段 (部分)、第 647 號餘段 (部分)、第 648 號餘段 (部分)、第 650 號餘段、第 651 號餘段、第 652 號、第 653 號、第 654 號、第 655 號餘段 (部分)、第 656 號、第 657 號 (部分)、第 741 號、第 791 號餘段、第 792 號餘段、第 793 號、第 806 號、第 807 號 A 分段 (部分)、第 2013 號 A 分段餘段 (部分)、第 2013 號 B 分段餘段 (部分)、第 2013 號 C 分段餘段 (部

分)、第 2014 號、第 2015 號 (部分)、第 2016 號 A 分段餘段 (部分)、第 2016 號 B 分段餘段 (部分)、第 2018 號 A 分段、第 2018 號 B 分段 (部分)、第 2018 號餘段、第 2019 號 A 分段 (部分)、第 2019 號餘段 (部分)、第 2020 號餘段 (部分)、第 2021 號 A 分段、第 2022 號 A 分段 (部分)、第 2022 號 B 分段、第 2022 號餘段、第 2023 號、第 2024 號、第 2025 號、第 2026 號、第 2027 號 A 分段、第 2027 號 B 分段、第 2028 號、第 2029 號餘段、第 2030 號餘段、第 2031 號餘段、第 2032 號餘段、第 2034 號 (部分)、第 2035 號 A 分段、第 2035 號 B 分段 (部分)、第 2036 號 (部分)、第 2037 號 (部分)、第 2038 號 (部分)、第 2039 號餘段、第 2041 號、第 2042 號 A 分段 (部分)、第 2042 號 B 分段、第 2043 號 (部分)、第 2044 號 A 分段 (部分)、第 2044 號餘段、第 2045 號 (部分)、第 2046 號 A 分段 (部分)、第 2046 號 B 分段、第 2046 號餘段、第 2047 號 B 分段、第 2047 號 C 分段 (部分)、第 2047 號餘段、第 2048 號、第 2049 號 A 分段、第 2049 號餘段、第 2050 號餘段、第 2052 號餘段、第 2053 號 B 分段、第 2053 號餘段、第 2054 號、第 2055 號餘段、第 2056 號、第 2057 號、第 2058 號、第 2059 號餘段、第 2060 號餘段、第 2061 號 B 分段、第 2061 號 C 分段、第 2061 號餘段、第 2062 號 A 分段、第 2062 號 B 分段、第 2062 號餘段、第 2063 號 A 分段、第 2063 號餘段、第 2064 號、第 2066 號、第 2067 號、第 2069 號餘段、第 2070 號餘段、第 2071 號、第 2072 號、第 2073 號、第 2074 號 (部分)、第 2075 號、第 2076 號、第 2077 號 (部分)、第 2078 號、第 2080 號 A 分段 (部分)、第 2080 號餘段、第 2081 號 A 分段、第 2081 號餘段、第 2082 號 A 分段、第 2082 號餘段、第 2083 號 A 分段、第 2083 號 B 分段、第 2083 號 C 分段、第 2083 號餘段、第 2084 號、第 2085 號 A 分段、第 2085 號餘段、第 2086 號 A 分段、第 2086 號餘段、第 2087 號 A 分段、第 2087 號 B 分段、第 2087 號餘段、第 2088 號 A 分段、第 2088 號 B 分段、第 2088 號餘段、第 2089 號 A 分段、第 2089 號餘段、第 2090 號、第 2091 號 A 分段、第 2091 號餘段、第 2092 號、第 2093 號、第 2094 號 A 分段、第 2094 號餘段、第 2095 號 A 分段、第 2095 號餘段、第 2096 號 A 分段第 1 小分段、第 2096 號 A 分段餘段、第 2096 號 B 分段、第 2096 號餘段、第 2097 號餘段、第 2124 號餘段 (部分)、第 2125 號餘段 (部分)、第 2127 號 A 分段餘段、第 2127 號 B 分段餘段、第 2128 號、第 2129 號、第 2130 號 A 分段 (部分)、第 2130 號 B 分段、第 2130 號餘段、第 2131 號餘段 (部分)、第 2133 號餘段、第 2134 號餘段、第 2135 號、第 2136 號餘段、第 2137 號 A 分段、第 2137 號餘段、第 2138 號 A 分段、第 2138 號餘段、第 2139 號 A 分段、第 2139 號餘段、第 2140 號、第 2141 號 A 分段、第 2141 號餘段、第 2144 號餘段、第 4541 號餘段、第 4644 號 (部分)、第 4666 號 (部分)、第 4849 號 A 分段 (部分)、第 4849 號 B 分段、第 4849 號 C 分段、第 4849 號 D 分段第 1 小分段、第 4849 號 D 分段餘段、第 4849 號 E 分段第 1 小分段 (部分)、第 4849 號 E 分段餘段、第 4849 號 F 分段第 1 小分段 (部分)、第 4849 號 F 分段餘段 (部分)、第 4849 號 G 分段 (部分)、第 4849 號 H 分段和第 4849 號餘段；

丈量約份第 52 約地段第 55 號 (部分)、第 56 號、第 74 號餘段、第 75 號餘段 (部分)、第 76 號、第 77 號餘段、第 78 號 A 分段餘段、第 78 號 B 分段餘段、第 79 號餘段、第 80 號餘段、第 81 號、第 82 號 A 分段餘段 [又稱第 82A 號餘段]、第 86 號 A 分段餘段 (部分)、第 87 號餘段 (部分)、第 89 號、第 90 號 A 分段、第 90 號 B 分段、第 92 號、第 93 號、第 94 號餘段、第 95 號 B 分段、第 96 號 B 分段、第 97 號、第 98 號 A 分段 (部分)、第 99 號、第 100 號 (部分)、第 101 號 (部分)、第 104 號 A 分段、第 104 號 B 分段 (部分)、第 104 號餘段 (部分)、第 117 號 A 分段餘段 (部分)、第 118 號 A 分段餘段、第 130 號 A 分段餘段、第 131 號 A 分段餘段、第 132 號、第 133 號、第 134 號餘段、第 135 號、第 147 號 (部分)、第 149 號 (部分)、第 150 號、第 151 號、第 152 號、第 153 號餘段、第 154 號 B 分段餘段 (部分)、第 159 號 C 分段餘段、第 160 號 B 分段、第 161 號、第 162 號、第 163 號、第 164 號 (部分)、第 166 號餘段、第 167 號 A 分段 (部分)、第 167 號餘段 (部分)、第 168 號 A 分段 (部分)、第 168 號餘段 (部分)、第 170 號餘段 (部分)、第 171 號餘段 (部分)、第 172 號餘段 (部分)、第 173 號餘段、第 174 號餘段、第 176 號餘段、第 177 號餘段、第 179 號

餘段、第 181 號餘段 (部分)、第 187 號餘段 (部分)、第 194 號 A 分段餘段 (部分)、第 195 號餘段 (部分)、第 210 號 (部分)、第 212 號 (部分)、第 231 號餘段 (部分)、第 318 號、第 319 號餘段、第 320 號餘段 (部分)、第 321 號 (部分)、第 329 號 B 分段餘段 (部分)、第 330 號餘段 (部分)、第 331 號 A 分段餘段、第 331 號餘段、第 332 號餘段、第 333 號餘段、第 334 號 (部分)、第 335 號 (部分)、第 336 號 (部分)、第 337 號 (部分)、第 338 號 (部分)、第 339 號 (部分)、第 340 號 (部分)、第 341 號 (部分)、第 342 號 (部分)、第 343 號 (部分)、第 344 號 (部分)、第 345 號 (部分)、第 346 號、第 347 號 (部分)、第 348 號 (部分)、第 350 號、第 351 號 (部分)、第 352 號、第 353 號 A 分段、第 353 號餘段、第 354 號、第 355 號、第 356 號、第 357 號、第 358 號、第 359 號、第 360 號、第 361 號、第 362 號、第 363 號、第 364 號、第 365 號餘段、第 366 號餘段、第 367 號 (部分)、第 369 號、第 370 號、第 371 號、第 372 號餘段、第 373 號、第 374 號、第 375 號餘段、第 376 號、第 377 號 A 分段餘段、第 377 號 B 分段餘段、第 378 號、第 379 號、第 380 號、第 381 號餘段、第 397 號餘段、第 398 號餘段、第 399 號、第 400 號、第 401 號、第 402 號、第 403 號、第 404 號、第 405 號 A 分段、第 405 號餘段、第 406 號、第 407 號、第 408 號、第 409 號餘段、第 410 號餘段、第 414 號 AB 分段餘段 [又稱第 414AB 號餘段]、第 414 號 C 分段餘段 [又稱第 414C 號餘段]、第 415 號餘段、第 416 號餘段、第 420 號餘段、第 421 號、第 422 號、第 423 號餘段、第 424 號、第 425 號、第 426 號、第 427 號、第 428 號、第 429 號、第 430 號、第 431 號、第 432 號、第 433 號、第 436 號餘段、第 437 號、第 438 號、第 439 號、第 440 號、第 441 號、第 442 號、第 443 號、第 444 號、第 445 號餘段 (部分)、第 446 號 (部分)、第 449 號 (部分)、第 451 號餘段 (部分)、第 452 號 (部分)、第 454 號 A 分段 (部分)、第 457 號 (部分)、第 459 號、第 462 號 (部分)、第 463 號 (部分)、第 464 號 A 分段餘段 (部分)、第 466 號 (部分)、第 467 號、第 468 號、第 474 號、第 475 號 (部分)、第 477 號、第 478 號、第 479 號、第 480 號、第 481 號、第 482 號 A 分段、第 482 號餘段、第 483 號、第 484 號 A 分段、第 486 號 A 分段餘段、第 528 號 A 分段餘段 (部分)、第 529 號 A 分段餘段、第 804 號 (部分)、第 805 號餘段 (部分)、第 806 號 (部分)、第 809 號 (部分)、第 810 號、第 811 號、第 812 號餘段、第 813 號餘段、第 814 號、第 815 號、第 816 號餘段、第 817 號餘段、第 1193A 號 (部分)、第 1207 號 (部分)、第 1208 號、第 1210 號、第 1319 號、第 1322 號 A 分段、第 1322 號餘段、第 1380 號、第 1381 號餘段和第 1454 號；

丈量約份第 83 約地段第 1130 號餘段 (部分)、第 1131 號餘段 (部分)、第 1132 號、第 1133 號、第 1134 號 (部分)、第 1135 號 A 分段 (部分)、第 1135 號 B 分段 (部分)、第 1135 號餘段、第 1136 號 A 分段第 1 小分段 (部分)、第 1136 號 A 分段餘段、第 1136 號餘段、第 1149 號 A 分段 (部分)、第 1149 號餘段、第 1150 號餘段 (部分)、第 1152 號 A 分段 (部分)、第 1152 號餘段、第 1153 號 A 分段 (部分)、第 1153 號餘段、第 1154 號 A 分段、第 1154 號 B 分段 (部分)、第 1154 號餘段、第 1156 號 B 分段、第 1156 號餘段、第 1157 號 A 分段第 1 小分段 (部分)、第 1157 號 A 分段第 2 小分段、第 1157 號 A 分段餘段、第 1157 號 B 分段第 1 小分段 (部分)、第 1157 號 B 分段餘段、第 1157 號 C 分段 (部分)、第 1157 號 D 分段第 1 小分段、第 1157 號 D 分段餘段、第 1157 號 E 分段、第 1157 號餘段、第 1158 號 A 分段第 1 小分段、第 1158 號 A 分段餘段、第 1158 號 B 分段第 1 小分段、第 1158 號 B 分段餘段、第 1158 號 C 分段、第 1158 號餘段、第 1159 號 A 分段、第 1159 號餘段、第 1160 號 A 分段第 1 小分段、第 1160 號 A 分段餘段、第 1160 號 B 分段、第 1160 號餘段、第 1161 號 A 分段、第 1161 號餘段、第 1162 號 A 分段餘段、第 1162 號 B 分段、第 1162 號 C 分段第 1 小分段、第 1162 號 C 分段第 2 小分段 A 分段、第 1162 號 C 分段第 2 小分段餘段、第 1162 號 D 分段第 1 小分段、第 1162 號 D 分段餘段、第 1175 號 A 分段、第 1175 號餘段、第 1176 號、第 1177 號 A 分段和第 1177 號餘段；

丈量約份第 88 約地段第 41 號、第 43 號 B 分段 (部分)、第 45 號、第 46 號 B 分段、第 49 號和第 53 號 (部分)；

丈量約份第 92 約地段第 739 號 A 分段、第 739 號 B 分段第 1 小分段、第 739 號 B 分段餘段、第 739 號 C 分段 (部分)、第 739 號餘段 (部分)、第 741 號 A 分段 (部分)、第 741 號 B 分段、第 741 號 C 分段 (部分)、第 741 號 D 分段、第 741 號 E 分段 (部分)、第 741 號 F 分段 (部分)、第 741 號 G 分段、第 741 號 H 分段、第 741 號餘段 (部分)、第 742 號 A 分段、第 742 號 B 分段、第 742 號餘段、第 743 號 A 分段、第 743 號餘段、第 744 號餘段、第 745 號 A 分段、第 745 號餘段、第 746 號餘段、第 749 號餘段、第 857 號 (部分)、第 858 號、第 859 號 (部分)、第 860 號 (部分)、第 861 號 (部分)、第 862 號、第 863 號、第 864 號、第 865 號、第 868 號、第 871 號餘段 (部分)、第 872 號餘段 (部分)、第 879 號 A 分段餘段 (部分)、第 880 號 C 分段餘段 (部分)、第 903 號 B 分段 (部分)、第 904 號 A 分段、第 904 號 B 分段、第 904 號 C 分段、第 904 號 D 分段 (部分)、第 904 號 E 分段 (部分)、第 904 號 F 分段 (部分)、第 904 號 G 分段 (部分)、第 905 號、第 906 號、第 908 號 A 分段、第 908 號 B 分段、第 908 號餘段、第 909 號 A 分段、第 910 號 (部分)、第 911 號 C 分段餘段 (部分)、第 912 號 A 分段第 1 小分段 (部分)、第 912 號餘段 (部分)、第 913 號、第 914 號 A 分段第 1 小分段 (部分)、第 914 號餘段、第 915 號 A 分段第 1 小分段 (部分)、第 915 號餘段 (部分)、第 916 號 (部分)、第 917 號 (部分)、第 918 號 (部分)、第 919 號 (部分)、第 920 號、第 923 號 (部分) 和第 2222 號 (部分)；

丈量約份第 95 約地段第 4 號 (部分)、第 5 號、第 6 號 A 分段、第 6 號餘段 (部分)、第 7 號、第 8 號 A 分段、第 9 號、第 10 號 A 分段、第 10 號餘段、第 12 號 A 分段、第 13 號、第 14 號 A 分段、第 14 號餘段、第 16 號 A 分段第 2 小分段 (部分)、第 16 號 A 分段第 3 小分段 (部分)、第 16 號 A 分段第 4 小分段、第 16 號 A 分段第 5 小分段 (部分)、第 16 號 A 分段第 6 小分段 (部分)、第 16 號 A 分段第 7 小分段 (部分)、第 16 號 A 分段第 8 小分段、第 16 號 A 分段第 9 小分段、第 16 號 A 分段第 10 小分段、第 16 號 A 分段第 11 小分段、第 16 號 A 分段第 12 小分段、第 16 號 A 分段第 13 小分段、第 16 號 A 分段第 14 小分段 (部分)、第 17 號 A 分段餘段、第 19 號、第 20 號、第 21 號、第 22 號、第 23 號、第 24 號、第 25 號、第 26 號、第 27 號、第 28 號 (部分)、第 29 號 (部分)、第 38 號 A 分段 (部分)、第 38 號 B 分段 (部分)、第 38 號餘段 (部分)、第 39 號 A 分段 (部分)、第 39 號餘段 (部分)、第 40 號 (部分)、第 42 號餘段、第 43 號 (部分)、第 44 號 (部分)、第 45 號 (部分)、第 53 號 (部分)、第 59 號 (部分)、第 61 號 (部分)、第 62 號 (部分)、第 63 號、第 64 號、第 65 號 (部分)、第 66 號 (部分)、第 67 號、第 69 號、第 70 號、第 71 號、第 72 號、第 73 號、第 74 號、第 75 號、第 76 號、第 77 號、第 78 號 A 分段、第 78 號餘段、第 79 號、第 80 號、第 81 號 (部分)、第 82 號 (部分)、第 83 號 (部分)、第 84 號 (部分)、第 85 號 (部分)、第 86 號 (部分)、第 87 號 (部分)、第 88 號 (部分)、第 89 號 (部分)、第 90 號 (部分)、第 91 號 (部分)、第 94 號 A 分段餘段 (部分)、第 95 號 A 分段第 2 小分段、第 95 號 A 分段餘段 (部分)、第 96 號 A 分段 (部分)、第 97 號 A 分段第 1 小分段、第 97 號 A 分段餘段、第 98 號 A 分段、第 98 號餘段 (部分)、第 99 號 (部分)、第 100 號 A 分段 (部分)、第 100 號餘段、第 102 號 (部分)、第 104 號 (部分)、第 106 號 (部分)、第 111 號 A 分段 (部分)、第 111 號 B 分段 (部分)、第 111 號餘段 (部分)、第 112 號 (部分)、第 118 號 (部分)、第 119 號 (部分)、第 122 號 (部分)、第 123 號 (部分)、第 124 號 (部分)、第 126 號、第 127 號、第 128 號、第 129 號、第 131 號、第 132 號 (部分)、第 133 號 (部分)、第 139 號 (部分)、第 140 號、第 143 號 (部分)、第 145 號 (部分)、第 148 號、第 149 號、第 150 號 (部分)、第 151 號 (部分)、第 152 號 (部分)、第 153 號 (部分)、第 154 號 (部分)、第 157 號、第 158 號、第 161 號 (部分)、第 162 號、第 163 號 (部分)、第 164 號 A 分段 (部分)、第 166 號 B 分段、第 167 號 A 分段餘段、第 168 號 A 分段餘段、第 169 號餘段、第 170 號、第 171 號、第 172 號 (部分)、第 173 號、第 174 號、第 175 號、第 176 號、第 177 號、第

178 號、第 180 號、第 181 號、第 182 號、第 183 號、第 184 號、第 186 號、第 187 號、第 188 號、第 189 號、第 190 號 A 分段、第 191 號、第 193 號、第 194 號 A 分段、第 195 號 A 分段餘段 (部分)、第 196 號餘段、第 197 號 A 分段 (部分)、第 198 號餘段 (部分)、第 199 號 A 分段、第 200 號 A 分段、第 201 號 A 分段 (部分)、第 203 號 (部分)、第 204 號 (部分)、第 205 號 (部分)、第 206 號、第 207 號 (部分)、第 208 號 A 分段 (部分)、第 208 號 B 分段 (部分)、第 208 號餘段 (部分)、第 210 號 A 分段、第 211 號 A 分段餘段、第 212 號 A 分段、第 212 號餘段、第 213 號、第 214 號 A 分段、第 214 號餘段、第 215 號、第 216 號、第 217 號、第 218 號、第 219 號、第 220 號、第 221 號 A 分段餘段、第 222 號 A 分段餘段 (部分)、第 223 號、第 224 號、第 225 號、第 229 號、第 231 號 B 分段餘段 (部分)、第 233 號 A 分段 (部分)、第 234 號 A 分段第 1 小分段 (部分)、第 234 號 A 分段餘段、第 235 號 A 分段第 1 小分段 (部分)、第 235 號 A 分段餘段、第 236 號 A 分段餘段 (部分)、第 237 號 B 分段 (部分)[又稱 237B(部分)；亦稱 237(部分)]、第 238 號 (部分)、第 240 號 (部分)、第 241 號 (部分)、第 242 號、第 244 號、第 245 號 (部分)、第 246 號、第 247 號 (部分)、第 249 號 (部分)、第 252 號 (部分)、第 253 號 (部分)、第 255 號 (部分)、第 256 號 (部分)、第 257 號、第 258 號、第 259 號 (部分)、第 261 號、第 262 號、第 263 號、第 264 號、第 265 號 A 分段、第 265 號餘段、第 266 號、第 268 號 (部分)、第 270 號 (部分)、第 271 號 A 分段餘段 (部分)、第 272 號 (部分)、第 273 號、第 276 號 (部分)、第 280 號 (部分)、第 283 號 (部分)、第 285 號、第 286 號、第 287 號、第 288 號、第 289 號 (部分)、第 292 號 A 分段 (部分)、第 292 號餘段 (部分)、第 306 號 (部分)、第 308 號 (部分)、第 314 號餘段 (部分)、第 321 號 B 分段、第 321 號 C 分段、第 321 號 D 分段、第 321 號 E 分段、第 321 號餘段、第 322 號餘段、第 323 號、第 325 號 A 分段、第 325 號 B 分段、第 325 號餘段、第 328 號 A 分段、第 328 號餘段 (部分)、第 329 號 (部分)、第 331 號、第 334 號 A 分段、第 334 號 B 分段、第 334 號 C 分段、第 334 號 D 分段、第 334 號 E 分段、第 334 號 F 分段、第 334 號餘段、第 335 號 A 分段 (部分)、第 335 號 B 分段、第 335 號 C 分段、第 335 號 D 分段、第 335 號 E 分段、第 335 號 F 分段、第 335 號 G 分段、第 335 號 H 分段、第 335 號 I 分段、第 335 號 J 分段、第 335 號餘段 (部分)、第 337 號 (部分)、第 338 號、第 341 號餘段、第 346 號 A 分段 (部分)、第 346 號 B 分段 (部分)、第 349 號 (部分)、第 351 號、第 352 號、第 353 號 A 分段、第 353 號 B 分段、第 353 號 C 分段、第 353 號 D 分段、第 355 號 (部分)、第 356 號 (部分)、第 357 號、第 359 號、第 360 號、第 372 號餘段 (部分)、第 373 號餘段 (部分)、第 691 號 C 分段第 2 小分段 (部分)、第 691 號 C 分段第 3 小分段、第 691 號 C 分段第 4 小分段、第 691 號 C 分段第 5 小分段、第 691 號 C 分段第 6 小分段、第 691 號 C 分段第 7 小分段、第 691 號 C 分段第 8 小分段、第 691 號 C 分段第 9 小分段、第 691 號 C 分段餘段 (部分)、第 694 號 (部分)、第 695 號 (部分)、第 696 號 (部分)、第 697 號、第 698 號、第 699 號、第 700 號、第 701 號、第 702 號 (部分)、第 703 號 (部分)、第 711 號餘段 (部分)、第 713 號餘段、第 714 號餘段、第 715 號餘段、第 716 號餘段、第 717 號餘段、第 719 號餘段 (部分)、第 720 號餘段 (部分)、第 722 號餘段 (部分)、第 723 號餘段、第 724 號、第 725 號 A 分段、第 725 號 B 分段、第 725 號餘段 (部分)、第 726 號餘段 (部分)、第 727 號餘段 (部分)、第 728 號 A 分段、第 728 號 B 分段、第 728 號 C 分段、第 728 號 D 分段、第 728 號 E 分段、第 728 號 F 分段、第 728 號 G 分段餘段 (部分)、第 728 號 H 分段、第 728 號 J 分段、第 728 號 K 分段、第 728 號 L 分段、第 728 號 M 分段、第 728 號 N 分段、第 728 號餘段、第 729 號 A 分段第 1 小分段、第 729 號 A 分段第 2 小分段 A 分段、第 729 號 A 分段第 2 小分段 B 分段、第 729 號 A 分段第 2 小分段 C 分段、第 729 號 A 分段第 2 小分段餘段、第 729 號 A 分段第 3 小分段、第 729 號 A 分段第 4 小分段、第 729 號 A 分段第 5 小分段餘段、第 729 號 A 分段第 6 小分段餘段、第 729 號 A 分段第 7 小分段、第 729 號 A 分段第 8 小分段、第 729 號 A 分段第 9 小分段、第 729 號 A 分段第 10 小分段 A 分段、第 729 號 A 分段第 10 小分段餘段、第 729 號 A 分段第 11 小分段、第 729 號 A 分段第 12 小分段、第 729 號 A 分段第 13 小分段、

第 729 號 A 分段餘段、第 730 號 A 分段第 1 小分段、第 730 號 A 分段第 2 小分段、第 730 號 A 分段第 3 小分段、第 730 號 A 分段第 4 小分段、第 730 號 A 分段第 5 小分段、第 730 號 A 分段第 6 小分段、第 730 號 A 分段第 7 小分段、第 730 號 A 分段第 8 小分段、第 730 號 A 分段餘段、第 730 號餘段 (部分)、第 731 號 A 分段第 2 小分段、第 731 號 A 分段第 3 小分段、第 731 號 A 分段第 4 小分段、第 731 號 A 分段第 5 小分段 (部分)、第 731 號 A 分段第 6 小分段 (部分)、第 731 號 A 分段第 7 小分段 A 分段、第 731 號 A 分段第 7 小分段餘段、第 731 號 A 分段第 8 小分段 (部分)、第 731 號 A 分段第 10 小分段、第 731 號 A 分段第 11 小分段 (部分)、第 731 號 A 分段第 12 小分段 (部分)、第 731 號 A 分段第 13 小分段 (部分)、第 731 號 A 分段第 14 小分段、第 731 號 A 分段第 15 小分段、第 731 號 A 分段第 16 小分段、第 731 號 A 分段餘段 (部分)、第 731 號餘段 (部分)、第 732 號 B 分段、第 732 號 C 分段 (部分)、第 732 號餘段 (部分)、第 733 號 C 分段餘段 (部分)、第 736 號餘段 (部分)、第 737 號餘段 (部分)、第 738 號餘段、第 739 號餘段、第 740 號餘段 (部分)、第 741 號 (部分)、第 742 號 A 分段 (部分)、第 742 號餘段 (部分)、第 743 號 A 分段、第 743 號餘段、第 744 號 A 分段、第 744 號餘段、第 745 號 A 分段、第 745 號餘段 (部分)、第 747 號、第 748 號餘段、第 749 號、第 750 號、第 751 號 (部分)、第 752 號 (部分)、第 754 號 A 分段、第 754 號 B 分段、第 754 號 C 分段、第 754 號 D 分段、第 754 號餘段、第 755 號 A 分段、第 755 號 B 分段、第 755 號 C 分段、第 755 號 D 分段 (部分)、第 755 號餘段 (部分)、第 757 號 A 分段、第 757 號 B 分段、第 757 號餘段 (部分)、第 758 號、第 759 號 A 分段 (部分)、第 759 號 B 分段、第 759 號 C 分段 (部分)、第 759 號餘段 (部分)、第 761 號 A 分段 (部分)、第 761 號 B 分段、第 761 號 C 分段 (部分)、第 761 號 D 分段、第 761 號餘段、第 762 號 A 分段、第 762 號 B 分段、第 762 號 C 分段 (部分)、第 762 號 D 分段、第 762 號餘段、第 763 號、第 764 號、第 765 號、第 766 號 A 分段、第 766 號餘段、第 767 號 A 分段餘段 (部分)、第 767 號餘段 (部分)、第 768 號 A 分段餘段 (部分)、第 768 號 B 分段餘段 (部分)、第 768 號 C 分段、第 768 號餘段、第 769 號餘段 (部分)、第 770 號 A 分段餘段、第 774 號 A 分段 (部分)、第 776 號 A 分段餘段 (部分)、第 778 號餘段 (部分)、第 783 號餘段 (部分)、第 784 號餘段 (部分)、第 790 號餘段、第 794 號餘段、第 795 號、第 796 號餘段、第 798 號 A 分段、第 798 號 B 分段、第 798 號餘段、第 799 號餘段、第 803 號 A 分段第 1 小分段餘段、第 803 號 A 分段第 2 小分段、第 803 號 A 分段第 3 小分段 (部分)、第 803 號 A 分段餘段、第 805 號 A 分段餘段、第 805 號 B 分段餘段 (部分)、第 806 號 (部分)、第 807 號餘段、第 809 號餘段、第 811 號 A 分段、第 811 號餘段、第 812 號、第 814 號、第 815 號餘段 (部分)、第 816 號 A 分段第 1 小分段 (部分)、第 816 號 A 分段第 2 小分段、第 816 號 A 分段餘段 (部分)、第 816 號餘段、第 817 號餘段、第 818 號餘段、第 819 號餘段、第 820 號餘段 (部分)、第 821 號 A 分段餘段、第 821 號 B 分段、第 821 號 C 分段、第 821 號餘段 (部分)、第 822 號 A 分段餘段、第 822 號 B 分段第 1 小分段、第 822 號 B 分段第 2 小分段、第 822 號 B 分段第 3 小分段 (部分)、第 822 號 B 分段餘段 (部分)、第 823 號、第 824 號 (部分)、第 825 號 (部分)、第 826 號、第 827 號 (部分)、第 829 號 (部分)、第 830 號 (部分)、第 831 號 A 分段 (部分)、第 831 號 B 分段 (部分)、第 832 號、第 833 號、第 834 號、第 835 號、第 837 號、第 839 號、第 840 號、第 841 號 (部分)、第 842 號、第 844 號 A 分段、第 844 號餘段、第 845 號、第 846 號 A 分段、第 846 號 B 分段、第 846 號餘段、第 847 號、第 849 號 A 分段、第 849 號 B 分段、第 850 號、第 851 號 (部分)、第 852 號 A 分段、第 852 號餘段 (部分)、第 853 號 (部分)、第 856 號 A 分段、第 856 號餘段、第 857 號、第 858 號 A 分段、第 858 號餘段、第 859 號、第 860 號 A 分段、第 860 號 B 分段、第 860 號 C 分段、第 860 號餘段、第 861 號 A 分段、第 861 號餘段、第 863 號、第 864 號、第 865 號、第 866 號 A 分段、第 867 號、第 868 號 A 分段、第 869 號 A 分段、第 870 號 A 分段、第 871 號 A 分段、第 871 號餘段、第 872 號 A 分段、第 872 號 B 分段 (部分)、第 872 號餘段、第 873 號 A 分段、第 873 號餘段 (部分)、第 874 號 A 分段、第 874 號餘段 (部分)、第 875 號 (部分)、第 876 號 (部分)、第 877 號 (部

分)、第 878 號 (部分)、第 879 號 (部分)、第 880 號、第 881 號、第 882 號、第 884 號、第 885 號、第 886 號、第 887 號 (部分)、第 888 號餘段 (部分)、第 889 號 (部分)、第 890 號 (部分)、第 891 號 (部分)、第 892 號 (部分)、第 893 號 (部分)、第 900 號、第 910 號餘段 (部分)、第 913 號餘段、第 914 號 (部分)、第 915 號、第 916 號 (部分)、第 917 號 (部分)、第 918 號、第 919 號、第 920 號、第 921 號、第 922 號、第 923 號、第 924 號、第 925 號、第 927 號 (部分)、第 928 號、第 929 號、第 930 號 (部分)、第 931 號 (部分)、第 932 號、第 933 號 (部分)、第 934 號 (部分)、第 935 號、第 936 號、第 937 號、第 938 號、第 939 號餘段 (部分)、第 940 號、第 941 號、第 942 號餘段、第 943 號餘段、第 944 號餘段、第 945 號餘段、第 966 號餘段 (部分)、第 986 號餘段、第 989 號餘段、第 991 號餘段、第 998 號餘段、第 999 號餘段、第 1001 號餘段、第 1002 號、第 1003 號餘段、第 1004 號 A 分段、第 1004 號餘段 (部分)、第 1005 號 (部分)、第 1007 號 A 分段、第 1007 號餘段 (部分)、第 1008 號 (部分)、第 1009 號 A 分段、第 1009 號餘段 (部分)、第 1010 號 A 分段、第 1011 號 A 分段、第 1011 號餘段、第 1012 號 A 分段、第 1012 號餘段、第 1013 號 A 分段、第 1014 號 A 分段、第 1014 號餘段、第 1015 號 A 分段、第 1015 號餘段、第 1016 號 (部分)、第 1017 號 (部分)、第 1018 號餘段 (部分)、第 1019 號 (部分)、第 1126 號 A 分段餘段 (部分)、第 1126 號 B 分段餘段、第 1127 號、第 1128 號餘段、第 1130 號餘段、第 1140 號餘段、第 1141 號、第 1142 號、第 1143 號 (部分)、第 1144 號 A 分段、第 1144 號 B 分段 (部分)、第 1144 號餘段、第 1145 號 (部分)、第 1146 號餘段 (部分)、第 1157 號餘段 (部分)、第 1158 號、第 1159 號、第 1160 號、第 1161 號、第 1162 號、第 1914 號、第 1917 號、第 1921 號 B 分段、第 1921 號餘段、第 1924 號、第 1952 號 (部分)、第 1971 號 (部分)、第 1975 號、第 1994 號 (部分)、第 1995 號、第 2067 號、第 2072 號 (部分)、第 2074 號和第 2079 號；

丈量約份第 96 約第 626 號 A 分段餘段、第 627 號、第 629 號、第 630 號 A 分段、第 630 號 B 分段餘段、第 631 號餘段、第 632 號餘段 (部分)、第 633 號餘段 (部分)、第 634 號 C 分段餘段、第 637 號餘段、第 638 號餘段、第 643 號餘段、第 644 號餘段、第 645 號 A 分段餘段、第 645 號 C 分段餘段、第 647 號餘段、第 657 號 A 分段餘段 (部分)、第 659 號 A 分段餘段 (部分)、第 659 號 B 分段 (部分)、第 659 號 C 分段餘段 (部分)、第 662 號 (部分)、第 663 號 (部分)、第 664 號餘段 (部分)、第 665 號餘段、第 666 號餘段 (部分)、第 667 號 (部分)、第 668 號 (部分)、第 671 號 (部分)、第 747 號 B 分段餘段 (部分)、第 747 號 C 分段餘段 (部分)、第 747 號 D 分段第 1 小分段 (部分)、第 834 號餘段 (部分)、第 839 號 B 分段 (部分)、第 839 號 C 分段第 1 小分段 (部分)、第 839 號 C 分段餘段 (部分)、第 839 號餘段 (部分)、第 855 號餘段、第 858 號、第 859 號 B 分段餘段 (部分)、第 860 號 (部分)、第 861 號 (部分)、第 862 號餘段、第 863 號、第 864 號、第 866 號、第 868 號、第 869 號餘段 (部分)、第 870 號 (部分)、第 871 號 (部分)、第 872 號 (部分)、第 875 號、第 876 號、第 877 號、第 878 號、第 882 號餘段、第 884 號餘段、第 886 號餘段、第 888 號餘段 (部分)、第 897 號、第 898 號 (部分)、第 899 號 (部分)、第 900 號 (部分)、第 901 號 (部分)、第 904 號 (部分)、第 905 號 (部分)、第 920 號 (部分)、第 922 號 (部分)、第 923 號 (部分)、第 924 號 (部分)、第 925 號 (部分)、第 954 號 (部分)、第 965 號、第 976A 號、第 979 號、第 980 號、第 982 號 (部分)、第 983 號 (部分)、第 989 號 (部分)、第 990 號 A 分段 (部分)、第 990 號 B 分段 (部分)、第 991 號 (部分)、第 992 號 (部分)、第 993 號、第 994 號 (部分)、第 998 號 (部分)、第 999 號 (部分)、第 1000 號 (部分)、第 1004 號 (部分)、第 1005 號、第 1006 號、第 1007 號、第 1008 號 (部分)、第 1015 號 (部分)、第 1017 號 (部分)、第 1020 號、第 1021 號 (部分)、第 1033 號、第 1035 號、第 1037 號、第 1040 號、第 1042 號、第 1056 號 (部分)、第 1057 號和第 2252 號餘段 (部分)；以及

粉嶺上水市地段第 182 號餘段 (部分)。

現公布行政長官會同行政會議已決定，須收回上述土地作公共用途。本人並已根據香港特別行政區行政長官所授予的權力，發出命令，在本公告張貼於上述土地的日期起計三個月屆滿時，上述土地須予收回，並歸還香港特別行政區政府所有。

本公告已於 2024 年 1 月 11 日張貼於上述土地。在通知期屆滿時，即 2024 年 4 月 11 日午夜，上述土地須予收回，並歸還香港特別行政區政府所有。土地歸還日期為 2024 年 4 月 12 日。

公眾人士可在本公告刊登《憲報》之後，於地政總署網頁 (https://www.landsd.gov.hk/tc/resources/gov-notices/acq.html) 政府公告一欄內，瀏覽本公告及上述收地圖則的電子版本。下列辦事處亦備有本公告的副本及上述收地圖則，公眾人士可於辦事處下述一般開放時間內免費查閱：

辦事處地址	*開放時間* *(公眾假期除外)*
香港中環統一碼頭道 38 號 海港政府大樓地下 中西區民政諮詢中心	星期一至星期五 上午 9 時至晚上 7 時
新界粉嶺璧峰路 3 號 北區政府合署地下 北區民政諮詢中心	
新界元朗青山公路 269 號 元朗民政事務處大廈地下 元朗民政諮詢中心	
新界粉嶺璧峰路 3 號 北區政府合署 6 樓 北區地政處	星期一至星期五 上午 8 時 45 分至下午 12 時 30 分 以及 下午 1 時 30 分至下午 5 時 30 分
新界元朗橋樂坊 2 號 元朗政府合署 9 樓 元朗地政處	

2024 年 1 月 11 日

地政總署副署長 (專業事務) 趙莉莉

Relevant Extracts of Town Planning Board Guidelines on
Application for Open Storage and Port Back-up Uses
(TPB PG-No. 13G)

1. On 14.4.2023, the Town Planning Board Guidelines for Application for Open Storage and Port Back-up Uses under Section 16 of the Town Planning Ordinance (TPB PG-No. 13G) were promulgated, which set out the following criteria for the various categories of area:

   (a) Category 1 areas: Favourable consideration will normally be given to applications within these areas, subject to no major adverse departmental comments and local objections, or the concerns of the departments and local residents can be addressed through the implementation of approval conditions. Technical assessments should be submitted if the proposed uses may cause significant environmental and traffic concerns;

   (b) Category 2 areas: Planning permission could be granted on a temporary basis up to a maximum period of 3 years, subject to no adverse departmental comments and local objections, or the concerns of the departments and local residents can be addressed through the implementation of approval conditions. Technical assessments, where appropriate, should be submitted to demonstrate that the proposed uses would not have adverse drainage, traffic, visual, landscaping and environmental impacts on the surrounding areas;

   (c) Category 3 areas: Applications would normally not be favourably considered unless the applications are on sites with previous planning approvals (irrespective of whether the application is submitted by the applicant of previous approval or a different applicant). Sympathetic consideration may be given if genuine efforts have been demonstrated in compliance with approval conditions of the previous planning applications and/or relevant technical assessments/proposals have been included in the fresh applications, if required, to demonstrate that the proposed uses would not generate adverse drainage, traffic, visual, landscaping and environmental impacts on the surrounding areas. Planning permission could be granted on a temporary basis up to a maximum period of 3 years, subject to no adverse departmental comments and local objections, or the concerns of the departments and local residents can be addressed through the implementation of approval conditions;

   (d) Category 4 areas: Applications would normally be rejected except under exceptional circumstances. For applications on sites with previous planning approvals (irrespective of whether the application is submitted by the applicant of previous approval or a different applicant), and subject to no adverse departmental comments and local objections, sympathetic consideration may be given if genuine efforts have been demonstrated in compliance with approval conditions of the previous planning applications and/or relevant technical assessments/proposals have been included in the fresh applications, if required, to demonstrate that the proposed uses would not generate adverse drainage, traffic, visual, landscaping and environmental impacts on the surrounding areas. The intention is however to encourage the phasing out of such non-conforming uses as early as possible. Planning permission for a maximum period of 3 years may be allowed for an applicant to identify suitable sites for relocation. Application for renewal of approval will be assessed on its individual merits; and

   (e) Taking into account the demand for cross-boundary parking facilities, applications for such use at suitable sites in areas of close proximity to the boundary crossing points, such

as in the San Tin area, particularly near the existing cross-boundary link in Lok Ma Chau, may also be considered. Notwithstanding the criteria set out in paragraphs 2.1(c) and (d) above, application of such nature will be assessed on its own merits, including its nature and scale of the proposed use and the local circumstances, and subject to satisfactory demonstration that the proposed use would not have adverse drainage, traffic, visual, landscaping and environmental impacts on the surrounding areas, and each case will be considered on its individual merits.

2. In assessing applications for open storage and port back-up uses, the other major relevant assessment criteria are also summarized as follows:

(a) port back-up sites and those types of open storage generating adverse noise, air pollution, visual intrusion and frequent heavy vehicle traffic should not be located adjacent to sensitive receivers such as residential dwellings, hospitals, schools and other community facilities;

(b) port back-up uses are major generators of traffic, with container trailer/tractor parks generating the highest traffic per unit area. In general, port back-up sites should have good access to the strategic road network, or be accessed by means of purpose built roads;

(c) adequate screening of the sites through landscaping and/or fencing should be considered where sites are located adjacent to public roads or are visible from surrounding residential areas;

(d) there is a general presumption against conversion of active or good quality agricultural land and fish ponds to other uses on an ad-hoc basis. For flood prone areas or sites which would obstruct natural drainage channels and overland flow, advice should be sought; and

(e) for applications involving sites with previous planning approvals, should there be no evidence to demonstrate that the applicants have made any genuine effort to comply with the approval conditions of the previous planning applications, planning permission may be refused, notwithstanding other criteria set out in the Guidelines are complied with.

Similar s.16 Applications for Temporary Open Storage or Warehouse in the vicinity of the Site within the "Agriculture" zone in the Fu Tei Au and Sha Ling Area

Approved Applications

Application No.	Uses/Developments	Date of Consideration
A/NE-FTA/242	Proposed Temporary Vehicle Repair Workshop (Private Car) and Open Storage of Vehicles for a Period of 3 Years and Associated Filling of Land	20.9.2024
A/NE-FTA/244	Proposed Temporary Open Storage of Construction Materials for a Period of 3 Years and Associated Filling of Land	6.12.2024 (Revoked on 6.12.2025)
A/NE-FTA/245	Proposed Temporary Open Storage of Containers and Vehicle Repair Workshop with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond	20.12.2024
A/NE-FTA/246	Proposed Temporary Open Storage of Construction Material and Machinery for a Period of 3 Years and Associated Filling of Land	25.10.2024
A/NE-FTA/251	Proposed Temporary Open Storage of Construction Materials and Machineries for a Period of 3 Years and Associated Filling of Land	4.10.2024
A/NE-FTA/253	Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land	8.11.2024
A/NE-FTA/257	Proposed Temporary Warehouse for Storage of Construction Materials with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land	20.12.2024
A/NE-FTA/260	Proposed Temporary Open Storage of Construction Machinery and Construction Materials and Associated Filling of Land for a Period of 3 Years	19.12.2025
A/NE-FTA/269	Temporary Open Storage of Construction Machinery and Construction Materials and Associated Filling of Land for a Period of 3 Years	6.2.2026

Application No.	Uses/Developments	Date of Consideration
A/NE-FTA/270	Proposed Temporary Warehouse and Open Storage of Construction Materials and Machinery and Associated Filling of Land for a Period of 3 Years	23.1.2026

Government Departments' General Comments

1. Traffic

Comments of the Commissioner for Transport (C for T):

- no comment on the application from traffic engineering perspective; and
- her advisory comments are at **Appendix V**.

Comments of the Chief Highway Engineer/New Territories East, Highways Department (CHE/NTE, HyD):

- no comment on the application from highways maintenance perspective; and
- his advisory comments are at **Appendix V**.

2. Environment

Comments of the Director of Environmental Protection (DEP):

- no objection to the application from environmental planning perspective;
- although heavy vehicles are involved, no domestic structure is identified within 100m from the site boundary and 50m from the access road;
- no environmental complaint concerning the application site (the Site) was received in the past three years; and
- his advisory comments are at **Appendix V**.

3. Drainage

Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD):

- noting that the application is submitted to facilitate the relocation of brownfield operations affected by the New Development Area and in order to streamline the process and act as a facilitator, she has no objection in principle to the application provided that a revised drainage impact assessment (DIA) would be submitted afterwards;
- should the application be approved, approval conditions should be included to request the applicant to submit a revised DIA, and flood mitigation measures proposed in the DIA and any other stormwater drainage facilities should be implemented and maintained at all times during the planning approval period;
- the Site is in an area where no public sewerage connection is available. DEP should be consulted regarding the sewage treatment/disposal facilities for the proposed uses; and
- her advisory comments are at **Appendix V**.

4. Landscape

Comments of the Chief Town Planner/Urban Design and Landscape, Planning Department (CTP/UD&L, PlanD):

- no adverse comment on the application from landscape planning perspective;
- based on the aerial photo of 2024, the Site is located in an area of miscellaneous rural fringe landscapes landscape character comprising temporary structures, vegetated areas, scattered tree groups and woodlands to the further west and east within the "Green Belt" zone;
- with reference to site photos taken in on 24.7.2025, the Site is fenced-off, partially hard-paved and occupied by existing temporary structures, and partially covered with existing trees/vegetation. No sensitive landscape resources are observed within the Site. According to the application form, no tree felling is anticipated. With reference to paragraphs 4.4.1 and 5.7.1 of the Planning Statement, "there is no existing trees within the Site". Significant adverse impact on the existing landscape character and resources within the Site arising from the proposed uses is not anticipated; and
- her advisory comments are at **Appendix V**.

5. Fire Safety

Comments of the Director of Fire Services (D of FS):

- no objection in principle to the application subject to fire service installations and water supplies for firefighting being provided to his satisfaction; and
- his advisory comments are at **Appendix V**.

6. Electricity Supply Safety

Comments of the Director of Electrical and Mechanical Services (DEMS):

- no particular comment on the application from electricity supply safety aspect; and
- it is noted that there are 400kV extra high voltage overhead lines running across the Site, which is within the preferred working corridor of the concerned overhead lines as stipulated in the Hong Kong Planning Standards and Guidelines published by the Planning Department. The applicant and its contractor should strictly comply with the requirements pertaining to electricity supply safety and reliability as detailed in **Appendix V**.

7. Water Supplies

Comments of the Chief Engineer/Construction, Water Supplies Department (CE/C, WSD):

- no objection to the application; and
- his advisory comments are at **Appendix V**.

8. Building Matters

Comments of the Chief Building Surveyor/New Territories West, Buildings Department (CBS/NTW, BD):

- no objection to the application;
- as there is no record of approval granted by the Building Authority (BA) for the existing structures at the Site, he is not in a position to offer comments on their suitability for the proposed uses;
- it is noted that six structures and land filling are proposed in the application. Before any new building works are to be carried out on site, prior approval and consent of the BA should be obtained, otherwise they are unauthorized building works under the Buildings Ordinance (BO). An Authorized Person should be appointed as the co-ordinator for the proposed building works in accordance with the BO; and
- his advisory comments under the BO are at **Appendix V**.

9. Other Departments

The following government departments have no comment on/no objection to the application:

- Head of the Geotechnical Engineering Office, Civil Engineering and Development Department (H(GEO), CEDD);
- Project Manager (North), Civil Engineering and Development Department (PM(N), CEDD); and
- District Officer (North), Home Affairs Department (DO(N), HAD).

Recommended Advisory Clauses

(a) to resolve any land issues relating to the development with the concerned owner(s) of the application site (the Site);

(b) failure to reinstate the Site as required under the relevant approval condition upon expiry of the planning permission might constitute an unauthorized development under the Town Planning Ordinance and be subject to enforcement and prosecution actions;

(c) to note the comments of the District Lands Officer/North, Lands Department (DLO/N, LandsD) that:

(i) the Site comprises Government land (GL) and Old Schedule Agricultural Lots held under the Block Government Lease, which contains the restriction that no structures are allowed to be erected without prior approval of the Government. The proposed ingress/egress of the Site is required to pass through GL but no right of access via GL is granted to the Site;

(ii) Lot 347 RP in D.D. 87 is partly covered by Modification of Tenancy (MoT) No. 38957 for erection of temporary structures for dwelling, bathroom, kitchen and shade. His office reserves the rights to take enforcement action for any irregularities and cancel the MoT as appropriate;

(iii) the following irregularities covered by the subject planning application have been detected by his office:

- Unauthorised structures within the said private lots covered by the planning application

  there are unauthorised structures on the private lots. The lot owners should immediately rectify the lease breaches and his office reserves the rights to take necessary lease enforcement action against the breaches without further notice; and

- Unlawful occupation of GL adjoining the said private lots with unauthorised structures covered by the planning application

  LandsD objects to the planning application since there is illegal occupation of GL which regularization would not be considered according to the prevailing land policy. The lot owners should immediately cease the illegal occupation of GL and remove the unauthorised structures as demanded by LandsD. Notwithstanding the applicant's submission and the Board's approval (if any) of the subject planning application, his office reserves the rights to take necessary land control action against the illegal occupation of GL without further notice;

(iv) the following irregularities not covered by the subject planning application have been detected by his office:

- Unauthorised structures extended from Lot 361 RP in D.D. 87 to adjoining private lot not covered by the planning application

  there are unauthorised structures extended from Lot 361 RP in D.D. 87 to adjoining private lot not covered by the subject planning application. The lot owners should

immediately rectify the lease breaches and his office reserves the rights to take necessary lease enforcement action against the breaches without further notice; and

- Unlawful occupation of GL not covered by the planning application

  the GL adjoining Lot 361 RP in D.D. 87 has been illegally occupied with unauthorised structures without permission. The GL being illegally occupied is not included in the application. Any occupation of GL without Government's prior approval is an offence under the Land (Miscellaneous Provisions) Ordinance (Cap. 28). His office reserves the rights to take necessary land control action against the illegal occupation of GL without further notice;

(v) the lot owners shall either remove the unauthorised structures not covered by the subject application and cease the illegal occupation of the GL immediately; or include the unauthorised structures in the subject planning application for further consideration by relevant government departments and subject to the approval of the Board to the planning application which shall have reflected the rectification or amendment as aforesaid required, apply to his office for Short Term Waiver (STW) and Short Term Tenancy (STT) to permit the structures erected/to be erected and the occupation of GL. The applications for STW and STT will be considered by the Government in its capacity as a landlord and there is no guarantee that they will be approved. In particular, notwithstanding the approval of the Board, the GL might be capable of separate alienation, hence, the size of GL (if approved under STT) is subject to further consideration by the Government and would not necessarily follow the size of the GL in the subject planning application. Besides, the STW would be on whole lot basis and the STW and STT, if approved, will be subject to such terms and conditions including the payment of back-dated waiver fee/rent from the first date when the unauthorised structures were erected and the occupation of GL as well as administrative fee as considered appropriate to be imposed by LandsD. In addition, LandsD reserves the right to take enforcement action against the lot owners for any breach of the lease conditions, including the breach(es) already in existence or to be detected at any point of time in future and land control action for any unlawful occupation of GL. Besides, given the proposed uses are temporary in nature, only erection of temporary structure(s) will be considered; and

(vi) the applicant should comply with all land filling requirements imposed by relevant government departments. GL should not be disturbed unless with prior approval;

(d) to note the comments of the Commissioner for Transport (C for T) that the Site is connected to the public road network via a section of a local access road which is not managed by Transport Department; the land status of the local access road should be checked with LandsD; the management and maintenance responsibilities of the local access road should be clarified with the relevant lands and maintenance authorities accordingly; sufficient manoeuvring space within the Site shall be provided; and no vehicle is allowed to queue back to or reverse onto/from public road at any time during the planning approval period;

(e) to note the comments of the Chief Highway Engineer/New Territories East, Highways Department (CHE/NTE, HyD) that HyD is not/shall not be responsible for the maintenance of any access connecting the Site and the nearest public road; and adequate drainage measures should be provided to prevent surface water running from the Site to the nearby public roads and drains;

(f) to note the comments of the Director of Agriculture, Fisheries and Conservation (DAFC) that the applicant should implement measures to protect nearby watercourses from adverse impacts during the construction and operational phases;

(g) to note the comments of the Director of Environmental Protection (DEP) that the applicant should follow the requirements of the 'Code of Practice on Handling the Environmental Aspects of Temporary Uses and Open Storage Sites' issued by the Environmental Protection Department (EPD) and implement relevant mitigation measures listed in the Recommended Pollution Control Clauses for Construction Contracts (https://www.epd.gov.hk/epd/english/environmentinhk/eia_planning/guide_ref/rpc.html) during land filling;

(h) to note the comments of the Chief Town Planner/Urban Design and Landscape, Planning Department (CTP/UD&L, PlanD) that approval of the application does not imply approval of tree works such as pruning, transplanting, felling and compensatory/new tree planting. The applicant should seek approval for any proposed tree works from relevant government departments prior to commencement of the works;

(i) to note the following comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD) that:

(i) the revised DIA shall demonstrate that there would be adequate measures provided at the resources of the applicant to ensure capacity of the streamcourse/drainage facilities and flooding susceptibility of the adjoining areas would not be adversely affected by the proposed uses and to avoid the Site from being eroded and flooded. The applicant is required to assess whether the downstream for drainage connection would have sufficient capacity to receive the stormwater runoff;

(ii) as the existing streamcourse traversing the Site is crucial to the drainage condition of the region, it should be maintained at all times. The applicant shall be required to place all the proposed works including landfilling works at least 3m away from the top of the banks of existing streamcourse. All the proposed works should not disturb, interfere with or cause damage to existing streamcourse, and all the proposed works in the vicinity of the existing streamcourse should not create any adverse drainage impacts, both during and after construction;

(iii) no land filling on site shall be allowed until the flood mitigation measures have been implemented to her satisfaction;

(iv) photos should be submitted clearly showing the current conditions of the area around the Site, the existing drainage/flowpaths around the Site, the proposed drainage from the Site to the downstream existing watercourse and the existing watercourse at about 20m intervals. The locations of the camera and the direction of each photo should also be indicated on a plan;

(v) to take all precautionary measures to prevent any disturbance, damage and pollution from the proposed uses to any parts of the existing drainage facilities and existing watercourse within the Site. In the event of any damage to the existing drainage facilities and watercourse, the applicant shall be held responsible for the cost of all necessary repair works, compensation and any other consequences arising therefrom;

(vi) to minimise the possible adverse environmental impacts of the existing watercourse in his/her design and during construction;

(vii) the proposed drainage works, whether within or outside the site boundary, should be constructed and maintained properly by the applicant and rectify the system if it is found to be inadequate or ineffective during operation at his/her own expense;

(viii) for works to be undertaken outside the lot boundary, the applicant should obtain prior consent and agreement from DLO/N, LandsD and/or relevant private lot owners;

(ix) to allow all time free access for the Government and its agent to conduct site inspection on his completed drainage works;

(x) the applicant and the successive lot owners shall allow connections from the adjacent lots to the completed drainage works on GL when so required, and;

(xi) the Site is in an area where no public sewerage connection is available;

(j) to note the comments of the Director of Fire Services (D of FS) that:

(i) in consideration of the design/nature of the proposal, fire service installations (FSIs) are anticipated to be required. The applicant should submit relevant layout plans incorporated with the proposed FSIs to his satisfaction. In addition, the applicant should note that the layout plans should be drawn to scale and depicted with dimensions and nature of occupancy; the location of the proposed FSIs to be installed should be clearly marked on the layout plans; and

(ii) if the proposed structures are required to comply with the Buildings Ordinance (BO) (Cap. 123), detailed fire service requirements will be formulated upon receipt of formal submission of general building plans;

(k) to note the comments of the Director of Electrical and Mechanical Services (DEMS) that:

(i) to observe the requirements of minimum safety clearance, minimum vertical clearance and preferred working corridor of the concerned overhead lines as stipulated in Clause 2.3.5, 2.3.6 and 2.3.14 under Chapter 7 - Utility Services of the Hong Kong Planning Standards and Guidelines published by the Planning Department, and ensure they shall be maintained at any time during and after construction;

(ii) no scaffolding, crane and hoist shall be built or operated within 6m from the outermost conductors (up to 400kV) at all times. Warning notices should be posted at conspicuous locations to remind operators and workers of the site boundary. CLP Power shall be consulted on the safety precautions required for carrying out any works near the concerned overhead lines;

(iii) in any time during and after construction, CLP Power shall be allowed to get access to the working corridor area of the concerned overhead lines for carrying out any operation, maintenance and repair work including tree trimming;

(iv) the Electricity Supply Lines (Protection) Regulation and the "Code of Practice on Working near Electricity Supply Lines" established under the Regulation shall be observed by the proponent and his contractors when carrying out works in the vicinity of the electricity supply lines; and

(v) in the interests of public safety and ensuring the continuity of electricity supply, the parties concerned with planning, designing, organising and supervising any activity near the

underground cable or overhead line under the mentioned document should approach the electricity supplier (i.e. CLP Power) for the requisition of cable plans (and overhead line alignment drawings, where applicable) to find out whether there is any underground cable and/or overhead line within and/or in the vicinity of the Site;

(l) to note the comments of the Chief Engineer/Construction, Water Supplies Department (CE/C, WSD) that:

(i) existing water mains inside the Site as shown in the Fresh Water Mains Record Plan (MRP) (**Attachment 1**) may be affected. The applicant is required to either divert or protect the water mains found on site;

(ii) if diversion is required, existing water mains inside the Site are needed to be diverted outside the site boundary of the Site to lie in GL. A strip of land of minimum 1.5m in width should be provided for the diversion of existing water mains. The cost of diversion of existing water mains upon request will have to be borne by the applicant; and the applicant shall submit all the relevant proposal to WSD for consideration and agreement before the works commence; and

(iii) if diversion is not required, the following conditions shall apply:

- existing water mains are affected as indicated on the MRP and no development which requires resiting of water mains will be allowed;
- details of site formation works shall be submitted to the Director of Water Supplies (D of WS) for approval prior to commencement of works;
- no structures shall be built or materials stored within 1.5m from the centre line(s) of water main(s) as shown on the MRP. Free access shall be made available at all times for staff of the D of WS or their contractor to carry out construction, inspection, operation, maintenance and repair works;
- no trees or shrubs with penetrating roots may be planting within the Water Works Reserve or in the vicinity of the water main(s) as shown on the MRP. No change of existing site condition may be undertaken within the aforesaid area without the prior agreement of D of WS. Rigid root barriers may be required if the clear distance between the proposed tree and the pipe is 2.5m or less, and the barrier must extend below the invert level of the pipe;
- no planting or obstruction of any kind except turfing shall be permitted within the space of 1.5m around the cover of any valve or within a distance of 1m from any hydrant outlet; and
- tree planting may be prohibited in the event that D of WS considers that there is any likelihood of damage being caused to the water mains;

(m) to note the comments of the Project Manager (North), Civil Engineering and Development Department (PM(N), CEDD) that the proposed uses are located within the proposed New Territories North (NTN) New Town under the Planning and Engineering (P&E) Study for NTN New Town and Man Kam To. The preliminary development proposal for NTN New Town was released in December 2024. While the implementation programme of NTN New Town is being formulated under the P&E Study, the site formation works will likely commence soon after the completion of detailed design in next stage. Hence, the applicant is reminded that subject to the

land use planning in the P&E Study, the proposed uses, if approved, may need to be vacated for the site formation works; and

(n) to note the following comments of the Chief Building Surveyor/New Territories West, Buildings Department (CBS/NTW, BD) that:

(i) it is noted that six structures and land filling are proposed in the application. Before any new building works are to be carried out on site, prior approval and consent of the Building Authority (BA) should be obtained, otherwise they are unauthorized building works (UBW) under the BO. An Authorized Person should be appointed as the co-ordinator for the proposed building works in accordance with the BO;

(ii) the Site shall be provided with means of obtaining access thereto from a street under the regulation 5 of the Building (Planning) Regulation (B(P)R) and emergency vehicular access shall be provided under the regulation 41D of B(P)R;

(iii) if the Site does not abut on a specified street having a width not less than 4.5m, the permitted development intensity shall be determined by the BA under regulation 19(3) of the B(P)R at building plan submission stage;

(iv) if the existing structures (not being a New Territories Exempted House) are erected on leased land without the approval of the BA, they are UBW under the BO and should not be designated for any proposed uses under the planning application;

(v) for UBW erected on leased land, enforcement action may be taken by BD to effect their removal in accordance with the prevailing enforcement policy against UBW as and when necessary. The granting of any planning approval should not be construed as an acceptance of any existing building works or UBW on the Site under the BO;

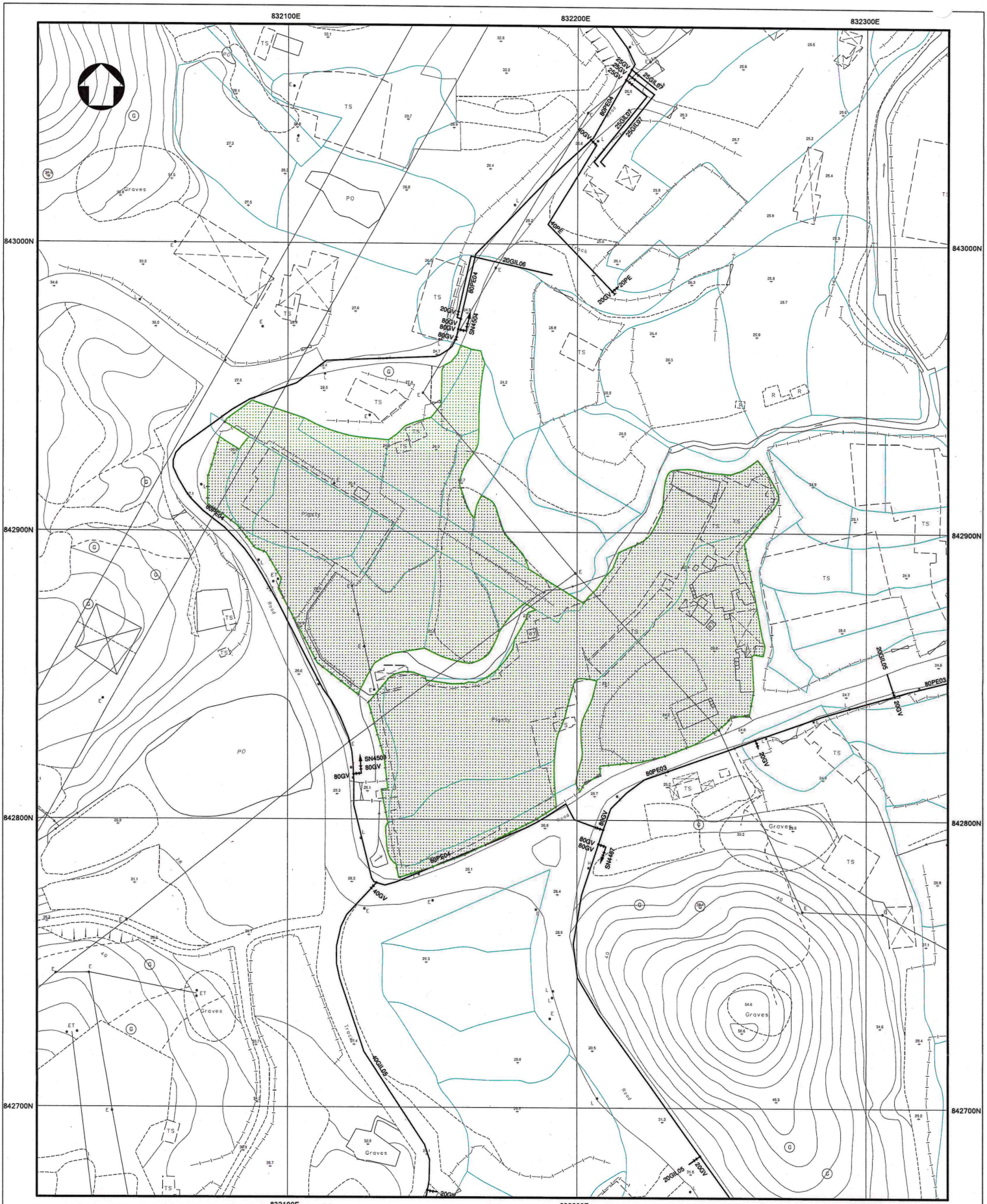
(vi) the applicant's attention is drawn to the provision under regulations 40 and 41 of the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations in respect of disposal of foul water and surface water respectively;

(vii) the headroom (15m) of the one to two-storey temporary structures is considered excessive. It should be justified upon formal plan submission to BD;

(viii) any temporary shelters or converted containers for office, storage, washroom or other uses are considered as temporary buildings are subject to the control of Part VII of the B(P)R; and

(ix) detailed checking under the BO will be carried out at building plan submission stage.

Attachment 1



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM.
3. INFORMATION ON ALIGNMENT OF MAINS IS OF INDICATIVE VALUE ONLY. WHERE POSITIONAL ACCURACY MAY BE OF IMPORTANCE, DETAILS SHOULD BE SITE CHECKED.
4. FOR MAINS RECORDS SIGN CONVENTIONS AND DESIGNATIONS SEE SKETCH NO. 3988.
5. NO EXISTING SALT WATER MAINS IN THE VICINITY OF THE SITE.
6. NO PROPOSED WATER MAINS IN THE VICINITY OF THE SITE.
7. NO EXISTING WSD CABLE IN THE VICNITY OF THE SITE.
8. NO PROPOSED WSD CABLE IN THE VICNITY OF THE SITE.
9. THE SITE IS NOT WITHIN WSD GATHERING GROUNDS.
10. NO WSD LAND ALLOCATION / WWR WITHIN THE SITE AREA.
11. NO WSD SLOPES ARE AFFECTED IN THE VICINITY OF THE SITE.

SUBJECT SITE

PRIVATE LOT BOUNDARY (FOR REF. ONLY)

PART COPY OF FRESH WATER MAINS RECORD PLAN(S)

W67880/3-NW-22A & 22B

FILE REF: (42) IN WSD/M/SP 3051/446/49S/12 PT.1

REF. CODE: 30W25M	SHEET 1 OF 1	SCALE 1:1200

水 務 署
Water Supplies Department

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

From: [redacted]
Sent: 2025-08-12 星期二 02:09:06
To: tpbpd/PLAND <tpbpd@pland.gov.hk>
Subject: A/NE-FTA/264 DD 87 Kong Nga Po

A/NE-FTA/264

Lots 346, 347 S.A, 347 S.B, 347 RP, 348 RP, 349 RP, 351 RP, 352 S.B RP, 361 RP (Part) and 366 RP in D.D. 87 and Adjoining Government Land, Kong Nga Po, Sheung Shui

Site area: About 16,604sq.m Includes Government Land of about 6,886sq.m

Zoning: "Agriculture"

Applied use: Warehouse / Open Storage of Construction Material / 34 Vehicle Parking / **Filling of Land**

Dear TPB Members,

Strong Objections.

While the application mentions relocation, this is in general terms and there is no data provided with regard to the size and nature of the operations to be relocated.

"contributing to the overall upgrade of the locality". Seriously? Open storage and some tin huts behind a rusty and ugly 3mt tall barrier is certainly no improvement on the pigsties.

Where are the state of the art industrial parks we were told would accommodate operations like this? Operators are too mean to get together and invest in developing modern and fully equipped logistic nodes. While other jurisdictions make great advances, Hong Kong is continues to invest the minimum in ramshackle, third world operations.

The applicant plans to further fill in the site, which is very large and contains a number of watercourses. How can this be of benefit to the community?

In view of climate warming and the prediction of every increasing rainfall and typhoons, drainage issues should be a property, particularly when the site is 40% GL.

The application should be rejected as it is speculative in nature and not based on any actual relocation needs.

Mary Mulvihill

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致城市規劃委員會秘書：
專人送遞或郵遞:香港北角渣華道 333 號北角政府合署 15 樓
傳真 : 2877 0245 或 2522 8426
電郵: tpbpd@pland.gov.hk

To : Secretary, Town Planning Board
By hand or post : 15/F, North Point Government Offices, 333 Java Road, North Point, Hong Kong
By Fax : 2877 0245 or 2522 8426
By e-mail : tpbpd@pland.gov.hk

有關的規劃申請編號 The application no. to which the comment relates
A/NE-FTA/264

意見詳情 (如有需要，請另頁說明)
Details of the Comment (use separate sheet if necessary)

反對

「提意見人」姓名/名稱 Name of person/company making this comment 侯志強議員

簽署 Signature _____ 日期 Date 2025.7.26

Seg.2

3

致城市規劃委員會秘書：
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有關的規劃申請編號 The application no. to which the comment relates
A/NE-FTA/264 Received on 14/10/2025

意見詳情 (如有需要，請另頁說明)
Details of the Comment (use separate sheet if necessary)

「提意見人」姓名/名稱 Name of person/company making this comment 何志雄議員

簽署 Signature _____ 日期 Date 2025.11.5